Archaeological Evaluation Report

THE WEIR GARDENS SWAINSHILL

For The National Trust

Matthew Williams MA MIfA

L-P:ARCHÆOLOGY

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NGR:	343580,241880
Author(s):	M.Williams
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A trading name of L – P : Heritage LLP

The Pump House | Coton Hill | Shrewsbury, SY1 2DP | +44 [0]1743 361552

www.lparchaeology.com

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Abstract

Four trenches were excavated and a transect of auger holes were bored to evaluate the condition of the Roman remains in the scheduled area at the Weir Garden Estate, which is owned and managed by the National Trust. The trenches revealed an opus signinum bath in the west of the site and uncovered a section of black and white mosaic that had first been discovered in 1977. The remains indicate that the building in the west of the site is a bathhouse and not a villa or shrine as previously suggested. In the east of the site is an octagonal stone cistern, and excavation adjacent to this proved that the surrounding deposits are severely disturbed and the relationship between the bathhouse and the cistern is unlikely to survive. There is a comparable cistern at the Chedworth villa complex, Gloucestershire, dated to the late 3rd/4th centuries, which stored and provided water for the baths.

Excavation in the north of the site confirmed that the slope comprises of natural geology and is not hillwash overlying archaeological remains.

In terms of condition the bath had been severely damaged by recent excavation, probably in the late 18th or early 19th century, but the mosaic was in good condition. Although spring water was seen in three trenches it was not flowing near sensitive remains and therefore the structures are not considered at any immediate risk from water.

1. Introduction

1.1. This report has been commissioned by the National Trust and considers a site at the Weir Estate, Swainshill, Herefordshire, HR4 7QF, NGR 343580,241880 (SO43584188) (**FIGURE 1**). It describes the results of an auger transect and four trial trenches excavated during 21st - 25th July 2014. The augering was carried out by Andy Howard of the Landscape Research Centre and the trial trenching was carried out by Cornelius Barton, Satsuki Harris and Matthew Williams of L - P : Archaeology. The site code given by L - P : Archaeology is 1716M.

1.2. The site is a Scheduled Monument (SM) (List entry 1005273) due to the extensive Roman building remains both visible and buried. Scheduled Monument Consent was granted and the work was carried out in accordance with the Archaeological Summary and Fieldwork Proposals (WILLIAMS 2014) submitted with the application for Scheduled Monument Consent and agreed with the Secretary of State for Culture, Media and Sport and the National Trust Archaeological Consultant. A copy of the consent is included as Appendix 1.

1.3. The most prominent features of the SM are two stone structures that project into the River Wye, and the octagonal cistern (**FIGURE 8**). For the purposes of this report the stone structures are referred to as the northern buttress and the southern buttress.

1.4. The site is potentially at risk from the overlying build up of hillwash and underground spring lines. The auger transect and trial trenches were recommended by the National Trust archaeological consultant to assess the risk to the site.

2. Site Background

2.1. GEOLOGY

2.1.1. The solid geology is sandstone and mudsone and the drift geology is glacial moraine. Detailed discussion of the geology of the site is given in the geoarchaeological report (Howard 2013).

2.2. TOPOGRAPHY

2.2.1. The site is 6km west of Hereford. It is located on a small terrace between the River Wye (to the south) and arable fields (to the north). It is at c.58.0m AOD.

2.3. ARCHAEOLOGY AND HISTORY

2.3.1. There is plentiful evidence for Roman activity in the area, the walled Roman town of Magna (Kenchester) is 1km to the north and a Roman road leading from Wroxeter to Caerleon passes about 500m to the east. The extant remains at New Weir are the largest upstanding Roman remains in Herefordshire and represent a type of riverside building that is unique in the country. The visible remains consist of two large stone 'buttresses' that jut out into the River Wye from a large terrace that may have been cut into the river bank. At one end of the terrace is an octagonal stone cistern. A comparable cistern is known at Chedworth Villa, Gloucestershire, which is about 40 miles east of Hereford (RAY 2002). It was described in a report by Professor Ian Richmond (RICHMOND 1963) thus:

'The spring was captured for Roman use by digging back into the hillside and covering with flagging a roughly triangular space in front and on top of the clay. The flagging was supported on a single course of ashlar bordering the edge of the space, so as to leave room for the water to emerge from the vein at the base of the triangle and debouch at its apex into a half-round stone conduit or gutter which passes into the nymphaeum and feeds the large octagonal tank. The flagging was then covered by loose stones acting as a rumbling drain for extra flow of water, and then by earth, containing fourth century pottery, and thus dating this phase of the building. Having filled the tank, the water in Roman times flowed out of it into another conduit to feed the bath-suites of

the villa. It is clear that the tank itself supplied the water for ordinary domestic use, as well might have done in other circumstances.'

2.3.2. Previous work at the Wier Gardens by Ron Shoesmith in 1977 (SHOESMITH 1980) revealed a mosaic on the terrace and it has been suggested that the site could be a bath house, villa and/or water shrine.

2.3.3. For a full summary of the previous archaeological work on the site please refer to the Archaeological Summary and Fieldwork Proposals (WILLIAMS 2014).

3. Aims

3.1. AUGER TRANSECT

3.1.1. The aims of the auger transect were:

- To determine the depth of hillwash that has built up on the terrace
- To determine whether there is a further terrace or step below the hillwash as suggested previously (Hoverd & Ray 2011)
- To determine the depth and character of deposits overlying and underlying the Roman remains

3.2. TRENCHING

3.2.1. The aims of each trench are given below in Table 1.

TRENCH	SIZE (M)	AIMS
1	3x1	Investigate the NW extent of the remains along the line of the northern edge of the northern buttress. This would clarify the presence/absence of structures at the top of the putative steps.
2	3x1	Re-excavate the 1977 trench and uncover more of the mosaic. The design and quality of the mosaic would help to understand the status of the building and perhaps the function of the room.
3	2x2	Investigate the rear extent of the building. The 1977 trench in this area stopped at the top of the rubble. This trench aims to go through the rubble to clarify the presence or absence of structural remains. It will probably be stepped or sloped to account for the wet conditions and depth and it is likely that the base of the trench will be less than 1m square.
4	2x2	This trench is located against the cistern. The aim is to clarify the context of the cistern, assess the extent of the Victorian disturbance, investigate the surrounding rubble type, and check for in situ building remains east of the cistern.

Table 1- Archaeological aims for each trench

4. Methodology

4.1. The works were undertaken in accordance with the Archaeological Summary and Fieldwork Proposals (WILLIAMS 2014).

4.2. Four trenches were excavated in total (**FIGURE 2**). The trenches were hand excavated with the exception of trench 3, where topsoil was removed by a small tractor mounted digging bucket under archaeological supervision.

4.3. Trench 1 was extended by 0.40m to the west to expose more of the mosaic. This was agreed in writing with Bill Klemperer, Principal Inspector of Ancient Monuments.

4.4. Trench 2 was 2m x 1m, the eastern 1m was not excavated as the trench was far deeper than anticipated and results indicated that east of the trench was a large amount of 18th/19th century backfill.

4.5. Trench 3 was not excavated as a deep, stepped square as it quickly became clear that there was no deep alluvial deposits in that area. Instead, it was elongated to 0.60m by 3.5m to try to identify the rear (north) wall of the building.

4.6. Trench 4 was dug slightly smaller than anticipated due to extensive flooding in the trench.

4.7. Seven auger holes were bored along the transect shown in the WSI. The locations of the holes are shown in **FIGURE 3**.

5. Results

5.1. TRENCH 1 (FIGURE 4)

5.1.1. Trench 1 was located near the centre of the terrace in the general area of the 1977 mosaic trench (Plate 1). Accurate location of the 1977 trench was not possible as the path and river bank, both shown on the 1977 trench location plan, have moved.

5.1.2. The upper deposit was dark brown topsoil (100) which overlay a dark red brown silt loam subsoil (101). This overlay the top of wall (105) and was to the east of wall (105). The base of (101) was not reached.

5.1.3. Wall (105) ran N-S and was 0.48m wide and survived to a maximum height of 0.65m. It was constructed from roughly dressed stone, the largest being 300mm by 750mm, and was bonded with lime mortar (Plate 2). The size of the wall suggests it was an external load supporting wall, i.e. the east wall of the building. On the west side of the wall was a room containing a mosaic (108).

5.1.4. No surface or turf line was visible on the east side of the wall at the corresponding depth of the mosaic, although that part of the trench was extremely wet which may have eroded or masked any horizons. A slight rise in the path on the north side of the trench is visible on the alignment of the wall. A similar rise is visible at the west end of the terrace just before the path descends towards the boathouse.

5.1.5. On the west side of (105) was a mid brown loam (107) containing frequent fragments of building rubble including fragments of painted wall plaster. This overlay a section of mosaic (108). (107) is clearly the rubble remains of the mosaic room.

5.1.6. The mosaic is black and white, it consists of a solid black border, then a row of single alternating black/white tesserae, and a chequerboard design of squares of approximately 100mm (Plate 3). Only 0.35m from the edge of the mosaic was uncovered and there may be further designs towards the centre. It is in good condition and has not collapsed, which suggests there is unlikely to be a

hypocaust below.

5.1.7. At the south edge of the trench a piece of plastic was seen partially overlying wall (105) and mosaic (108) (Plate 3). This marked the location of the 1977 trench which was confirmed by Ron Shoesmith during a site visit on 23rd July.

5.2. TRENCH 2 (FIGURE 5)

5.2.1. Trench 2 was positioned on the alignment of the edge of the northern buttress (Plate 1). The upper deposit was brown topsoil (200), this overlay mid brown silt subsoil (recorded as (201) in the west of the trench and (202) in the east) with occasional large fragments of opus signinum and building stone.

5.2.2. Below subsoil (201) on the west side of the trench were structural remains consisting of a consolidated mass of stone and mortar with several horizontal lines of ash (205).

5.2.3. The west elevation of (205) was faced with tile and opus signinum (206). The tile had disintegrated to form a soft mid orange red layer and was no longer hard. (206) was excavated to a maximum height of 1.25m (Plate 4). It generally had a smooth outer (east facing) surface except where lime deposits had stuck rubble fragments to it (Plate 5). Near the base of (206) the surface was rough, perhaps indicating where a floor had broken away (Plate 4).

5.2.4. Abutting (206) in the east side of the trench was a mid brown silt containing Roman building material as well as several fragments of Post Medieval unfrogged red brick fragments (203). Within this deposit, at a depth of 58.44m AOD (about 0.90m below ground level) was a crude line of building stone (207) that may have been an attempt to drain the area (Plate 6). There was no cut or horizon associated with (207). (203) filled a large cut [204] which cut through the Roman structure and deposits within the trench. Below [204] was a deposit of unpainted plaster fragments and stone rubble (209), this was not excavated due to the depth of the trench. It appeared to be original rubble from the collapse/demolition of the bathouse.

5.2.5. The building materials and construction method indicate that this was the west side of a bath from a Roman bathhouse. It appears to have been built within an

artificial extension or consolidation of the terrace. The structure has been severely damaged by Post Medieval excavation, either to help drain the terrace or simply casual investigation.

5.3. TRENCH 3 (FIGURE 6)

5.3.1. Trench 3 was located directly north of trench 2 on the slope at the base of the north edge of the terrace. It was initially 1m by 0.60m as shown in Plate 7 and was extended downhill towards the river. It was thought that the slope may comprise hillwash from the fields above but excavation proved this not to be the case.

5.3.2. The uppermost deposit was dark brown loose topsoil (301) which overlay a mid orange brown clay silt subsoil (302). In the north and central part of the trench this overlay pale blue grey rock natural geology (304) at a depth of 0.50m (Plate 8). In the south of the trench was a soft, loose very dry pale grey silt (303) with occasional fragments of stone. It contained one undiagnostic fragment of ceramic building material (CBM) which, although not definitely Roman in date, shows disturbance towards the south of the trench which could be a robber trench from one of the walls.

5.4. TRENCH 4 (FIGURE 7)

5.4.1. Trench 4 was located on the east side of the cistern in the eastern part of the site (within the trees in the background of Plate 1). The upper deposit was a moderately wet grey brown clay topsoil (401) which overlay a mid red brown silt clay (402) containing several undiagnostic fragments of stone building rubble. Below (402) was a mid blue grey clay with sand lenses with occasional fragments of Post Medieval brick (403). Water started quickly filling the trench at the depth of (403) and it was backfilled before it started pouring over into the cistern (Plate 9).

5.4.2. The brick fragments suggest that the deposits on this side of the cistern are related to the discovery, partial demolition and reconstruction of the cistern in the 1890s.

6. Finds

6.1.1. All artefacts were assessed by Matthew Williams and Dan Garner of L - P : Archaeology. Only building material was recovered from this excavation; no pottery, bone or other domestic or industrial artefacts were found. A large amount of building stone was recovered but none had tool marks or clear working and therefore none was retained. A large amount of opus signinum was also recovered and diagnostic pieces were retained and are described below. All stones and opus signinum fragments not retained were reburied in the trench from which they were excavated.

6.1.2. All the finds from trench 2 and 3 came from 18th/19th century backfill.

6.2. OPUS SIGNINUM/ROMAN CONCRETE (TABLE 2)

6.2.1. Three fragments of concrete were retained from the rubble fill (107) above the mosaic. This deposit is the original collapse or demolition of the building and is not Post Medieval backfill as seen in trench 2. The concrete from (107) was pale grey as it did not have any CBM inclusions that give opus signinum its characteristic pink colour. All fragments had remnants of painted plaster on the surface and therefore it appears that the mosaic room had painted walls.

6.2.2. The fragments from trench 2 were from the Post Medieval backfill (203) and may have been the result of breaking through the bath face (206). One fragment of bath face was recorded and one piece had the imprint of a beam or other structural feature. At least two different mixes of concrete were noted which may relate to the waterproof qualities or simply the availability of materials.

6.3. CERAMIC BUILDING MATERIAL (CBM) (TABLE 3)

6.3.1. Various types of CBM were recovered from the site. The most common were fragments of box flue tile, all from trench 2. This indicates a heating system, which would be present in a bath house. One fragment of tegula was recovered from (202) but it was extremely abraded and on its own should not be taken as evidence for a tiled roof. Several fragments of floor tile were recovered from trench 2 and a whole tile was retained. It has clearly been used as a floor tile as

mortar still adheres to the base and the top is worn. One discarded fragment had mortar on the top and base and may have been used as a pilae to support a floor with a hypocaust.

6.3.2. At least two types of combing pattern was seen on the box flue tiles. These, and the dimensions of the pilae tile, should be compared to national typologies which may elucidate on the date and manufacture of the artefacts.

6.3.3. Fragments of large unfrogged brick dating to the late 18th or 19th century were found in the backfill deposits (202) and (203) which proved that the disturbance within trench 2 had occurred within the last 200 years or so.

6.4. STONE (TABLE 4)

6.4.1. Several thin fragments of stone were found that were probably fragments of roof tile but the only clearly worked piece had the remains of a small hole for a nail. Stone roof tiles edge the path at the top of the terrace and the boathouse is roofed in similar tiles. The date and provenance of these tiles is unknown.

6.4.2. Various pieces of building stone were recovered from all trenches but these had not been clearly worked. The local rock that produced the stones could easily fracture into the shapes seen (A. Howard pers. comm.).

6.5. TUFA (TABLE 5)

6.5.1. Tufa is a natural lime deposit that builds up from the spring lines on the site. It was a favoured building material for bath houses. Two fragments were found on site. One from the backfill in trench 2 had been worked and is likely to be from the bath house structure. Another unworked piece came from trench 3 and may be natural.

6.6. TESSERAE (TABLE 6)

6.6.1. Tesserae were found in both trenches. The only colours found were black and white which suggests a monochrome tessellated pavement rather than a true mosaic in trench 1. The number of tesserae in trench 1 also suggests that part of the mosaic (or another mosaic nearby) is in poor condition, however the area exposed in trench 1 appeared to be in very good condition.

CONTEXT	CONSISTENCY	COLOUR	DIMENSIONS	DIAGNOSTIC FEATURES	INTERPRETATION
106	soft	pale grey	40mm thick, max length 135mm	white plaster finish with a very small spot of red paint remaining	fragment of painted plaster wall face from mosaic room
107	soft	pale grey	23mm thick, max length 40mm	white plaster finish with remains of a red stripe and a green/yellow stripe	fragment of painted plaster wall face from mosaic room
107	soft	pale grey	17mm thick, max length 40mm	white plaster finish	fragment of plaster wall face from mosaic room
202	soft	white/dark pink	50mm thick, max length 158mm	40mm thick paler outer layer with large CBM inclusions, 10mm thick inner layer with freq small CBM and grit inclusions. outer face has hard lime deposit	bath face
202	soft	pink grey	60mm thick, max length 160mm	imprint of small beam 70mm wide and max 20mm dep	structural fragment

Table 2- Opus Signinum/Roman concrete

CONTEXT	COUNT	CONSISTENCY	COLOUR	INCLUSIONS	DIMENSIONS	DIAGNOSTIC FEATURES	FORM
202	1	soft	pale pastel orange	v occasional stone grit at base	30mm thick (ex.lip), max length 165mm	very abraded	fragment of tegula
202	11	soft	mid to pale orange	none	13mm - 20mm thick, max length 110 mm	2 fragments have a short lip of 20mm. There are at least three types of curved combing. One frag has very shallow straight comb design	fragments of box flue tile
202	1	soft	mid orange	none	18mm thick	area of square cornered hole and rim around edge	possibly piece of modern garden ceramic
202	1	soft	mid orange	v occasional grit	W 200mm, L 200mm, D 30mm	mortar on base and sides, top is worn and has lime deposits	floor tile
202	1	hard	pale purple red	occ. stone grit	W 106mm, H 2mm, max length 105mm	none, unfrogged	half a modern brick
303	1	soft	mid orange	none	14mm thick, max length 63mm	appears to be formed from two layers	fragment of thin tile, poss modern

Table 3- Ceramic Building Material

CONTEXT	CONSISTENCY	COLOUR	INCLUSIONS	DIMENSIONS	DIAGNOSTIC FEATURES	FORM
202	hard	mid grey	none	14mm thick, max length 150mm	half a circular hole 8mm across	fragment of roof tile

Table 4- Stone

CONTEXT	CONSISTENCY	COLOUR	DIMENSIONS	DIAGNOSTIC FEATURES	INTERPRETATION
202	soft	cream	65mm thick, max length 110mm	two smooth finished faces	structural fragment
303	soft	very pale yellow grey	max 70mm	none	unworked tufa fragment

Table 5- Tufa

CONTEXT	COLOUR	COUNT	DIMENSIONS	NOTES
103	black	2	between 4mm - 25mm	crudely shaped. hard granite material
103	grey	19	between 4mm - 18mm	soft grey mudstone material
103	white	130	between 6mm - 21mm	chalky material
106	black	3	W 20mm, L 20mm, D 2-5mm	white mortar adhering to both sides of two
107	black	15	W 20mm, L 20mm, D 2-5mm	no mortar present
107	black	1	W 38mm, L 33mm, D 19mm	very large, one rounded edge
202	black	2	between 6mm - 21mm	fairly crude shape, mortar on base of one

Table 6- Tesserae

7. Geoarchaeological Survey by Andy Howard

7.1. INTRODUCTION AND CONTEXT OF STUDY

7.1.1. The New Weir Estate comprises extensive parkland and formal gardens adjacent to the River Wye, approximately 8km upstream of the city of Hereford. The eastern area of the formal garden includes an elevated, presumed artificial terrace that is designated as a Scheduled Ancient Monument (718-MHE203) on the basis of known Roman remains (SHOESMITH 1980). Significantly, Shoesmith raised the possibility that hillwash from the immediate slopes of the moraine bluff might mask further archaeological remains. Hillwash within the area was also used as an explanation for the poor geophysical results obtained for the area by staff from the Ancient Monuments Laboratory (letter from Andrew Payne to Malcolm Cooper, the incumbent Archaeological Officer for Herefordshire dated 16.09.91; Herefordshire HER).

7.1.2. Further archaeological investigations in the parkland to the north of the Romano-British terrace were undertaken in 2002 following reports of Roman material eroding out of the river terrace bluff (moraine bluff). In total, eight trenches were excavated but only natural deposits were recorded (clay soil onto gravel); geophysical survey revealed a horse-drawn carriage drive, but no other, older features. Given these results, the conclusion was drawn that the archaeological material was in fact eroding from structures and features buried on the terrace by later hillslope deposits (i.e. concurring with the ideas of Shoesmith). The surface of the moraine is dissected by a number of shallow dry valleys exemplified by the landform containing the access road to Weir Garden Cottage and the Visitor car park and such features would act as natural funnels for both water and sediment. On the basis of this geomorphological evidence, Howard (2013) suggested that an apron of colluvial sediments was most probably present along the footslope of the moraine bluff across the estate (see 2013 report, Figure 2, zone 2 and Table 1).

7.1.3. In Summer 2014, L - P : Archaeology were commissioned to undertake a programme of further investigation of the scheduled area with the aim of appraising current knowledge and condition of the site. As part of this

programme of new works, Landscape Research & Management was commissioned to investigate the character of the terrace sediments in order to:

- Understand their genesis
- Assess the potential for colluvial deposits to bury archaeological remains near the bluff edge
- Assess the potential for colluvial deposits to contain reworked artefactual assemblages
- Assess the relationship of the terrace to riverine processes

7.1.4. This section presents the results of this study.

7.2. GEOLOGICAL CONTEXT

7.2.1. The solid and superficial geology of the New Weir Estate has been considered in detail in a previous report written for the National Trust (HOWARD 2013). In brief, the solid geology comprises sandstones and mudstones of the Old Red Sandstone, laid down during the Devonian Period approximately 400 million years ago. However, these solid rocks are not exposed at the ground surface, but are buried beneath the terminal moraine of the Wye Valley Glacier, which began its final phase of retreat around 17,000 years ago (CLARK & ET AL 2012). These moraine sediments comprise a mixture of material either directly deposited by the ice (referred to as tills or on some older Geological Survey sheets as 'boulder clay') or by water flowing within, beneath and across the surface of the ice (referred to as fluvio-glacial if deposited by running water or glacio-lacustrine if associated with ponded water). Sedimentologically, the deposits range from angular poorly-sorted rock fragments set within a clay matrix, to well sorted sands and gravels. Where the sediments are gravel-rich and gradients are steep, for example within the formal gardens, slope failure can occur if the sediments are exposed and not bound by vegetation .

7.2.2. Towards the end of the last glaciation, after 17,000 ka BP, but before the onset of the postglacial, the River Wye excavated a course through this moraine creating a bluff on which the Weir formal garden has been created. Further

incision and floodplain development probably during the early Holocene led to the formation of a river terrace within the landscape, 1-3m above the contemporary river upon which the Kitchen Garden is situated. Below this terrace feature, the contemporary floodplain is situated.

7.2.3. Tufa is a common feature of the formal Weir gardens and in addition to providing aesthetically pleasing features these deposits are important palaeoenvironmental archives

7.2.4. The terrace surface and feature on which the 'scheduled ancient monument' is designated, is situated significantly above the highest river terrace unit; therefore it is unlikely that the feature is of fluvial origin, though it may relate to the moraine bluff (see below).

7.3.3. METHODOLOGY

7.3.1. In order to investigate the character of the terrace feature, a transect line of auger holes was drilled across the terrace from the base of the moraine bluff to the river edge. Cores were drilled using a dutch-head auger (5cm diameter) and the textural and lithological properties of each core were described (Appendix 1) using standard geological terminology (Jones et al., 1997). After sediment description the material was closely examined for cultural material. In areas beyond the tree canopy, auger points were surveyed in by L-P staff using a dGPS; where foliage prevented use of the dGPS, the auger points were measured off the transect line using a 30m tape and surveyed in using a dumpy level (Appendix 2).

7.4.4. RESULTS

7.4.1. In total, 7 cores were drilled along a 11.5m transect between the river bank and the slope of the moraine bluff (FIGURE 3). Cores A1 and A2, drilled 11.5 and 8m from the riverbank respectively, revealed approximately 30cm of brown silty clay underlain by reddish brown silty clay. The latter unit was notably gritty and poorly sorted, containing fine to coarse clasts of sub-rounded sandstone and quartzite and angular calcareous material. The sandstone and quartzite are most probably derived initially from the Old Red Sandstone and

their shape is inherited from these primary deposits; the calcareous material is most probably tufa derived from the immediate springs and streams flowing into the river through the formal gardens (HOWARD 2013). The matrix of the unit also contained small balls of weathered red clay, most probably reworked from the local glacial tills, in turn partly derived from the Old Red Sandstone. The poorly sorted, gritty and clayey nature of the sediments together with the angular nature of the local tufa suggests that the sediment is immature and has not been transported very far before being deposited. Therefore, it has characteristics reminiscent of colluvium derived from the immediate slopes with the upper silty clay merely reflecting soil formation processes acting on the upper part of the sequence.

7.4.2. Core A3 was drilled 4m from the river bank and although the material encountered also comprised brown silty clay, the sediment was cleaner (less clayey), well sorted and friable. The sediments included occasional, matrix-supported sandstone clasts comprising sub-rounded though occasionally angular sandstone (though as mentioned previously, the shape of these sandstones is inherited from the primary deposit of origin). No angular calcareous material was recorded, which gave the previous cores a gritty texture. Given the characteristic described, this silty clay was interpreted as of alluvial origin, most probably deposited by stream processes associated with the small springs draining from the valley-side slopes or with the river when it occupied the channel adjacent to the boathouse.

7.4.3. Since an important sediment junction was clearly present between auger cores A2 and A3 (i.e. the junction between alluvial and colluvial deposition). Core A4 was drilled 6.4m from the river edge and demonstrated that gritty silty clay of colluvial origin was present at this point. However, by core A5 and A6, 5.4m from the river edge, the sediments could be described as brown loam, a well sorted mix of sand, silt and clay and commonly associated with overbank alluvial deposition.

7.4.4. Core A7 was drilled approximately 0.95m from the river edge, immediately adjacent to one of L-P's trenches, which again revealed around 40cm of loam. However, in contrast to the other six cores, which encountered no cultural

materials, this core encountered a pinkish calcareous deposit at 41cm, which was similar in depth to a potential floor deposit encountered in the adjacent trench; for this reason, coring was terminated.

7.4.5. Trench 3 was opened approximately 10m east A2 of the transect line and revealed a silty clay colluvial layer that graded with depth into a sandy clay boulder-rich unit. This latter unit had characteristics that would be expected of the morainic drift.

7.5.5. IMPLICATIONS OF CORING

7.5.1. Auger coring has demonstrated that the 'scheduled' area of the terrace proximal to the moraine slope is covered in a veneer of colluvial material, up to around 1m thick. Trial trenching (030) confirms that this colluvial sediment is underlain by morainic drift.

7.5.2. The terrace has been created on a lobe of moraine material rather than being associated with riverine processes (i.e. river terrace). Immediately to the west of the 'scheduled' area towards the boathouse, the terrace has been truncated by river erosion though the timing of this erosion is unknown.

7.5.3. The colluvial apron does not extend across the entire scheduled area, but appears to be restricted to a zone beyond 6m from the river edge, measured along the line of the transect (in broad terms the area north of the footpath truncating the scheduled area can be considered a zone of colluviation).

7.5.4. No cultural material was recorded in the colluvial material during coring, but depending on its age, it does have the potential to contain reworked archaeological material.

7.5.5. Between the colluvial margin and the river, the area is blanketed by silty clays and loams, which are better sorted and cleaner than the colluvium. It is suggested that this material is associated with alluvial processes (wash) associated with the small springs and streams issuing from the valley-side slopes and also with the river when it occupied the channel feature adjacent to the boathouse.

7.5.6. The alluvial deposits bury Roman remains adjacent to the river. Furthermore,

the presence of potential archaeological material at 41cm depth in core A7 demonstrates that these remains extend beyond the trench excavated by L – P : Archaeology. Such masking of remains may well occur elsewhere adjacent to the river within the 'scheduled' area.

8. Discussion

8.1. CONDITION OF THE REMAINS

8.1.1. The bath building in the west of the site has been severely damaged by previous excavation. The extent of the damage (recorded as cut [204] in trench 2) is not known but it appears to extend east from trench 2 and is at least 1.6m deep.

8.1.2. The upper part of the wall in trench 1 has been robbed but the surviving base is in good condition. The mosaic appears to be in very good condition and has only subsided slightly from the base of the wall.

8.1.3. The cistern is stable but has clearly been extensively rebuilt. No undisturbed Roman deposits survive on the east side of the cistern.

8.1.4. Water was present in trenches 2, 3 and 4. In trench 2 it was only present on the east side of the wall and therefore the mosaic was not affected. Any ephemeral deposits on the east side of the wall, such as buried soil horizons, had been diffused by water action. It is possible that the wall has protected the mosaic from water action.

8.1.5. In trench 3 water was present at the very north end of the trench at the interface between the subsoil and the natural geology. The southern end of the trench, where archaeological deposit (303) was located, was not affected.

8.1.6. Geoarchaeological investigation has proved that there are no remains buried below hillwash in the northern part of the terrace.

8.1.7. In summary it is likely that the remains have been damaged extensively by previous excavation on the site. However, the remaining parts of the structure are in a stable state and sensitive deposits such as the opus signinum wall face and mosaic are not, nor appear to ever have been, in contact with spring water lines. As such the remains are not considered at risk and no immediate action to protect them is suggested.

8.1.8. New spring lines do occasionally appear on the terrace and these should be monitored and redirected if they are seen to be eroding soil around sensitive remains. Trees and shrubs should not be allowed to take root in the areas of the

remains.

8.2. INTERPRETATION OF THE BUILDING REMAINS

8.2.1. The wall in trench 1 is clearly a load bearing outer wall and therefore probably defines the eastern extent of the building. The stone consolidation in trench 2 shows that the building extends further west than the northern buttress. The west wall of the building may be indicated by the slight rise in the path just before it drops down to the boathouse. A similar rise was noted in the path in line with the wall seen in trench 1. Trench 3 did not locate the rear (northern) wall of the building, however disturbed archaeological deposits were recorded at the south end of the trench which suggests the wall may have been close. An approximate outline of the building can be drawn from this information (FIGURE 8). It is relatively small and includes the small room on top of the northern buttress, however, no physical connection was seen with the southern buttress.

8.2.2. The excavation revealed evidence for a mosaic room with painted wall plaster at the east of the building. Although no *in situ* hypocaust structure was discovered the high proportion of box flue tiles in the rubble backfills imply there was a box flue heating system, and the presence of the deep opus signinum bath face in trench 2 makes the interpretation of the structure as a bathhouse beyond question. A general layout of the rooms can be suggested from the limited evidence. The mosaic room may be the entrance/changing (apodyterium) as it is at the easiest approach by foot. The furnace would be at the rear of the building (Hoverd pers.comm) which would suggest that the bath in trench 2 may be the hot plunge (Klemperer pers.comm). The small room on the north buttress does not contain a bath and therefore may be the warm or cold room.

8.2.3. The context of the bathhouse is puzzling. The terrace is far too small for a villa complex and therefore it appears to be a discrete structure. The size and location suggests it is a private bathhouse associated with a villa, comparable to that at Chedworth, but the location of the associated villa at the Weir Gardens is unknown. There are some potential sites: in 1812 a villa complex was discovered at Bishopstone, 3.2km northwest of the site, which included a

mosaic measuring 10m by 10m (Herefordshire SMR 7223); aerial photographs indicate an enclosure and possible stone building at Canon Bridge, 2.5km south of the site on the south bank of the River Wye (Herefordshire SMR 22856); and an Iron Age and Romano-British settlement with stone buildings, wall painting and imported stone columns is recorded 500m east of Kenchester (RAY 2002).

8.2.4. The deposits and rubble around the cistern were too disturbed to indicate any type of structure in the vicinity, however the comparison with the Chedworth nymphaeum is interesting. Both sites are situated at the base of a slope with spring lines. At Chedworth the slope had been cut away to locate and control the springwater and divert it into the cistern where it was then channelled to the baths. There is no evidence for this at Weir Gardens, however the similarities are so striking that it would not be unreasonable to expect a similar system. Pottery has dated the cistern at Chedworth to the 4th century, which concurs with the pottery found by Shoesmith in 1977 which was dated to the late 3rd/4th centuries (SHOESMITH 1980). Although no pottery sherds or other closely datable artefacts were found during the 2014 excavation, a late 3rd/4th century date seems likely.

8.3. FURTHER ARCHAEOLOGICAL WORK

8.3.1. Further analysis is recommended on the ceramic building material. The results of this excavation should be published in a suitable journal such as the Transactions of the Woolhope Naturalists Field Club.

8.3.2. Although the general layout of the site is becoming clearer there are still many unknowns. There are surely further baths which may be linked to the cistern, and also at least one furnace to heat the building and water.

8.3.3. Now that the geology and rubble 'mask' of the remains is more clearly understood a Ground Penetrating Radar (GPR) survey may be the most cost effective way of revealing the plan of the site. Targeted excavation could then inform on the details of the building. Further uncovering of the mosaic, at least to the centre, would allow closer dating and interpretation of the building.

9. Archive

9.1. The paper archive consists of:

- 1 x Drawing Register
- 9 x Drawing Film
- 1 x Photographic Register
- 2 x Negative rolls
- X x prints
- 1 x CD Digital Images and GIS data
- 4 x Trench sheets
- 14 x Context Sheets
- 2 x Context Register

9.1.1. The archive will be stored at Hereford Museum, Broad Street, Hereford HR4 9AU.

SOURCES CONSULTED

CLARK, C.D. & ET AL, 2012. 'Pattern and timing of retreat of the last British-Irish Ice Sheet.'. *Quaternary Science Reviews*, **44**, pp.112–146.

HOVERD, T. & RAY, K., 2011. *The Weir Estate: An Archaeological Assessment and Field Evaluation*. Herefordshire Archaeology.

HOWARD, A.J., 2013. *Geoarchaeological Assessment of the New Weir Estate, Kenchester, Herefordshire*. Landscape Research and Management.

RAY, K., 2002. *Herefordshire in the Roman period*. Birmingham University.

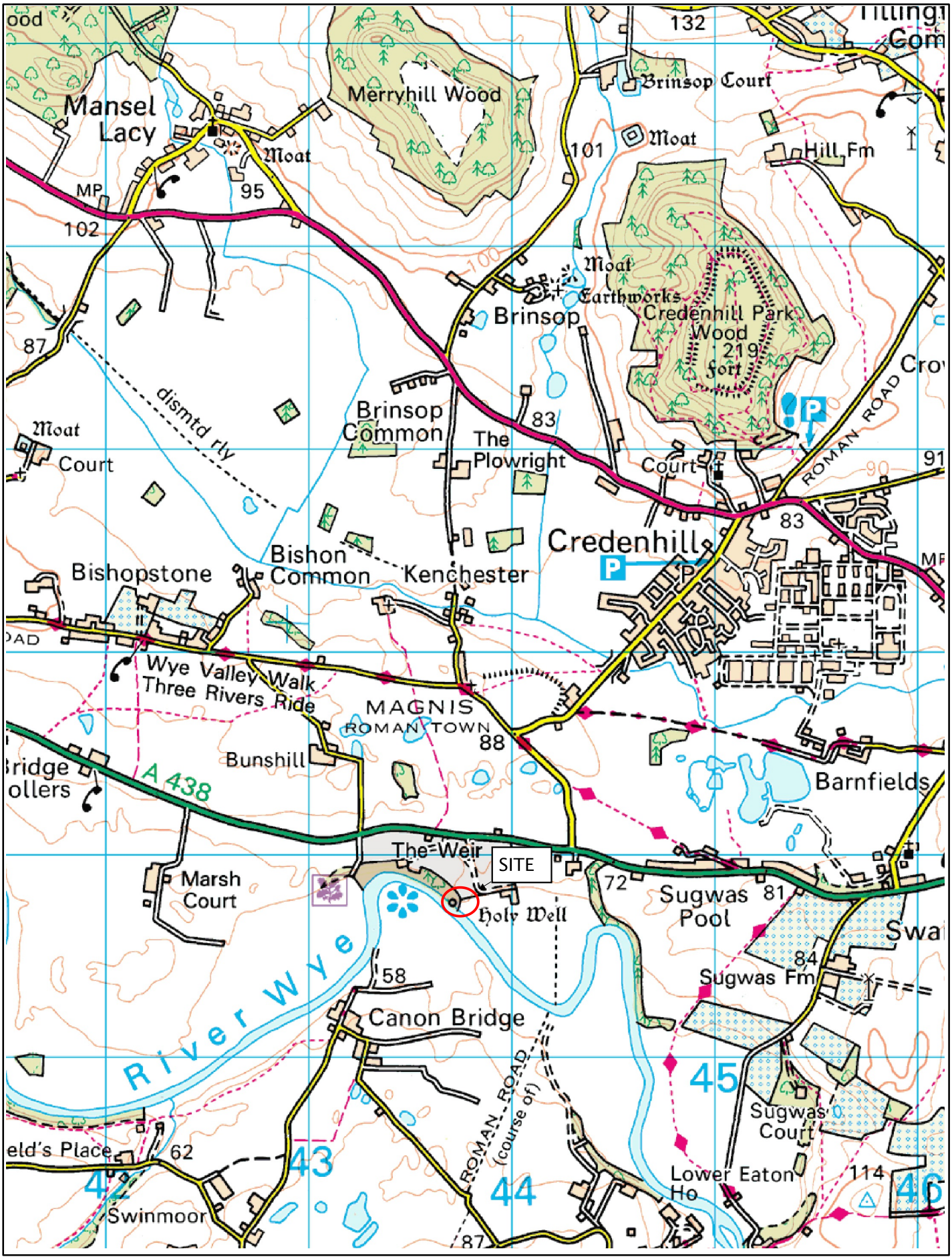
RICHMOND, I.A., 1963. *Observations on the Chedworth Nymphaeum : an Ancient Water-supply in Modern Use*. unpublished.

SHOESMITH, R., 1980. 'The Roman Buildings at New Weir, Hereforedhire'. *Transactions of the Woolhope Naturalists Field Club*, **43**, pp.135–154.

WILLIAMS, M., 2014. *The Weir Estate, Swainshill. Archaeological summary and fieldwork proposals.*

FIGURES

FIGURE 1 // Site Location



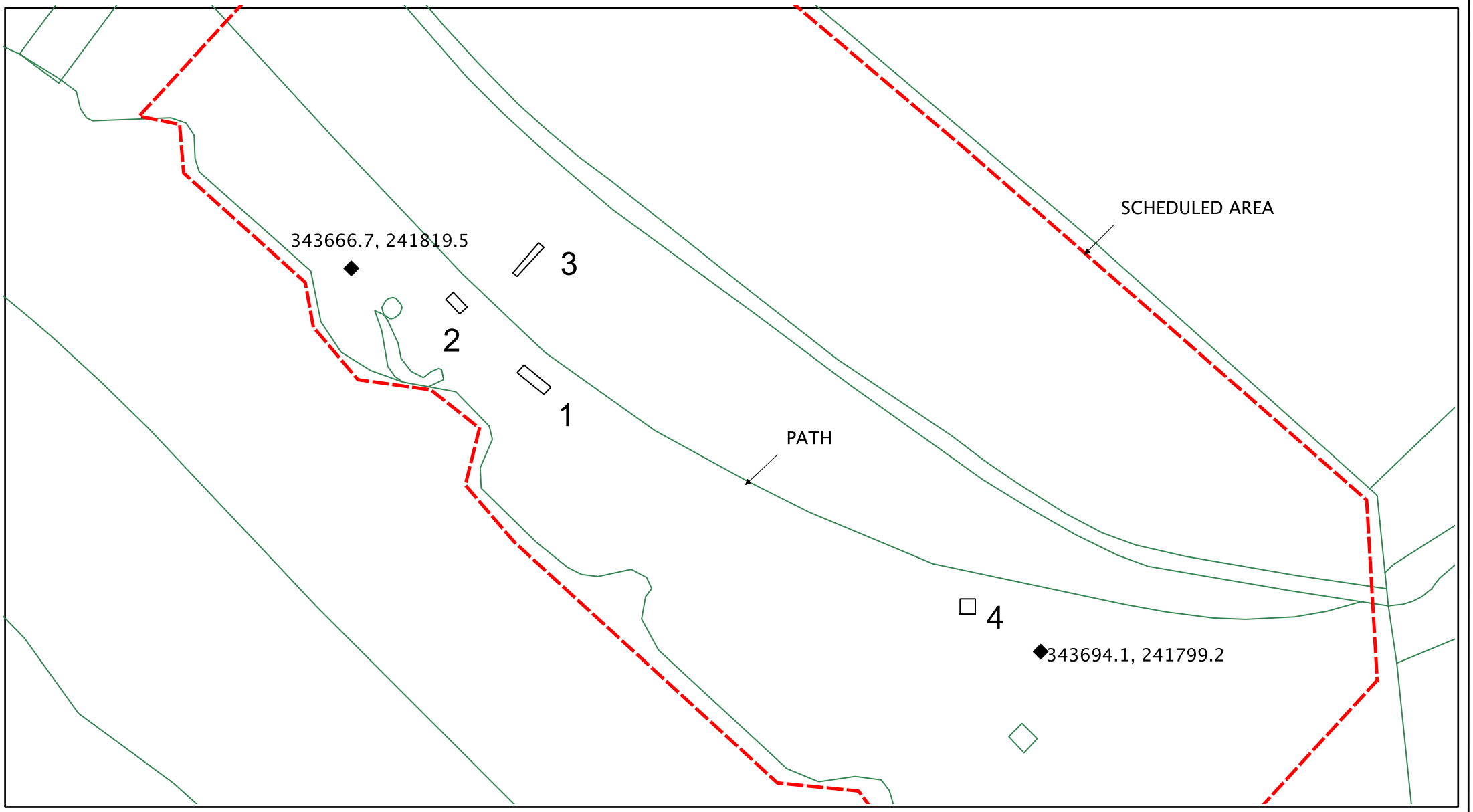
PROJECT // 1716M - The Weir Estate

DESCRIPTION // Site Location

DOC REF: LP1716M-AER-v1

L-P:ARCHÆOLOGY

FIGURE 2 // Site Detail



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0 50 m

N

PROJECT // 1716M - The Weir Estate

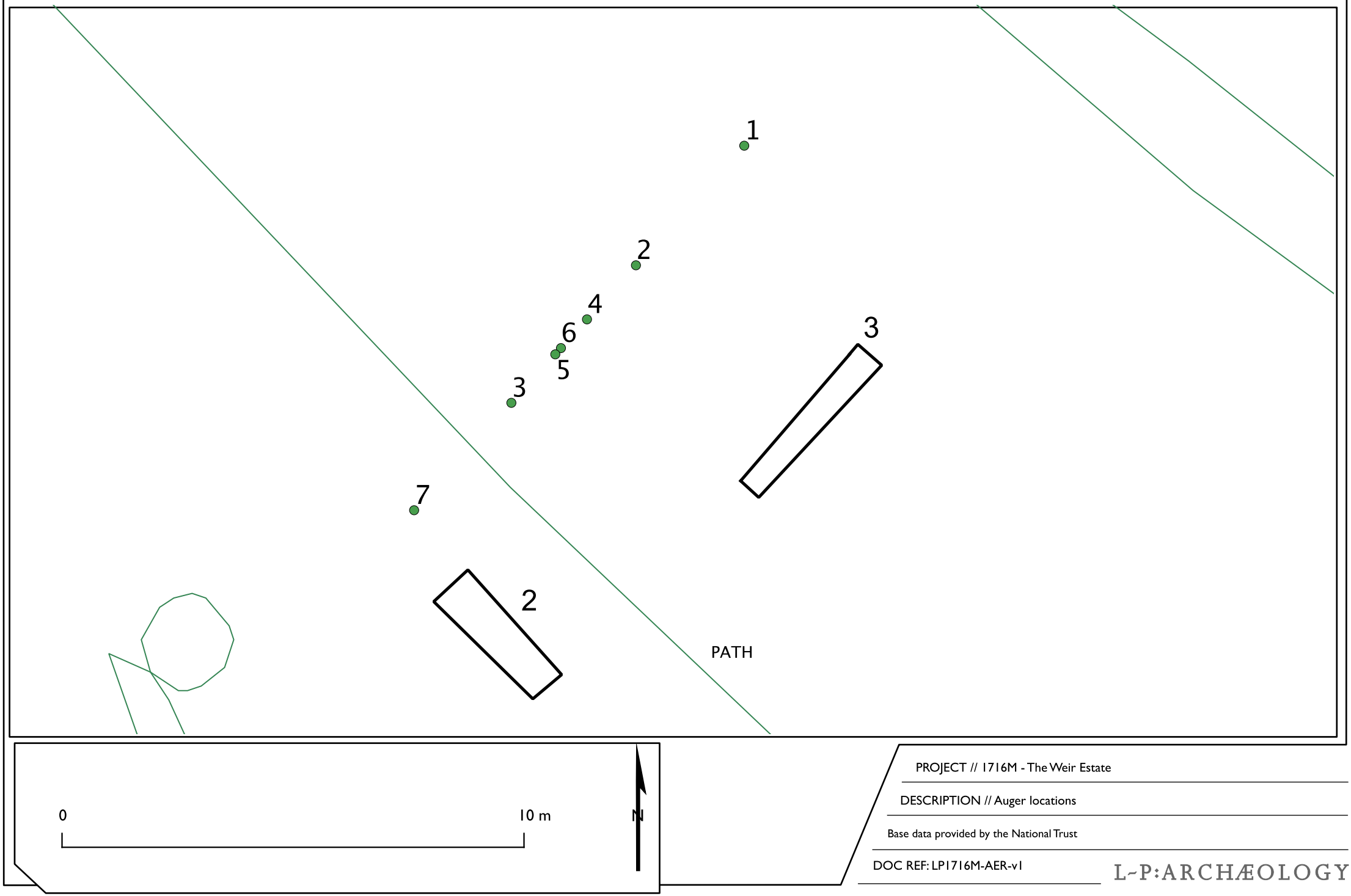
DESCRIPTION // Trench locations

Base data provided by the National Trust

DOC REF: LP1716M-AER-v1

L-P:ARCHÆOLOGY

FIGURE 3 // Auger transect



PROJECT // 1716M - The Weir Estate

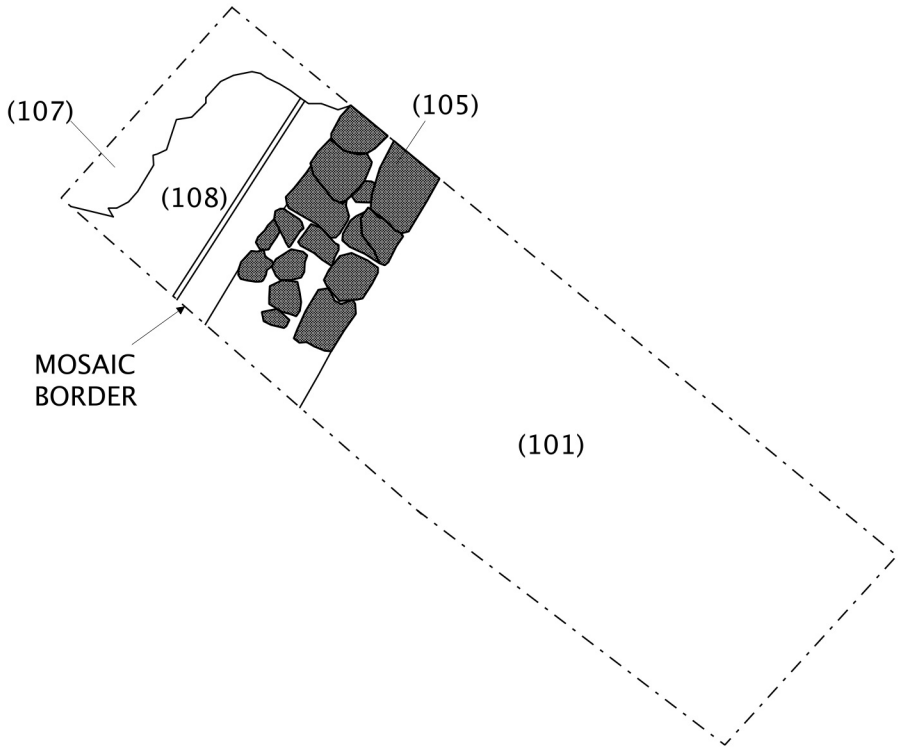
DESCRIPTION // Auger locations

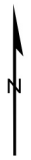
Base data provided by the National Trust

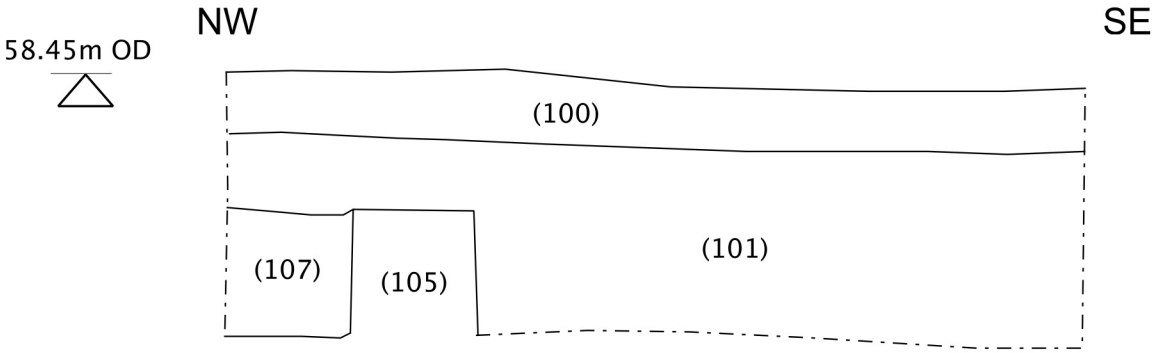
DOC REF: LP1716M-AER-v1

L-P:ARCHÆOLOGY

FIGURE 4 // Trench 1







scale 1:30 @ A4

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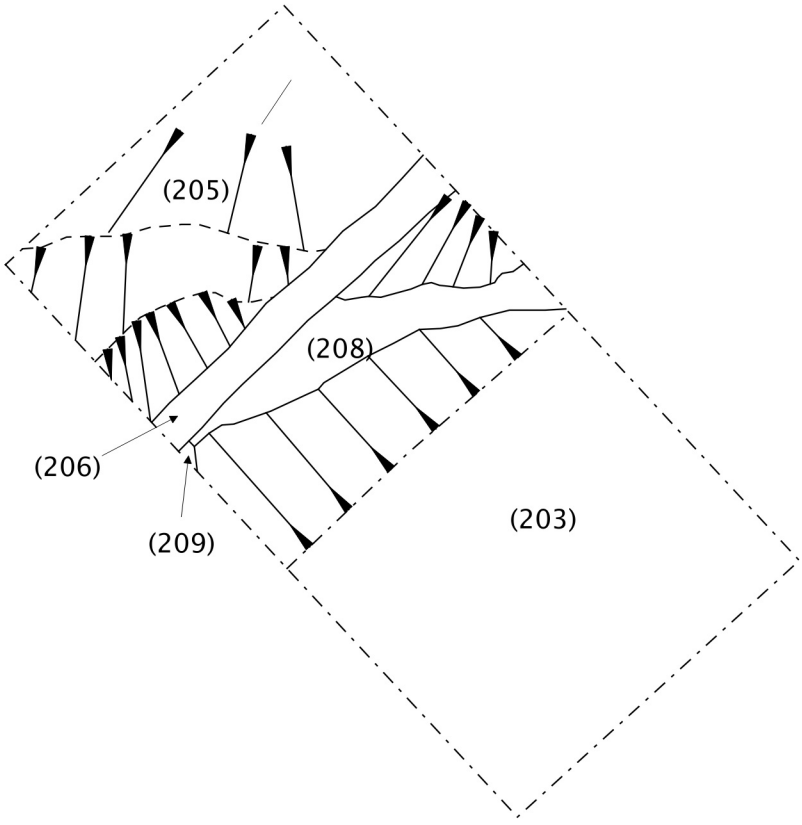
PROJECT // 1716M - The Weir Estate

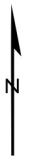
DESCRIPTION // Trench 1 plan and section

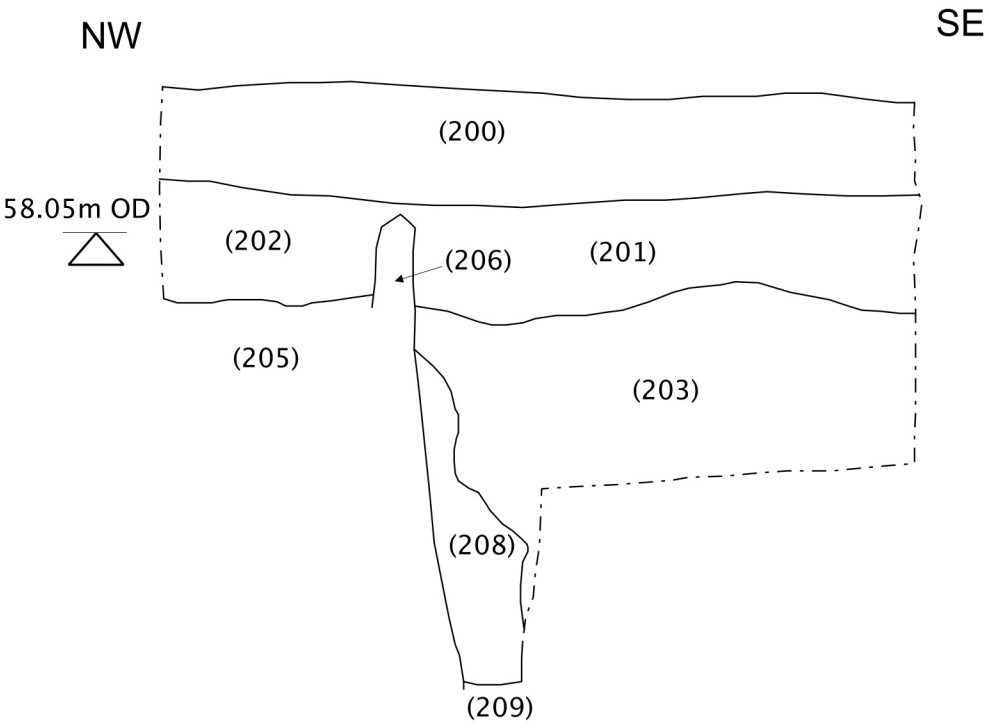
DOC REF: LP1716M-AER-v1

L-P:ARCHÆOLOGY

FIGURE 5 // Trench 2







scale 1:20 @ A4

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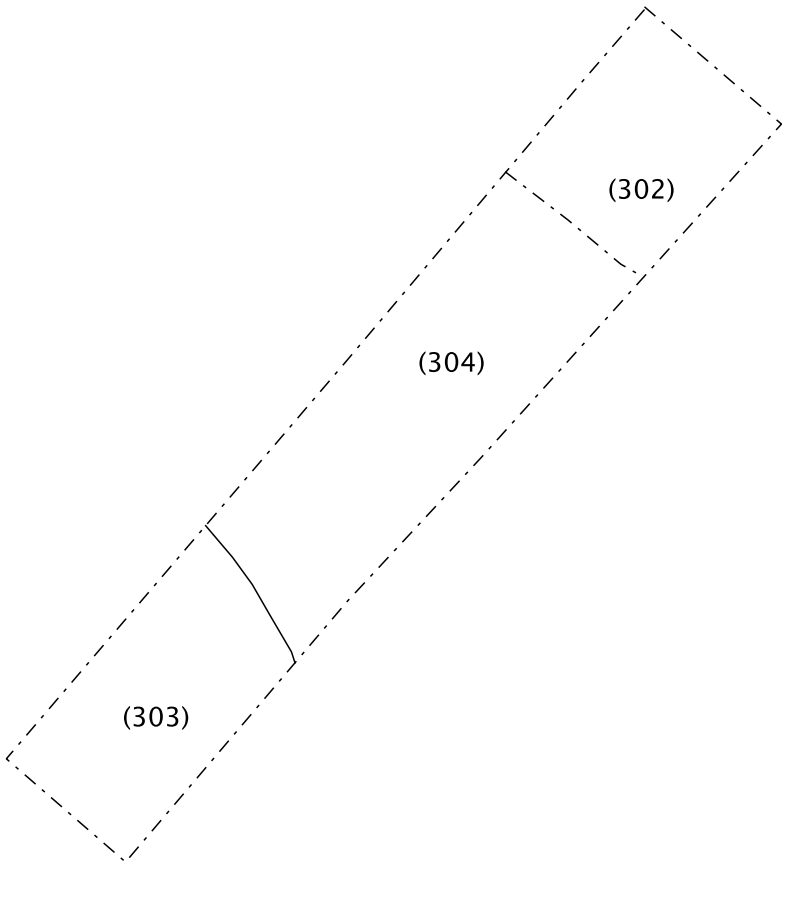
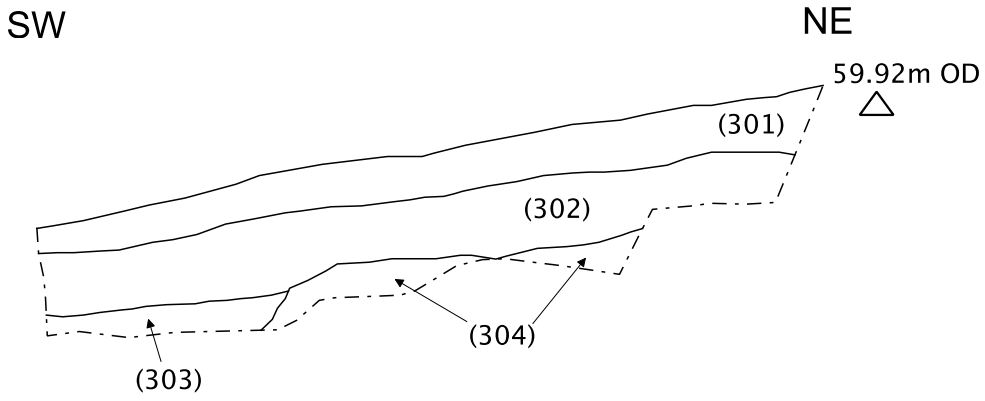
PROJECT // 1716M - The Weir Estate

DESCRIPTION // Trench 2 plan and section

DOC REF: LP1716M-AER-v1

L-P:ARCHÆOLOGY





Scale 1:30 @ A4

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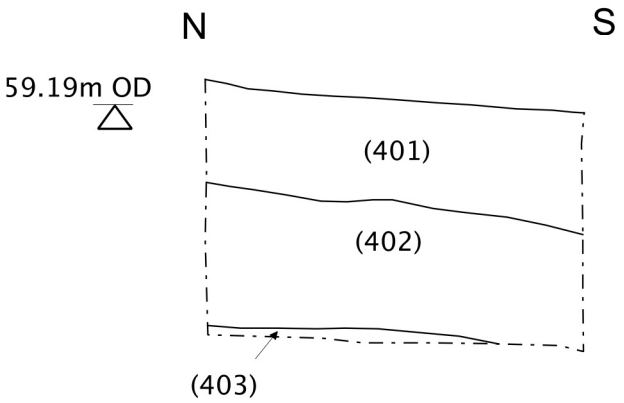
PROJECT // 1716M - The Weir Estate

DESCRIPTION // Trench 3 plan and section

DOC REF: LP1716M-AER-v1

L-P:ARCHÆOLOGY



Scale 1:20 @ A4

0 1 m

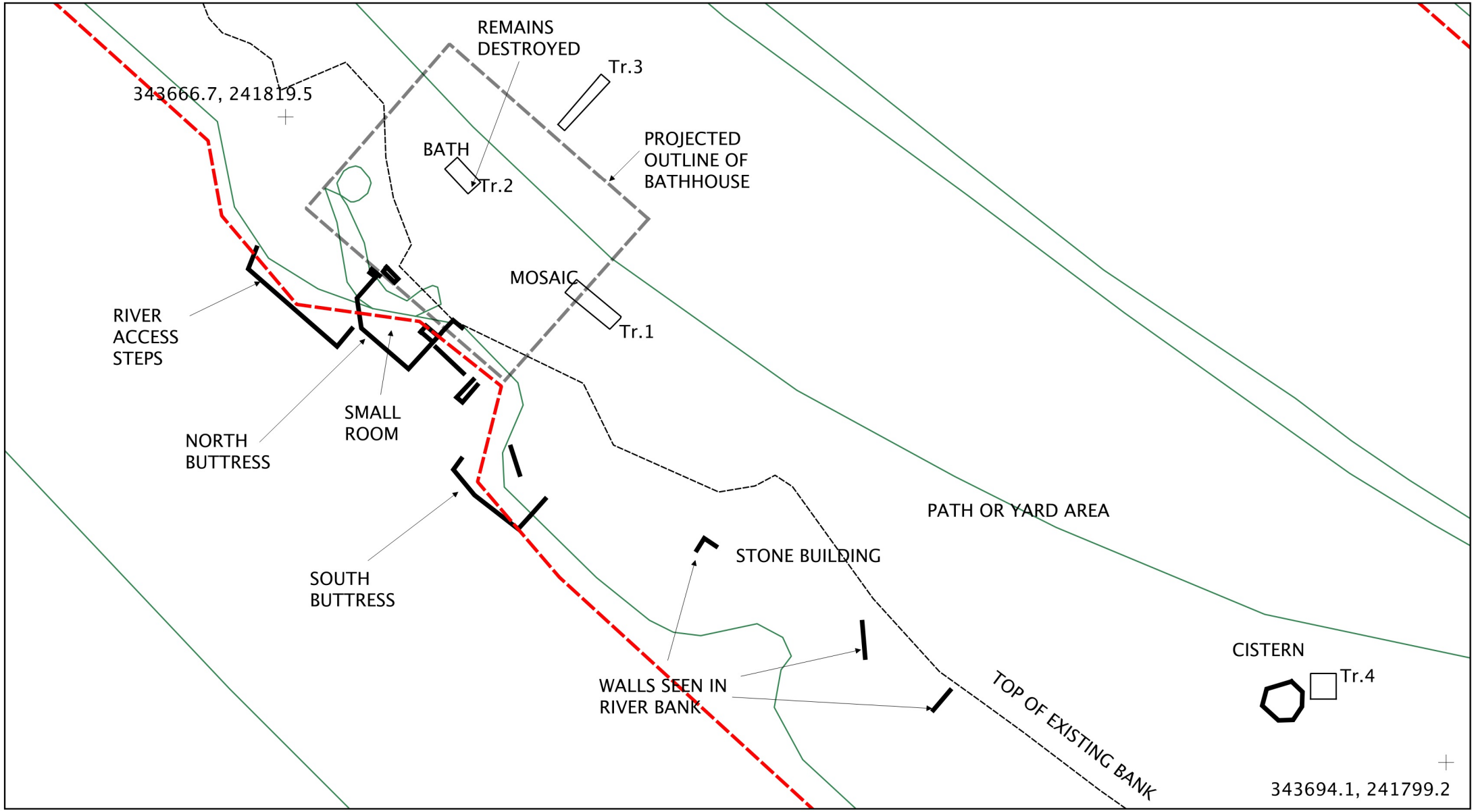
PROJECT // 1716M - The Weir Estate

DESCRIPTION // Trench 4 section

DOC REF: LP1716M-AER-v1

L-P:ARCHÆOLOGY

FIGURE 8 // Archaeological remains



Scale 1:300 @ A4

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PROJECT // 1716M - The Weir Estate

DESCRIPTION // Archaeologial remains on the terrace

DOC REF: LP1716M-AER-v1

PLATES

Plate 1 - Looking SE from path. Tr. 1 in background, Tr 2 in foreground

Plate 2 - East elevation of wall (105) prior to full excavation. 300mm scale

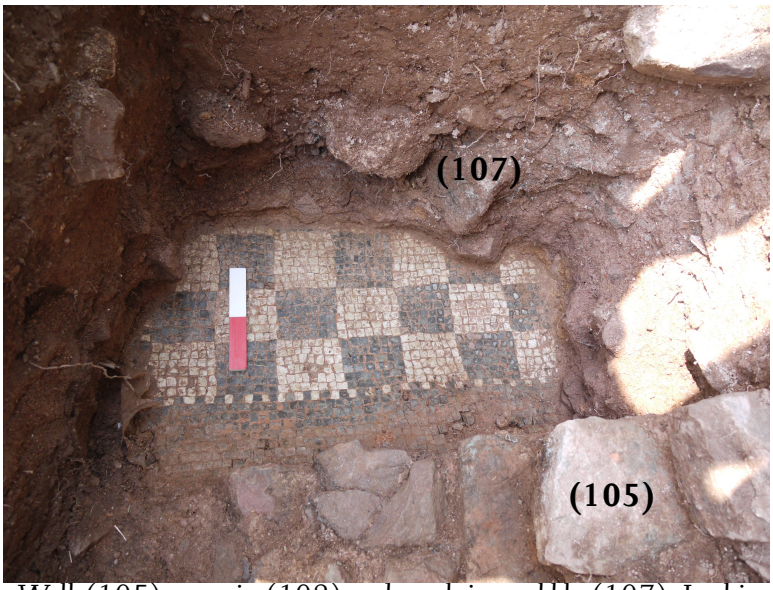

Plate 3 - Wall (105), mosaic (108) and overlying rubble (107). Looking east, 200mm scale

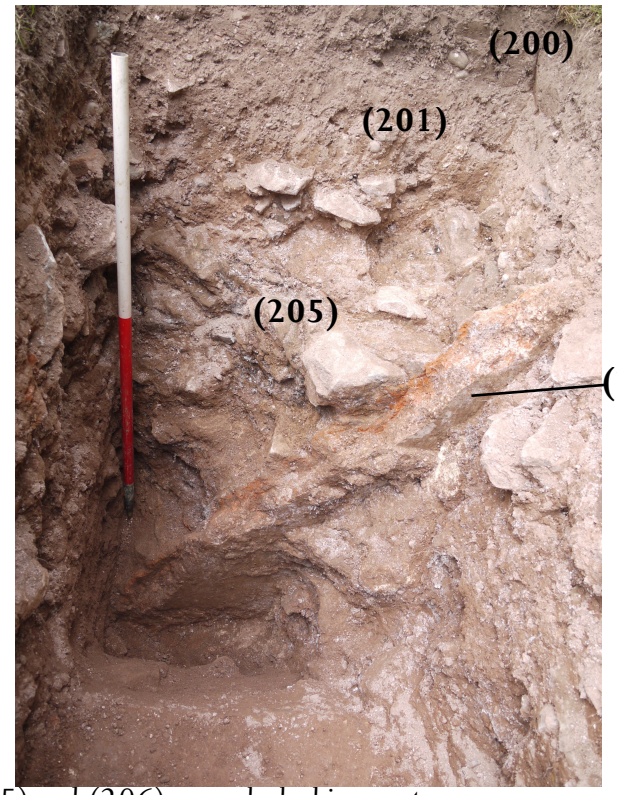

Plate 4 - Structure (205) and (206). m scale, looking west

Plate 5 - Detail of (205) and (206). Note lime deposits.

Plate 6 - Tr 2 prior to full excavation showing (207). 1m scale, looking west

Plate 7 - View of Tr 3 looking SE, prior to extension.

Plate 8 - Tr 3 looking east. 1m scale.

Plate 9 - Tr 4 looking east. 1m scale.

SCHEDULED MONUMENT CONSENT

APPENDIX 1

ENGLISH HERITAGE

WEST MIDLANDS OFFICE

Mr Matthew Williams
L-P Archaeology
The Pump House
Shrewsbury
SY1 2DP

Direct Dial: 0121 625 6820
Direct Fax: 0121 625 6821

Our ref: S00087584

4 July 2014

Dear Mr Williams

Ancient Monuments and Archaeological Areas Act 1979 (as amended); Section 2 control of works
Application for Scheduled Monument Consent

NEW WEIR ROMAN SITE, KENCHESTER, HEREFORD
Scheduled Monument No: SM HE 335, HA 1005273
Our ref: S00087584
Application on behalf of The National Trust

1. I am directed by the Secretary of State for Culture, Media & Sport to advise you of the decision regarding your application for Scheduled Monument Consent dated 13 June 2014 in respect of proposed works at the above scheduled monument concerning augering transect of five holes and four test pits totalling up to 16 square metres. The works were detailed in the following documentation submitted by you:

- rationale for augering programme, location plan and document 'Archaeological Summary and Fieldwork Proposals' by L~P Archaeology that collectively comprise the Project Design.

2. In accordance with paragraph 3(2) of Schedule 1 to the 1979 Act, the Secretary of State is obliged to afford you, and any other person to whom it appears to the Secretary of State expedient to afford it, an opportunity of appearing before and being heard by a person appointed for that purpose. This opportunity was offered to you by English Heritage and you have declined it.

3. The Secretary of State is also required by the Act to consult with the Historic Buildings and Monuments Commission for England (English Heritage) before deciding whether or not to grant Scheduled Monument Consent. English Heritage considers the effect of the proposed works upon the monument to be archaeological excavation supported by a full research design which reasonably justifies the controlled destruction of buried archaeological evidence. This demands the detailed professional

recording and analysis of the results and their preservation in archival and published form in order to increase understanding of the monument and archaeology of the period.

I can confirm that the Secretary of State is agreeable for the works to proceed providing the conditions set out below are adhered to, and that accordingly Scheduled Monument Consent is hereby granted under section 2 of the 1979 Act for the works described in paragraph 1 above, subject to the following conditions:

(a) The works to which this consent relates shall be carried out to the satisfaction of the Secretary of State, who will be advised by English Heritage. At least 1 weeks' notice (or such shorter period as may be mutually agreed) in writing of the commencement of work shall be given to Bill Klemperer (07867526564) in order that an English Heritage representative can inspect and advise on the works and their effect in compliance with this consent.

(b) All those involved in the implementation of the works granted by this consent must be informed by the owner, occupier and/or developer that the land is designated as a scheduled monument under the Ancient Monuments and Archaeological Areas Act 1979 (as amended); the extent of the scheduled monument as set out in both the scheduled monument description and map; and that the implications of this designation include the requirement to obtain Scheduled Monument Consent for any works to a scheduled monument from the Secretary of State prior to them being undertaken.

(c) Equipment and machinery shall not be used or operated in the scheduled area in conditions or in a manner likely to result in damage to the monument/ ground disturbance other than that which is expressly authorised in this consent.

(d) The works to which this consent relates shall be carried out only by Matt Williams of L~P Archaeology and his nominated excavation team.

(e) The project design (including analysis, post-excavation and publication proposals) for which consent is granted shall be executed in full, unless variations have been agreed in writing with English Heritage.

4. By virtue of section 4 of the 1979 Act, if no works to which this consent relates are executed or started within the period of five years beginning with the date on which this consent was granted (being the date of this letter), this consent shall cease to have effect at the end of that period (unless a shorter time period is set by a specific condition above).

THE AXIS 10 HOLLIDAY STREET BIRMINGHAM B1 1TG

Telephone 0121 625 6820 Facsimile 0121 625 6821
www.english-heritage.org.uk

ENGLISH HERITAGE

WEST MIDLANDS OFFICE

5. This letter does not convey any approval or consent required under any enactment, bye law, order or regulation other than section 2 of the Ancient Monuments and Archaeological Areas Act 1979.

6. Your attention is drawn to the provisions of section 55 of the 1979 Act under which any person who is aggrieved by the decision given in this letter may challenge its validity by an application made to the High Court within six weeks from the date when the decision is given. The grounds upon which an application may be made to the Court are (1) that the decision is not within the powers of the Act (that is, the Secretary of State has exceeded the relevant powers) or (2) that any of the relevant requirements have not been complied with and the applicant's interests have been substantially prejudiced by the failure to comply. The "relevant requirements" are defined in section 55 of the 1979 Act: they are the requirements of that Act and the Tribunals and Inquiries Act 1971 and the requirements of any regulations or rules made under those Acts.

Yours sincerely

W.D. Klemperer

Bill Klemperer
Principal Inspector of Ancient Monuments
E-mail: bill.klemperer@english-heritage.org.uk
For and on behalf of the Secretary of State for Culture, Media and Sport

cc Julian Cotton and Tim Hoverd, Herefordshire Archaeology, Blue School House, Hereford.

THE AXIS 10 HOLLIDAY STREET BIRMINGHAM B1 1TG

Telephone 0121 625 6820 Facsimile 0121 625 6821
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OASIS FORM

APPENDIX 2

OASIS DATA COLLECTION FORM: England

List of Projects | Manage Projects | Search Projects | New project | Change your details | HER coverage | Change country | Log out

Printable version

OASIS ID: lparchae1-190959

Project details

Project name	Weir Gardens, Herefordshire
Short description of the project	Four trial trenches were excavated to see if the Roman remains are at risk
Project dates	Start: 21-07-2014 End: 25-07-2014
Previous/future work	Yes / Not known
Any associated project reference codes	1716M - Contracting Unit No.
Type of project	Field evaluation
Site status	Scheduled Monument (SM)
Current Land use	Other 5 - Garden
Monument type	BATHHOUSE Roman
Significant Finds	OPUS SIGNINUM Roman
Significant Finds	CERAMIC BUILDING MATERIAL Roman
Significant Finds	TESSERAE Roman
Methods & techniques	"Augering","Test Pits"
Development type	Assessing risk to remains from groundwater
Prompt	Landowner (National Trust)
Position in the planning process	Not known / Not recorded

Project location

Country	England
Site location	HEREFORDSHIRE HEREFORDSHIRE HEREFORD Weir Gardens
Postcode	HR4 7QF
Study area	2700.00 Square metres

Site coordinates	SO 435 418 52.0712643045 -2.82440457652 52 04 16 N 002 49 27 W Point
Height OD / Depth	Min: 58.50m Max: 59.50m

Project creators

Name of Organisation	L - P : Archaeology
Project brief originator	National Trust
Project design originator	L - P : Archaeology
Project director/manager	Matthew Williams
Project supervisor	Matthew Williams
Type of sponsor/funding body	National Trust

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Evaluation Report Weir Gardens Swainshill
Author(s)/Editor(s)	Williams, M.
Other bibliographic details	LP1716M-AER-v1.2
Date	2014
Issuer or publisher	L - P : Archaeology
Place of issue or publication	Shrewsbury
Description	A4 portrait pdf document.

Entered by	Matthew Williams (m.williams@lparchaeology.com)
Entered on	25 September 2014

OASIS:

Please e-mail English Heritage for OASIS help and advice