aeon archaeology

Cors-Y-Gedol Estate, Tal-y-bont, Gwynedd

June 2017 - August 2017
V 2.0

Archaeological Watching Brief
Project Code: A0018.2
Report no. 0151

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Archaeological Watching Brief

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Project Code: A0018.2
Date: 18/01/2018
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1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commissioned by Baileys and Partners Ltd to carry out an archaeological watching brief during works associated with the construction of a new micro hydro scheme, including the intake weir, turbine house and the excavation of a penstock trench on land to the east and south of Cors y Gedo hall, Tal-y-bont, Gwynedd.

The watching brief enabled a photographic and descriptive record to be taken of field boundaries features 3, 10 and 12, as well as an unnumbered field boundary to the immediate north of the Afon Ysgethin. Moreover, it enabled the examination and recording of the trackways of Ffordd Gors and Ffordd Ffridd Isa (features 4 and 9 respectively) as well as during the breaching of the forest trackway (feature 50) in two locations. The revealed sections across the walls and trackways did not provide any additional dating evidence and no earlier deposits or foundations were identified.

2.0 INTRODUCTION

Aeon Archaeology was commissioned by Baileys and Partners Ltd, hereafter the Client, to carry out an archaeological watching brief during the construction of a new micro hydro scheme, including the intake weir, turbine house and the excavation of a penstock trench. The hydro intake tapped into an existing leat fed by the Afon Ysgethin at NGR **SH 60678 23083** and ran roughly southwest through the Cors y Gedol estate land to a new turbine house located at NGR **SH 59513 21926** where the hydro outfall emptied back into the Afon Ysgethin. A new power supply was connected from the turbine house into the national grid at the eastern edge of Tal-y-bont, Meirionydd, Gwynedd (figure 1a and 1b) (Planning Permission **NP5/58/542**).

A mitigation brief was not prepared for this scheme by Gwynedd Archaeological Planning Service (GAPS) but the following statement was made a condition of full planning permission:

Condition 12

Prior to any work commencing (including any ground disturbance works or site clearance) pursuant to this permission the applicant/developer shall submit to and receive written approval from the Local Planning Authority for an archaeological specification for a programme of works which must meet all relevant archaeological standards. The development shall subsequently be carried out in strict accordance with the approved programme of works unless otherwise agreed to in writing by the Local Planning Authority.

Reason

In the interest of the protection and recording of any archaeological remains.

An archaeological assessment was undertaken by Aeon Archaeology in August 2014 (**Ref. A0018.1 report 023**) and identified a range of archaeological sites in close proximity of the development and provided recommendations for an archaeological watching brief so that the potential impact and significance of effect of the scheme could be negated.

Relevant UK legislation on heritage includes the Historic Environment Act (Wales) 2016 which amends the Ancient Monuments and Archaeological Areas Act 1979, and the Planning (Listed Buildings and Conservation Areas) Act 1990. The new Act has three main aims:

- to give more effective protection to listed buildings and scheduled monuments;
- to improve the sustainable management of the historic environment; and
- to introduce greater transparency and accountability into decisions taken on the historic environment.

With respect to the cultural heritage of the built environment the *Planning (Conservation Areas and Listed Buildings) Act*[1] *1990* applies. The Act sets out the legislative framework within which works and development affecting listed buildings and conservation areas must be considered. This states that:-

[1] Great Britain. *Planning (Conservation Areas and Listed Buildings) Act.* Elizabeth II.(1990), London: The Stationery Office

> *"In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses" (s66(1))*

Other known sites of cultural heritage/archaeological significance can be entered onto county-based Historic Environment Records under the *Town and Country Planning 1995.*

Planning Policy Wales sets out the land use planning policies of the Welsh Government. Chapter 6 covers the historic environment and emphasises that the positive management of change in the historic environment is based on a full understanding of the nature and significance of historic assets and the recognition of the benefits that they can deliver in a vibrant culture and economy.

Various principles and polices related to cultural heritage and archaeology are set out in the Planning Policy Wales which guide local planning authorities with respect to the wider historic environment.

The following paragraphs from Planning Policy Wales are particularly relevant and are quoted in full:

Paragraph 6.5.5 concerns planning applications:

> *The conservation of archaeological remains is a material consideration in determining a planning application, whether those remains are a scheduled monument or not. Where nationally important archaeological remains, whether scheduled or not, and their settings are likely to be*
>
> *affected by proposed development, there should be a presumption in favour of their physical protection in situ. It will only be in exceptional circumstances that planning permission will be granted if development would result in an adverse impact on a scheduled monument (or an archaeological site shown to be of national importance) or has a significantly damaging effect upon its setting. In cases involving less significant archaeological remains, local planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the proposed development.*

Planning Policy Wales is supplemented by a series of Technical Advice Notes (TAN). Technical Advice Note 24: The Historic Environment contains detailed guidance on how the planning system considers the historic environment during development plan, preparation and decision making on planning and listed building consent applications. TAN 24 replaces the following Welsh Office Circulars:

- 60/96 Planning and the Historic Environment: Archaeology
- 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas
- 1/98 Planning and the Historic Environment: Directions by the Secretary of State for Wales

The work adhered to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).

A written Scheme of Investigation (WSI) (appendix I) was undertaken by Aeon Archaeology in May

2017 which outlined the principle aims of the archaeological watching brief and the methods by which they would be met. This formed the basis of a method statement submitted for the work.

A second WSI (appendix II) was undertaken by Aeon Archaeology in June 2017 which outlined the principle aims of the archaeological watching brief and the methods by which they would be met during the installation of the hydro intake weir and the initial 15.0m of the abstraction pipe as it passed through the Roman *Cors-y-Gedol Settlements & Field System* Scheduled Ancient Monument polygon (SAM: ME128). This document reports on the results of the entire hydro scheme including the works within the SAM polygon.

The Client applied for Scheduled Monument Consent (SMC) for works affecting the above SAM on the 23rd May 2017. Correspondence received from the Welsh Government (Nichola Davies, dated 7th June 2017) showed that the Welsh Government and Cadw were of a mind to grant permission for SMC so long as 16 individual conditions were met. Conditions 11 to 16 refer to archaeological requirements:

Archaeological Requirements:

11. You shall appoint a suitably qualified archaeologist who shall be responsible for undertaking archaeological supervision of all works, within the scheduled area, ensuring that there is no adverse archaeological impact arising from the direct works and the supporting ancillary works (e.g. storage areas, access routes etc);

12. That prior to the start of works the appointed archaeologist shall submit a detailed specification of works, for approval by the Welsh Ministers, detailing how the appointed archaeologist will record the works and provide archaeological supervision throughout the course of the works;

13. That digital photographic record shall be taken prior to the start of works, throughout the course of the works and upon completion. These photographs shall be incorporated into the final completion report;

14. That in the event of significant archaeological remains, features, deposits or artefacts being exposed, work shall stop and the Welsh Ministers shall be informed. Our representatives will then visit the site and assess the archaeological material and its implications, which may (depending upon the findings) necessitate relocating the Forebay Tank and/or connecting pipe;

15. Within one month of the works having been completed, the appointed archaeologist shall submit a draft digital completion report to the Welsh Ministers, detailing the results of the work including plans and photos and also including the technical detail supplied by the hydro contractors;

16. Within one month of the draft report having been approved the appointed archaeologist shall deposit a final version of the report, incorporating any comments/editorial amendments to:

- *The Welsh Ministers*

- *The Regional Historic Environment Record held by Gwynedd Archaeological Trust – her@heneb.co.uk<mailto:her@heneb.co.uk>*

- *The National Monument Record held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) - Gareth.Edwards@rcahmw.gov.uk<mailto:Gareth.Edwards@rcahmw.gov.uk>)*

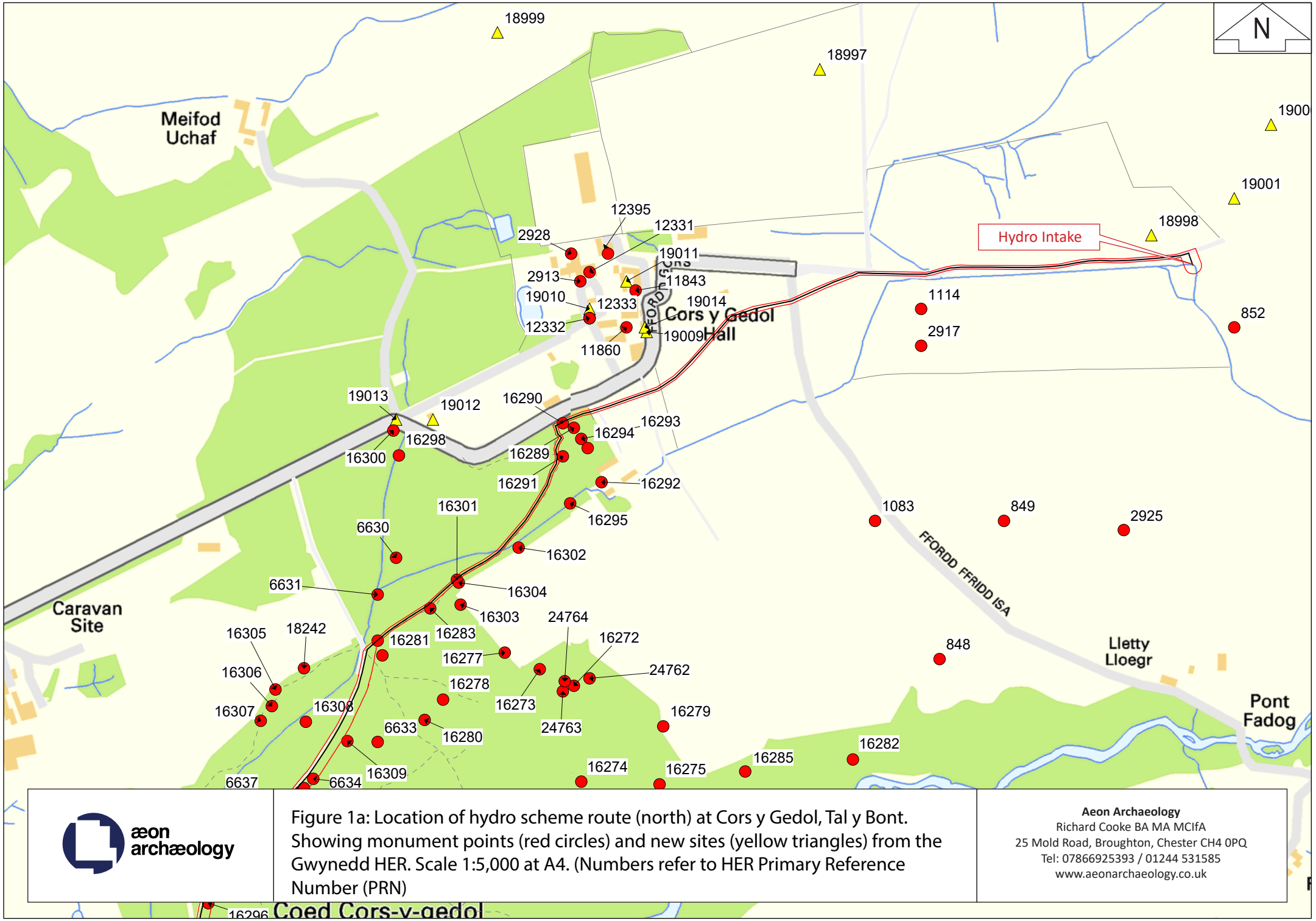

Figure 1a: Location of hydro scheme route (north) at Cors y Gedol, Tal y Bont. Showing monument points (red circles) and new sites (yellow triangles) from the Gwynedd HER. Scale 1:5,000 at A4. (Numbers refer to HER Primary Reference Number (PRN)

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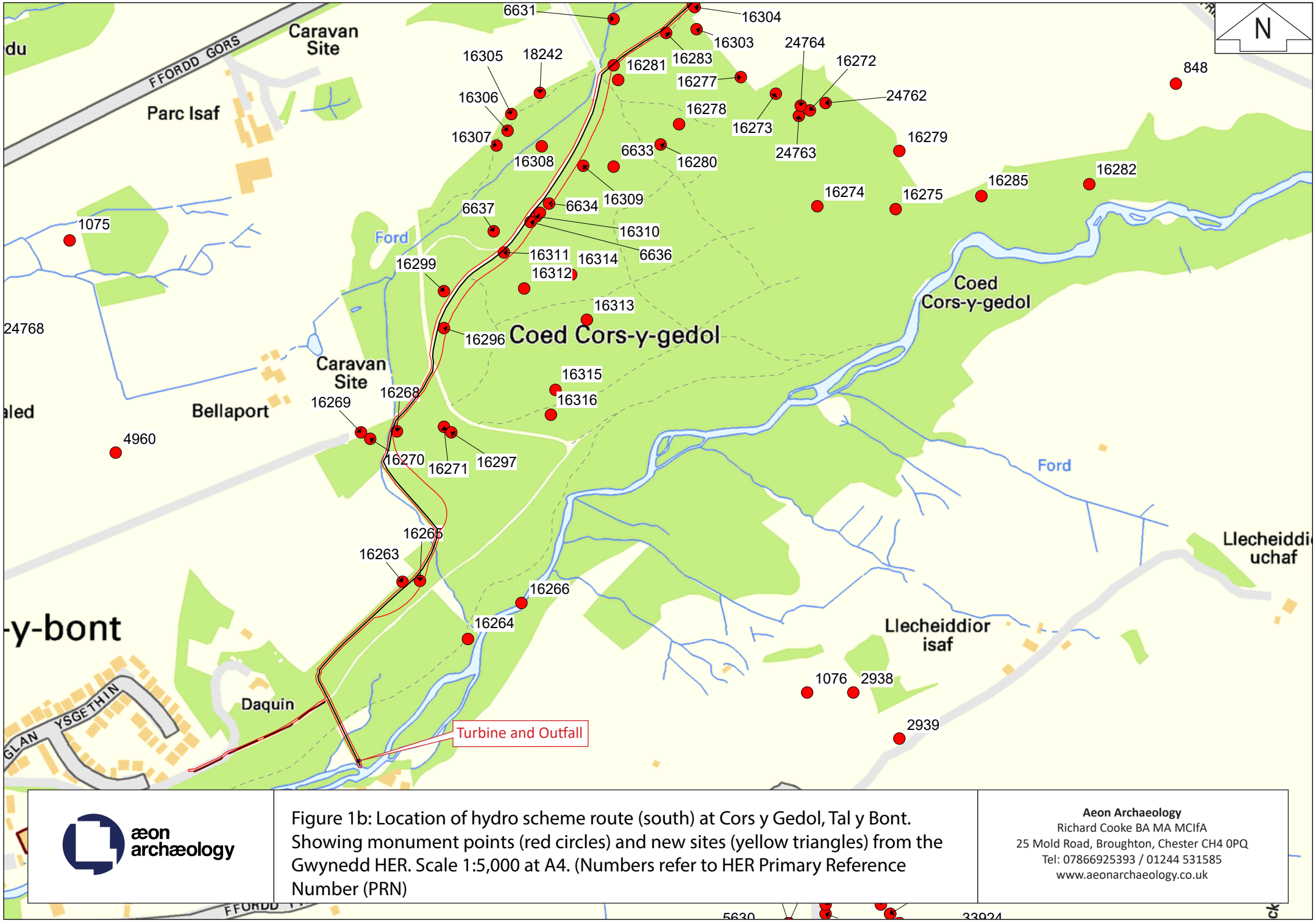

Figure 1b: Location of hydro scheme route (south) at Cors y Gedol, Tal y Bont. Showing monument points (red circles) and new sites (yellow triangles) from the Gwynedd HER. Scale 1:5,000 at A4. (Numbers refer to HER Primary Reference Number (PRN)

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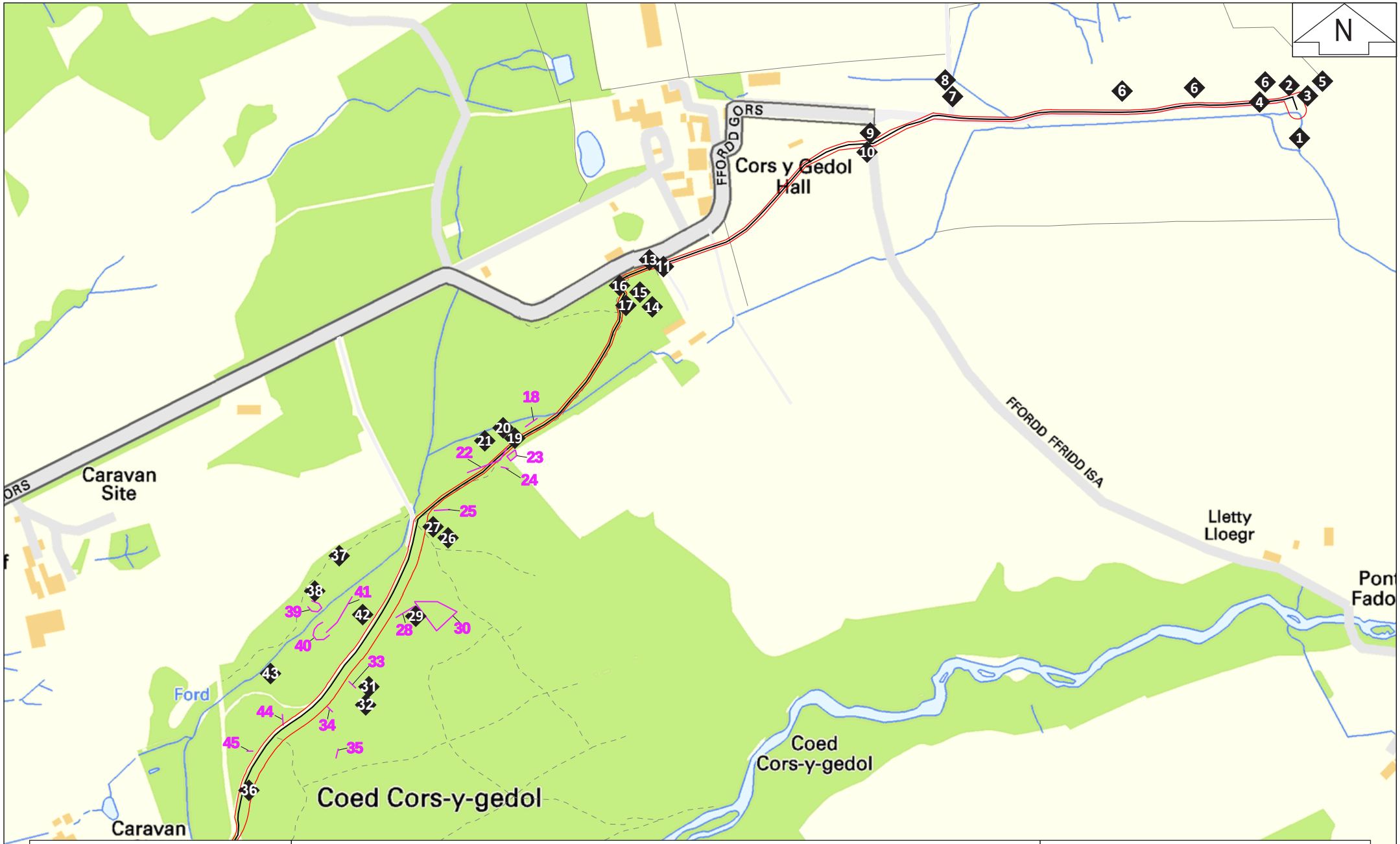

Figure 2a: Location of archaeological sites (numbered diamonds) and archaeological linear features (pink lines) in proximity of the pipeline route (north).

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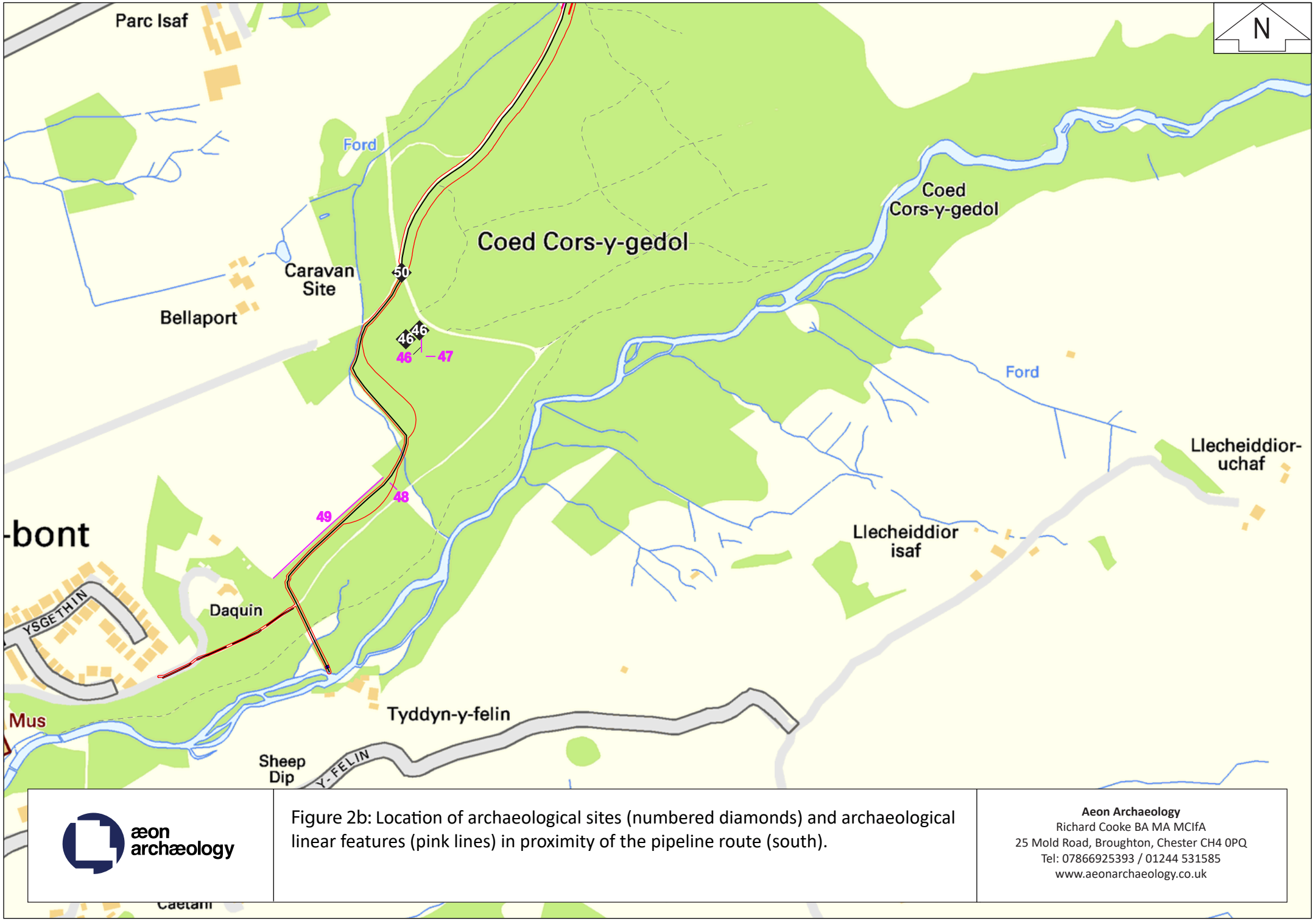

Figure 2b: Location of archaeological sites (numbered diamonds) and archaeological linear features (pink lines) in proximity of the pipeline route (south).

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3.0 PROJECT AIMS

The aim of the watching brief was to characterise the known, or potential, archaeological remains should they be revealed during the excavation of the penstock trench and during the breaching of the field boundaries.

The **watching brief** consisted of the following:

1. In proximity of the former leat (feature 2)
2. During trenching through Ffordd Gors (feature 4)
3. During trenching within the woodland trackway (feature 50)
4. During trenching in the Cors-y-Gedol Settlements & Field System Scheduled Ancient Monument polygon (SAM: ME128) (feature 51)
5. During trenching in the Cors-y-Gedol Grade II Park and Garden of Special Historic Interest (GD27) (feature 52)
6. Within the woodland while the pipe route is formally pegged out.

The management of this project has followed the procedures laid out in the standard professional guidance *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006; rev 2015), and in the Chartered Institute for Archaeologists *Archaeological Watching Brief* (Institute for Archaeologists, 2014). Five stages are specified:

Phase 1: project planning
Phase 2: fieldwork
Phase 3: assessment of potential for analysis and revised project design
Phase 4: analysis and report preparation
Phase 5: dissemination

The current document reports on the phase 4 analysis and states the means to be used to disseminate the results. The purpose of this phase is to carry out the analysis identified in phase 3 (the assessment of potential phase), to amalgamate the results of the specialist studies, if required, with the detailed site narrative and provide both specific and overall interpretations. The site is to be set in its landscape context so that its full character and importance can be understood. All the information is to be presented in a report that will be held by the Gwynedd Historic Environment Record (HER) and the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) so that it can be accessible to the public and future researchers. This phase of work also includes archiving the material and documentary records from the project.

4.0 METHODOLOGY – ARCHAEOLOGICAL WATCHING BRIEF

4.1 Watching Brief

4.2 Data Collection from Site Records

A database of the site photographs was produced to enable active long-term curation of the photographs and easy searching. The site records were checked and cross-referenced and photographs were cross-referenced to contexts. These records were used to write the site narrative and the field drawings and survey data were used to produce an outline plan of the site.

All paper field records were scanned to provide a backup digital copy. The photographs were organised and precisely cross-referenced to the digital photographic record so that the Gwynedd Historic Environment Record (HER) can curate them in their active digital storage facility.

4.3 Artefact Methodology

All artefacts were to be collected and processed including those found within spoil tips. They would be bagged and labelled as well any preliminary identification taking place on site. After processing, all artefacts would be cleaned and examined in-house at Aeon Archaeology. If required artefacts would be sent to a relevant specialist for conservation and analysis.

The recovery policy for archaeological finds was kept under review throughout the archaeological watching brief. Any changes in recovery priorities would be made under guidance from an appropriate specialist and agreed with the Client and the GAPS Archaeologist. There was a presumption against the disposal of archaeological finds regardless of their apparent age or condition.

4.4 Environmental Samples Methodology

The sampling strategy and requirement for bulk soil samples was related to the perceived character, interpretational importance and chronological significance of the strata under investigation. This ensured that only significant features would be sampled. The aim of the sampling strategy was to recover carbonised macroscopic plant remains, small artefacts particularly knapping debris and evidence for metalworking.

Advice and guidance regarding environmental samples and their suitability for radiocarbon dating, as well as the analysis of macrofossils (charcoal and wood), pollen, animal bones and molluscs would be obtained from Oxford Archaeology if required.

4.5 Report and dissemination

A full archive including plans, photographs, written material and any other material resulting from the project was prepared. All plans, photographs and descriptions were labelled, and cross-referenced, and will be lodged within a suitable repository to be agreed with the archaeological curator within six months of the completion of the project.

A draft copy of the report has been sent to the client and upon written approval from them paper and digital copies of the report will be sent to the regional HER (x1) (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, LL57 2RT) and the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) (x1). Copies of all notes, plans, and photographs arising from the watching brief will be stored at Aeon Archaeology under the project codes **A0018.2 & A0018.3** with the originals being lodged in a suitable repository to be agreed with the archaeological curator.

Any artefacts arising from the fieldwork were to be lodged with the Gwynedd Museum and Art Gallery, Bangor, Gwynedd.

5.0 HISTORY OF THE SITE

(Reproduced from Aeon Archaeology DBA report 0023)

The following sections describe the known archaeological record within the general area of the proposed development. Sites are identified by their Primary Reference Number (PRN) which is the number by which they are identified in the Gwynedd Historic Environment Record (HER), or by their Scheduled Ancient Monument reference, or Listed Building reference numbers if applicable. The intention of this section is to provide a historic and archaeological context to the site. This aids in establishing the relative importance of an archaeological feature within its landscape, as well as assessing the potential for unknown buried archaeological remains on the proposed development site.

The beginning and end of certain periods is a contentious issue. In the Gwynedd Historic Environment Record (HER) the following dates are used. This is a standard convention across all of the Welsh HERs.

Table 1. Historic periods

Palaeolithic (prehistoric)	500,000 BC – 10,001 BC
Mesolithic (prehistoric)	10,000 BC – 4,001 BC
Neolithic (prehistoric)	4,000 BC – 2,351 BC
Bronze Age (prehistoric)	2,350 BC – 801 BC
Iron Age (prehistoric)	800 BC – 47 AD
Romano-British	48 AD – 409 AD
Post-Roman (Early Medieval)	410 AD – 1065 AD
Medieval	1066 AD – 1539 AD
Post-Medieval	1540 AD – 1900 AD
Modern	1901 AD – 2050 AD

5.1 Prehistoric and Roman Period

The site is located within the Ardudwy Registered Landscape of Outstanding Historic Interest (HLW (Gw) 2), designated primarily for the range and quality of its extensive relict archaeological remains, mainly dating from the late prehistoric period and for its World Heritage Site (Harlech).

In the localised landscape the Neolithic chambered tomb of *Cors y Gedol burial chamber* Scheduled Ancient Monument (SAM: ME038) locally known as 'Coetan Arthur' lies approximately 232.0m southeast of the proposed pipeline route. An impressive site and one of the better preserved Merioneth megaliths. A cap stone rests on the Cairn and on a single orthostat at the front east end, and standing at right angle to its north end is another stone of equal height. Further north is a fallen stone probably not in its original position. The cairn, which was built almost entirely with small stones, has been extensively damaged by stone robbing for the construction of an old road which almost cuts across its east end.

A second Neolithic chambered tomb Scheduled Ancient Monument (SAM: ME003) is located approximately 740.0m west of the proposed pipeline route. This chambered long cairn is situated close to the school in the village of Dyffryn Ardudwy. It is oriented east to west and is approximately 38.0m long and 17.0m wide at the west end and approximately 10.5m wide at the east end. Most of the stones have been removed leaving two megalithic chambers about 9.0m apart. It originally stood in a small oval mound which at some later date was enclosed in the present long cairn with its own chamber at the east end (HER).

Evidence of Bronze Age activity is relatively sparse but can be seen within the localised landscape approximately 790.0m southeast of the proposed hydro-electric intake point. Two burnt mounds (PRN: 5161) were identified at this point in 1989 lying north of a leat and to the western edge of a patch of marshland. Further sites of possible Bronze Age date include a series of stone cairns (PRN: 16281) located 21.0m east of the proposed pipeline route, as well as possible hut circles (PRN: 16275, 16278), relict stone walls (PRN: 16282), and terraces (PRN: 16297) identified in the archaeological desk-based assessment undertaken by the Gwynedd Archaeological Trust in 1997 (GAT report 242).

The Iron Age and Romano-British periods are particularly well represented within this part of Northwest Wales. The initial 15.0m of the proposed pipeline passes through the prehistoric/Roman *Cors-y-Gedol Settlements & Field System* Scheduled Ancient Monument polygon (SAM: ME128). In proximity to the pipeline the SAM consists of an enclosed hut group (PRN: 1114) lying just above 183.0m contour to the east of Gors y Gedol. It includes two hut circles both of about 7.5m in diameter with a roughly rectangular structure above them cut into the slope, measuring approximately 4.0m x 2.0m. The enclosing wall measures approximately 34.0m north to south and 24.0m east to west, and is very ruined but clearly visible in part to the south. An associated field system (PRN: 2917) extends southwards and eastwards from the hut group, and further round huts both in groups and singly can be seen (PRN: 852). A brief excavation was made in May 1956 and the finds include the charred remains of a small bowl made in oak, three small slate discs and seventeen fragments of pottery, some of which is thought to be 2nd century A.D (HER).

Approximately 420.0m west of the proposed pipeline lies the Roman *Fron-Galed* hut circle settlement Scheduled Ancient Monument (ME113) including four huts clustered around a central courtyard. Further to the west and approximately 740.0m from the pipeline route lies the Roman *Hut Circles and Field Systems, Dyffryn Ardudwy* Scheduled Ancient Monument (ME003). The site includes some of the finest cultivation terraces in Meirionnydd as well as the remains of two much ruined hut circles among the terraces. Some years ago in a field the topside of a fine decorated quern was found which is now in the garden of St. Elizabeth cottage, Dyffryn. Further unscheduled hut circles of probable Roman date are scattered across the upland area within the localised landscape.

5.2 Early Medieval, Medieval and Post-Medieval Periods

The Early Medieval period is poorly represented within this part of northwest Wales and there is only one known suspected site within 1.0km of the proposed pipeline. Among the terraces of the large system at the back of the village of Dyffryn Ardudwy and approximately 770.0m west of the pipe route, is a large circular enclosure terraced out and cut into the slope. It is so overgrown with hazel bushes and brambles that it is impossible to make out its exact features. It has suffered considerable damage but is of the type of homestead tentatively dated to the post Roman period (PRN: 1133).

By the 12th and 13th centuries the kingdom of Gwynedd was divided into administrative *commotes*, administered through a network of local centres governed by a royal court or *Llys*. The cantref of Ardudwy was sub-divided into the commotes of *Uwch Artro* and *Is Artro*. The township of a commote associated with a llys was known as the *maerdref*, in which the Prince's agent would reside. The maerdref for Ardudwy, which was considered part of Gwynedd, was at Ystumgwern. The component parts of a llys included the royal hall and other buildings associated with the residence, as well as the royal demesne worked by bond tenants, and the settlements of these tenants which constituted small hamlets. The llys and royal lands became the property of the English King upon the conclusion of the conquest of Wales.

There are eleven known medieval sites located within 1.0km of the proposed pipeline route. Approximately 470.0m southeast of the proposed hydro-electric discharge point lies the medieval deserted rural settlement of Tyddyn y Felin Scheduled Ancient Monument (SAM: ME202). This small rural settlement is comprised of the remains of three rectangular buildings set on earthen platforms built into the slope of the ground with well preserved wall facings and the remains of a drainage hood. The dwellings are visible today as low stone foundations with a rubble core sandwiched between inner and outer facing stonework. One dwelling was subdivided internally and may have been a long house. Further to the north of the deserted settlement and approximately 540.0m east of the discharge point a *robbed platform house* (PRN: 2939) and a *Stone Built Lynchet, Llecheiddior* (PRN: 2938) of probable medieval date have been found.

During archaeological evaluation work in advance of the development of a water treatment works at Eithinfynydd by the Gwynedd Archaeological Trust (GAT report 831) in 2010, a relict field boundary (PRN: 33926) of suspected medieval date was found. In addition an associated rubble bank was located as well as a possible medieval long-hut (PRN: 33925).

The beginnings of the Cors y Gedol estate can be traced back to the return to Wales from Ireland of Osborn Fitzgerald, a descendant of one of the Norman conquerors of Ireland. Osborn Fitzgerald was a supporter of Llywelyn Fawr and married an heiress of Cors y Gedol who was a royal ward. The family later acquired the family name Vychan or Vaughan, and prospered greatly under Henry Tudor after backing the House of Lancaster in the War of the Roses (Lloyd, L.L. 1977).

The house was entirely rebuilt in 1576 with many additions to the outbuildings and gardens over the centuries. Richard Vaughan (1693-1734) is reported to have made improvements to the house and gardens, and his son William commissioned an extensive and detailed survey of the estate in 1764 (figure 6). This is the earliest known depiction of the house and gardens and shows the estate much as it exists today, with the layout of the gardens and outbuildings having been achieved. Furthermore,

the estate map shows that the leat, which it is proposed feeds the hydro-electric scheme, was in existence at this point in time and was supplying water to the main house. Indeed, the leat continues northward of the proposed water extraction point where a second branch of the leat, and quite probably an earlier version, originally picked up a spring which fed to the main house. The 1764 estate map also shows that the forest to the south of the main house had been planted by this point in time, and that some of the forest tracks had been established. Moreover, the field boundaries are shown much as they exist today with the exception that Ffordd Gors had not yet been constructed.

The estate passed by succession through the female line to the Mostyn family in 1791 and is depicted on the Mostyn estate map of 1806 (figure 7). The map although detailed is not of the same standard as the 1764 estate map and does not depict the forest tracks to the south of the main house. The map does however depict, as with the 1764 map, the continuation of the leat northward of the proposed hydro-electric intake as well as the field boundaries.

The estate is again depicted in detail on the Llanddwywe tithe map of 1841 (figure 8) which shows the estate as almost identical to the two earlier maps, with the exception that the forest tracks had been fully established by this point, including the southern trackway which will carry the proposed hydro-electric pipeline.

Table 2. Apportionment to the 1841 Tithe Map for the Parish of Llanddwywe

Field Number	Field Name	Landowner	Occupier	A/R/P
191	Ffrydd Forgan	The Hon. Edward Mostyn Lloyd Mostyn	William Davies	5/3/36
542	Coed	The Hon. Edward Mostyn Lloyd Mostyn	Bell Lloyd	71/0/12
564	Coed Bach	The Hon. Edward Mostyn Lloyd Mostyn	Bell Lloyd	10/3/28
573	A part of Tai acrenewydd	The Hon. Edward Mostyn Lloyd Mostyn	Bell Lloyd	3/3/20
574	A part of Tai acrenewydd	The Hon. Edward Mostyn Lloyd Mostyn	Bell Lloyd	1/2/0
604	Part of cae'r lloi	The Hon. Edward Mostyn Lloyd Mostyn	David Griffith	6/2/32
605	Part of ffridd fawr	The Hon. Edward Mostyn Lloyd Mostyn	Bell Lloyd	9/0/0
606	Ffridd Ganol	The Hon. Edward Mostyn Lloyd Mostyn	David Griffith	44/0/8

As can be seen from the Llanddwywe tithe apportionment of 1841 the proposed hydro-electric pipeline will pass through fields that were all part of the Cors y Gedol estate and as such belonged to The Hon. Edward Mostyn Lloyd Mostyn, 2nd Baronet Mostyn. He was born Edward Lloyd on 13th January 1795 and assumed by royal licence the additional surname of Mostyn in 1831. In 1831 he was elected to the House of Commons for Flintshire, a seat he held from 1831 to 1837, from 1841 to 1842 and from 1847 to 1850. He also represented Lichfield from 1846 to 1847. In 1854 he succeeded his father in the barony and entered the House of Lords. In 1839 he served as High Sheriff of Merionethshire, in 1840 as High Sheriff of Caernarvonshire and between 1840 and 1884 as Lord Lieutenant of Merionethshire. Lord Mostyn died in March 1884, aged 89, and was succeeded in his titles by his grandson Llewellyn, his eldest son the Hon. Thomas Edward Lloyd-Mostyn having predeceased him (Burke, J. 1833).

The parish tithe apportionment lists the names of the fields for which the pipeline will run through, which refer to descriptive topographical locations such as *Coed Bach* (little wood) or to agricultural use such as *Cae'r Lloi* (calf field).

The proposed pipeline location is again depicted on the Mostyn estate map of 1858 (figure 9), although this map is almost certainly a retrace of the earlier tithe map of 1841 and as such does not provide any additional detail or features of note. Cors y Gedol was eventually sold in 1858 to the Corbett family, whose generous lifestyle resulted in the house being doubled in size, with a ballroom, and it is largely landscaping of this period which survives in the garden. It was sold twice around the turn of the century, becoming a school and then a hostel, and was purchased by the present owners in 1951 (HER).

The Cors y Gedol estate is depicted in detail on the first and second edition county series 25" Ordnance Survey maps of 1889 and 1901 respectively (figures 10a, 10b, 11a and 11b). Both the first and second edition maps depict the estate very similarly to how it exists today and by 1889 Ffordd Gors had been constructed to the south of the main house and lodge. The fields to the immediate north of the proposed hydro intake had been amalgamated by this point in time forming one large field as it exists today. The leat to the immediate north of the proposed intake is shown on the first edition map of 1889 but had apparently been filled in by the production of the second edition map of 1901. Furthermore, the first edition map depicts an offshoot of the leat at the approximate location of the proposed hydro intake, which fed westward via a new arm of the leat to an overshot wheel at the 'power house' south of the main house.

5.3 Aerial Photographs

As part of the archaeological desk-based assessment the RCAHMW was visited to examine available historic aerial photographs of the proposed development area. Aerial coverage from the Royal Air Force and dating to 1947 was examined, as was later Ordnance Survey coverage from 1958. Both sets of photographs showed the leat to the north of the proposed intake point, as well as the terraced ground within the large field north of ffordd Gors.

6.0 QUANTIFICATION OF RESULTS

6.1 The Documentary Archive

The following documentary records were created during the archaeological watching brief:

Watching brief day sheets	4
Digital photographs	88

6.2 Environmental Samples

No environmental samples were taken as part of the watching brief as no suitable archaeological deposits were encountered.

6.3 Artefacts

No artefacts were recovered during the archaeological watching brief.

7.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

7.1 Penstock excavation trench (plates 1-13)

7th - 8th June 2017

The archaeological watching brief was maintained during the excavation of the penstock trench from field boundary (feature 12) westward to the existing turbine house (NGR SH 60021 22928 to SH 59991 22920). The trench measured 1.0m in width by 0.8m in depth. The trench cut through a 0.2m deep dark red-brown silt-clay topsoil and a 0.6m deep dark/mid grey-brown clay-silt subsoil with frequent medium and large sub-rounded cobble inclusions. The natural glacial substrata was not encountered however the large quantity of cobble inclusions within the subsoil horizon may represent a demolition spread from the nearby ruined rectangular structure (feature 13).

Field boundary (feature 12) was breached during the works and was found to measure 0.5m in width and be of a double-skin construction of dry-bonded medium and large sized sub-angular and sub-rounded cobbles. No earlier foundations to the wall were discernible in section.

The penstock trench was then excavated across the trackway connecting Ffordd Gors with a farm south of Cors y Gedol (feature 10) (NGR SH 60027 22932). This trench cut through a 0.25m deep hardcore layer onto >0.55m deep light yellow-brown sand clay natural. This indicated that the trackway had been stripped onto the natural glacial substrata prior to the deposition of the trackway hardcore material.

The watching brief was then maintained during the excavation of the penstock trench from trackway (feature 11) eastward to field boundary wall (feature 10) (NGR SH 60027 22932 to SH 60236 23051). The trench measured 1.0m in width by 0.8m in depth and cut through a 0.2m deep dark red-brown silt-clay topsoil and >0.6m deep light yellow-brown sand clay natural.

No archaeological deposits or remains were encountered during this phase of works, aside from the upstanding boundary walls (feature 12 & 10) and trackway (feature 11).

16th June 2017

The watching brief was maintained while the penstock was laid upon the surface throughout Coed Cors y Gedol. At two locations the penstock was required to cross the existing forest trackway (feature 50) and as such a trench was excavated across both locations in order to bury the penstock. At the first location (NGR SH 59595 22359) a trench measuring 0.65m in width by a maximum of 0.33m in depth was excavated for approximately 20.0m in length. The trench cut through a 0.2m deep dark red-brown silt-clay topsoil and >0.13m deep light yellow-brown silt-sand clay natural glacial substrata. The trackway at this location had no structural element and existed solely as an area of compressed soil rather than a deposit of hardcore and stones. No archaeological remains were observed within the penstock trench.

At the second location (NGR SH 59577 22321) a trench measuring 0.65m in width by a maximum of 0.3m in depth was excavated for approximately 6.0m in length. The trench cut through a 0.2m deep

dark red-brown silt-clay topsoil and >0.1m deep light yellow-brown silt-sand clay natural glacial substrata. The forest trackway at this location comprised a deposit of medium sized sub-rounded cobbles laid directly on to the natural glacial substrata. This showed that the topsoil had been removed prior to the laying of the trackway but no earlier trackway deposits were identified suggesting that the trackway was laid as a single phase event.

Following the excavation of the penstock trench the new turbine location was excavated and monitored by watching brief at NGR SH 59513 21926. The foundation trench measured 4.0m in length by 3.0m in width and was excavated to a depth of 0.25m. The foundation trench was cut through a 0.2m-0.25m deep dark red-brown silt-clay topsoil on to a mid/light orange-red silt-clay natural glacial substrata. No archaeological remains were observed.

7.2 Penstock Outfall excavation trench (plates 14-18)

3rd July 2017

The watching brief was maintained during the excavation of the penstock outfall trench from the location of the new turbine house NGR SH 59513 21926 to the field boundary wall to the immediate north of the Afon Ysgethin NGR SH 59515 21920.

The trench measured 0.65m in width by 0.88m in depth and cut through a 0.20m deep dark red-brown silt-clay topsoil which lay above a 0.48m deep light grey-orange silt-sand natural glacial substrata with very frequent root inclusions, onto 0.12m deep light orange-red silt-sand clay natural glacial substrata. No archaeological remains were observed.

The field boundary immediately north of the Afon Ysgethin was breached during the works and was found to measure 0.6m in width and be of a single-skin construction of dry-bonded medium and large sized sub-rounded cobbles. No earlier foundations to the wall were discernible in section.

7.3 Penstock excavation trench (plates 19-27)

26th July 2017

The watching brief was maintained during the breach of field boundary wall (feature 10) and Ffordd Ffridd Isa (feature 9), and then during the excavation of the penstock trench north-eastward across the enclosed field to field boundary wall (feature 3) which was also breached (SH 60236 23051 to SH 60319 23076).

The section across field boundary wall (feature 10) showed that it consisted of a 1.0m wide base tapering to 0.5m in width at the top of the wall. It was of double-skin dry-stone construction with an outer face of large sub-rounded cobbles and an internal core of medium sized sub-angular cobbles. No earlier foundations to the wall were discernible in section.

To the immediate east of wall (feature 10) the penstock trench was excavated across the trackway known as Ffordd Fridd Isa (feature 9) (NGR SH 60241 23053). This trench cut through a 0.1m deep tarmac deposit and a 0.2m deep hardcore layer onto a light yellow-brown sand clay natural. This

indicated that the trackway had been stripped onto the natural glacial substrata prior to the deposition of the trackway hardcore and tarmac material.

The watching brief was then maintained during the excavation of the penstock trench from trackway (feature 9) north-eastward to field boundary wall (feature 3). The trench measured 1.0m in width by 0.8m in depth and cut through a 0.2m deep dark red-brown silt-clay topsoil and >0.6m deep light yellow-brown sand clay natural.

The section across field boundary wall (feature 3) showed that it consisted of a 0.6m wide base tapering to 0.5m in width at the top of the wall. It was of double-skin dry-stone construction with an outer face of large sub-rounded cobbles and an internal core of medium sized sub-angular cobbles. No earlier foundations to the wall were discernible in section.

The watching brief during the trenching of the penstock route within Ffordd Gors (feature 4) (NGR SH 60319 23076 to SH 60668 23107) was to be carried out on an intermittent basis. As such three trial holes measuring 0.6m in width by 5.0m in length were excavated at location SH 60308 23095, SH 60466 23101, and SH 60602 23106. All three trial holes were excavated through a deposit of medium and small sub-rounded cobbles on to a light yellow-brown sand clay natural glacial substrata. The cobble layer formed the trackway surface of Ffordd Gors and showed that the trackway had been stripped on to the natural clay prior to the deposition of the cobble layer. The cobble deposit measured 0.5m within trial hole 01 but was found to be only 0.2m deep within trial holes 02 and 03. The cobbles within trial hole 01 had no discernible variation in the size and shape of the cobbles, or in the soil matrix between the stones. The thin layer of cobbles seen in trial holes 02 and 03 would suggest a single deposition event and it is likely that the deeper stratigraphy in trial hole 01 is the result of intermittent repairs to the trackway.

7.4 Leat Channel (Feature 2) excavation

7th August 2017

The archaeological watching brief was maintained while a tracked excavator removed the material from within the former leat (feature 2) channel towards Ffordd Gors (feature 4) at NGR SH 61318 23448 and within the Roman *Cors-y-Gedol Settlements & Field System* Scheduled Ancient Monument polygon (SAM: ME128). The excavation continued on from the already excavated penstock trench, located within Ffordd Gors trackway to the immediate north of the leat gate. Due to the proposed position for the intake weir and in order to facilitate an adequate connection with the penstock trench already excavated the former leat channel (feature 2) was excavated and expanded in order to receive the turbine pipe.

The contents of the leat were excavated from south to north across a flat piece of ground for a distance of approximately 2.25m. The foundation cut [1005] for the leat was linear and aligned north to south. At its maximum depth it was 0.93m from top to bottom; with a gradual slope leading to a concave base on its western side and a steep almost vertical slope on the eastern side to the same concave base. The fill of this cut (1011 = 1012) was approximately 0.36m in depth and consisted of a soft mid grey-brown clay with rare small sub-rounded pebble inclusions.

This context had been subject to a linear re-cut [1009] which respected the alignment of the original cut [1005]; this cut was vertical on both sides with a concave base and also tapered from 0.97m in width at the top to 0.82m wide at its base and was 0.45m in depth. The primary fill (1008) of this secondary cut consisted of 0.14m of dark red-brown silt-clay with occasional sub-rounded pebble inclusions. This underlay the secondary fill (1007) which consisted of 0.09m of dark grey-brown clay-silt with occasional very small sub-angular and sub-rounded pebbles. Above this was 0.32m deep tertiary fill (1006) which was a firm mottled orange-brown silt-clay with occasional small sub-rounded boulders and cobbles. All these fills were distinct and were restricted within the bounds of the recut [1009].

Situated above the tertiary fill (1006) was a 0.43m deep soft mid blue-grey silt-clay fill (1004) with occasional large sub-rounded cobble inclusions. Above this was a 0.06m deep deposit of dark black-brown clay-silt (1010) with frequent root inclusions which lay below the topsoil (1001).

Discussion

The foundation cut [1005] for the leat had a gradual slope on its western side and a steep almost vertical slope on the eastern side; this is suggestive of a gentle north westerly curve to the original leat as the western bank which was gradually eroded by the velocity of the water. The contexts (1011) & (1012) appeared to have been the primary fill of the foundation cut [1005] and may represent a significant silting event leading to the need for the recut [1009]. The recut then seems to have been subject to further silting events (1008) and (1007) which combined to create a small *point bar* or concentration of alluvium on the inside bend of the leat (see figure 05). Above this collection of material there appeared to be a backfilling event (1006) within the recut; this was a firm material with a high stone content, suggesting that it was perhaps anthropogenic in origin or associated with a high velocity event within the leat; the derivation of this material may be from higher up on the mountain side deposited by flood waters.

The fill (1004) which was 1.88m in width appears to be associated with disuse presumably after the leat gate was closed and never reopened; it appears as if the blue/grey material (1004) may be associated with a period of standing water, the resultant deposit being evidence for the production of gley soils which in many cases take decades to develop (SASSA 2017).

The archaeological watching brief within the Roman *Cors-y-Gedol Settlements & Field System* Scheduled Ancient Monument polygon (SAM: ME128) did not identify any archaeological remains associated with the SAM due to the siting of the weir and penstock trench within an area previously disturbed by a post-medieval former leat.

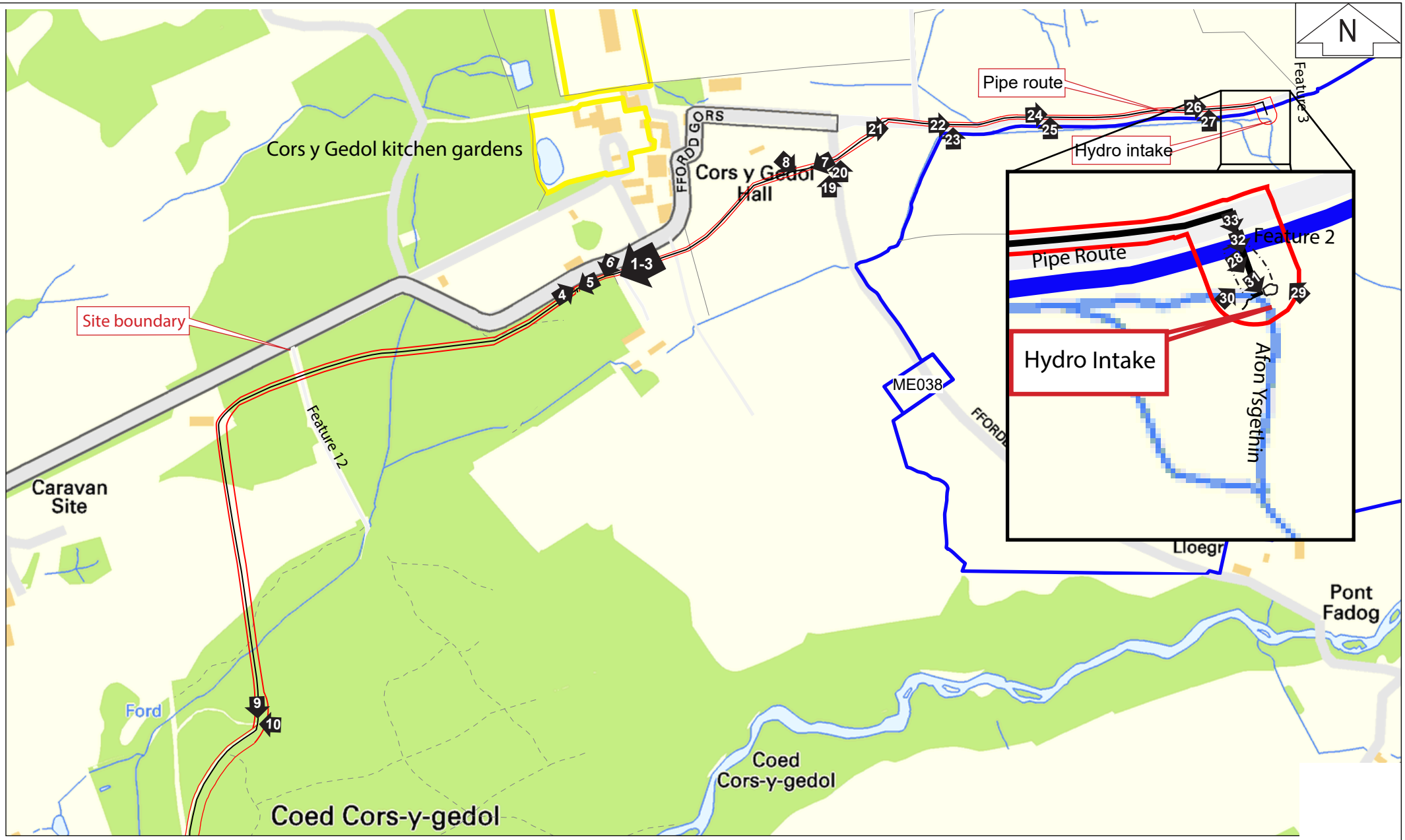

Figure 3a: Location of photographs at Cors y Gedol (north). Scale 1:5,000 at A4.

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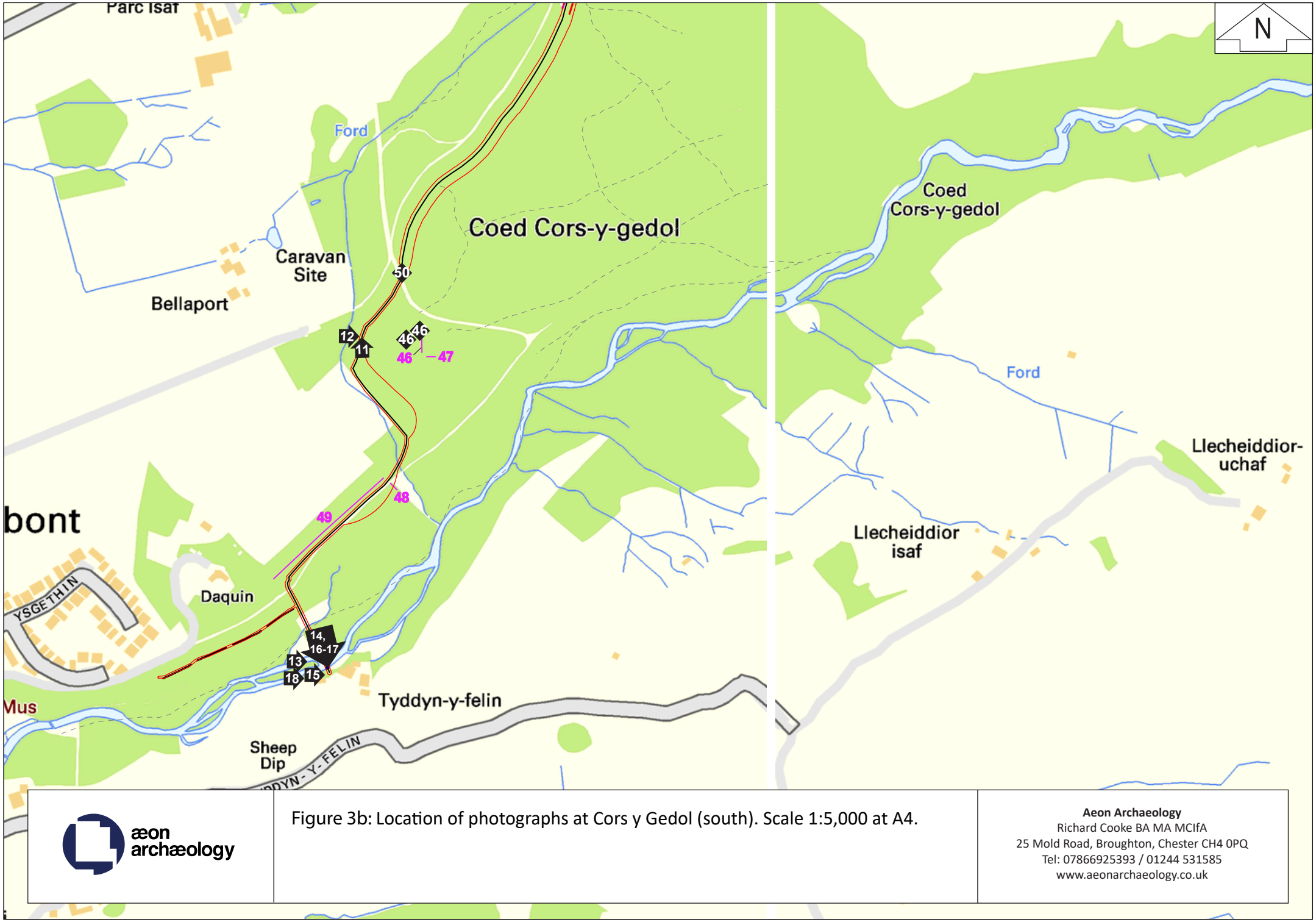

Figure 3b: Location of photographs at Cors y Gedol (south). Scale 1:5,000 at A4.

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Plate 01: Pre excavation shot of Feature 12 - from northeast - scale 1m

Plate 02: Post excavation shot of Feature 12 - from northeast - scale 1m

Plate 03: Post excavation section shot of Feature 12 - from northwest - scale 1m

Plate 04: Trench from Feature 12 into Coed Y Gedol - from west - scale 1m

Plate 05: Trench across trackway in Coed Y Gedol towards old Turbine house - from east - scale 1m

Plate 06: Trench across trackway feature 11 - from northeast - scale 1m

Plate 07: Penstock trench from trackway feature 11 to fieldwall feature 10 - from northeast - scale 1m

Plate 08: Section of penstock trench from trackway feature 11 to fieldwall feature 10 - from northwest - scale 1m

Plate 09: Penstock trench at location 1 across trackway feature 50 - from north - scale 1m

Plate 10: Section of penstock trench at location 1 across trackway feature 50 - from east - scale 1m

Plate 11: Penstock trench at location 2 across trackway feature 50 - from south - scale 1m

Plate 12: Section of penstock trench at location 2 across trackway feature 50 - from west - scale 1m

Plate 13: New turbine house foundation trench - from west - scale 1m

Plate 14: Outfall penstock trench - from northwest - scale 1m

Plate 15: Section of outfall penstock trench - from west - scale 1m

Plate 16: Pre excavation photograph of field wall north of the Afon Ysgethin - from north - scale 0.5m

Plate 17: Post excavation photograph of field wall north of the Afon Ysgethin - from north - scale 1.0m

Plate 18: Section across field wall north of the Afon Ysgethin - from west - scale 0.5m

Plate 19: Section across field boundary wall feature 10 - from south - scale 1m

Plate 20: Section across Ffordd Fridd Isa (feature 9) - from south - scale 0.5m

Plate 21: Section across field boundary wall feature 3 - from east - scale 1m

Plate 22: TH 01 within Ffordd Gors feature 4 - from west - scale 1m

Plate 23: South facing section of TH 01 within Ffordd Gors feature 4 - from south - scale 0.5m

Plate 24: TH 02 within Ffordd Gors feature 4 - from west - scale 1m

Plate 25: South facing section of TH 02 within Ffordd Gors feature 4 - from south - scale 1.0m

Plate 26: TH 03 within Ffordd Gors feature 4 - from west - scale 1m

Plate 27: South facing section of TH 02 within Ffordd Gors feature 4 - from south - scale 1.0m

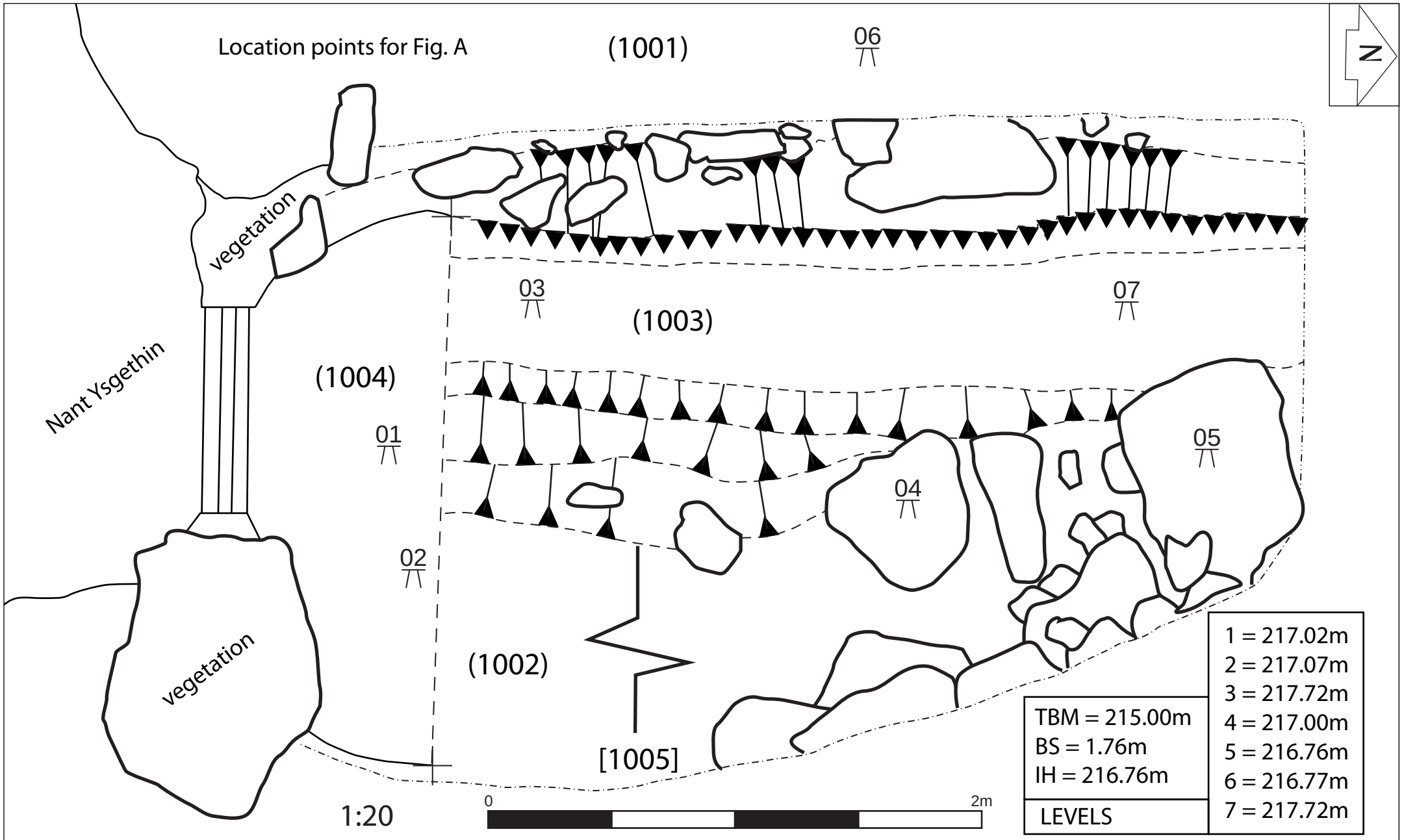

Figure 04. Plan of excavated Leat with heights above sea level and location of archaeological contexts. Scale at 1:20 @ A4

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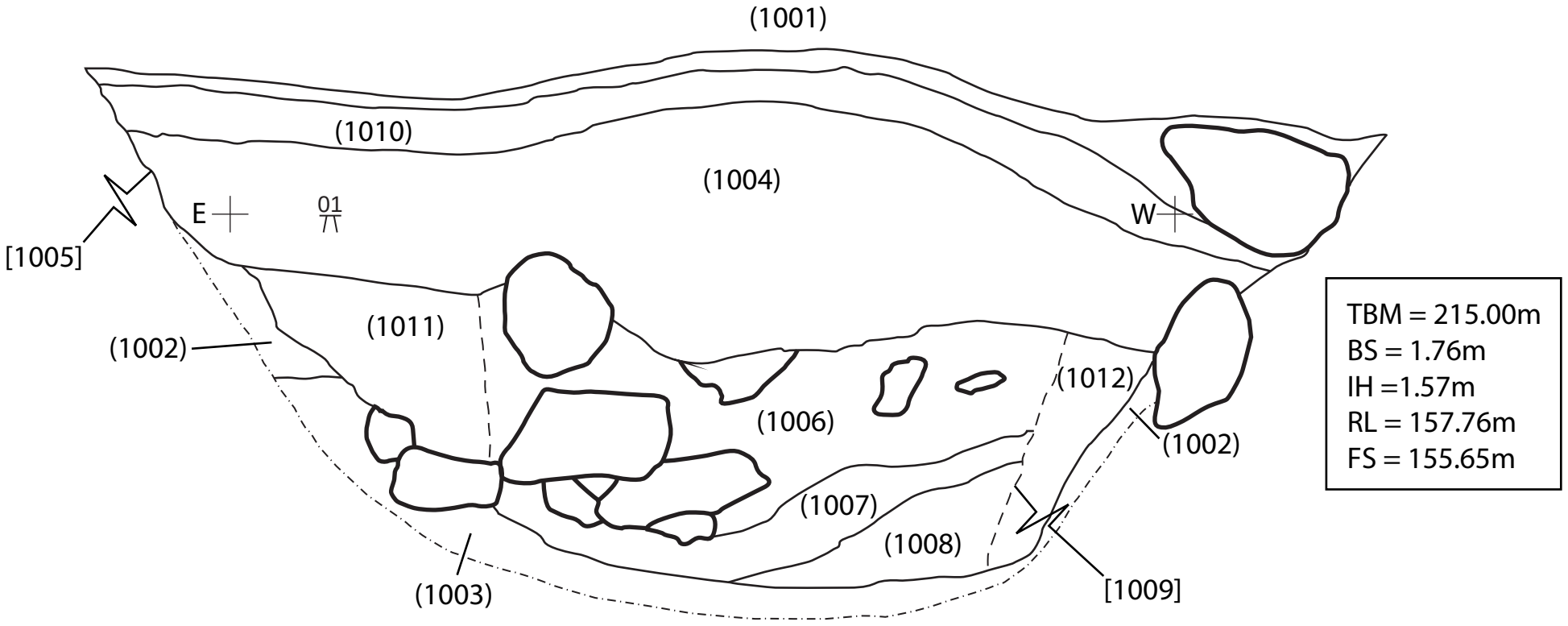

Figure 05. Section of excavated Leat with location of archaeological contexts. Scale at 1:10 @ A4

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Plate 28: Pre excavation photographer of former leat (feature 2) - from south - scale 1m

Plate 29: Pre excavation photograph of former leat (feature 2) - from north - scale 1m

Plate 30: Post excavation section shot of south-western side of former leat (feature 2) - southwest - scale 1m

Plate 31: Post excavation section shot of north-eastern side of former leat (feature 2) - from north- scale 1m

Plate 32: Post excavation section shot across former leat (feature 2) - from north- scale 1m

Plate 33: Post excavation shot across former leat (feature 2) - from north- scale 1m

8.0 CONCLUSION AND RECOMMENDATIONS

The watching brief enabled a photographic and descriptive record to be taken of field boundaries features 3, 10 and 12, as well as an unnumbered field boundary to the immediate north of the Afon Ysgethin. Moreover, it enabled the examination and recording of the trackways of Ffordd Gors and Ffordd Ffridd Isa (features 4 and 9 respectively) as well as during the breaching of the forest trackway (feature 50) in two locations. The revealed sections across the walls and trackways did not provide any additional dating evidence and no earlier deposits or foundations were identified. This result is by no means dismissive of an early origin, perhaps in the medieval period or prehistoric era, but merely showed there was a lack of structural or artefactual evidence to provide a conclusive origin for the land divisions or trackways.

The excavation of the leat (feature 2) provided an opportunity to archaeologically record the redundant feature and describe its function. This feature lay within the the Roman *Cors-y-Gedol Settlements & Field System* Scheduled Ancient Monument polygon (SAM: ME128) however no remains pertaining to this feature were uncovered due to prior disturbance caused through the creation of the post-medieval former leat.

The purpose of the archaeological assessment was to identify the archaeological remains within the localised environment and to mitigate for them primarily through avoidance or agreed methods of archaeological recording; as no further archaeological remains were encountered, apart from those already identified by the archaeological assessment (Aeon report 0023), the watching brief allowed for an sufficient record of these features to be prepared ahead of their removal or alteration as a result of this hydro-electric scheme.

9.0 SOURCES

OS Maps

OS 1:10 000 Series sheet SH 52NE, SH 52SE, SH 52SW, SH 52NW, SH 62NE, SH 62SE, SH 62SW, and SH 62NW.

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Cors y Gedol Hall Hydro Scheme, Tal-y-Bont, Gwynedd.

Written Scheme of Investigation for Archaeological Watching Brief

May 2017 V 1.0

REGISTERED ORGANISATION CIfA

Project Code: A0018.2

Planning Ref: NP5/58/542

1.0 INTRODUCTION

Planning permission has been secured by Carter Jonas LLP for the construction of a new micro hydro scheme, including the construction of weir, turbine house and installation of pipes. The hydro intake will tap into an existing leat fed by the Afon Ysgethin at NGR **SH 60678 23083** and will run roughly southwest through the Cors y Gedol estate land to a new turbine house located at NGR **SH 59513 21926** where the hydro outfall will empty back into the Afon Ysgethin. A new power supply will be connected from the turbine house into the national grid at the eastern edge of Tal-y-bont, Meirionydd, Gwynedd (figure 1a and 1b) (Planning Permission **NP5/58/542**).

This Written Scheme of Investigation (WSI) addresses the following:

Condition 12

Prior to any work commencing (including any ground disturbance works or site clearance) pursuant to this permission the applicant/developer shall submit to and receive written approval from the Local Planning Authority for an archaeological specification for a programme of works which must meet all relevant archaeological standards. The development shall subsequently be carried out in strict accordance with the approved programme of works unless otherwise agreed to in writing by the Local Planning Authority.

Reason

In the interest of the protection and recording of any archaeological remains.

An archaeological assessment was undertaken by Aeon Archaeology in August 2014 (Ref. A0018.1_0023) and identified a range of archaeological sites in close proximity of the development and provided recommendations for an archaeological watching brief so that the potential impact and significance of effect of the scheme could be negated. The assessment should be read in conjunction with this WSI document.

The watching brief will be maintained during intrusive groundworks, as detailed below.

This WSI states the aims, objectives and methodology for implementing the archaeological watching brief so as to meet the spirit and intent of the archaeological condition.

Relevant UK legislation on heritage includes the Ancient Monuments and Archaeological Areas Act 1979, and the Planning (Listed Buildings and Conservation Areas) Act 1990. The Ancient Monuments and Archaeological Areas Act 1979 sets out the requirement for Scheduled Ancient Monument Consent for any works of demolition, repair, and alteration that might affect a Scheduled Ancient Monument.

For archaeological sites that are not covered by the above Act, protection is afforded through development control, the Town and Country Planning Act 1990 and the Welsh Government's Planning Policy Wales (PPW 2012).

Reference will be made to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).

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Figure 1a: Location of Monument points (red circles) and new sites (yellow triangles) from the Gwynedd HER (north). Scale 1:5,000 at A4. (Numbers refer to HER Primary Reference Number (PRN), see report appendix I)

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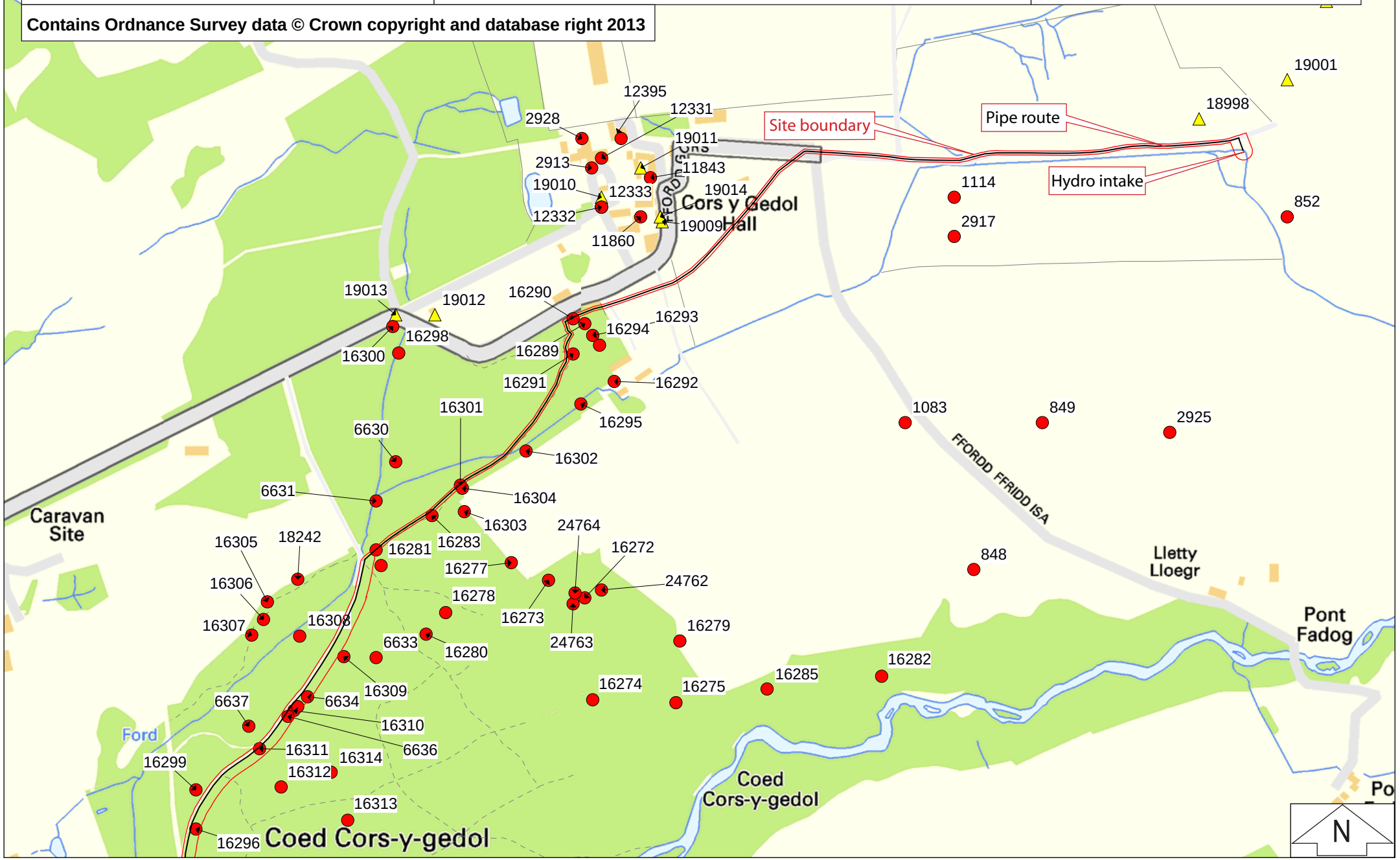

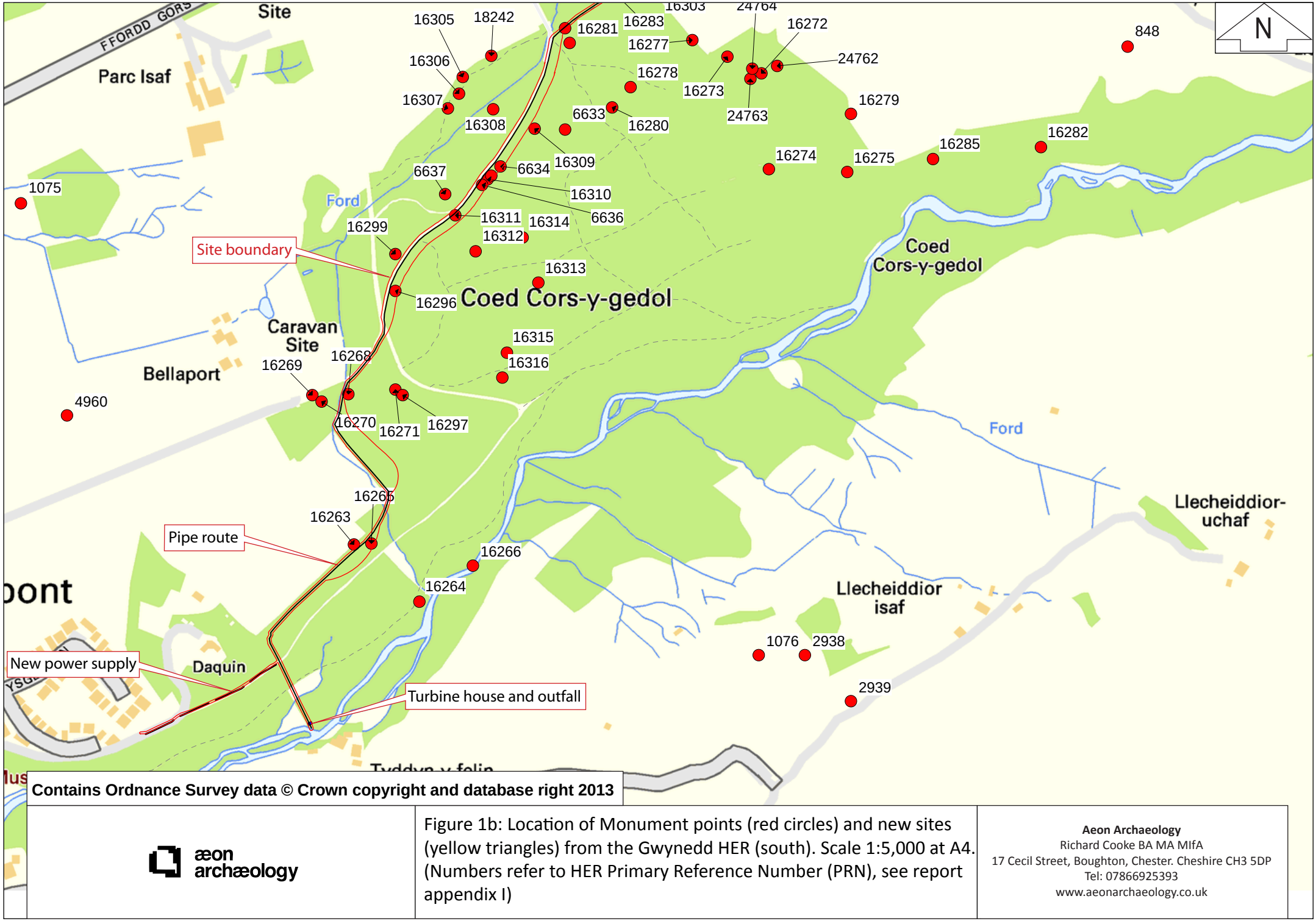

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Figure 1b: Location of Monument points (red circles) and new sites (yellow triangles) from the Gwynedd HER (south). Scale 1:5,000 at A4. (Numbers refer to HER Primary Reference Number (PRN), see report appendix I)

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2.0 AIMS AND OBJECTIVES

The archaeological watching brief shall be maintained:

1. In proximity of the former leat (feature 2)

2. During trenching through Ffordd Gors (feature 4)

3. During trenching within the woodland trackway (feature 50)

4. During trenching in the Cors-y-Gedol Settlements & Field System Scheduled Ancient Monument polygon (SAM: ME128) (feature 51)

5. During trenching in the Cors-y-Gedol Grade II Park and Garden of Special Historic Interest (GD27) (feature 52)

6. Within the woodland while the pipe route is formally pegged out.

The CIfA maintains a standard for archaeological watching brief which states that:

An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant by-laws of CIfA.

An archaeological watching brief is defined by the CIfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (CIfA 2014a). The watching brief will take place within a specified area within the Site where there is a possibility that archaeological deposits may be disturbed or destroyed.

The CIfA further identifies the purpose of a watching brief as allowing, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established in advance of development or other potentially disruptive works.

It is also important to note that a watching brief provides an opportunity, if needed, for a signal to be made to all interested parties, before the destruction of the archaeological materials, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.

A watching brief is, therefore, not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The aims of the watching brief are:

- To allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of archaeological remains on the Site affected by excavations and groundworks, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.

- To provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

The specific objectives of the watching brief are:

- To observe and recover any artefacts of archaeological significance.

- To record the location, dimensions and nature of any deposits, features, structures or artefacts of archaeological significance.

- To recover samples of any deposits considered to have potential for analysis for palaeoenvironmental data should the opportunity arise.

3.0 METHODOLOGY

3.1 Archaeological Watching Brief

The methodology for the watching brief has been prepared with reference to the CIfA's document Standards and Guidance for Archaeological Watching Brief (2014a) and will be kept under constant review during the project, in order to see how far it is meeting the terms of the aims and objectives, and in order to adopt any new questions which may arise.

Curatorial monitoring of the archaeological work on behalf of the Council will be carried out by the Gwynedd Archaeological Planning Service (GAPS) Archaeologist. To facilitate the curatorial monitoring, the officer shall be provided with a minimum of two weeks' notice of the start of the archaeological work.

A suitably qualified and experienced archaeologist(s) from Aeon Archaeology will be commissioned for the maintenance of the watching brief. On arrival on site, the archaeologist(s) will report to the site manager and conform to the arrangements for notification of entering and leaving site. The archaeologist(s) will keep a record of the date, time and duration of all attendances at site, the names and numbers of archaeologists deployed and any actions taken. The archaeologist will be provided with a Health & Safety Induction by the construction contractor and wear a safety helmet, safety footwear and high visibility jacket/vest at all times.

If deposits and or artefacts are exposed during excavations for the development which require recording and recovery, it may be necessary to delay works whilst the proper investigation and recording takes place. Watching brief recording can often be undertaken without delay to groundworks, depending upon the specific circumstances and flexibility of all the staff on site.

Within the constraints of the terms of the watching brief work, the archaeologist will not cause unreasonable disruption to the maintenance of the work schedules of other contractors on site. In the event of archaeological discoveries the treatment of which (either arising from the volume/quantity of material and/or the complexity/importance of the material) is beyond the resources deployed the Client will be notified and a site meeting/telephone consultation arranged with the GAPS Archaeologist. The aim of the meeting will be to confirm that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard and identify measures which would be sufficient to support treatment to a satisfactory and proper standard prior to destruction of the material in question.

Any archaeological deposits, features and structures identified which can be investigated and recorded under the terms of the watching brief will be excavated manually in a controlled and stratigraphic manner sufficient to address the aims and objectives of the project – subject to the limitations on site access.

It may not be necessary to excavate the complete stratigraphic sequence to geologically lain deposits but the inter-relationships between archaeological deposits, features and structures will be investigated sufficient to address the aims and objectives of the project and the complete stratigraphic sequence to geologically lain deposits will be investigated where practicable.

The method of recording will follow the normal principles of stratigraphic excavation and the stratigraphy will be recorded in written descriptions even where no archaeological deposits have been identified. The archaeologist will record archaeological deposits using proformae recording forms and locate them on a large-scale site plan related to the Ordnance Survey National Grid and Datum references.

The drawn record will comprise plans at scale 1:20 and sections at scale 1:10; propriety electronic hardware and software to prepare site drawings may be used as appropriate.

A photographic record will be maintained throughout, using a digital SLR camera (Canon 550D) set to maximum resolution and any subsurface remains will be recorded photographically, with detailed notations and measured drawings being undertaken if required.

The archive produced will be held at Aeon Archaeology under the project code **A0018.2**.

3.2 Watching brief report

3.2.1 Post-excavation Assessment

A report on the results of the watching brief, in accordance with the recommendations in *Management of Archaeological Projects* (English Heritage, 1991), *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006), and in the Chartered Institute for Archaeologists *Standard and Guidance for an archaeological watching brief* (2014) will be required to be produced upon conclusion of the archaeological fieldwork. The report will be completed within a maximum of two months of completion of work on site and may include examination and quantification leading to the identification of function, form, date, method of manufacture, material/fabric type, source, parallels, attributes and condition of artefacts; of the exploitation of wild or domesticated resources; the reconstruction of environments; and the nature of human populations.

Full analysis of the results of the project, including: dating and interpretation of excavated features; pottery and other finds analysis; analysis of industrial residues by an appropriate specialist or specialists; analysis of samples for environmental data (including pollen, plant macrofossils and beetles) by an appropriate specialist or specialists; radiocarbon dating; discussion of the results in their local, regional and national context, including relating the excavated features and palaeoenvironmental data to evidence from nearby sites, and discussion of the results in their local, regional and national context may be required.

The scope of post-excavation assessment will subject to a specification for approval by the GAPS Archaeologist, upon the conclusion of the fieldwork project and preliminary report.

3.2.2 Post-excavation Report

Following completion of the stages outlined above, a report will be produced that will include:

- A non-technical summary.
- A table of contents.
- An introduction with acknowledgements, including a list of all those involved in the project and the location and description of the site.
- A statement of the project aims.
- An account of the project methodology undertaken, with an assessment of the same to include a statement on preservation bias and the means of data collection and sampling strategies.
- A factual summary of the history, development and use of the site.
- A statement setting out the nature, quantity and condition of the material archive (artefacts and ecofacts) including commentary on any bias observed due to collection and sampling strategies and commentary on long-term storage requirements.
- A statement setting out the nature and quantity of the documentary archive (notes, photographs, drawings, digital data).
- A general site plan indicating the position and size of the areas subject to watching brief and the locations of archaeological deposits identified and recorded during the works.
- Plans and sections at appropriate scales, augmented with appropriate photographs. All plans and sections will be related to the Ordnance Survey datum levels and to the National Grid.
- Other maps, plans, drawings, stratigraphic matrices and photographs as appropriate.
- Summary assessment reports on the artefact, bio-archaeological, dating and other assessments/analyses.
- A discussion of the location, extent, date, nature, condition, quality and significance of any archaeological deposits and finds identified during the project.
- A discussion of any research implications arising from the archaeological work.
- Notes on consultations with conservators and the nominated archive repository related to the immediate and long-term conservation and storage requirements for the data held in the site archive and recommendations of retention/discard of artefacts and ecofacts.
- A bibliography of sources consulted.
- Appendices to the report will include artefact catalogues, reports on assessments/analyses and an index to the project archive and a statement on its location/proposed repository.
- In addition the post-excavation report will summarise and draw together the findings of all of the phases of work.

3.3 Archive

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled, and cross-referenced, and lodged with the National Monument Record, RCAHMW within six months of the completion of the project.

Bound copies of the report and an archive CD will be sent to the regional HER (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, Gwynedd LL57 2RT) (x 2#), the GAPS archaeologist (x 2#) and to National Monument Record, of the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW) (x 1#) for long term archiving. Furthermore, a summary of the project will be sent to *Archaeology in Wales* for publication.Copies of all digital files (inc. photos, report as PDF and Word, spreadsheets, databases, survey data etc) to be presented to each of above on optical disc (ie DVD).

4.0 FURTHER ARCHAEOLOGICAL WORKS

The identification of significant archaeological features during the watching brief stage may necessitate further archaeological works. This will require the submission of new cost estimates to the contractor and may be subject to a separate WSI, to be agreed with the GAPS Archaeologist prior to implementation.

This WSI does not include a methodology or cost for examination of, conservation of, or archiving of finds discovered during the watching brief, nor of any radiocarbon dates required, nor of examination of palaeoenvironmental samples associated with any peat deposits. The need for these will be identified in the post-fieldwork programme (if required), and a new WSI will be issued for approval by the GAPS Archaeologist prior to implementation.

5.0 ENVIRONMENTAL SAMPLES

If necessary, relevant archaeological deposits will be sampled by taking bulk samples (a minimum of 10.0 litres and maximum of 30.0 litres) for flotation of charred plant remains. Bulk samples will be taken from waterlogged deposits for macroscopic plant remains. Other bulk samples, for example from middens, may be taken for small animal bones and small artefacts.

Bulk environmental samples will also be taken from any fills, deposits or structures which yield archaeological artefacts, charcoal flecks/ fragments, bone, or any other historic remains.

Advice and guidance regarding environmental samples and their suitability for radiocarbon dating, as well as the analysis of macrofossils (charcoal and wood), pollen, animal bones and molluscs will be obtained from Oxford Archaeology.

For guidance purposes the following volume criteria represent the minimum feature sampling requirements:

- 50% of each discrete feature (e.g. pits and postholes)
- 25% of the exposed areas of each liner feature and all terminals/intersections
- 50% of structural features (e.g. beamslots, ring-ditches)
- 50%-100% of domestic/industrial working features (e.g. hearths and ovens)

6.0 HUMAN REMAINS

Any finds of human remains will be left *in-situ*, covered and protected, and both the coroner and the GAPS Archaeologist informed. If removal is necessary it will take place under appropriate regulations and with due regard for health and safety issues. In order to excavate human remains, a licence is required under Section *25* of the Burials Act 1857 for the removal of any body or remains of any body from any place of burial. This will be applied for should human remains need to be investigated or moved.

7.0 SMALL FINDS

The vast majority of finds recovered from archaeological excavations comprise pottery fragments, bone, environmental and charcoal samples, and non-valuable metal items such as nails. Often many of these finds become unstable (i.e. they begin to disintegrate) when removed from the ground. All finds are the property of the landowner; however, it is recommended that all finds are donated to an appropriate museum where they can receive specialist treatment and study. Access to finds must be granted to Aeon Archaeology for a reasonable period to allow for analysis and for study and publication as necessary. All finds would be treated according to advice provided within *First Aid for Finds* (Rescue 1999). Aeon Archaeology staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants.

The recovery policy for archaeological finds will be kept under review throughout the fieldwork phase. Any changes in recovery priorities will be under guidance from an appropriate specialist and agreed with the GAPS Archaeologist. There will be a presumption against the disposal of archaeological finds with the exception of unstratified items dating to the twentieth or twenty-first centuries AD which will be recorded by material, type, form, identification and weight, and discarded.

All finds will be collected and processed including those found within spoil tips. Their location will be recorded; finds numbers attributed, bagged and labelled as well any preliminary identification taking place on site. Where specialist advice is required provision will be made to do so at the earliest possible convenience.

After processing, artefacts which are suitable will be cleaned and conserved in-house. Artefacts requiring specialist cleaning and conservation will be sent to the relevant specialist. All finds will then be sent to a specialist for analysis, the results of which will then be assessed to ascertain the potential of the finds assemblage to meet the research aims of the project. The value of the finds will also be assessed in terms of the wider educational and academic contributions.

8.0 UNEXPECTED DISCOVERIES: TREASURE TROVE

Treasure Trove law has been amended by the Treasure Act 1996. The following are Treasure under the Act:

- *Objects other than coins* any object other than a coin provided that it contains at least 10% gold or silver and is at least 300 years old when found.

- *Coins* all coins from the same find provided they are at least 300 years old when found (if the coins contain less than 10% gold or silver there must be at least 10. Any object or coin is part of the same find as another object or coin, if it is found in the same place as, or had previously been left together with, the other object. Finds may have become scattered since they were originally deposited in the ground. Single coin finds of gold or silver are not classed as treasure under the 1996 Treasure Act.

- *Associated objects* any object whatever it is made of, that is found in the same place as, or that had previously been together with, another object that is treasure.

- *Objects that would have been treasure trove* any object that would previously have been treasure trove, but does not fall within the specific categories given above. These objects have to be made substantially of gold or silver, they have to be buried with the intention of recovery and their owner or his heirs cannot be traced.

The following types of finds are not treasure:

- Objects whose owners can be traced.
- Unworked natural objects, including human and animal remains, even if they are found in association with treasure.
- Objects from the foreshore which are not wreck.

All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown.

The British Museum will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled.

9.0 STAFF & TIMETABLE

9.1 Staff

The work will be managed and undertaken by Richard Cooke BA MA MCIfA, Archaeological Contractor and Consultant at Aeon Archaeology.

9.2 Timetable

The evaluation work can currently be undertaken from May 2017, although the client is encouraged to give as much notice as possible to Aeon Archaeology as project commitments are currently high.

10.0 HEALTH AND SAFETY

Aeon Archaeology has a Health and Safety Policy Statement which can be supplied upon request. Furthermore, site-specific Risk Assessments and Method Statements are compiled and distributed to every member of staff involved with the project prior to the commencement of works.

11.0 INSURANCE

Liability Insurance – Insignia Underwriting Policy 347002

- Employers' Liability: Limit of Indemnity £10m in any one occurrence
- Public Liability: Limit of Indemnity £2m in any one occurrence
- Legal Defence Costs (Health and Safety at Work Act): £250,000

The current period expires 07/09/17

Professional Indemnity Insurance – Insignia Underwriting Policy 347002

- Limit of Indemnity £500,000 any one claim

The current period expires 07/09/17

12.0 GENERAL

All project staff will adhere to the *Code of Conduct of the Chartered Institute for Archaeologists*.

The project will follow the requirements set down in the *Standard and Guidance for Archaeological Excavation* prepared by the Chartered Institute for Archaeologists.

A Method Statement and Risk Assessment will be prepared prior to the commencement of fieldwork and circulated to all staff concerned.

Please note the following:

Aeon Archaeology will not be held responsible for any delays to the work programme resulting from the discovery of archaeological sites or finds.

The cost quoted does not include examination of, conservation of or archiving of finds discovered during the archaeological programme, nor of any radiocarbon dates required, nor of examination of palaeoenvironmental samples.

SPECIALISTS

Specilaist advice required will be sought from the following list if required:

- Bone: Nora Bermingham
- Glass: Hilary Cool, Barbican Research Associates.
- Metal artefacts: Phil Parkes, Cardiff Conservation Services, Cardiff.
- Slag, burnt clay, hammerscale: Dr. Tim Young, Geoarch, Cardiff.
- Stone artefacts: Oxford Archaeology
- Wood artefacts: Jane Foley, Foley Conservation, Builth Wells.
- Leather: Quita Mould, Barbican Research Associates.
- Waterlogged environmental: Dr Mike Allen, Allen Environmental Archaeology.
- Environmental samples: Oxford Archaeology
- Numismatics: Peter Guest, Barbican Research Associates.
- Pottery (all periods): Oxford Archaeology
- Clay pipe: Oxford Archaeology

Depending upon the material of the remains the following experts will be consulted regarding the conservation of waterlogged material:

- Organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)
- Non-organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)

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Cors y Gedol Hall Hydro Scheme, Tal-y-Bont, Gwynedd.

Written Scheme of Investigation for Archaeological Watching Brief within the Cors-y-Gedol Settlements & Field System Scheduled Ancient Monument (SAM: ME128)

June 2017 V 1.0

REGISTERED ORGANISATION CIfA

Project Code: A0018.3
Planning Ref: NP5/58/542

1.0 INTRODUCTION

Planning permission has been secured by Baileys and Partners Ltd (hereafter the Client) for the construction of a new micro hydro scheme, including the construction of weir, turbine house and installation of pipes. The hydro intake will tap into an existing leat fed by the Afon Ysgethin at NGR **SH 60678 23083** and will run roughly southwest through the Cors y Gedol estate land to a new turbine house located at NGR **SH 59513 21926** where the hydro outfall will empty back into the Afon Ysgethin. A new power supply will be connected from the turbine house into the national grid at the eastern edge of Tal-y-bont, Meirionydd, Gwynedd (figure 1) (Planning Permission **NP5/58/542**).

As part of the scheme the hydro intake weir and the initial 15.0m of the abstraction pipe will pass through the Roman *Cors-y-Gedol Settlements & Field System* Scheduled Ancient Monument polygon (SAM: ME128). An existing post-medieval leat will be excavated of infill and utilised for the abstraction pipe trench and backfilled upon completion. The Client applied for Scheduled Monument Consent (SMC) for works affecting the above SAM on the 23rd May 2017. Correspondence received from the Welsh Government (Nichola Davies, dated 7th June 2017) has shown that the Welsh Government and Cadw are of a mind to grant permission for SMC so long as 16 individual conditions are met. Conditions 11 to 16 refer to archaeological requirements and are addressed through this WSI.

Archaeological Requirements:

11. You shall appoint a suitably qualified archaeologist who shall be responsible for undertaking archaeological supervision of all works, within the scheduled area, ensuring that there is no adverse archaeological impact arising from the direct works and the supporting ancillary works (e.g. storage areas, access routes etc);

12. That prior to the start of works the appointed archaeologist shall submit a detailed specification of works, for approval by the Welsh Ministers, detailing how the appointed archaeologist will record the works and provide archaeological supervision throughout the course of the works;

13. That digital photographic record shall be taken prior to the start of works, throughout the course of the works and upon completion. These photographs shall be incorporated into the final completion report;

14. That in the event of significant archaeological remains, features, deposits or artefacts being exposed, work shall stop and the Welsh Ministers shall be informed. Our representatives will then visit the site and assess the archaeological material and its implications, which may (depending upon the findings) necessitate relocating the Forebay Tank and/or connecting pipe;

15. Within one month of the works having been completed, the appointed archaeologist shall submit a draft digital completion report to the Welsh Ministers, detailing the results of the work including plans and photos and also including the technical detail supplied by the hydro contractors;

16. Within one month of the draft report having been approved the appointed archaeologist shall deposit a final version of the report, incorporating any comments/editorial amendments to:

- *The Welsh Ministers*

- *The Regional Historic Environment Record held by Gwynedd Archaeological Trust – her@heneb.co.uk<mailto:her@heneb.co.uk>*

• *The National Monument Record held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) - Gareth.Edwards@rcahmw.gov.uk<mailto:Gareth.Edwards@rcahmw.gov.uk>)*

An archaeological assessment was undertaken by Aeon Archaeology in August 2014 (Ref. A0018.1_0023) which identified that the proposed intake weir and abstraction pipe passes through the prehistoric/Roman *Cors-y-Gedol Settlements & Field System* Scheduled Ancient Monument polygon (SAM: ME128). In proximity to the pipeline the SAM consists of an enclosed hut group (PRN: 1114) lying just above 183.0m contour to the east of Gors y Gedol. It includes two hut circles both of about 7.5m in diameter with a roughly rectangular structure above them cut into the slope, measuring approximately 4.0m x 2.0m. The enclosing wall measures approximately 34.0m north to south and 24.0m east to west, and is very ruined but clearly visible in part to the south. An associated field system (PRN: 2917) extends southwards and eastwards from the hut group, and further round huts both in groups and singly can be seen (PRN: 852). A brief excavation was made in May 1956 and the finds include the charred remains of a small bowl made in oak, three small slate discs and seventeen fragments of pottery, some of which is thought to be 2nd century A.D (HER).

Despite the proposal of trenching the new hydro-electric pipeline through 15.0m of the SAM polygon, the pipe will be trenched within the former leat (feature 2) and will not disturb any remains associated with the hut circle settlement. Furthermore, due to the pipe being buried there is not expected to be any indirect visual impact upon the SAM polygon upon completion, although there will be a negligible adverse indirect non-physical (visual) impact during construction (see Aeon report 0023).

The watching brief will be maintained during intrusive groundworks, as detailed below.

This WSI states the aims, objectives and methodology for implementing the archaeological watching brief so as to meet the spirit and intent of the archaeological conditions.

Relevant UK legislation on heritage includes the Ancient Monuments and Archaeological Areas Act 1979, which sets out the requirement for Scheduled Ancient Monument Consent for any works of demolition, repair, and alteration that might affect a Scheduled Ancient Monument.

Reference will be made to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).

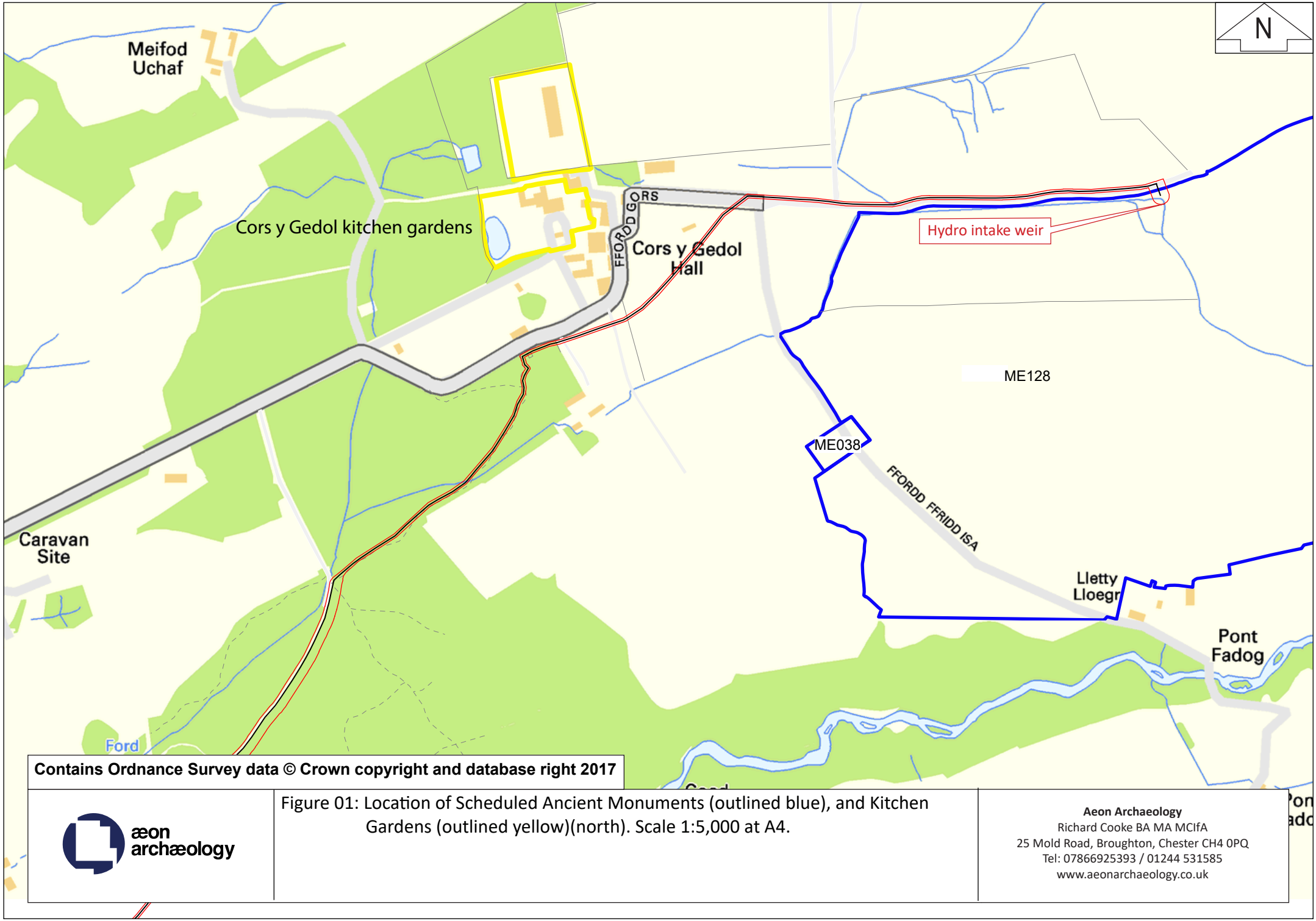

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Figure 01: Location of Scheduled Ancient Monuments (outlined blue), and Kitchen Gardens (outlined yellow)(north). Scale 1:5,000 at A4.

Aeon Archaeology
Richard Cooke BA MA MCIfA
25 Mold Road, Broughton, Chester CH4 0PQ
Tel: 07866925393 / 01244 531585
www.aeonarchaeology.co.uk

2.0 AIMS AND OBJECTIVES

The archaeological watching brief shall involve the following:

1. A digital photographic record shall be taken prior to the start of works, throughout the course of the works and upon completion. These photographs shall be incorporated into the final completion report.

2. A watching brief shall be maintained during all excavation work within the Cors-y-Gedol Settlements & Field System Scheduled Ancient Monument polygon (SAM: ME128) (feature 51) including the removal of debris and infill within the existing post-medieval leat; the excavation and installation of the hydro intake weir; the excavation of trench for the six inch overflow pipe; and the backfilling of the post-medieval leat.

The CIfA maintains a standard for archaeological watching brief which states that:

An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant by-laws of CIfA.

An archaeological watching brief is defined by the CIfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (CIfA 2014). The watching brief will take place within a specified area within the Site where there is a possibility that archaeological deposits may be disturbed or destroyed.

The CIfA further identifies the purpose of a watching brief as allowing, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established in advance of development or other potentially disruptive works.

It is also important to note that a watching brief provides an opportunity, if needed, for a signal to be made to all interested parties, before the destruction of the archaeological materials, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.

A watching brief is, therefore, not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The aims of the watching brief are:

- To allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of archaeological remains within the SAM affected by excavations and groundworks, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.

- To provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

The specific objectives of the watching brief are:

- To observe and recover any artefacts of archaeological significance.

- To record the location, dimensions and nature of any deposits, features, structures or artefacts of archaeological significance.

- To recover samples of any deposits considered to have potential for analysis for palaeoenvironmental data should the opportunity arise.

3.0 METHODOLOGY

3.1 Archaeological Watching Brief

The methodology for the watching brief has been prepared with reference to the CIfA's document Standards and Guidance for Archaeological Watching Brief (2014) and will be kept under constant review during the project, in order to see how far it is meeting the terms of the aims and objectives, and in order to adopt any new questions which may arise.

Curatorial monitoring of the archaeological work on behalf of the Council will be carried out by the Gwynedd Archaeological Planning Service (GAPS) Archaeologist and Cadw. To facilitate the curatorial monitoring, the officer shall be provided with a minimum of two weeks' notice of the start of the archaeological work.

A suitably qualified and experienced archaeologist(s) from Aeon Archaeology will be commissioned for the maintenance of the watching brief. On arrival on site, the archaeologist(s) will report to the site manager and conform to the arrangements for notification of entering and leaving site. The archaeologist(s) will keep a record of the date, time and duration of all attendances at site, the names and numbers of archaeologists deployed and any actions taken. The archaeologist will be provided with a Health & Safety Induction by the construction contractor and wear a safety helmet, safety footwear and high visibility jacket/vest at all times.

If deposits and or artefacts are exposed during excavations for the development which require recording and recovery, it may be necessary to delay works whilst the proper investigation and recording takes place. Watching brief recording can often be undertaken without delay to groundworks, depending upon the specific circumstances and flexibility of all the staff on site.

Within the constraints of the terms of the watching brief work, the archaeologist will not cause unreasonable disruption to the maintenance of the work schedules of other contractors on site. In the event of archaeological discoveries the treatment of which (either arising from the volume/quantity of material and/or the complexity/importance of the material) is beyond the resources deployed the Client will be notified and a site meeting/telephone consultation arranged with the GAPS Archaeologist and Cadw. The aim of the meeting will be to confirm that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard and identify measures which would be sufficient to support treatment to a satisfactory and proper standard prior to destruction of the material in question.

<u>A toothless ditching bucket shall be utilised for all excavations.</u>

Any archaeological deposits, features and structures identified which can be investigated and recorded under the terms of the watching brief will be excavated manually in a controlled and stratigraphic manner sufficient to address the aims and objectives of the project – subject to the limitations on site access.

It may not be necessary to excavate the complete stratigraphic sequence to geologically lain deposits but the inter-relationships between archaeological deposits, features and structures will be

investigated sufficient to address the aims and objectives of the project and the complete stratigraphic sequence to geologically lain deposits will be investigated where practicable.

The method of recording will follow the normal principles of stratigraphic excavation and the stratigraphy will be recorded in written descriptions even where no archaeological deposits have been identified. The archaeologist will record archaeological deposits using proformae recording forms and locate them on a large-scale site plan related to the Ordnance Survey National Grid and Datum references.

The drawn record will comprise plans at scale 1:20 and sections at scale 1:10; propriety electronic hardware and software to prepare site drawings may be used as appropriate.

A photographic record will be maintained throughout, using a digital SLR camera (Canon 600D) set to maximum resolution and any subsurface remains will be recorded photographically, with detailed notations and measured drawings being undertaken if required.

The archive produced will be held at Aeon Archaeology under the project code **A0018.3**.

3.2 Watching brief report

3.2.1 Post-excavation Assessment

A report on the results of the watching brief, in accordance with the recommendations in *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006), and in the Chartered Institute for Archaeologists *Standard and Guidance for an archaeological watching brief* (2014) will be required to be produced upon conclusion of the archaeological fieldwork. The report will be completed within a maximum of one month of completion of work on site and may include examination and quantification leading to the identification of function, form, date, method of manufacture, material/fabric type, source, parallels, attributes and condition of artefacts; of the exploitation of wild or domesticated resources; the reconstruction of environments; and the nature of human populations.

Full analysis of the results of the project, including: dating and interpretation of excavated features; pottery and other finds analysis; analysis of industrial residues by an appropriate specialist or specialists; analysis of samples for environmental data (including pollen, plant macrofossils and beetles) by an appropriate specialist or specialists; radiocarbon dating; discussion of the results in their local, regional and national context, including relating the excavated features and palaeoenvironmental data to evidence from nearby sites, and discussion of the results in their local, regional and national context may be required.

The scope of post-excavation assessment will subject to a specification for approval by the GAPS Archaeologist and Cadw, upon the conclusion of the fieldwork project and preliminary report.

3.2.2 Post-excavation Report

Following completion of the stages outlined above, a report will be produced that will include:

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- A statement setting out the nature, quantity and condition of the material archive (artefacts and ecofacts) including commentary on any bias observed due to collection and sampling strategies and commentary on long-term storage requirements.
- A statement setting out the nature and quantity of the documentary archive (notes, photographs, drawings, digital data).
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- Plans and sections at appropriate scales, augmented with appropriate photographs. All plans and sections will be related to the Ordnance Survey datum levels and to the National Grid.
- Other maps, plans, drawings, stratigraphic matrices and photographs as appropriate.
- Summary assessment reports on the artefact, bio-archaeological, dating and other assessments/analyses.
- A discussion of the location, extent, date, nature, condition, quality and significance of any archaeological deposits and finds identified during the project.
- A discussion of any research implications arising from the archaeological work.
- Notes on consultations with conservators and the nominated archive repository related to the immediate and long-term conservation and storage requirements for the data held in the site archive and recommendations of retention/discard of artefacts and ecofacts.
- A bibliography of sources consulted.
- Appendices to the report will include artefact catalogues, reports on assessments/analyses and an index to the project archive and a statement on its location/proposed repository.
- In addition the post-excavation report will summarise and draw together the findings of all of the phases of work.

3.3 Archive

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled, and cross-referenced, and lodged with the National Monument Record, RCAHMW within one month of the completion of the project.

Within one month of approval by the Welsh Ministers of the draft report, digital copies of the final report will be sent to the Welsh Ministers, Cadw, the regional HER (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, Gwynedd LL57 2RT), the GAPS archaeologist and to National Monument Record, of the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW) for long term archiving. Furthermore, a summary of the project will be sent to *Archaeology in Wales* for publication.

4.0 FURTHER ARCHAEOLOGICAL WORKS

The identification of significant archaeological features during the watching brief stage may necessitate further archaeological works. This will require the submission of a separate WSI, to be agreed with the Welsh Ministers, Cadw, andthe GAPS Archaeologist prior to implementation.

This WSI does not include a methodology for examination of, conservation of, or archiving of finds discovered during the watching brief, nor of any radiocarbon dates required, nor of examination of palaeoenvironmental samples associated with any peat deposits. The need for these will be identified in the post-fieldwork programme (if required), and a new WSI will be issued for approval by the Welsh Ministers, Cadw, andthe GAPS Archaeologist prior to implementation.

5.0 ENVIRONMENTAL SAMPLES

If necessary, relevant archaeological deposits will be sampled by taking bulk samples (a minimum of 10.0 litres and maximum of 30.0 litres) for flotation of charred plant remains. Bulk samples will be taken from waterlogged deposits for macroscopic plant remains. Other bulk samples, for example from middens, may be taken for small animal bones and small artefacts.

Bulk environmental samples will also be taken from any fills, deposits or structures which yield archaeological artefacts, charcoal flecks/ fragments, bone, or any other historic remains.

Advice and guidance regarding environmental samples and their suitability for radiocarbon dating, as well as the analysis of macrofossils (charcoal and wood), pollen, animal bones and molluscs will be obtained from Oxford Archaeology.

For guidance purposes the following volume criteria represent the minimum feature sampling requirements:

- 50% of each discrete feature (e.g. pits and postholes)
- 25% of the exposed areas of each liner feature and all terminals/intersections
- 50% of structural features (e.g. beamslots, ring-ditches)
- 50%-100% of domestic/industrial working features (e.g. hearths and ovens)

6.0 HUMAN REMAINS

Any finds of human remains will be left *in-situ*, covered and protected, and both the coroner, Welsh Ministers, Cadw and the GAPS Archaeologist informed. If removal is necessary it will take place under appropriate regulations and with due regard for health and safety issues. In order to excavate human remains, a licence is required under Section *25* of the Burials Act 1857 for the removal of any body or remains of any body from any place of burial. This will be applied for should human remains need to be investigated or moved.

7.0 SMALL FINDS

The vast majority of finds recovered from archaeological excavations comprise pottery fragments, bone, environmental and charcoal samples, and non-valuable metal items such as nails. Often many of these finds become unstable (i.e. they begin to disintegrate) when removed from the ground. All finds are the property of the landowner; however, it is recommended that all finds are donated to an appropriate museum where they can receive specialist treatment and study. Access to finds must be granted to Aeon Archaeology for a reasonable period to allow for analysis and for study and publication as necessary. All finds would be treated according to advice provided within *First Aid for Finds* (Rescue 1999). Aeon Archaeology staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants.

The recovery policy for archaeological finds will be kept under review throughout the fieldwork phase. Any changes in recovery priorities will be under guidance from an appropriate specialist and agreed with the Welsh Ministers, Cadw, and the GAPS Archaeologist. There will be a presumption against the disposal of archaeological finds with the exception of unstratified items dating to the twentieth or twenty-first centuries AD which will be recorded by material, type, form, identification and weight, and discarded.

All finds will be collected and processed including those found within spoil tips. Their location will be recorded; finds numbers attributed, bagged and labelled as well any preliminary identification taking place on site. Where specialist advice is required provision will be made to do so at the earliest possible convenience.

After processing, artefacts which are suitable will be cleaned and conserved in-house. Artefacts requiring specialist cleaning and conservation will be sent to the relevant specialist. All finds will then be sent to a specialist for analysis, the results of which will then be assessed to ascertain the potential of the finds assemblage to meet the research aims of the project. The value of the finds will also be assessed in terms of the wider educational and academic contributions.

8.0 UNEXPECTED DISCOVERIES: TREASURE TROVE

Treasure Trove law has been amended by the Treasure Act 1996. The following are Treasure under the Act:

- *Objects other than coins* any object other than a coin provided that it contains at least 10% gold or silver and is at least 300 years old when found.

- *Coins* all coins from the same find provided they are at least 300 years old when found (if the coins contain less than 10% gold or silver there must be at least 10. Any object or coin is part of the same find as another object or coin, if it is found in the same place as, or had previously been left together with, the other object. Finds may have become scattered since they were originally deposited in the ground. Single coin finds of gold or silver are not classed as treasure under the 1996 Treasure Act.

- *Associated objects* any object whatever it is made of, that is found in the same place as, or that had previously been together with, another object that is treasure.

- *Objects that would have been treasure trove* any object that would previously have been treasure trove, but does not fall within the specific categories given above. These objects have to be made substantially of gold or silver, they have to be buried with the intention of recovery and their owner or his heirs cannot be traced.

The following types of finds are not treasure:

- Objects whose owners can be traced.
- Unworked natural objects, including human and animal remains, even if they are found in association with treasure.
- Objects from the foreshore which are not wreck.

All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown.

The British Museum will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled.

9.0 STAFF & TIMETABLE

9.1 Staff

The work will be managed and undertaken by Richard Cooke BA MA MCIfA, Archaeological Contractor and Consultant at Aeon Archaeology.

9.2 Timetable

The watching brief can be undertaken from July 2017, although the Welsh Ministers will be given at least two weeks' notice in writing prior to the commencement of works.

10.0 HEALTH AND SAFETY

Aeon Archaeology has a Health and Safety Policy Statement which can be supplied upon request. Furthermore, site-specific Risk Assessments and Method Statements are compiled and distributed to every member of staff involved with the project prior to the commencement of works.

11.0 INSURANCE

Liability Insurance – Insignia Underwriting Policy 347002

- Employers' Liability: Limit of Indemnity £10m in any one occurrence
- Public Liability: Limit of Indemnity £2m in any one occurrence
- Legal Defence Costs (Health and Safety at Work Act): £250,000

The current period expires 07/09/17

Professional Indemnity Insurance – Insignia Underwriting Policy 347002

- Limit of Indemnity £500,000 any one claim

The current period expires 07/09/17

12.0 GENERAL

All project staff will adhere to the *Code of Conduct of the Chartered Institute for Archaeologists*.

The project will follow the requirements set down in the *Standard and Guidance for Archaeological Excavation* prepared by the Chartered Institute for Archaeologists.

A Method Statement and Risk Assessment will be prepared prior to the commencement of fieldwork and circulated to all staff concerned.

Please note the following:

Aeon Archaeology will not be held responsible for any delays to the work programme resulting from the discovery of archaeological sites or finds.

SPECIALISTS

Specilaist advice required will be sought from the following list if required:

- Bone: Nora Bermingham
- Glass: Hilary Cool, Barbican Research Associates.
- Metal artefacts: Phil Parkes, Cardiff Conservation Services, Cardiff.
- Slag, burnt clay, hammerscale: Dr. Tim Young, Geoarch, Cardiff.
- Stone artefacts: Oxford Archaeology
- Wood artefacts: Jane Foley, Foley Conservation, Builth Wells.
- Leather: Quita Mould, Barbican Research Associates.
- Waterlogged environmental: Dr Mike Allen, Allen Environmental Archaeology.
- Environmental samples: Oxford Archaeology
- Numismatics: Peter Guest, Barbican Research Associates.
- Pottery (all periods): Oxford Archaeology
- Clay pipe: Oxford Archaeology

Depending upon the material of the remains the following experts will be consulted regarding the conservation of waterlogged material:

- Organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)
- Non-organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)