

CPAT Report No. 1830




Wrexham Crematorium

Archaeological Evaluation



YMDDIRIEDOLAETH ARCHAEOLEGOL CLWYD-POWYS
CLWYD-POWYS ARCHAEOLOGICAL TRUST

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 with the Chartered Institute for Archaeologists

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Summary

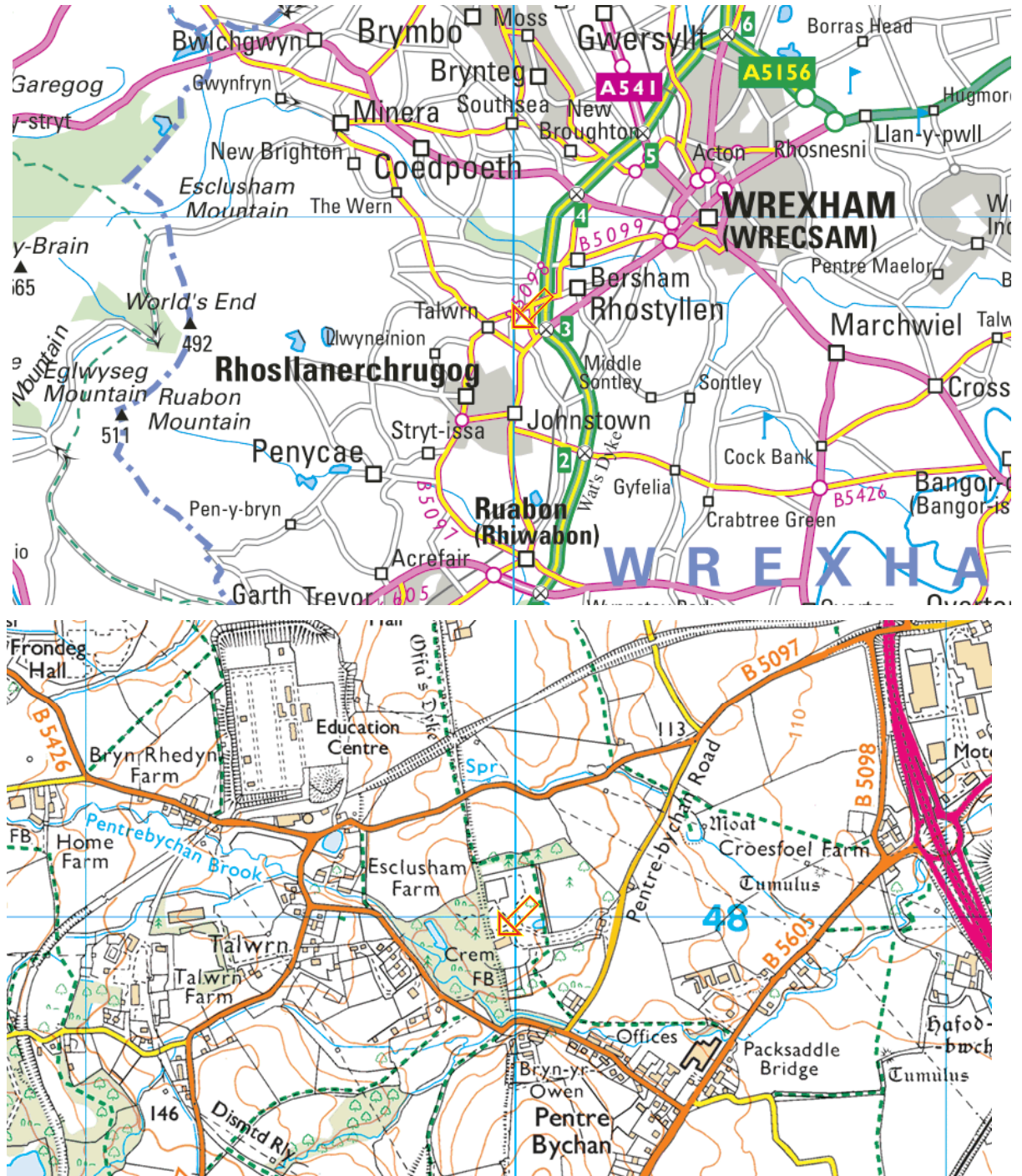
In October 2021, Clwyd-Powys Archaeological Trust undertook a trial trench evaluation prior to the installation of a concrete pad to facilitate the upgrading of the furnaces at Wrexham Crematorium, due to its proximity to the scheduled monument of Offa's Dyke. Cadw required a 5m by 2m trench to be mechanically excavated within the proposed construction area to investigate its archaeological potential. Beneath overburden and a brick feature, redeposited clay was discovered which might derive from eroded deposits from Offa's Dyke bank. As this deposit is no longer in situ, and c.10m away from the dyke, it was decided that there was no significant threat to the archaeological resource.

Crynodeb

Fis Hydref 2021, bu Ymddiriedolaeth Archaeolegol Clwyd-Powys yn cynnal gwerthusiad rhych arbrofol ymlaen llaw i osod pad concrit er mwyn hwyluso gwaith uwchraddio ffwrneisiau yn Amlogsgfa Wrecsam, oherwydd ei fod yn agos at heneb restredig Clawdd Offa. Roedd Cadw wedi galw am gloddio rhych 5m wrth 2m yn fecanyddol o fewn yr ardal adeiladu arfaethedig i ymchwilio i'w photensial archaeolegol. O dan y gorlwyth a nodwedd o frics, darganfuwyd clai a oedd wedi'i ailddyddodi, o bosibl yn deillio o ddyddodion oedd wedi erydu o Glawdd Offa. Gan nad yw'r dyddodyn hwn yn ei le mwyach, a gan ei fod yn rhyw 10m i ffwrdd o'r clawdd, penderfynwyd nad oedd yna unrhyw fygythiad sylweddol i'r adnodd archaeolegol.

1 Introduction

1.1. Clwyd-Powys Archaeological Trust was appointed by Wrexham County Borough Council (WCBC), to design a programme of investigative work prior to the construction of a concrete plinth at the north-western corner of the crematorium. The site is located adjacent to Offa's Dyke scheduled monument (NGR: SJ 29940 47928) at Pentre Bychan Crematorium (also called Wrexham Crematorium), Pentre Bychan, Wrexham LL14 4EP (Figure 1).



Contains Ordnance Survey data © Crown copyright and database right 2018

Figure 1 Location of Pentre Bychan Crematorium, Wrexham

- 1.2. Scheduled monument consent (SMC) was required because of proximity to the nationally protected section of the dyke known as DE137 *Offa's Dyke: Pentre-Bychan Hall Section, extending 540m S from Bron-Wylfa* which lies adjacent to the Crematorium. Cadw were consulted and their inspector advised that a trial trench would be required prior to a planning application and SMC for the development, so that the heritage significance of the deposits that would be disturbed could be determined.



Figure 2 Location of investigation area with approximate alignment of the dyke, crematorium buildings, and scheduled monument area outlined in red

2 Aims & Objectives

- 2.1. The aim of the investigation was to identify whether any significant archaeological remains might be harmed by the proposed ground reduction for a concrete plinth. Figure 2 shows the detailed location for the area of investigation.
- 2.2. The objectives were to determine the extent, state of preservation, date, character, function and group value of any archaeological remains, and to produce a deposit model, as well as assessment of the heritage significance. These results would inform Cadw as to whether the proposed works can be permitted, and whether subsequent investigation might be required as mitigation for the construction programme.

3 Methodology

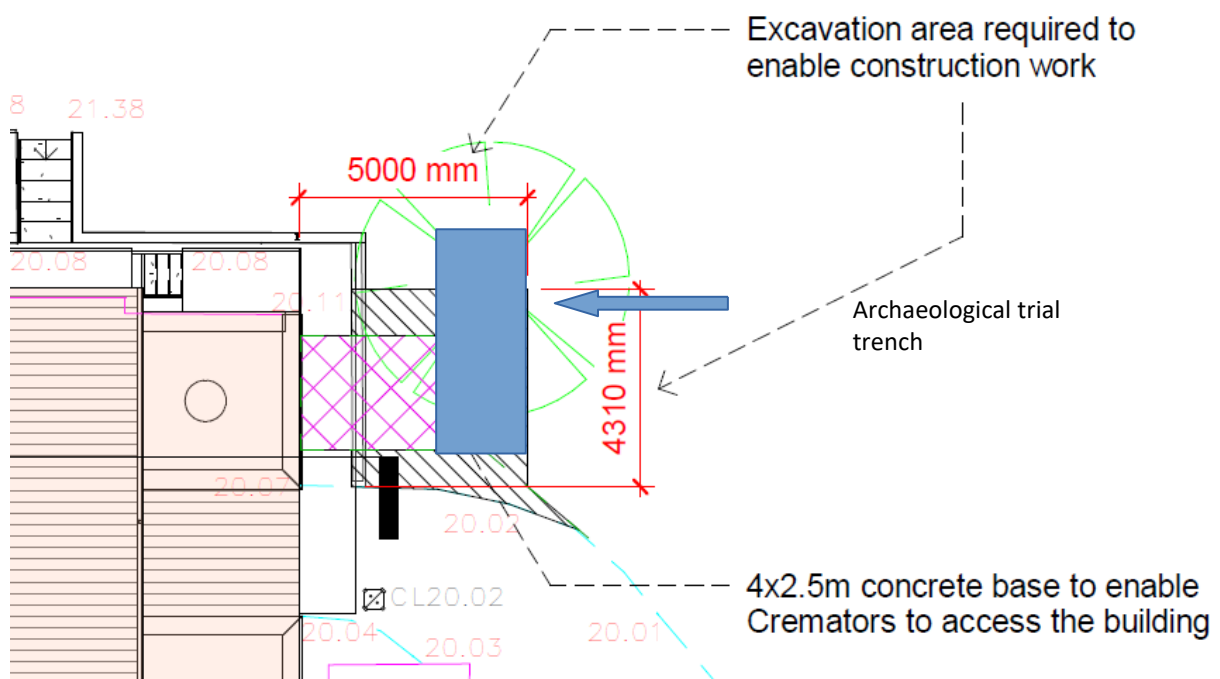


Figure 3 archaeological trench projected over concrete plinth and excavation area

- 3.1. Figure 3 shows the proposed location of the trial trench aligned north-east to south-west.
- 3.2. The evaluation consisted of a 2m x 5m trench that was dug by machine, with manual excavation when deposits of potential sensitivity were uncovered.

4 Historical Background

- 4.1. The Crematorium at Pentre Bychan was built in the mid to late 1960s and was constructed partially into Offa's Dyke, a monumental linear earthwork believed to be dated to the 8th Century. It is said to have been commissioned by the eponymous King Offa; a King of Mercia that ruled in the late 8th Century. Modern archaeological research has challenged this traditional interpretation. Through archaeological and historical analysis, it has become suspect whether this is only a late 8th century military installation, and recent investigations have raised questions as to its origins. Dates at least as early as the 6th century have been produced through analysis of excavated dyke material.

- 4.2. The Crematorium was built on the site of Pentre Bychan Hall, believed to have been first established in the 17th Century. In order to construct the buildings at Pentre Bychan Hall, some disturbance to the dyke occurred. The Walled Garden from this period is still standing and is used today as a memorial garden for the families using the crematorium. Pentre Bychan Hall was rebuilt in the 19th century at the same site. The Hall was demolished in 1962. Within the modern crematorium grounds, there is an 18th Century dovecote associated with the Hall that is still standing.
- 4.3. During the 1960s, the current crematorium building was built on the site of Pentre Bychan Hall to service the Wrexham County Borough and surrounding areas. During this time, Offa's Dyke earthworks may have again been truncated by construction, as the crematorium furnaces required an extension to the existing building at its juncture with the line of the dyke.



Figure 4 Trench outline pre-excavation, viewed from the east. Photo CPAT 4954-0002

5 Archaeological Evaluation

- 5.1. The archaeological evaluation was conducted on the 18th of October 2021, in accordance with the Chartered Institute for Archaeologists' (CIfA) (2014) *Standard and Guidance for Archaeological Field Evaluation*. (2014). It was scheduled for 2 days but due to low archaeological resource identifiable in the evaluation trench, it was concluded by the end of the first day of excavation.
- 5.2. A 5m x 2m trench was excavated within 15m of a scheduled monument section (SM DE137) of Offa's Dyke, and may have been within 10m of the ditch cut of Offa's Dyke (see Figures 2 - 5). The trench reached a maximum depth of 1.15m (Figure 8). A total of 6 contexts were identified.



Figure 5 Trench outline pre-excitation, showing proximity to Offa's Dyke (bank is hidden in trees), viewed from the south. Photo CPAT 4954-0003

Deposit sequence and interpretation

- 5.3. The top soil (identified as context (01)) was a dark grey clayey silt that was densely packed with ceramic building material, and continued to approximately 0.3m below surface level at its maximum depth.
- 5.4. After stripping off the topsoil, complete bricks were exposed, some of which were in situ as a single course (context (02)). These bricks were approximately 65mm tall, and may have been 68mm (the former imperial standard brick size dating before 1965) but due to abrasive erosion from the surrounding compacted soil it could not be determined with certainty if the bricks had metric or imperial measurements.
- 5.5. The bricks comprised a limited spread in the south-western corner of the trench, and appeared to be within a cut (context [05]) made into the underlying clay deposit (03) as a levelling event. This may indicate that the bricks were part of a levelled floor, possibly associated with the pre-1960s buildings, such as one of the iterations of Pentre Bychan Hall.
- 5.6. After removal of the brick layer, it became apparent that the clay material underneath was very compacted, causing the mechanical excavator to struggle. It was decided to switch to a toothed bucket (see Figure 6) with careful excavation of a narrow area to create a smaller strip to test the archaeological potential of the context. This was to minimise damage to any significant archaeological deposit whilst maximising the depth that could be reached in the time available.



Figure 6 toothed bucket penetrating compact layer beneath brick surface. Photo CPAT 4954-0006

- 5.7. Beneath the brickwork a thick deposit of clay was found (context (03), and initial interpretation suggested this might derive from redeposited bank material which had eroded or been displaced from the adjacent section of Offa's Dyke (Figure 7a). This redeposited material ranged in thickness from 0.3m to 0.7m (visible in Figure 7b within the blue lines) from surface level, but approximately 0.35m in total depth from top to bottom of the context.
- 5.8. Context (03) was truncated at two points: around the brick towards the west end of the trench (context [05]) and towards the tarmac in the eastern part of the trench (context [06]). The eastern truncation is probably due to levelling associated with the crematorium and its yard area. Overall, the significance of these truncations were small and easily accounted for by studying the surrounding area. The spread of the redeposited earth probably represents the erosive effects of weathering on the earthwork over the centuries before the construction of any building at what is now Pentre Bychan Crematorium, however the iron panning within the redeposited earth implies an instance where a turf or similar organic soil was buried. This could be a levelling event associated with the construction of the original Pentre Bychan Hall, or it could be dyke material that was spread during an earlier era.
- 5.9. The layer beneath the redeposited clay was identified as natural geology (context (04)), clay with some ephemeral iron panning at the interface between it and the deposit above. The ephemeral iron panning could be indicative of a buried ancient turf or surface level soil, which supports the idea that the deposit above is redeposited. The clay natural continued from 0.7m and continued beyond the total depth of excavation (Figure 8).



Figure 7a Trench section. View from the north. No annotation. Photo CPAT 4954-0008



Figure 7b Trench Section with annotations. Red = probable truncation, blue = extent of redeposited bank.

- 5.10. Figures 7a & 7b show trench section with brick in situ. The blue line shows the extent of the potential redeposited bank material from the original construction of Offa's Dyke, but no datable evidence was discovered during excavation of this layer. The red line shows truncation; the western truncation may be the levelling efforts from an earlier phase of usage (such as a pathway associated with Pentre Bychan Hall), whereas the eastern red line may be a later truncation during the installation of a tarmac yard for the crematorium.



Figure 8 Trench section showing stratigraphy and depth reached; note (03) in-situ bricks. Photo CPAT 4954-0012

6 Conclusions

- 6.1. The archaeological resource revealed in this trench has been evaluated as relatively insignificant. A layer of compacted clay may represent redeposited bank material associated with Offa's Dyke, but it is sterile and has no discrete features of archaeological value. There was no material or features from which usable data can be extrapolated to help develop understanding of Offa's Dyke.
- 6.2. The excavation of the area designated for a concrete plinth poses no risk of significant damage to the scheduled monument, nor does it require any mitigation that minimises loss through irreversible damage to the archaeological resource.

7 Archive deposition Statement

- 7.1. The project archive has been prepared according to the CPAT Archive Policy and in line with the CIfA *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives guidance* (2014). The digital archive only will be deposited with the Historic Environment Record, Clwyd-Powys Archaeological Trust and the paper/drawn/digital archive with the National Monuments Record (RCAHMW).

Archive summary

1 Trench recording sheet

1 Drawing

15 Photographs, CPAT film no. 4954

CPAT Event PRN: 140383

Appendix 1: CPAT WSI 2567

1 INTRODUCTION

The Clwyd-Powys Archaeological Trust (CPAT) have been instructed by Barry Hellen, on behalf of the Wrexham County Borough Council (WCBC), to design a programme of archaeological investigation work prior to the construction of a concrete plinth at the north-western corner of the crematorium. The site is located adjacent to Offa's Dyke scheduled monument (NGR: SJ 29940 47928) at Penrebychan Crematorium, Pentre Bychan, Wrexham LL14 4EP (Figures 1 and 2). The work will require scheduled monument consent (SMC) process for DE137 *Offa's Dyke: Pentre-Bychan Hall Section, extending 540m S from Bron-Wylfa* which lies adjacent.

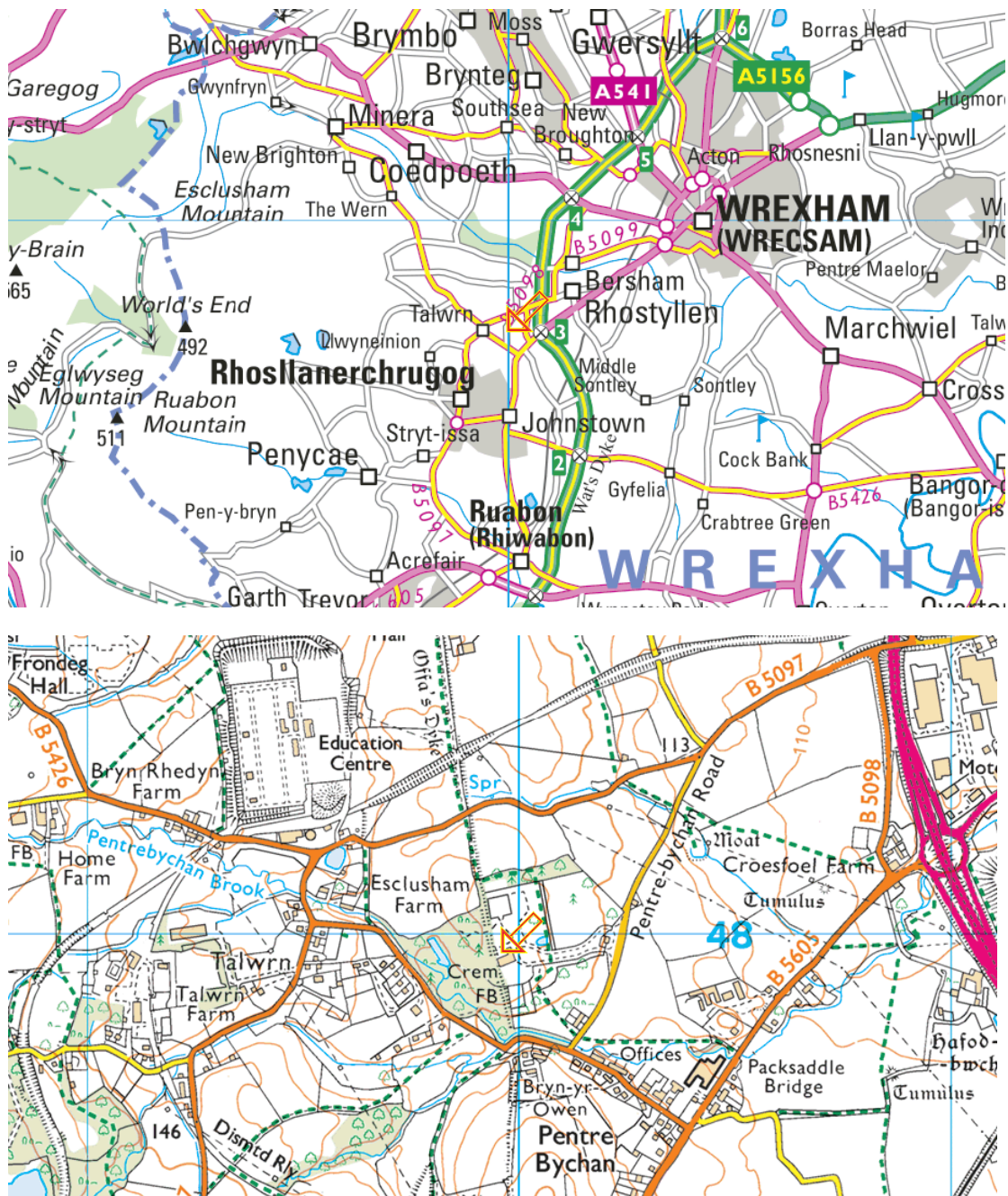


Figure 9 Site location

This Written Scheme of Investigation (WSI) has been designed to detail the archaeological work that will be required to investigate the impact of the proposed development on the archaeological resource (Figure 2). A single trench c.2 x 5m will be sited across the zone of impact (5 x 4.3m) to assess whether archaeologically sensitive remains survive within this area.

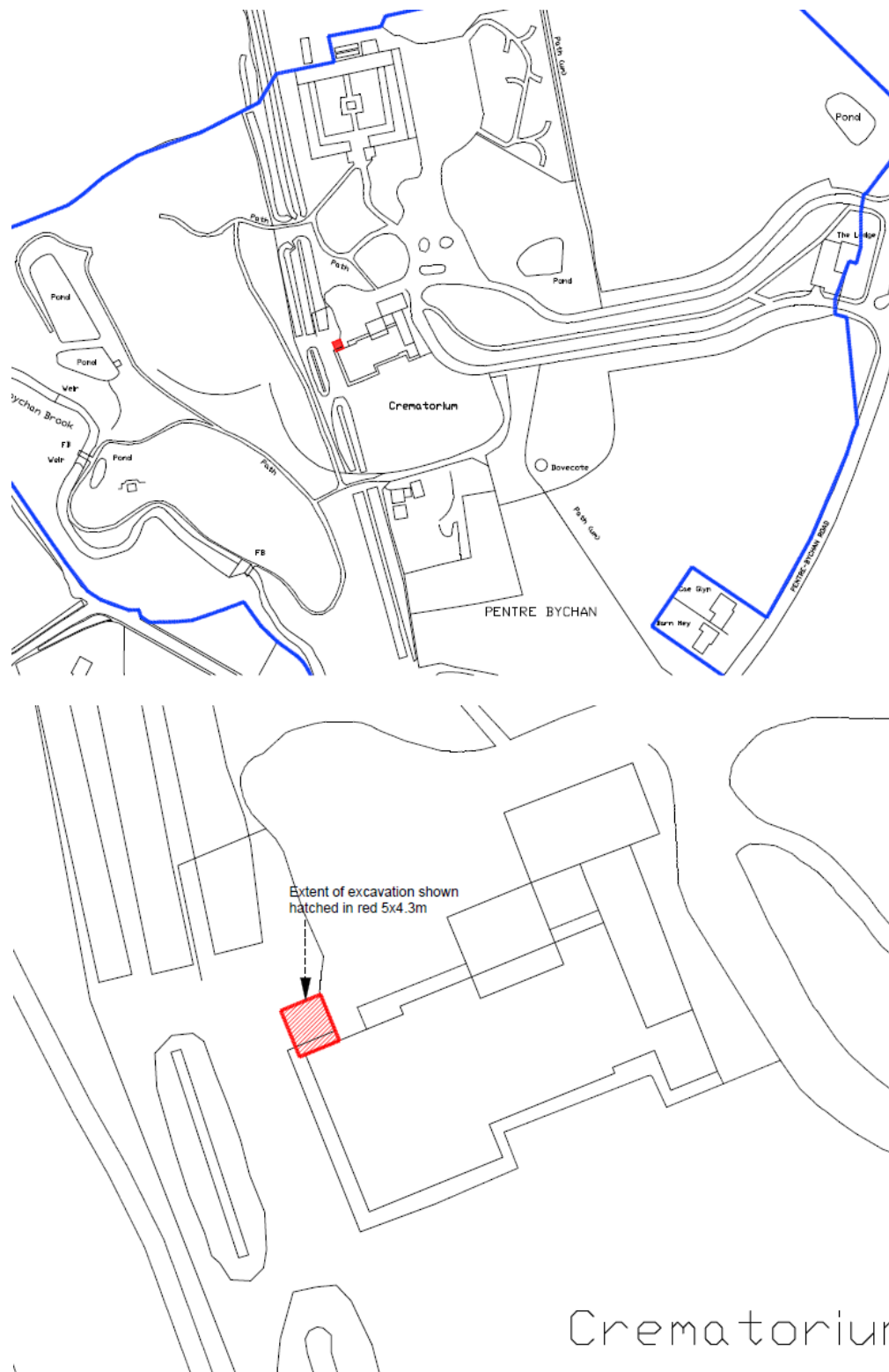


Figure 10 Detail showing area of proposed development

2 BACKGROUND

The scheduled area includes a length of Offa’s Dyke which lies immediately to the west of the crematorium, with sections of SM DE137 to the north and south. The bank is narrow and steeply profiled, suggesting that it was truncated when the crematorium was constructed and the visible remains may not be part of the original bank, but have perhaps been reconsolidated. The ditch is largely infilled within what is now a garden of contemplation.¹

The Cadw inspector, Ashley Batten, met with the architects from WCBC on site in late July 2021, and it was agreed that an archaeological trial trench would need to be excavated prior to any construction in order to establish the deposit sequence, and whether any archaeologically significant remains might lie preserved within the proposed development area.

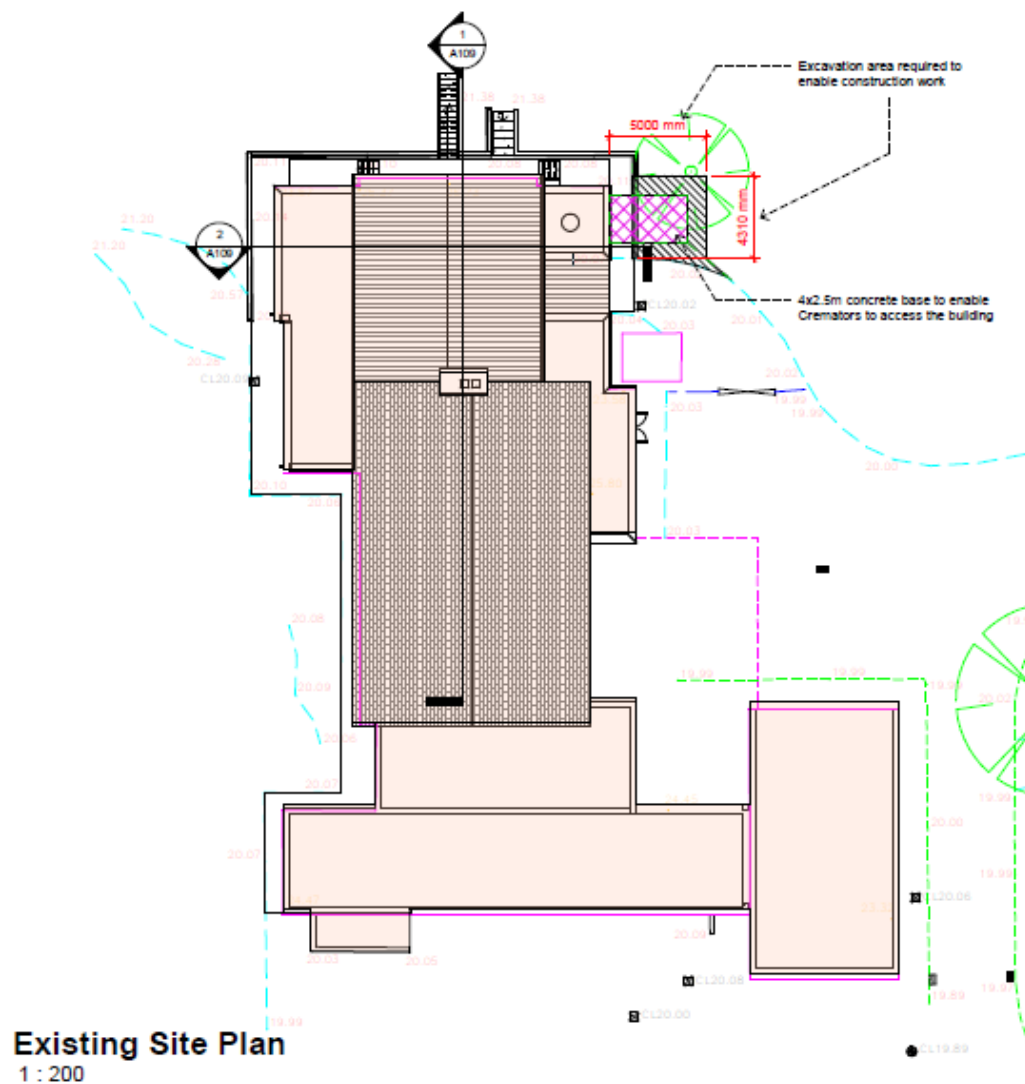


Figure 11 Proposed area of construction at north-west corner of existing building

1 1 Jones, N.W., 2017 *Offa’s and Wat’s Dykes in Wrexham Monument Condition Survey* CPAT Report No. 1488

The proposed works are required urgently to replace the existing burners at the crematorium. Construction would require a level area 5 x 4.5m on which a concrete plinth and retaining wall would be built (Figures 2 and 3).

Current conditions on the site comprise a courtyard leading into entrances and a footway around the back of the building, with a vegetated bank to the west. This rises up to the line of Offa's Dyke c.15m to the west (Figures 4 and 5) which is entirely hidden within a belt of woodland.



Figure 12 View looking south-west across proposed development area



Figure 13 View looking north-west across proposed development area

3 AIMS AND OBJECTIVES

The aim of the investigation is to identify whether any significant archaeological remains might be harmed by the proposed ground reduction for a concrete plinth.

The objectives are to determine the extent, state of preservation, date, character, function and group value of any archaeological remains, and to produce a deposit model, as well as assessment of the heritage significance. These results would inform Cadw as to whether the proposed works can be permitted, and whether subsequent investigation might be required as mitigation for the construction programme.

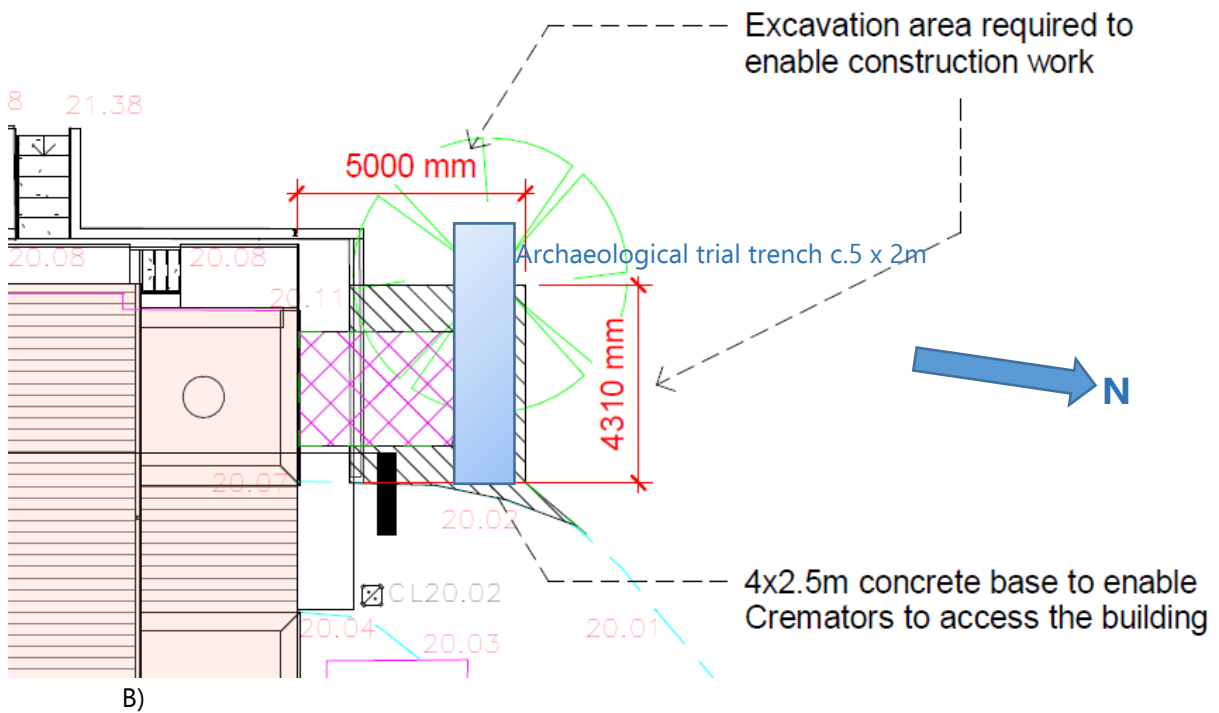
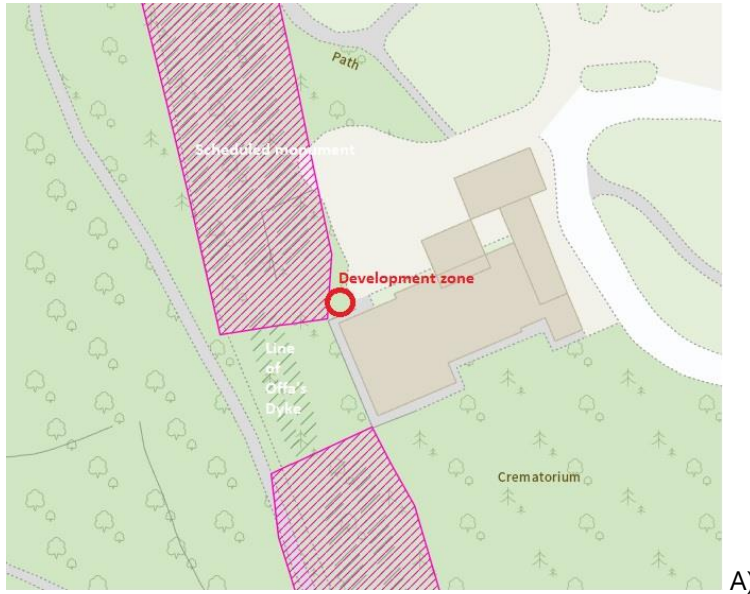


Figure 14 A) shows relationship to scheduled area, and B) shows location and direction of trial trench

4 METHODOLOGY

4.1 Fieldwork investigation and recording

The work will be conducted according to the Chartered Institute for Archaeologists' (CIfA) *Standard and Guidance for an Archaeological Evaluation* (2014 updated 2020). Figure 6a shows the proposed development area in relation to the scheduled monument, and Figure 6b shows the proposed location of the trial trench aligned north-east to south-west.

A mechanical excavator will be used to remove the overburden (believed to be debris from when the crematorium was built) down to archaeological horizons or the natural geology (whichever is identified first).

Once the trench has exposed archaeological deposits, excavation would continue manually. The trench would be cleaned, planned and excavated according to normal archaeological and stratigraphic practice.

Archaeological features and deposits will be recorded and sampled as appropriate according to their nature. Discussion on site with the Cadw Inspector will determine the strategy to be adopted, dependent on what is found in the trench.

The excavation of any archaeological features or deposits will be undertaken by hand using the conventional techniques for archaeological excavation:

- The presence or absence of archaeological features encountered during the ground works will be noted.
- Where features of archaeological interest are identified during the ground works they will be investigated by hand with sufficient work being undertaken to determine their date, character and function, if that is possible, using the conventional techniques for archaeological excavation and in accordance with CIfA Standard and Guidance.
- All features will be located as accurately as possible on an overall plan of the work at an appropriate scale, showing boundaries depicted on Ordnance Survey mapping.
- Contexts will be recorded on individual record forms, using a continuous numbering system, and be drawn and photographed as appropriate.
- Plans will be drawn on permatrace to a scale of 1:10, 1:20 or 1:50, as appropriate.
- All photography will be taken using a digital SLR camera with a minimum resolution of 12 mega pixels, including a metric scale in each view, with views logged in a photographic register.
- In the event of finding any artefacts covered by the provisions of the Treasures Act 1996, the appropriate procedures under this legislation will be followed.

All artefacts and environmental samples will be treated in a manner appropriate to their composition and a sampling strategy will be developed as appropriate:

- All stratified finds will be collected by context, or where appropriate, individually recorded in three dimensions. Unstratified finds will only be collected where they contribute significantly to the project objectives or are of particular intrinsic interest.
- All finds and samples will be collected, processed, sorted, quantified, recorded, labelled, packed, stored, marked, assessed, analysed and conserved in a manner appropriate to their composition and in line with appropriate guidance.

- Arrangements will be made to assess and study any artefacts, assemblages and environment samples, if required.
- Any artefacts recovered during the works will be deposited with Wrexham museum, subject to the permission from WCBC.

4.2 Selection Strategy

Unstratified finds will only be collected where they contribute significantly to the project objectives or are of particular intrinsic interest. All artefacts will be retained from stratigraphically secure contexts of 18th-century date or earlier. In the case of later or disturbed contexts, all 18th-century or earlier material will be retained, together with a sample of later finds to assist with dating and phasing, unless later deposits/artefacts are deemed to be of high archaeological value.

CPAT has a retention policy for artefacts which prioritises as follows:

High priority for retention

- Rare finds from stratified and unstratified contexts
- Prehistoric and early medieval assemblages
- Key stratigraphic dating assemblages crucial to the structural development of the site
- Assemblages which are not well represented in museum collections

High priority for disposal

- Unstratified material unless intrinsically dateable and unusual/rare
- Artefacts from residual/intrusive contexts unless of key stratigraphic importance to the site
- Assemblages already well represented in museum collections
- Unprocessed environmental/soil samples

4.3 Post-excavation assessment and reporting

Following the on-site work an illustrated report will be prepared combining both the extension excavation. A draft version of the report will allow Cadw to assess and approve its findings. A final version of the report will be lodged in an appropriate archive, with a copy to the Historic Environment Record and the National Monuments Record. Conventional sections would include:

- Non-technical summary
- Introduction
- Site location
- Historical Background
- Excavation
- Conclusions
- References
- Appropriate appendices on archives and finds

The site archive will be prepared to specifications in English Heritage's Management of Research Projects in the Historic Environment (MoRPHE) system and the *CiFA Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014).

The paper and digital archive will be deposited with the National Monuments Record (NMR), RCAHMW, including a copy of the final report. This archive will include all written, drawn, survey and photographic records relating directly to the investigations undertaken. NMR Digital archives

will follow the standard required by the RCAHMW (RCAHMW 2015). A copy of the digital archive only will also be lodged with the Historic Environment Record, Clwyd-Powys Archaeological Trust and the stipulations of the 'Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) V1, July 2018', will therefore be adhered to. It should be noted that this includes an undertaking for the report summary to be provided in Welsh and English.

4.4 Data management

The project will be conducted in accordance with CPAT's data management policy. All paper records will be collated, catalogued and labelled with the unique project code. All digital data will follow strict file naming, to include the unique project code, and be sorted into a standard series of sub-folders. The digital data will be catalogued, including a list of file types and relevant software.

5 RESOURCES AND PROGRAMMING

The evaluation will be undertaken by a team of skilled archaeologists under the overall supervision of Tim Malim, a senior member of CPAT's staff who is also a member of the Chartered Institute for Archaeologists (CIfA). CPAT is also a CIfA Registered Organisation (RO No 6) and as such agrees to abide by their *Code of Conduct* (2014) and the *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (2014).

All report preparation will be completed by or with the assistance of the same field archaeologist(s) who conducted the site work. If appropriate, a short report will be published in *Archaeology in Wales*.

Requirements relating to Health and Safety regulations will be adhered to by CPAT and its staff.

CPAT is covered by appropriate Public and Employer's Liability insurance, as well as Professional Indemnity insurance.

Tim Malim 23rd August 2021