CPAT Report No. 1469

Caves of North-East Wales

ARCHAEOLOGICAL EVALUATION 2016





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Client name:	Cadw
CPAT Project No:	1928
Project Name:	Caves of North-East Wales
Grid Reference:	Various
County/LPA:	Denbighshire
CPAT Report No:	1469
Event PRN:	140148
Issue No:	
Report status:	Final
Confidential:	No

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06/01/2017	09/01/2017	10/01/2017	

Bibliographic reference:

Hankinson, R., 2017. *Caves of North-East Wales: Archaeological Evaluation* 2016. Unpublished report. CPAT Report No. 1469.

Cover photo: Recording the excavation in Tan-yr-Ogof Cave No 5 (CPAT 4262-0005)



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Summary

Following an assessment of caves in north-east and east Wales in 2008-9 as part of Cadw's scheduling enhancement programme, a selection of sites were investigated in 2015 to assess the archaeological potential and survival of the deposits at each site. Further investigations were conducted in 2016, although access restrictions prevented work within two of the caves thought to have the highest potential.

Instead, investigations were undertaken at caves in the Coed-y-Trap woods near Henllan and at Tan-yr-Ogof near Abergele; more than one cave was examined at each. These were sites in which archaeological deposits might be expected owing to discoveries in the wider locality, but where no incontrovertible evidence had been found. In both cases there was also circumstantial evidence that suggested previous excavations had been carried out, although there was no known record of this activity. The results, however, were disappointing in each case, revealing no archaeological material, though further information was gathered regarding the caves assessed and this shows that both localities retain some potential for relevant deposits.

1 Introduction

- 1.1. An assessment of known and possible archaeological caves in north-east and east Wales was conducted by the Clwyd-Powys Archaeological Trust (CPAT) in 2008-9 (Hankinson and Silvester 2009), under Cadw's scheduling enhancement programme. The report considered caves throughout the CPAT area and assessed their potential for designation.
- 1.2. Following the assessment in 2008-9 Cadw determined that further information and specialist input were required before a decision could be made on finalising designations. This would enable Cadw to make an informed and robust assessment of the archaeological potential and significance of the sites considered. At the same time, some issues had been raised over potential additional sources of information for north-east Wales and the need to address conflicts between these sources and the data in the gazetteer that formed part of the 2008-9 assessment. This led to the formation of a working group 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, where appropriate.
- 1.3. 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).
- 1.4. Proposals for the assessment of caves in the study area were formulated and the future direction of work was discussed at a meeting of the steering group in June 2015. The main product of the meeting was a listing of caves (Table 1) 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.
- 1.5. Four of the caves thought to have significant archaeological potential were later investigated by trial excavation. In each case, material of significance was identified, and it was clear that at least some relevant deposits had survived at all the caves investigated. 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 period. For Perthichwarae Cave II, which had been investigated in the 19th century, material that had not previously been identified was recovered, while at Eryrys Hill Cave, where it was not possible to investigate within the cave, 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.

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 (Neolithic?) flint objects removed. Potential for internal and external deposits to survive in situ. Dating of material.
123467	Eryrys Hill	1	Apparently intact deposits of unknown character.
100568	Plas Heaton	1	Very large cave, heavily disturbed in the 19 th century but still with substantial intact deposits of unknown character. Desktop research required to better understand reported antiquarian finds sections could be cleaned with relative ease.
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 th century. Potential for some intact deposits and opportunity to explore 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.
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 <i>c</i> . 4170bp. Limited potential for intact / in situ material to schedule.

	Table 1: The	e list of caves	considered for	or further	assessment.
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1.6. Following on from the fieldwork conducted in 2015-16 a further three caves were identified for investigation in 2016-17, based on the same criteria. The sites initially chosen were Brasgyll No 2, Plas Heaton and Coed-y-Trap, which would have meant

that all of the category 1 sites would have been examined. Unfortunately, permission for work at the first two of these was not forthcoming, and sites in category 2 were therefore reassessed to determine which were the most suitable candidates for further investigation.

1.7. The first cave in category 2 to be considered was Bryn Alyn Cave No 5, primarily for its proximity to Lynx Cave, where significant evidence of prehistoric and Roman use has been found by John Blore (http://lynxcave.webs.com/). However, it was clear when the evidence was re-examined that work had already been carried out by Blore at the site and nothing significant had been identified. Dulas Cave was also considered but rapidly rejected as it proved impossible to identify the owner. An additional site to those listed in Table 1, that of Gop Cave, which was known to have been used for Neolithic burials, was also considered as it was thought that investigation of the spoil tips from previous excavations might provide useful additional information, but permission was not forthcoming, so this left two of the Tan-yr-Ogof caves (Nos 4 and 5) and Coed-y-Trap as the best remaining sites for study.

2 Methodology

- 2.1. The proposals for 2016 differed from 2015 in that the investigation of the sites in Coed-y-Trap Wood were assigned to Dr Rob Dinnis, one of the members of the steering group. Consultation and liaison to obtain the necessary permissions was conducted by CPAT.
- 2.2. Both Tan-yr-Ogof and Coed-y-Trap lie within areas with a natural environment designation, namely the Llanddulas Limestone and Gwrych Castle Wood SSSI (Tanyr-Ogof) and the Coedydd ac Ogofau Elwy a Meirchion SSSI (Coed-y-Trap). Following a field visit to the sites with Heledd Jones of NRW, permission was obtained to carry out excavations at Tan-yr-Ogof caves 4 and 5, and at Coed-y-Trap, subject to the adoption of detailed project designs compiled by CPAT and approved by NRW. Included in the project design for the former area was an undertaking to record numbers and locations for three rare plant species, known in common usage as the Wild Cabbage, Stinking Hellebore and White Horehound which were encountered during work at the caves. The records made and photographs taken of these species have been passed to NRW for inclusion in the records of the flora from the locality.
- 2.3. The excavations fell outside the bat hibernation period, although bats had been recorded at both localities in the past, and the Clwyd Bat Group therefore undertook pre-excavation inspections in order to ensure compliance with the European Protected Species legislation. No bats were identified at Coed-y-Trap, but bats were present in Cave No 4 at Tan-yr-Ogof, as a result of which NRW agreed to vary the terms of their consent to allow for the transfer of the excavation to Cave No 3, which had been clear at the time of the inspection. Following the completion of work in Cave No 5, an initial examination of Cave No 3 was carried out in the remaining part of one day, but on returning the next a bat was found to be in residence so contact was again made with NRW, who permitted the work to be transferred to Cave No 2.

2.4. A detailed description of the extent and nature of the investigations at each site follows in the next section, but in general the work involved the excavation by hand of a small trench at each site or the cleaning of an existing section through the deposits within the cave. This was essentially a process of evaluation, designed to provide information on the presence or absence of archaeological deposits and an understanding of the nature and preservation of any that were encountered. Deposits of relatively recent date were removed and subsequent layers tested to assess their origin.

3 Excavations

3.1. Each excavation is described individually in the following paragraphs. Conclusions regarding the nature of each site and the implications of the work follow and are summarised in Section 4.



Fig. 1: The caves evaluated in 2016. Shading shows principal limestone formations.

Coed y Trap and Upper Meirchion Caves by Dr R Dinnis

Upper Meirchion Cave

3.2. Upper Meirchion Cave overlooks Afon Meirchion, a tributary of the River Elwy, roughly 1.5km north of Henllan at NGR SJ 0210 6926. The first documented exploration at Upper Meirchion Cave was by the Shropshire Mining Club (SMC) in 1962. They describe the (then unnamed) cave as 'a quite large impressive cave entrance in an isolated valley scarp 100yds above Afon Meirchion Cave, and high up on the valley side, this does not appear to have been recorded'.



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Fig. 2: Location plan showing Upper Meirchion and Coed-y-Trap in relation to nearby archaeological caves

3.3. The SMC dug into a passage on the cave's right (southern) side, but progress was blocked by a badger set (James 1962, 34-35). Oldham (2000, 55), later referred to the cave as 'Upper Meirchion Cave (also known as Fox Cave)', and, with reference to a 1987 visit, described the cave's passages as 'completely blocked by badger earthworks'. The cave's entrance is shown in Fig. 3.



Fig. 3: Main entrance to Upper Meirchion Cave. The excavations described here were carried out on the left wall as viewed from the entrance. (Photo: Rob Dinnis, September 2016.) See also Fig. 4.

3.4. Bones were reportedly removed from the cave in 1991 by a recreational caver, and several years later passed to the St Asaph Archaeology Society. They were subsequently examined by Elizabeth Walker of Amgueddfa Cymru - National Museum Wales, who identified among them bear and horse remains (Maria Blagojevic pers. comm. to Rob Dinnis, 2012). Although there was some confusion as to which cave the bones had come from, the caver's sketch plan (also passed to the St Asaph Archaeology Society) fits reasonably well with Upper Meirchion Cave. The bones were described as being found in association with a boulder positioned against the left (northern) wall of the cave, and with all bones coming from directly beneath or within a one foot radius of the boulder. Their find position as reported by the caver is shown in Fig. 4.

2012 and 2016 work

3.5. In light of these reported finds a 1m x 1.5m trench was excavated in October 2012 by Rob Dinnis and J. Boulton (Dinnis and Ebbs 2013, 30) (Fig. 4). Between 0.5m and 0.6m of recent badger denning material overlay a neat horizontal floor formed of intact

clay deposits containing rounded siltstone clasts. Based largely on their colour these clay deposits could be separated into two units, whose contact dipped northwards, towards the cave wall: on the north side, abutting the cave wall, was a stratigraphically higher red clay; in the southern part of the trench was a stratigraphically lower grey clay. Neither of these clay deposits contained archaeological or palaeontological material.



Fig. 4: Plan of Upper Meirchion Cave, based on Oldham 2000. The location of the 1991 finds of bones, as reported by their discoverer, is marked by "X". The position of excavations in 2012 and 2016 are shown (see text).

- 3.6. Subsequently, re-examination and comparison of the cave plan of Oldham (2000, 55) with the description and sketch plan provided to the St Asaph Archaeology Society by the caver raised the possibility that the precise find spot of the bones may, in fact, have been slightly mis-reported, and that it instead lay closer to the cave mouth. The 2012 trench was therefore extended westwards in 2016, towards the cave mouth, with a new 0.75m by 0.9m excavation area, in order to test this possibility (Fig. 4).
- 3.7. The 2016 excavated sequence matched that found in 2012: the uppermost *c*.0.5m was badger denning material containing recent remains (sheep bones, badger bones, glass, a clay pigeon fragment), and this overlay a flat surface of two discernible clayey deposits with rounded siltstone clasts, matching those found in 2012 (albeit the grey clay unit slightly sandier and more yellow than in the 2012 trench) (Fig. 5). A 0.25m

by 0.25m sondage was excavated into these two units to a depth of *c*.0.15m, which indicated that, like the equivalent deposits tested in 2012, both are sterile (Fig. 6).



Fig. 5: The surface of the intact, clay deposits (Photo: Rob Dinnis, September 2016).

Interpretation

3.8. Although the caver described "levelling" the floor (Maria Blagojevic pers. comm. To Rob Dinnis, 2012) it is unlikely that he was responsible for the flat surface of intact clay deposits found across our entire (2012 and 2016) excavation area. The extent and neatness of this surface – apparently across the entirety of the cave floor – is instead more typical of a structured, geologically-minded excavation. Dinnis and Ebbs (2013, 30) suggested that the intact deposits at Upper Meirchion Cave may have been left following excavations in the 19th century, when it is known that geologists were working in nearby caves (Dawkins 1874). The lack of reporting of the Upper Meirchion Cave excavation may simply reflect the paucity of finds relative to its more illustrious neighbours in the Elwy Valley. Following our 2016 return to the site, this remains the favoured explanation of Rob Dinnis and John Boulton.



Fig. 6: Small sondage into the yellow-grey clay deposits in the south-west corner of the trench (Photo: Rob Dinnis, September 2016).

3.9. If this explanation is accepted, and if the caver's reported 1991 findspot is accurate, then the presence of horse and bear bones in this area is difficult to explain, particularly if, as described by the caver, they lay underneath and around a boulder. Remnants of stalagmite floor levels on the northern wall of the cave above the present-day floor level testify to the removal of a large volume of sediments at some point in the cave's history, but it is impossible to be sure when this took place. However, this does at least raise the possibility that a substantial volume of ossiferous sediments may once have been present in the cave. The caver's 1991 discoveries were therefore possibly present in a small, remnant part of this nowabsent deposit, although the neatness of the cut of the extant intact deposits in the relevant area would argue against this. Alternatively, faunal remains may have been moved into the cave's main chamber from deeper in the cave system prior to their discovery in 1991 - possibly by badgers, or feasibly during the caving dig of the SMC. If ossiferous deposits did once exist in the cave's main chamber it would be unsurprising for remnants of the same sediment body to remain in less accessible parts of the cave.

Coed-y-Trap Cave

3.10. A further small, previously unnamed, cave close to Upper Meirchion Cave was also examined in 2016 (Fig. 7). The cave lies *c*.15m south of Upper Meirchion Cave,

slightly higher from the valley floor, but formed in the same bedding plane. Although this is much smaller than Upper Meirchion Cave, both share two entrances accessible from a path around the cliff edge, and two blocked passages heading into the cliff, at least one of which was obviously used by badgers. These features formed part of the sketch plan of Upper Meirchion Cave passed by the caver to the St Asaph Archaeology Society. In addition, limestone blocks are visible on the floor of the cave, and these are noticeably missing from the main chamber of Upper Meirchion Cave, despite the caver describing finding the bones under a boulder.



Fig. 7: Coed-y-Trap, located close to Upper Meirchion Cave. (Photo: Rob Dinnis)

3.11. Owing to the discrepancy between the deposits identified in Upper Meirchion Cave and the location of finds as reported by the bones' discoverer (see above) it was considered possible that these two caves may have become confused, and that the finds may instead have come from Coed-y-Trap. Excavation of an area of *c*.0.4m by 0.4m positioned as close as possible to the left wall of the cave as viewed from the entrance in Fig. 7, sought to clarify whether such a mix-up was plausible. A brief excavation revealed limestone blocks atop a clearly intact, very stiff brownish clay containing siltstone/mudstone inclusions but no archaeological or palaeontological

material. This clay may correspond to the similar deposits found in Upper Meirchion Cave (see above).

3.12. Given the smallness of the currently exposed cave void and the presence of intact deposits on the current cave floor, it is implausible that a large body of ossiferous deposits have been removed from the cave. When considered alongside the greater overall resemblance of the caver's sketch plan to Upper Meirchion Cave, we can therefore be confident that the 1991 finds did not come from this smaller cave.

Tan-yr-Ogof Caves by R Hankinson

3.13. This group of caves all lie at the base of a limestone escarpment in the Gwrych Castle Wood, which rises to approximately 150m OD and is situated about 1km to the east of the centre of the village of Llanddulas. To the north of this block of limestone there is the coastal plain running eastwards towards Abergele and it is bounded on the west by the valley of the Afon Dulas.



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3.14. With the exception of Cave No 1, all of the caves have been partially emptied of their deposits, and in some cases the pick marks from this activity can still be discerned on the passage walls. The period when this activity took place is a matter of particular interest and a number of clues taken together suggest that it dates to the first half of the 19th century (see discussion below).

Tan-yr-Ogof Cave No 2

3.15. Cave No 2 is located at NGR SH 9140 7790, in the north-west facing part of the limestone escarpment where it overlooks Llanddulas. The cave interconnects with Cave No 1, with which it is linked by a steep climb up the clay deposits in its rear; it was these deposits that were investigated by means of cutting a section into the base of the slope (Figs 9 and 10), about 10m in from the entrance and measuring 1.1m wide by 1.5m high.



Fig. 9: The section through the deposits in Cave No 2. Photo CPAT 4262-0019

- 3.16. The deposits ranged from reddish-brown clay to mixed gravelly material in a greybrown sandy matrix and all appeared to have been deposited by fluvial activity at a time when the cave contained an active stream; no evidence of an artificial origin was observed and no artefacts were revealed. It was also clear that this was one of the caves that had been partially emptied of its deposits and the base of the slope indicated the point at which that excavation was terminated.
- 3.17. On his website Ebbs notes that he and a fellow caver carried out some excavations in the area at the top of the slope in the 1970s while revealing an additional passage, but that no archaeological material was found. This was probably at a level equivalent to the fill of the cave before the excavations thought to have taken place in the first half of the 19th century. It is not possible to be precise about the scale of these early excavations, but the visible indicators suggest that at least 150m³ of fill was removed from the cave.



Fig. 10: Plan of Tan-yr-Ogof Cave No 2, from its entrance to the surviving in-situ deposits. The cave continues to the south-south-east.

Tan-yr-Ogof Cave No 3

- 3.18. The entrance to Cave No 3 lies a short distance to the north-east of Cave No 2 at NGR SH 9142 7791. As noted above (para 2.3), work had commenced here on the day before a bat took up residence in the cave, thereby halting any further investigation. All that had been completed was a study of the graffiti within the cave, but this proved to be informative in the assessment of the dating of the partial removal of the deposits, something first noted in 2015 when evidence of a former stalagmite floor was seen at a high level in the main passage and pick marks were recorded on the walls of the cave.
- 3.19. A range of initials and dates were seen, mainly on the left hand side of the main passage, about 10m in from the entrance. The earliest of those that could be deciphered gave the year 1851 (Fig. 11); the other early dated examples were generally from the 1870s and 1880s. The position of this graffiti meant that it must have been inscribed after the passage floor had been taken down to its current level, thereby providing a *terminus ante quem* for the excavations that had removed deposits from this part of the cave.



Fig. 11: The earliest dated graffiti found in Tan-yr-Ogof Cave No 3. Photo CPAT 4262-0010

Tan-yr-Ogof Cave No 5



Fig. 12: The section through the deposits at the rear of Cave No 5. Photo CPAT 4262-0008

- 3.20. Cave No 5 is some 60m to the east of Cave No 4 at NGR SH 9154 7793 and lies in the north-facing part of the escarpment which overlooks the coastal plain. The escarpment here is lower than at the other caves but the ground slopes away quite steeply below the cave entrance.
- 3.21. This was another cave where large-scale removal of deposits had taken place in the past and surviving portions of a stalagmite floor at the current end of the passage suggested that a thickness of between 1.5m and 2.0m of material had been removed for a distance of about 13m into the cave from its entrance, or an approximate volume of 30-40m³. Work at this site comprised the cleaning of part of the section which had been left by these earlier excavations to see if any significant material could be identified.
- 3.22. In cleaning the existing section through the cave deposits, these were found to consist of a single fill, probably of natural origin, comprising angular lumps of limestone, redissolved white calcite and creamy brown clay. This appeared to have been sealed beneath a stalagmite floor which continued into the cave for a further 1.5m before the passage became almost completely blocked by speleothems. No archaeological material was observed.



Fig. 13: Plan of Tan-yr-Ogof Cave No 5, from its entrance to the limit of the probable 19th-century excavations

Discussion

- 3.23. While it is clear that a significant amount of deposits have been removed from the Tan-yr-Ogof caves, there is no record of this activity or information on any archaeological material that may have been encountered. It is only secondary evidence that provides information on the likely date of, and reasons for, the work as well as a tantalising hint that archaeological material may have been present in the locality.
- 3.24. Attempting to date the removal of these deposits has proved difficult as although Cave No 4 has clearly been known for a long time, the other caves are generally not mentioned by early sources and no direct evidence has been found. Trimmer (1838, 344) clearly visited Cave No 4 and describes its interior with reasonable accuracy, although it appears that there may have been some subsequent removal of a deposit that he describes as a 'great heap of angular limestone and loam' which had entered the cave through the large hole in the roof a short distance in from the entrance. He seems to have spent some time in the immediate area but does not refer to any other open caves, although he states that 'The adjoining extensive quarries have laid open several cavities completely filled with loam and gravel', and it seems reasonable to assume that at least some of these may be equated with the other caves in the group, at a stage before some of their deposits were removed. If correct, this narrows the potential date for the removal to between 1838 and 1851, the *terminus ante quem* for the work provided by graffiti in Cave No 3 (Fig. 11).
- 3.25. These dates suggest the possibility that the caves were dug out at the behest of Lloyd Hesketh Bamford-Hesketh (1788-1861), who had Gwrych Castle built in the 1820s and was a known follower of the picturesque movement. He was perhaps ultimately, if not directly, influenced in some of his thinking regarding the picturesque by the park at Piercefield on the banks of the River Wye, created by Valentine Morris in the second half of the 18th century. Morris planned and built a series of walks through his estate woodland, but more notably created a grotto and a 'giant's cave'. He also developed viewpoints along the clifftop above the river and opened the park up to visitors for viewing; these included some influential personages such as Sir Joseph Banks and William Gilpin, the latter publishing a work on the romantic qualities of the Wye in 1782.
- 3.26. At Gwrych, there are a number of comparable features, particularly the paths through the estate woods and the series of stone steps which lead down through a gap in the cliff about 40m to the east of Tan-yr-Ogof Cave No 5. In this light it is easy to imagine that Bamford-Hesketh saw the potential contribution that opening up the Tan-yr-Ogof caves for ready access could make to his, and perhaps any of his guests, appreciation of the landscape of the estate, something which his designs for the castle show was a prime consideration of his. The presence of quarrying activity would have no doubt been disruptive to this pursuit and therefore seen as undesirable, so it is significant that a note on the history of the Llanddulas quarries mentions that quarrying started on 'Creigiau'r Ogo' at the end of the 17th century, but that work here was stopped by the owners of Gwrych Castle and quarrying moved to the opposite (west) side of the river (Afon Dulas).
- 3.27. Trimmer (1838, 344-5) provides two snippets of information which might be taken to suggest that the caves once contained archaeological or palaeontological material.

Firstly, he mentions a sequence of deposits which had 'evidently accumulated in an open fissure', within which there was a 'Reddish clay, 4 to 6 inches thick, having a layer of calcareous tufa above and below it, and containing numerous bones of moles and mice, that have not lost their gelatine'. This sounds as if it may represent an ossiferous cave deposit bounded by stalagmite floors that had become degraded by exposure to the open air. His second piece of information relates to discussions he had with the quarry workers, where he notes that 'I could see no traces of bones or shells, and could obtain from the workmen no account of any having been met with, except a human skull in the surface soil'. Whether this originally came from a funerary deposit in one of the caves will never be known.

4 Conclusions

- 4.1. The 2016 cave investigations have proved to be relatively unsuccessful in comparison to work carried out in 2015, although this is perhaps largely a result of restrictions which prevented work within those caves thought to contain the greatest potential for archaeological deposits. The writer is in no doubt that caves containing significant in-situ archaeological deposits remain to be identified within the study area.
- 4.2. The investigations by Dr Dinnis in the Coed-y-Trap woods suggested that the larger of the two caves there (Upper Meirchion) was probably subject to some excavation in the second half of the 19th century, when other caves in the neighbourhood were being investigated. The fact that there is no record of any such work was considered to reflect the relative paucity of finds in comparison to these other sites, which meant it was not worthy of mention. However, the apparent discovery of horse and bear bones there by a recreational caver in 1991 may suggest that significant material remains elsewhere within the cave, although this may, in part, have been disturbed by badgers. No evidence of archaeological material or deposits was found in the nearby Coed-y-Trap Cave, where the existing cave void is extremely small and appears to have escaped the attention of antiquarians.
- 4.3. The setting and relative proximity of the Tan-yr-Ogof caves to a number of known archaeological caves on the Great and Little Orme headlands, the nearest of which lies some 10km distant, suggested that they should have a good potential to contain archaeological material. That none was found is perhaps the result of a number of factors, one of which is that it proved impossible to excavate in the locations with greatest potential, particularly where a stalagmite floor and associated deposits had been recognised in Cave No 4.
- 4.4. There is also evidence that points to the other caves in the Tan-yr-Ogof group having been first discovered during quarrying and it seems probable that any archaeological deposits present would have been either lost to or damaged by these activities. The record of a skull being found in the surface soils may signify that one or more could have been used as places of burial, this having gone unrecognised by the quarrymen at the time of the cave's discovery, but this is impossible to verify. Most of the passages revealed were probably originally filled with clay and stones, but these deposits are thought to have been partially removed by activities related to the Gwrych Castle Estate between 1838 and 1851. While it is known that there was an interest in archaeological cave deposits in north-east Wales during this period, particularly at the Cefn Caves, near Henllan, no evidence of an organised

archaeological investigation in this locality has been found. Perhaps, like with Upper Meirchion Cave, any investigation which might have taken place was relatively unsuccessful and not deemed worthy of reporting.

5 Acknowledgements

- 5.1. The writer would like to thank the following owners of the caves and their representatives for permission to carry out the excavations, namely: Craig Edwards, EPM UK Ltd and Ralph Collins, Carter Jonas.
- 5.2. Thanks are also due to: Cadw for their support of the project and Will Davies, their Regional Inspector of Ancient Monuments; Cris Ebbs, Llanarmon-yn-Iâl; Fiona Gale of Denbighshire Countryside Service; Amy Green, Clwyd Bat Group; Heledd Jones, Richard May, Raymond Roberts, Charlotte Williams, and Glenn Williams, Natural Resources Wales; and Elizabeth Walker, Amgueddfa Cymru - National Museum Wales.
- 5.3. In addition to the above, the writer would like to thank Dr Rob Dinnis for his involvement with the project as a whole and for reporting on his work at the Upper Meirchion and Coed-y-Trap caves, and Rachael Matthews (CPAT) for her assistance with the excavations at Tan-yr-Ogof.

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Ebbs' listing relating to the Tan-yr-Ogof caves https://sites.google.com/site/cavesofnorthwales/09-caves-t---z

John Blore's webpages relating to Lynx Cave http://lynxcave.webs.com/

Gwrych Castle history http://gwrychtrust.co.uk/index.php/history/

Pictorial history of the Llanddulas quarries (with text) http://www.llanddulasquarries.co.uk/quarries.htm

1962 North Wales Expedition of the Shropshire Mining Club (James, M.). Shropshire Mining Club Yearbook 1961–2, 34–35. http://www.shropshirecmc.org.uk/yearbooks/SMC_Year_Book_1961-62_w.pdf

Discussion of the Piercefield Estate http://www.ggat.org.uk/cadw/historic_landscape/wye_valley/english/wyevalle y_004.htm

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 archive will be deposited with the regional Historic Environment Record, maintained by CPAT in Welshpool; no artefacts were recovered. A summary of the archive is provided in Appendix 2.

Appendix 1: Gazetteer of relevant sites

(based on CPAT Report No 1313)

PRN 123457 Tan-yr-Ogof Cave No 2

SH9139577905

This is a previously unrecorded cave that features on Ebbs' website and is one of 6 caves in the Tan-yr-Ogof caves group. The parent PRN for this group is 54884. (MB 19/12/14)

Ebbs provides the following information:

Length, 19m. A passage up to 6m high becomes silted after 10m, but at the top of the clay blockage at the end is a crawl excavated in 1974. This enters a small chamber after 8m and terminates close to a dig in Cave 3. During this excavation no archaeological material was found. Above the bank on the right of the passage is a crawl into Cave 1. (https://sites.google.com/site/cavesofnortheastwales/, accessed December 2014)

Cave as described by Ebbs. It seems likely that the current open part of the cave was deliberately emptied of its fill to create a feature of landscape interest for the Gwrych Castle estate. (CPAT site visit 16/1/2015)



Tan-yr-Ogof Cave No 3. Photo CPAT 3906-0029.

This is a previously unrecorded cave that features on Ebbs' website and is one of 6 caves in the Tan-yr-Ogof caves group. The parent PRN for this group is 54884. (MB 19/12/14)

Ebbs provides the following information:

Length, 30m. A 5m high winding passage, 24m long, with a smaller 6m passage on the right at the end. Part way into the cave are two tubes in the passage wall. 6m above these tubes is a crawl passage connecting to Cave 2. (https://sites.google.com/site/cavesofnortheastwales/, accessed December 2014)

Cave as described by Ebbs. It seems likely that the current open part of the cave was deliberately emptied of its fill to create a feature of landscape interest for the Gwrych Castle estate. This is particularly so as evidence of a former stalagmite floor can be seen at a high level in the main passage and there are pick marks visible on the walls. Most of the deposits seem to have been removed. (CPAT site visit 16/1/2015)

123459 Tan-yr-Ogof Cave No 4

SH9150377944

This is a previously unrecorded cave that features on Ebbs' website and is one of 6 caves in the Tan-yr-Ogof caves group. The parent PRN for this group is 54884. (MB 19/12/14)

Ebbs provides the following information:

The Ogo (after Baker and Balch 1907), length 52m. A 7m diameter entrance immediately splits into two passages. The left ends after 10m. The main right-hand passage passes beneath a rift in the roof leading up to surface, within which an awkward climb leads to a 6m passage. Some 35 metres from the entrance the main passage becomes more silted at a point where a small chamber can be seen on the left. The main route closes down after a further 7m. (https://sites.google.com/site/cavesofnortheastwales/, accessed December 2014)



Tan-yr-Ogof Cave No 4 (The Ogo). Photo CPAT 3906-0023.

Cave as described by Ebbs. It seems likely that some of the currently open part of the cave was deliberately emptied of its fill to create a feature of landscape interest for the Gwrych Castle estate; a photograph on Ebbs' website shows that this had probably already taken place

by 1907. This is the only cave of the group depicted on late 19th-century Ordnance Survey maps. It appears that the right-hand passage had a stalagmite floor, about 2m above its current one, and there are traces of a possible second stalagmite floor at a lower level, suggesting that there were at least two phases of silt deposition in the life of the cave. The right-hand passage is exposed to a through draught, being open to the surface above, and is not particularly habitable. The left-hand passage provides rather more shelter and has a curious rock step at its entrance. There are clay deposits within the passage, which are thicker near its end. The site may be worth some trial excavation to assess the archaeological potential of the remaining deposits. (CPAT site visit 16/1/2015)

123337 Tan-yr-Ogof Cave No 5

SH91547793

This is a previously unrecorded cave that features on Ebbs' website and is one of 6 caves in the Tan-yr-Ogof caves group. The parent PRN for this group is 54884. (MB 19/12/14)

Ebbs provides the following information: Length, 8m. A straight rift passage with an aven in the roof. (https://sites.google.com/site/cavesofnortheastwales/, accessed December 2014)



Tan-yr-Ogof Cave No 5. Photo CPAT 3906-0021.

It seems likely that some, if not most, of the currently open part of the cave was deliberately emptied of its fill to create a feature of landscape interest for the Gwrych Castle estate, as seems to have happened to most of the other caves in this group. The photograph of Cave No 6 on Ebbs' website is actually of this cave. There is evidence of the truncated remains of a stalagmite floor at head-height at the end of the cave, although this has been removed nearer to the entrance. This may be the evidence reported by Blore under Cave No 6 (PRN 123460), as there appear to be in-situ deposits beneath the surviving portion of the floor. (CPAT site visit 16/1/2015)

PRN 132342 Coed-y-Trap Cave

SJ02106926

A cave, not previously recorded in the HER, in the wooded valley of the Afon Meirchion in the same general area as the Cefn Caves and Pontnewydd. It has been seen by Rob Dinnis and Cris Ebbs and is considered to be relatively undisturbed, except perhaps by badgers. Some intact deposits have been identified, but these appear to be very thin and limited to the entrance; significant deposits may remain in the interior. Upper Meirchion Cave lies in this immediate locality and could have been subject to previous investigation by antiquarians.

Appendix 2: Site Archive

Written

3 Trench recording forms

Drawn

3 A4 site plans

Photographs

21 photographs, CPAT Film No 4262 Photographic catalogue