

CPAT Report No. 1511

# Caves in North-East Wales: Final report




Archaeological Assessment



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CLWYD-POWYS ARCHAEOLOGICAL TRUST

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Photo: Gop Cave entrance, viewed from the east with the North Wales coast in the background. CPAT 2784-0033



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## Summary

This report provides a brief overall summary of the work that has been carried out by the Clwyd-Powys Archaeological Trust (CPAT) with funding from Cadw, on caves of potential archaeological importance in north-east Wales. The work was prompted by Cadw's requirement to identify caves meriting designation and protection.

In addition to the summarising of work carried out as part of the study, an attempt has been made to provide a background by which the study of archaeological caves can be brought to a wider audience and allow for the inclusion of others with an interest in the cave environment to contribute to the furtherance of our collective knowledge.

It is hoped that the development of a more inclusive model for the study of archaeological caves will lead to an increased volume of information and the development of integrated cave conservation plans to preserve this highly important resource for future generations.

# 1 Introduction

- 1.1. This report provides a brief overall summary of the work that has been carried out by the Clwyd-Powys Archaeological Trust (CPAT) with funding from Cadw, on caves of potential archaeological importance in north-east Wales. The work was prompted by Cadw's requirement to identify caves meriting designation and protection. The methods that were used are described to provide a general basis for the future evaluation of caves, and the opportunity has also been taken to produce suggestions on 'best practice' to be considered by archaeologists and other cave users, drawing on knowledge from the working group of specialists and various interested parties, together with the results of others involved in this field of study.
- 1.2. Initial work on the project comprised an assessment of known and possible archaeological caves in north-east and east Wales, conducted by CPAT in 2008-09 (Hankinson and Silvester 2009), under Cadw's scheduling enhancement programme. The report considered caves throughout the CPAT area and assessed their potential for designation.
- 1.3. Following the assessment in 2008-09 and a subsequent visit by representatives of CPAT and Cadw to a number of caves in north-east Wales, Cadw determined that further information and specialist input were required before a decision could be made on finalising designations in north-east Wales. This would enable Cadw to make an informed and robust assessment of the archaeological potential and significance of the sites considered. Some issues had been raised over potential additional sources of information for this area and the need to address conflicts between these sources and the data in the gazetteer that formed part of the 2008-9 assessment.
- 1.4. The reassessment of caves in north-east Wales was preceded by an informal seminar held at The Old Schoolhouse, Llanarmon-yn-Iâl, on 25 September 2014, where various interested parties gathered to watch presentations relating to the identification, recording and protection of caves of archaeological interest. In the afternoon session, discussion groups gathered to debate cave identification, fieldwork methods and management. The feedback from the group discussions was utilised in the study and informed the work programmes. A working group was then formed, comprising Elizabeth Walker (Amgueddfa Cymru - National Museum of Wales), Dr Rob Dinnis (Oxford University), Fiona Gale (Denbighshire County Archaeologist), and representatives of Cadw, CPAT and Natural Resources Wales (NRW), which established two courses of action:
  - The expansion of the existing gazetteer to a 'peer-reviewed' version, incorporating additional sources of data and input from local and regional experts.
  - Following the compilation of the revised gazetteer, a collaborative programme of fieldwork, involving both the working group (with input from NRW) and regional experts with the aim of identifying robust candidates for scheduling. The fieldwork was to include visits to assess potential candidates and trial excavation (evaluation), where appropriate.
- 1.5. Following additional research and fieldwork a revised and updated gazetteer for caves potentially containing archaeological deposits in north-east Wales was completed in early 2015 (Hankinson 2015).

- 1.6. Once the gazetteer was available, proposals for cave assessments could be formulated for the future direction of work, and this was discussed at a meeting of the working group in June 2015. The main product of the meeting was a listing (Table 1) of caves where further work had the potential to identify sites which might merit designation; the table was divided into Categories 1-3, with 1 having the most potential and 3 the least, based on the groups' perceptions of their potential and the likelihood for the survival of archaeological deposits at each site.

*Table 1: The list of caves considered for further assessment.*

PRN(s)	Site Name	Cat	Reasons for assigning the site to the group
101424	Brasgyll No 2	1	External platform. Extensive internal deposits showing signs of disturbance. Unstratified human remains recovered in 1940s.
123465	Caerwys No 3	1	Control site - Intact deposits of unknown character, large opening, easy access.
102804	Colomendy	1	Partially excavated by cavers with large quantities of bones and flint objects removed. Potential for internal and external deposits to survive in situ and opportunity for dating.
123467	Eryrys Hill	1	Apparently intact deposits of unknown character.
100568	Plas Heaton	1	Very large cave, heavily disturbed in the 19 <sup>th</sup> century but still with substantial intact deposits of unknown character. Desktop research required to better understand reported antiquarian finds.
132342	Coed-y-Trap (and Upper Meirchion cave)	1	Near intact deposits close to and in similar position to known archaeological caves.
19109 (overall)	Llandegla/Rhos Isaf/Perthi Chwarae	1	Small caves used for Neolithic burial known from antiquarian excavations and of a distinct regional class, all known examples of which were destroyed or extensively disturbed. Scheduling demonstrated inaccurate by Ebbs and high likelihood of other undisturbed caves in same outcrops.
123462	Bryn Alyn Cave No 5	2	Short passage with some undisturbed deposits of unknown character, higher up same escarpment as Lynx Cave. Possibly sampled by John Blore.
123337, 123456- 123460	Tan yr Ogof Caves 1-6	2	Several superficially promising caves but apparently extensively dug out and 'enhanced' in the 19 <sup>th</sup> century. Potential for some intact deposits and opportunity to examine more than one passage.
123466	Dulas	2	Glacially filled cave disturbed by mining but with some intact deposits. No known archaeological material but charcoal observed near entrance during site visit.
102318	Big Covert	3	Roman / late Prehistoric burials and finds. Some spoil and potential for intact deposits but relatively limited and offering little for designation.
102147	Brasgyll Cave No 6	3	Shallow overhang / short passage with large spoil heap from its complete clearance covering a possible external platform. Roman / late prehistoric finds. Some potential for spoil heap excavation but limited undisturbed material to schedule.
123462	Bryngwyn Quarry	3	Passage in quarry face, its outer end destroyed. No known archaeological component and potentially heavily disturbed.
103035	Orchid	3	Cave near Big Covert extensively dug in 1970s and later. Originally thought to be of Roman/Iron Age origin, but human bone recovered and dated to c. 4170bp. Limited potential for intact / in situ material to schedule.

- 1.7. Four of the caves thought to have significant archaeological potential were evaluated by trial excavation in 2015-16 (Hankinson 2016) to test the proposed methodology, all of which fell within the block of limestone to the east of the Vale of Clwyd. In each case, material of significance was identified, and it was clear that at least some relevant deposits had survived. Significant datable material was identified at two of the caves - Caerwys Cave No 3 and Ogof Colomendy - and both provided a radiocarbon date that suggested they were in use in the Neolithic, collectively covering the period between 2900BC and 3400BC. For Perthichwarae Cave II, it was confirmed that this was the cave which had been investigated in the 19<sup>th</sup> century and subsequently mentioned by Dawkins, but also that calcined bone, potentially indicative of cremation activity and not identified by the excavators, was present. At Eryrys Hill Cave, where it was not possible to investigate within the cave owing to the presence of badgers, a single flint was found in a platformed area immediately adjacent to the entrance, which suggested there had been prehistoric activity in the immediate locality and confirming that this was a site with archaeological potential.



Fig. 1: Caerwys Cave No 3, Trench 2 showing the light-grey to whitish lime-rich clay layer at the base of the trench, from which a human tooth was recovered. Ash charcoal from this layer was subjected to radiocarbon dating and this produced a most probable origin in the period from about cal. 3350 BC to cal. 3100 BC.

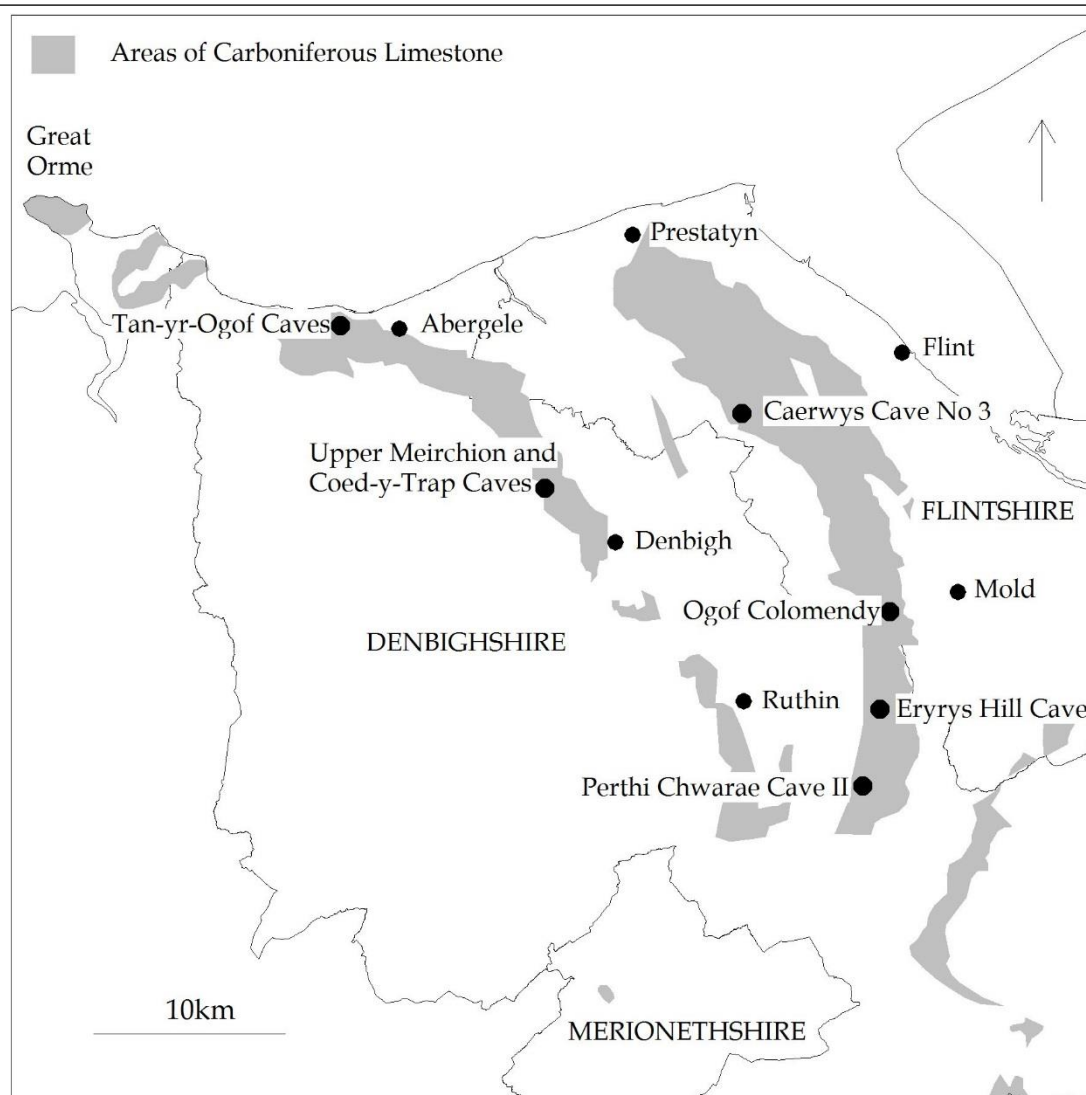


Fig. 2: Locations of the Caves investigated in 2015-16 and 2016-17

- 1.8. Additional caves were investigated in 2016-17 (Hankinson 2017), based on the same criteria. It proved impossible to gain access to the preferred category 1 targets of Brasgyll No 2 and Plas Heaton, so the sites finally chosen were Coed-y-Trap, where both that cave and the nearby Upper Meirchion Cave were evaluated by Dr Rob Dinnis, and Tan-yr-Ogof, where cave numbers 2 and 5 were evaluated by CPAT. Both of these areas fell within the block of limestone to the west of the Vale of Clwyd. None of the four caves that were evaluated in the second season provided material that was certainly indicative of human use or occupation, although all are known to lie within localities that have seen relevant activity.

## 2 The cave environment and its archaeological study

- 2.1. Although the meaning of the term 'cave' seems self-evident, some consideration of the processes involved in *speleogenesis* (cave formation) may be useful, where these place into context the means by which human beings have utilised these natural features.



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- 2.2. The term 'cave' or 'cave system' refers to an underground network of passages, chambers, shafts and other cavities which in this country are generally, but not exclusively, initiated by the action of slightly acidic groundwater on limestone and allied rocks containing calcium carbonate. Once cave development has progressed to the point where recognisable passage has formed other factors also become significant contributors to its enlargement, notably the erosive potential of stones and material carried by flowing water. Cave passages can also be 'active' or 'fossil', the terms respectively meaning that a passage is still being formed by the passage of water through it, or that the watercourse which formed it has now found a different path through the strata leaving the passage in a dry state. Almost all caves of archaeological interest can be classed as 'fossil', though this is a generalisation and the possibility that early passages can be re-occupied by watercourses not involved in their formation is only one of many factors that complicate understanding of this environment.
- 2.3. In the context of this report, the other main type of natural feature in which human settlement or activity is found is the 'rock shelter', a term that refers to a landscape feature which is effectively open to daylight but that nevertheless provides protection from the weather to some extent. These shelters are not exclusively found in limestone districts as they are normally formed more by forces of physical erosion than the partly chemical processes which are inherent in *speleogenesis*.
- 2.4. Even in heavily erosive environments, caves take a great deal of time to form, and it is extremely difficult to date the actual formation of a passage. It is possible to date the material or deposits which are found within them, and these are demonstrably later than the passages themselves. One method utilises the mineral properties of *speleothems* (stalactites, stalagmites and calcite flowstone), which are created by the deposition of calcite from solutions running over surfaces and falling into existing passages. There are relatively few *speleothem* dates for Welsh caves, more work having been carried out in the Mendips and Yorkshire Dales, but a date of 107,000 to 127,000 years BP from a cave on the Gower Peninsula (Crowther 1989, 30) gives an idea of the timescales involved. Indeed, Crowther (1989, 26-7) makes it clear that *speleogenesis* was occurring in at least the Mesozoic period of geological time, primarily in relation to a series of stratified cave and fissure deposits in South Wales which contain the remains of Triassic fauna (248-213 million years old). Where *speleothems* are found in relation to material of archaeological significance, their dating has the potential to identify the age of that material. It has most notably been used to date engravings on cave walls, where these have been covered by subsequent deposits of flowstone, as at Creswell in Derbyshire (Pike *et al*, 2006) and Cathole Cave on the Gower peninsula in South Wales (Walker *et al*, 2014).
- 2.5. Though evidence of human settlement is normally expected to be identified close to the entrance of a suitable cave, both this and evidence of past fauna can be found at any point within a system as material may have been washed deep into the cave system by the action of past and present watercourses. It must be recognised that the local topography could have been markedly different at the time when archaeologically significant deposits were being laid down as subsequent deposition of material by glaciation or flowing water, or erosion resulting from these forces, could have both hidden and removed different elements of this topography. One of the primary effects is likely to have been the infilling of cave passage with deposits

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- and the masking of cave entrances. It has been noted that *clastic* cave deposits, which are derived from fragments or eroded waste of various rocks, 'often represent material eroded from caves or material moved into them from the surface by palaeoenvironmental processes (e.g. erosion and transport by ice, water or air). Caves thus act as museums, preserving evidence of landscapes and past human activity, long removed from the surface' (NCA 1997, 4-1).
- 2.6. The fact that this is a resource that is essentially hidden from view (unless the cave passages are easily accessible) means that it is extremely difficult to assess the archaeological potential of either a single cave or an area of limestone in which caves may be found. As stated, this is in part a recognition of the uncertainties regarding past topography and the likelihood that caves have been hidden by deposits laid down after they had been utilised. A reasonable attempt was mentioned by Last (2003, 3-4), where he reported that field visits in the Malham Plateau area of the Yorkshire Dales indicated that between 10% and 20% of the (visible) caves could contain archaeological deposits, with similar figures suggested for the Manifold Valley in Staffordshire. In the former area caves are likely to be relatively more visible owing to its remoteness and the lack of development, but this may not be the case in areas such as north-east Wales which have a greater modern settlement density and where mining and quarrying have impacted on the natural landscape. In these circumstances, it is to be expected that cave entrances will be filled in or removed by human intervention, so a relatively well-populated area such as this may potentially have once contained a significantly higher number of caves than is currently known.
- 2.7. Unfortunately, understanding of the archaeological caves of north-east Wales is based largely on the work of past excavations, many of which were firmly antiquarian in character. Arguably, the heyday of interest in caves and their past human use was in the 19<sup>th</sup> century, but the reporting of these early investigations was often patchy, with either no record being made or the record having been subsequently lost, and consequently the true picture of their distribution is unclear. In the present day, investigations are limited by constraints on resources, which often leads to either no work being done, or the selection of target sites which are already known to contain material of interest. Substantial time and funding may be required to carry out detailed excavations and the associated environmental studies needed to gain a good understanding of past activity. There have been notable exceptions, however, such as Aldhouse-Green's investigations at Pontnewydd Cave, Dinnis' recent excavations at Ffynnon Beuno, and Blore's work at Lynx cave and elsewhere in the district.
- 2.8. In the 19<sup>th</sup> century, many landed estates were prepared to support cave investigations and even provide a workforce to carry them out, under what was often minimal supervision. Victorian 'antiquarian' investigation of such complex sites, whilst conducted within the spirit and intellectual climate of the time, was nonetheless hugely destructive of deposits that - were they available to modern science now - would be rated of the highest value and significance (Historic England 2011, 4). One of the most prolific of these early investigators was Boyd Dawkins, who was responsible for excavating or at least overseeing work at a number of caves, including the Cefn caves, Rhos Isaf/Perthichwarae caves, Plas Heaton cave, Pontnewydd cave and Gop cave. He was by no means alone, however, and his methods, which

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involved the large-scale removal of deposits, were those generally adopted by other investigators in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries.

- 2.9. It is therefore ironic that, in north-east Wales, the caves examined in the 19<sup>th</sup> century are often those with the greatest level of protection, even though their deposits will have seen significant disturbance or even near-total removal by this past activity. Since there has been no systematic assessment of unknown locations with archaeological potential, these known sites are still considered to be those more likely to produce further information – either through the examination of deposits that have escaped disturbance, or by the identification of spoil from the earlier works which can be analysed for material missed by the excavators. It is now only rarely that new archaeological caves are identified as part of a programme of archaeological investigation, so the discovery of material belonging to both the Neolithic and medieval periods at Caerwys Cave No 3 (see above) is significant.
- 2.10. Given the constraints noted above, it is evident that the caving community has considerable potential to contribute to the knowledge of archaeological caves. This is because the process of digging caves to extend them – an acknowledged part of the sport – may expose deposits of archaeological interest. Various suggestions and recommendations for a collaborative approach between archaeologists and cavers involved in cave digging are discussed in Section 4 of this report. It is hoped that possibilities for further study at both new and existing archaeological caves in north-east Wales will be both recognised and valued accordingly in the future.

### **3 Methodologies for use in cave evaluation**

#### *Consultation with natural environment bodies*

- 3.1. Although this was not exclusively the case, most of the caves investigated during this programme of study were located in areas with natural environment designations, specifically as Sites of Special Scientific Interest (SSSI), which are the responsibility of Natural Resources Wales (NRW). While it is the landowner's responsibility to notify NRW of any actions likely to damage a SSSI, it is beholden on the excavator to assist in the notification process, consult with NRW to determine what is acceptable in regard to the legislation, and then design the work to have a minimal impact on the natural environment. In this regard, the SSSI may have been designated for any of a number of factors, including its fauna, flora, and geological interest. Any constraints that are identified can then be included in a detailed method statement/project design, which ensures compliance with NRW's requirements regarding the legislation and provides the landowner with an assurance that the work will not be detrimental to the environment.
- 3.2. In addition to the legislation relating to SSSI's, the European Protected Species (EPS) legislation also needs to be considered. In relation to subterranean excavations this primarily relates to the use of caves by bats, and particularly in the winter months when many form *hibernacula*. It is an offence to disturb bats in these circumstances as the lack of available food may well lead to them having insufficient resources to last through the winter and consequent death from starvation, so excavations need to be timed to avoid sensitive periods. If it is believed that bats may be disturbed during the course of any work NRW must be contacted and an appropriate licence applied for; there is no guarantee this will be approved. While CPAT's excavations fell

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outside the bat hibernation period, the Clwyd Bat Group were kind enough to undertake pre-excavation inspections to identify whether any bats were present and ensure compliance with the European Protected Species legislation. In one cave bats were found in close proximity to the proposed excavation site and this was abandoned; in another, bats were encountered by CPAT staff after an inspection had taken place and work at the site was immediately terminated.

- 3.3. Nationally important geological conservation sites are selected through the Geological Conservation Review (GCR) which identifies the geological features protected within the national Site of Special Scientific Interest (SSSI) network. A second, non-statutory geodiversity site network comprises Regionally Important Geodiversity Sites, (RIGS) which can be selected on educational, aesthetic and cultural grounds, as well as scientific ones. These are not managed as are SSSI's but are protected from development via the planning process. Any consultation with NRW should include sites of geological diversity.
- 3.4. It is possible for investigations to have a positive environmental impact, primarily as they provide improved understanding which in turn leads to enhanced management. Another example of a positive impact occurred in relation to the 2016-17 excavations in the area covered by the Llanddulas Limestone and Gwrych Castle Wood SSSI (Tan-yr-Ogof). Here the project design was drawn up to include an undertaking to record numbers and locations for three rare plant species (common names: Wild Cabbage, Stinking Hellebore and White Horehound) which had been recorded near the caves in question. The records made and photographs taken of these species were passed to NRW for inclusion in the records of the flora from the locality.

### *Archaeological evaluation*

- 3.5. The nature of the caves study undertaken in north-east Wales has meant that the work carried out was deliberately focussed on answering specific questions of particular sites. Funding was only available for small-scale evaluations and it was not possible to carry out the sort of large-scale and often speculative excavations that were the stock-in-trade of antiquarians. For example at Plas Heaton Cave near Henllan (Fig. 3), around 1,000m<sup>3</sup> was removed by pick and shovel in the 1860s; pick-marks in the walls and the benched profile of the surviving deposits are testament to the scale and robustness of the excavations.
- 3.6. The main purpose of the work undertaken by CPAT has been to determine whether archaeological deposits or material are present, gain an understanding of the nature and preservation of any that were encountered, and identify the management implications of their presence or absence. It is worth stating that one of the aims of the project was to ensure that as much of the cave deposits as possible were left undisturbed for future protection or investigation.
- 3.7. In general the work involved the excavation by hand of one or two small trenches at each site, up to 2m<sup>2</sup> in area, either within the cave or at its entrance. While recognising the limitations of small-scale evaluations in not providing a complete picture of the activity at a particular cave, they are still appropriate for identifying the presence or absence of archaeological deposits. It has also been possible to analyse some of the material that was recovered to provide a context in which it can be placed. For

example, Neolithic dates were obtained for material recovered from Ogof Colomendy and Caerwys Cave No 3.



Fig. 3: Plas Heaton Cave; at least 75% of the current cave was filled with deposits prior to the antiquarian excavations of the 1860s. Photo CPAT 3906-0011

- 3.8. Apart from the need for careful excavation to identify the smallest fragments of information, the most important element of the evaluations was the creation of drawn plans and/or sections of both the work areas and the cave itself to establish the context and location of deposits of interest. This not only informs future management of the site, but also clearly indicates the locations of investigations. This is important should any future work be carried out. In the past, the recording of excavations has often been so limited that there may be uncertainty about where in the cave (and sometimes even which cave) was investigated. The confusion over the Perthichwarae caves is a typical example: for many years it was not appreciated that the cave reported on by Dawkins in the 19<sup>th</sup> century had remained undesignated despite producing evidence that indicated it was a place of burial, probably utilised in the Neolithic period. Fortunately, the existing information was reassessed by Ebbs (2013) and the correct cave identified; it was this cave that was evaluated at Perthichwarae by CPAT in 2015-16 and the evidence from the excavations supported his assertions.

## **4 Archaeological Caves, recommendations towards the production of best practice guidance for Archaeologists and Cavers**

- 4.1. The caving community has considerable potential to contribute to the knowledge of archaeological caves, so a dialogue between archaeologists and cavers, particularly those involved in cave digging, would provide an opportunity to further the study and extend the stock of archaeological caves. This should be explored and contacts built up to provide a two-way dissemination of knowledge and information that will ultimately expand our collective understanding of the subject. It is hoped that these suggestions and recommendations will provide an avenue for future discussions between archaeologists and the caving community in north-east Wales.

### *Current guidance*

- 4.2. While there is some existing guidance relating to the discovery of archaeology in caves, it is often too generalised to provide a useful contribution. Only rarely is there advice on the sort of material that may be found. Detailed advice on who might be contacted in the event of any discoveries is scarce and often not related to the area in which a caver may be operating.
- 4.3. Probably the most immediately informative source for cavers with an interest in archaeology, or who may have discovered material of possible archaeological interest, is the website of the Cave Archaeology Group of the British Cave Research Association (<http://cag.bcra.org.uk/>). This includes a list of contacts, though these are exclusively from the north of England.
- 4.4. Historic England have published a booklet dealing with archaeological caves in their 'Introduction to Heritage Assets' series, titled 'Caves, Fissures and Rockshelters' (2011). This is a more informative work designed to explain the archaeology of caves and the history of their investigation. English Heritage also carried out a more general study on the research, conservation and management of caves, the results of which were presented in the Centre for Archaeology Report 32/2003, *The Archaeology of English Caves and Rock-Shelters: A Strategy Document* (Last 2003). It is useful in identifying and discussing the issues inherent in cave archaeology, including those factors which have the potential to impact on the archaeological resource. However it has not been updated in the 15 years since it was produced. Interestingly, a monitoring project on the impact of cavers in part of the Peak District identified the major impact as being the use of caves by badgers, something which was also evident in a number of the north-east Wales caves that were visited for this project.
- 4.5. The Centre for Archaeology report discusses the activities of the Derbyshire Caving Association (DCA), a regional council within the British Caving Association (BCA), itself the successor of the National Caving Association (NCA). It notes that while overall policy is a matter for the NCA (now BCA), the implementation of that policy usually falls to the regional associations, of which DCA was the most active. A mission statement published by the DCA's former Conservation Officer provides a good summary of the situation. It argued that conservation should not be seen as an excuse for excluding visitors without scientific justification, but that along with access comes responsibility, with sustainability and minimal impact being the

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- keywords. Blanket policies may not serve the special needs of each site, so the development of Cave Conservation Plans (CCPs) was seen as being important, based on discussions between the different interest groups. The relevant body for Wales is the Cambrian Caving Council (CCC), though their website page on Cave Conservation has only a passing mention of the possibility that cave deposits might contain archaeological remains.
- 4.6. Current DCA policy on archaeology is summarised in their *Cave Digging on SSSIs? Before you start.....A Guide to Good Practice* leaflet, which provides the following guidance: 'Cave entrances sometimes provided shelter for man and animals from earliest times through to the medieval period, while prehistoric people sometimes made burials deep inside. Sediments with artefacts, bones and environmental material are a valuable resource for archaeological study. Care needs to be taken as these are very vulnerable to damage. Landowners may advise you of the presence of such sites on their land, (e.g. the Manifold Valley), but further checks should be made by contacting the County Council Archaeological staff or the DCA Conservation Team'. This is a practical view that allows for the two-way transmission of information, and can be recommended as an example of an inclusive approach.
- 4.7. Another positive example is the National Monuments Service of Ireland's *Advice to the public on the archaeological potential of caves*, published in 2014 and available online at (<https://www.archaeology.ie/news/advice-to-public-archaeological-potential-of-caves>). This was a collaborative effort drawing together the experience of the National Museum of Ireland in concert with the Speleological Union of Ireland. This leaflet provides information on the legal situation and advice for anyone involved in excavations within caves (in the Republic of Ireland); it manages to be sufficiently detailed to explain all the salient points within a brief, easy to digest, document. Not least, it acknowledges that it is cavers who have been responsible for most new archaeological discoveries in Irish caves since the 1930s.
- 4.8. The British Caving Association booklet *Minimal Impact Caving Guidelines* has a paragraph under 'New cave or extension excavations' which notes that: 'Bones or other archaeological material should not be moved at all unless under imminent threat. Collection should only be undertaken with permission from the relevant Statutory Conservation Body if the cave is a Designated Site. Photograph any find in situ if possible and contact the Regional Caving Council for advice. It is unlikely to hold up explorations beyond a few days whilst an archaeological record is compiled'. While useful in identifying an immediate response to any discovery, the additional possibility that a cave may have been designated as a Scheduled Ancient Monument is not mentioned and there is no information that could lead cavers to the relevant archaeological bodies who they might contact for specialist advice. There is also no recognition that if material is collected then its stratigraphic location in the cave deposits should be recorded. It would be helpful if the difference between a rapid assessment of any discovery, which might only take a few days to compile, and a detailed archaeological investigation to understand the date and origin of the discovery was made clear. In the latter case, the archaeologist may need to consult more widely and gain the appropriate permissions and, more significantly, they may need to identify sufficient funding to enable the work to be carried out in accordance with the standards that are expected of them.

- 4.9. The desire among the caving community to preserve the underground environment for future generations is highlighted by the *Descent* magazine 'Adopt-a-cave scheme'. In 1977 *Descent* began a scheme to recognise and encourage the work of clubs and individuals in helping to preserve this environment. Currently there are 121 sites in the scheme that have been adopted by 83 clubs. Two of these are caves in north Wales (Ogof Hen Ffynhonau and Ogof Hesp Alyn), both of which have been adopted by North Wales Caving Club. Ogof Llanymynech, adopted by the Shropshire Scouts, is a mine, though it has some similarities to cave sites and has provided evidence of activity at least as far back as the Roman period.

### *Opportunities*

- 4.10. Overall, it is clear that most members of the caving community have a general desire to preserve cave environments for the future enjoyment of their peers and this is evident in the procedures that are adopted when new cave passage is found. As a minimum, this normally involves the taping of a route through any sensitive areas to prevent unnecessary damage to deposits and formations and sometimes involves making certain areas of a cave out of bounds to casual visitors. However, it is the writer's impression that, with some notable exceptions, the opportunities this desire for preservation presents have not been generally welcomed and built upon among the ranks of professional archaeologists. A parallel can be drawn here with the situation regarding metal detectorists in England and Wales before the passing of the Treasure Act in 1996.
- 4.11. In March 1996, during the run-up to the passing of the new Treasure Act, what was then the Department of National Heritage (DNH, now the Department for Culture, Media & Sport or DCMS) published *Portable Antiquities: a discussion document*. The aim of this document was to complement the impending Treasure Act, address the issue of non-treasure archaeological finds and propose solutions for dealing with these. Proposals for both voluntary and compulsory schemes for reporting and recording non-treasure finds were put forward in the document and views on these were sought from a variety of interested parties, including professional archaeologists, metal detectorists and others.
- 4.12. The general response to the DNH's proposals was that the recording of all archaeological finds was important and that a consistent voluntary scheme to record finds should be established. The Portable Antiquities Scheme (PAS) was thus instituted to provide a portal for the recording of any discoveries made by members of the public; the central unit of the scheme is currently an official department within the British Museum. The scheme also includes a network of 'Finds Liaison Officers', who provide an easily accessible avenue of contact for the public, together with advice and help with identifying any artefacts that are brought to their attention. The scheme has five main aims:
- to promote the maximum public interest and benefit from the recovery, recording and research of portable antiquities;
  - to promote best practice by finders/landowners and archaeologists/museums in the discovery, recording and conservation of finds made by the public;



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- in partnership with museums and others, to raise awareness among the public, including young people, of the educational value of recording archaeological finds in their context and facilitate research in them;
  - to create partnerships between finders and museums/archaeologists to increase participation in archaeology and advance our understanding of the past
  - to support the Treasure Act, and increase opportunities for museums to acquire archaeological finds for public benefit.
- 4.13. The success of the PAS is beyond doubt. Of the 14,000 finds classed as constituting Treasure up to 2016, 40% are now in museum collections which can be enjoyed by local communities and the wider public. These include some of the most well-known archaeological objects in the country, such as the Staffordshire Hoard, a spectacular collection of Anglo-Saxon gold and silver war items which has been displayed across the UK and in the USA, and the Frome Hoard, the largest collection of Roman coins in one vessel ever found in Britain. In 2016 alone, there were 1,120 treasure finds, in addition to a further 81,914 archaeological finds recorded through the PAS across England, Wales and Northern Ireland. Over 1.3 million PAS finds have been recorded since the scheme began and all are available online. Significantly, up to 2016, over 600 research projects, including 126 PhDs, have made major use of PAS data.
- 4.14. While it is recognised that there is no funding available to institute a similar scheme in relation to the archaeology of caves, and it is unlikely that there would be sufficient call on an archaeologists time to make the creation of a permanent post worthwhile, two points can be drawn from the undoubted success of the PAS. First, it has fostered greater trust between metal detectorists and archaeologists and led to a great increase in the reporting of significant objects of archaeological interest. Second, it has allowed for the dissemination of knowledge on these discoveries, both within the archaeological profession and to the wider public. Although the information is freely available on the PAS website, there is an acknowledgement of the need for confidentiality to protect the material in question and its places of discovery, and measures are in place that facilitate this, which include the limiting of locational information to national grid kilometre squares.
- 4.15. It might be argued that one of the main reasons for the success of the PAS has been that, within obvious ethical considerations, any material reported has been accepted without subjecting the finder to judgement on the means of its discovery. Metal detecting has been generally accepted as a hobby that can be carried out more or less responsibly, but only if the material is recorded for future analysis. The presence of designated contacts for anyone who finds archaeological material is also important, as over a period of time this allows for trust to be built up, when discoverers realise that they are not about to be censured for reporting material that they find and that a degree of confidentiality will be observed in making this information more widely known, should this be required or thought desirable.

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**Where do we go from here? A suggested model for consultation on archaeological caves**

- 4.16. The recent completion of the caves project in north-east Wales provides an opportunity to build on the contacts that have been made. The project has raised the awareness of archaeology – both in the local caving community, and in NRW in their role managing SSSI's and overseeing the European Protected Species legislation. These links have provided a first step on the road to greater mutual understanding, promoting cooperation between the different parties and interests. Other opportunities remain to be fully explored, however. For example, there is the potential for gaining the support of the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB) for work at caves within the area that they cover. The AONB's recognition of the value of its limestone landscapes is highlighted by its *Discovering Limestone Landscapes* booklet, which mentions the Gop and Pontnewydd caves.
- 4.17. Just as the PAS has led to the acceptance in the archaeological profession that metal detecting can be a responsible hobby that provides new sources of archaeological information, it should be similarly accepted that one of the elements of caving as a sport - the extension of existing caves and the discovery of new caves by digging - has the potential to reveal new archaeological information that can further our collective understanding of this aspect of the cave environment. The situation should be a positive one, as cavers already have a range of skills that can be built on by dialogue. There is already a formula for protecting speleothems and sensitive cave deposits that are encountered, primarily involving the use of hazard warning tape to direct recreational cavers away from significant areas; the similar consideration of archaeological deposits should be straightforward. By raising awareness of archaeology, cave diggers should be reassured that it need not provide a bar to their activities. In the absence of any large-scale funding for archaeological research into caves which aren't already known to contain archaeological remains, it is evident that most new discoveries are likely to be made by the caving community and this should be seen as a valuable contribution to the furtherance of cave archaeology. In response, it is incumbent on professional archaeologists to make the results of further study accessible and comprehensible to members of the caving community.
- 4.18. There are instances where cave digging may not be appropriate, such as caves where there are significant archaeological deposits that may be significantly damaged or destroyed in the process. Caves that fall in this category should already be designated as Scheduled Monuments (SM) by Cadw, as distinct from any caves that may be protected by natural environment designations. Information on which caves are considered to be of archaeological interest and which of these are SMs is publicly available on the *Archwilio* website and this should be made known to the local caving clubs; the reciprocal sharing of information is an important part of this exercise. In the case of newly identified sites worthy of scheduling, some understanding of the means of discovery should be displayed by Cadw and access to the cave maintained.
- 4.19. The designation of a cave as a SM does not preclude digging as such, but means that Cadw as the responsible body must be contacted and permission gained for any work that is undertaken. While there is no guarantee that permission will be granted, if cavers wish to excavate then a method statement or project design will provide a basis for discussions with Cadw on the advantages and disadvantages of the work

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- proposed. Cadw would be expected to provide a measured response to any request, which balances the risk of loss against the potential for new information to be revealed. Archaeological oversight would of course be required for any work that was proposed.
- 4.20. While it may be possible in the longer term to organise training in archaeological methods for cave diggers who express an interest in the study, some form of straightforward leaflet or readily available source could be produced which assists cave diggers in recognising when archaeological deposits or finds are present. Cavers could use their existing survey skills for the mapping of passages to lead on the mapping of any significant deposits, both for the benefit of archaeologists who might wish to use the information for research and by allowing the deposits to be identified on cave surveys and thereby prevent accidental damage by recreational cavers who may not be aware of the issues.
- 4.21. The compilation of a series of Cave Conservation Plans (CCPs) for sites of a sensitive nature, as in the Derbyshire Caving Association model cited previously, provides a good basis on which the conservation of archaeologically significant caves can be organised. This could potentially work without the need for designation (scheduling), or in tandem with it. Such CCPs may cover different aspects such as:
- the identification of where in the cave sensitive deposits are to be found and the means by which they might be protected
  - the identification of areas worthy of further investigation
  - the provision of a means of reporting any threats to, or damage at, a cave
  - the compilation of a summary of the history of exploration and investigation at the site
- 4.22. Some of this information may already be in the public domain, but what is most important is that these plans would be compiled following consultation with, or perhaps even by, the local caving community. This would ensure that there is full engagement with and 'ownership' of any agreed means of conserving a particular site.
- 4.23. The practicalities of reporting any new archaeological cave discoveries are something that need to be considered, to allow all interested parties the opportunity for involvement, but a simple system that allows for an archaeologist with the relevant skills to visit a cave where archaeological deposits have been reported would provide the contacts that have already been identified as being beneficial to increased trust and understanding. Overall, this would have the effect of creating an equivalent to the Finds Liaison Officer of the Portable Antiquities Scheme (PAS), who could provide a first point of contact and supply advice and finds identification. They would also be able to report any discoveries to the members of the project working group (see section 1.4, above) who could further consider the relevance of any discoveries and provide advice and support.
- 4.24. In relation to the working group, it would be appropriate for this to be expanded to include cavers in the three main clubs that operate in the area, allowing better liaison

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between the clubs and the relevant professional archaeologists. This expanded group could be structured to respect the wishes of any cavers who wanted to keep their discoveries confidential in the short term. The group would be able to consider whether further work was merited to assess the importance of a site, how and when information was accessioned into the wider archaeological record, and even future designation or other protection of the cave. Ultimately, they could be instrumental in approving any CCP that had been produced.

### *Recommendations*

- 4.25. The main aim of these recommendations regarding the future of cave archaeology in north-east Wales is to promote cooperation, understanding and dialogue between cavers, archaeologists and natural environment professionals in regard to the conservation and investigation of known archaeological caves and any new discoveries that might be made.
- 4.26. This cooperative approach also allows the interested parties to combine in raising awareness among the public of the educational value of the material that has been preserved in caves and the importance of its conservation and study, along with other aspects of the underground environment.
- 4.27. Recent experience has suggested that the following recommendations have the potential to further the study of cave archaeology and it is hoped that they provide a basis for discussions leading towards a greater understanding of the subject and its potential benefits in aiding our understanding of past societies:
  - It is important for the future of cave archaeology in north-east Wales that the local cavers are made aware of the potential of the area and are involved with efforts to conserve the existing resource; this includes making sure that they are aware of which caves are designated as SAMs. Similarly, it is incumbent on professional archaeologists to accept that the digging of caves to discover new passages or extend existing ones can be carried out responsibly and has the potential to increase our knowledge of archaeological caves in the region.
  - The existing caves working group should be expanded to involve representatives from the caving clubs who operate in north-east Wales and encourage the reporting of any potential discoveries revealed by cave digging. If suitable candidates cannot be found, then dialogue should be instituted with the clubs so that club members are aware of an archaeological contact should any discoveries be made. This would also involve the development of a contact list that provides for the two-way dissemination of information on the archaeological caves of the area, so that both archaeologists and cavers are kept informed of any developments in their respective interests.
  - A concise guide should be produced, which deals with evidence that might suggest archaeological deposits are present to allow cave diggers to determine whether it is worth calling in the advice of a professional archaeologist. This could be based on the Derbyshire Caving Association leaflet, with changes to suit the framework of Welsh archaeology, and should include clear instructions on how information on caves known to be of archaeological significance can be accessed, comparable with that provided by the National Monuments Service of Ireland's

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leaflet. While Ebbs' website on the caves of north Wales will probably already be known to cavers, there is also the *Archwilio* website, which provides publicly-available information from the records of the four Welsh Archaeological Trusts and includes information on SAMs.

- If an initial assessment is to be made of any possible discoveries, then a suitably experienced archaeologist needs to be available to carry that out at relatively short notice. It may be appropriate for Cadw to consider making a small fund available to provide sufficient staff time on a 'rapid response' basis, perhaps by augmenting the Trust's current outreach budget.
- Archaeologists with the skills required in cave archaeology are few and far between, so there needs to be some provision to ensure that these skills are passed on in the event of individual career change/retirement. Also, that there are trained staff available in different localities to cover the same role, should this proposal be expanded to cover a wider area.
- If any archaeological deposits or finds are revealed during the course of cave digging, it should be a priority that the discovering cavers are kept fully involved with any future investigations that might be proposed and with any findings. An archaeologist with the appropriate skills should be part of any team involved in the demarcation (taping) of sensitive deposits. Cavers existing survey skills should be utilised in the recording of those sensitive deposits and thereby allow them to be mapped on cave survey plans, for use by casual visitors to the cave and archaeological researchers.
- A means for drawing up Cave Conservation Plans on the Derbyshire model should be explored for caves with known archaeological deposits or where they are revealed by digging; this could run in parallel with designation or instead of it depending on the nature of the cave in question. Again, this would involve at least dialogue with the local caving clubs and perhaps the identification of individuals with the necessary skills in the caving community. A professional archaeologist should be made available to help in this process, if required. This could be publicised to the wider caving community by the involvement of the Cambrian Caving Council and via *Descent* magazine, if that was considered appropriate or if it is proposed to expand these suggestions to cover the whole of Wales in future.
- Contact should be made with the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB), and other bodies such as the Denbighshire Countryside Service, to see if it is possible to gain more widespread support for furthering the cause of cave archaeology in the area.

## 5 Conclusions

- 5.1. Overall, the study of caves described in this summary and more particularly in reports in the CPAT grey literature series (Hankinson, 2015; Hankinson 2016; Hankinson 2017) has provided a background against which the designation of cave sites in north-east Wales can be further considered, thereby fulfilling Cadw's main aims in supporting the work.

- 5.2. A number of sites have been identified in the course of the work where designation is likely to be appropriate. Although it was not possible to evaluate all of these, the evidence collected appears to identify that suitable deposits are present at a limited number. No doubt there are other caves in north-east Wales, either not known or whose archaeological potential has not currently been realised, where deposits of archaeological significance remain, with the potential to add greatly to our collective knowledge of prehistoric and later settlement in Wales. The identification and preservation of any deposits which may exist are matters of prime importance.
- 5.3. Suggestions that may aid in the future discovery and protection of archaeological deposits and information within the caves of the area have been considered. In this, one of the main future aims of the archaeological profession should be building links with the local caving community such that any evidence that appears in the course of caving activities can be recognised, valued and reported on for the benefit of all those interested in the study of the cave environment.

## 6 Acknowledgements

- 6.1. The writer would like to thank all those who have been involved with the project since its inception and most particularly the various interested parties who have provided suggestions and comments on the way forward for the study of archaeological caves in north-east Wales.

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### **Web-based resources**

- British Caving Association, minimal impact caving guidelines ([http://british-caving.org.uk/wiki3/lib/exe/fetch.php?media=conservation\\_access:micg.pdf](http://british-caving.org.uk/wiki3/lib/exe/fetch.php?media=conservation_access:micg.pdf))
- British Cave Research Association, Cave Archaeology Group (<http://cag.bcra.org.uk/>)
- Cambrian Caving Council's cave conservation page ([http://www.cambriancavingcouncil.org.uk/cave\\_conservation.html](http://www.cambriancavingcouncil.org.uk/cave_conservation.html))
- Cris Ebbs' listings of the caves of north Wales, which includes a section on caves containing archaeological material (<https://sites.google.com/site/cavesofnorthwales/home>)
- Derbyshire Caving Association leaflet - *Cave Digging on SSSIs? Before you start.....A Guide to Good Practice* (<https://www.thedca.org.uk/images/dca/publications/leaflets/Cave-Digging.pdf>)
- Historic England's 2011 *Introductions to Heritage Assets: Caves, Fissures and Rock Shelters* (<https://www.historicengland.org.uk/images-books/publications/iha-caves-fissures-rockshelters/>)
- John Blore's webpages relating to Lynx Cave (<http://lynxcave.webs.com/>)
- University of Bristol news pages relating to Nash's discovery at Cathole Cave on the Gower (<http://www.bristol.ac.uk/news/2012/8606.html>)

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Minimal impact caving guidelines for England ([http://british-caving.org.uk/wiki3/lib/exe/fetch.php?media=conservation\\_access:micg.pdf](http://british-caving.org.uk/wiki3/lib/exe/fetch.php?media=conservation_access:micg.pdf))

Natural Resources Wales SSSI guidance (<https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-seas/guidance-to-site-of-special-scientific-interest-sssi-land-owners-and-occupiers/?lang=en>)

## 8 **Archive deposition Statement**

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). No field work was carried out in this season.