



aeon archaeology

**Hendre Eirian Hydro Scheme,
Tal-y-Bont, Barmouth, Gwynedd.
April 2015
V 1.0**



Archaeological Watching Brief
Project Code: A0029.2
Report no. 0060



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Hendre Eirian Hydro Scheme, Tal-y-bont, Barmouth, Gwynedd. April 2015

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Archaeological Watching Brief

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Project Code: A0029.2

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1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commissioned by Greenearth Hydro Ltd to carry out an archaeological watching brief and excavation during, and in advance of, a hydro-electric scheme with turbine house, penstock (pipeline), and electrical cable connection.

The archaeological work was undertaken as part of mitigatory works for the installation of a new hydro-electric scheme located on the northern bank of the Ceunant Egryn, approximately 2.5km southeast of the village of Tal-y-Bont, near Barmouth, Gwynedd and within the Snowdonia National Park Authority (SNPA).

The archaeological watching brief did not reveal any archaeological sites or artefacts along the route with the exception of a probable prehistoric round house located 100.0m northwest of the intake weir.

This feature was exposed, cleaned and recorded in-situ, with the exception of a small hand-excavated sondage across the round house wall in order to ascertain information about its construction. The round house enclosed an internal area of at least 4.7m and measured at least 7.2m in external diameter, although the centre point of the structure had not been exposed and as such the overall dimensions would have been somewhat larger.

The round house wall was found to have been constructed from small sub-rounded cobbles laid within a foundation trench which almost certainly doubled up as an integrated drip gully. Towards the north-western end the wall survived to a height of 0.82m, including its foundations, and utilised larger sub-rounded cobbles as part of the wall construction. A thin internal deposit that formed once the walls had been constructed is likely to be a relict floor surface that accumulated while the round house had been in use.

Bulk samples of silt concentrations within the round house wall as well as the relict floor deposit were taken but have not been processed. If additional analysis work of the round hut is required these two samples would be possible candidates for Carbon 14 dating.

A fragment of a probable hand-stone from a saddle quern and a concentration of opaque quarts were recovered from the hut wall and are likely to represent a ritualistic deposition during construction.

No other archaeological remains or artefacts were encountered along the rest of the penstock and tailrace routes.

2.0 INTRODUCTION

Aeon Archaeology was commissioned by Greenearth Hydro Ltd to carry out an archaeological watching brief and excavation during, and in advance of, a hydro-electric scheme with turbine house, penstock (pipeline), and electrical cable connection.

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The scheme consisted of an intake weir located at **NGR SH 61305 20678** and a 1.45km long buried penstock (pipe) running west to a new turbine house located at **NGR SH 59973 20792**. The hydro scheme then emptied back into the Ceunant Egryn via a 0.34km buried outfall pipe running southeast from the turbine. In addition a new power cable ran northwest from the turbine house for approximately 0.15km to a new transformer building.

A mitigation brief was not prepared for this work by The Snowdonia National Park Authority (SNPA) Archaeologist, but the following statement was made a condition of full planning permission:

*Prior to any work commencing (including any ground disturbance works or ground 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 hereby approved shall be carried out in strict accordance with the archaeological specification for a programme of works as approved in condition 10 unless otherwise agreed to in writing by the Local Planning Authority (conditions 10 and 11, planning application **NP5/58/554**).*

The reason for this condition was:

To protect any archaeological interest on the site.

An archaeological assessment was undertaken by Aeon Archaeology (report no.0029) in April 2014 which identified twenty-nine archaeological sites within the 40.0m wide assessment corridor centred on the pipe route. These included seven previously unknown prehistoric/Roman round/rectangular huts, as well as six relict field walls all of probable prehistoric date. As such the assessment report made recommendations for the following mitigatory measures to be made a condition of full planning permission:

- Archaeological excavation – feature 9 (prehistoric relict field wall)
- Watching brief for the entire penstock route, and for the tailrace route excluding where it crosses the steep section from tailrace chainage (Ch) 170 to 270.

The work undertaken adhered to the guidelines specified in *Standard and Guidance for Archaeological Watching Brief* (Chartered Institute for Archaeologists, 1994, rev. 2001 and 2008) and the *Standard and Guidance for Archaeological Excavation* (Chartered Institute for Archaeologists, 1995, rev. 2001, 2008).

3.0 PROJECT AIMS

The aim of the watching brief and excavation works were to characterise the known, or potential, archaeological remains uncovered during the excavation of the penstock and tailrace trenches along the entire length of the hydro-scheme route, with the exception of Ch170-270 where the steep topography was deemed not conducive to early habitation or activity.

These aims extended to an archaeological excavation across the suspected prehistoric relict field wall (feature 9) which was to be undertaken in advance of being breached by the penstock route at Ch703. However, upon inspection of the relict wall with the Client and site contractor it was realised that the penstock trench could be narrowed to 0.5m in width to pass through an existing gap in the wall, with plant machinery being diverted around the northern limit of the feature to ensure that no compression damage occurred. As such, the excavation across the relict field wall was not undertaken but an archaeological watching brief was maintained during the excavation of the penstock trench through the wall gap, with the exposed section cleaned by hand and photographic and descriptive records taken.

The broad aims of the archaeological mitigatory works were to:

- To determine, as far as is reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains on the site, the integrity of which may be threatened by development at the site.
- To establish the nature and extent of existing disturbance and intrusion to sub-surface deposits and, where the data allows, assess the degree of archaeological survival of buried deposits of archaeological significance.
- To allow the Snowdonia National Park Authority Archaeologist to make an informed decision on the need for and scope of any further archaeological works that may be required on future projects within proximity to the scheme.

The detailed objectives of the archaeological watching brief were to:

- Insofar as possible within methodological constraints, to explain any temporal, spatial or functional relationships between the structures/remains identified, and any relationships between these and the archaeological and historic elements of the wider landscape.
- Where the data allows, identify the research implications of the site with reference to the regional research agenda and recent work in Gwynedd.

An Archaeological Written Scheme of Investigation (WSI) was written by Aeon Archaeology and submitted to Greener Earth Hydro Ltd and the Snowdonia National Park Authority in January 2015. This formed the basis of a method statement submitted for the work. The archaeological watching brief was executed in accordance with this WSI.

The management of this project has followed the procedures laid out in the standard professional guidance *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 Institute for Archaeologists *Archaeological Evaluation* (Institute for Archaeologists, 1994, rev. 2001 & 2008). 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) 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

The Chartered Institute for Archaeologists (CIfA) defines an archaeological watching brief as:

‘A formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed.’ (CIfA 1994, rev. 2008)

The Snowdonia National Park Authority Archaeologist requested that a **comprehensive** watching brief be maintained during the excavation of the penstock and tailrace trenches.

All soil removal was undertaken using a mechanical excavator fitted with a toothless ditching bucket except for where a large quantity of stone required removal whereby a toothed bucket was used. A photographic record was maintained throughout, using a digital SLR camera (Canon 550D) set to maximum resolution and any subsurface remains were to be recorded photographically, with detailed notations and measured drawings being undertaken if required.

In the event of archaeological discovery features were to be excavated by hand and fully recorded using Aeon Archaeology pro-formas, digital photographs, and plan and section drawings taken at a suitable scale (usually 1:20 for plan drawings and 1:10 for section drawings).

The archive produced is held at Aeon Archaeology under the project code **A0029.2**.

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 as 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 Snowdonia National Park Authority 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), the Snowdonia National Park Authority (SNPA) Archaeologist (x3), 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 code **A0029.2** 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 or returned to the landowner.

5.0 STATUTORY AND NON-STATUTORY DESIGNATIONS

5.1 Non-designated monument points from the Gwynedd Historic Environment Record (figure 1)

The Gwynedd Historic Environment Record (HER) maintains a register of non-designated archaeological sites represented as single point data or as polygons. These are identified through their Primary Reference Number (PRN). These include sites which are of archaeological/historical interest, artefact find spots, documentary evidence, and locations of past events such as archaeological projects.

There are 149 non-designated monuments within 1.0km of the proposed pipeline route with the following monuments located within the 40.0m assessment zone centred on the pipe:

- (i) The prehistoric *Hut Group, Ceunant Egryn* (PRN: 1110);
- (ii) The prehistoric/Medieval *Hut Circle and Medieval Complex, Ffridd Llwyn Gurfal* (PRN: 1168).

The pipe route lies within 100.0m of the following:

- (i) Approximately 26.0m south of the Early Medieval *Circular Enclosure - Hendre Eirian* (PRN: 1115);
- (ii) Approximately 39.0m west of the prehistoric *Circular Enclosure, Hendre-eirian* (PRN: 5863);
- (iii) Approximately 42.0m north of the prehistoric *Circular Enclosure, Hendre-eirian* (PRN: 5862);
- (iv) Approximately 45.0m north of the Medieval *Deserted Rural Settlement, Near Pen y Dinas* (PRN: 15652);
- (i) Approximately 64.0m north of the Roman *Ceunant Egryn Enclosed Settlement* (PRN: 1116);
- (ii) Approximately 68.0m north of the *Egryn - Prehistoric Hearth* (PRN: 4284);
- (iii) Approximately 69.0m northwest of the Medieval *Platform House, Egryn* (PRN: 5825).
- (iv) Approximately 77.0m north of the Medieval *Decorated Lead Spindle Whorl, Findspot, Egryn* (PRN: 2940);
- (v) Approximately 86.0m north of the post-medieval *Slate Quarry, Hendre Eirian* (PRN: 20365);

5.2 Scheduled Ancient Monuments (figure 1)

Scheduled monuments are those considered to be monuments of national importance. The Ancient Monuments and Archaeological Areas Act 1979 supports a formal system of Scheduled Monument Consent (SMC) for any work to a designated monument. Any works within a Scheduled area will require SMC; this includes non-invasive techniques such as geophysics or field-walking.

There are 13 Scheduled Ancient Monuments within 1.0km of the proposed pipeline route with the following monuments located within the 40.0m assessment zone centred on the pipe:

- (i) The prehistoric *Ceunant Egryn Hut Group* Scheduled Ancient Monument (ME154);

The pipe route lies within 100.0m of the following:

- (i) Approximately 28.0m north of the prehistoric/Roman *Ceunant Egryn Enclosed Settlement* Scheduled Ancient Monument (ME099);
- (ii) Approximately 70.0m northwest of the prehistoric *Carneddau Hengwm Long Cairns* Scheduled Ancient Monument (ME007);
- (iii) Approximately 70.0m south of the prehistoric *Pen y Ddinas Camp* Scheduled Ancient Monument (ME076);
- (iv) Approximately 100.0m north of the medieval *Settlement & Fields Systems above Egryn Abbey* Scheduled Ancient Monument (ME122).

5.3 Listed Buildings (figure 2)

The Secretary of State for Culture, Media and Sport holds a List of Buildings of Special Architectural or Historic Interest, considered to be of national importance. Compiled under the Planning (Listed Buildings and Conservation Areas) Act 1990, the List includes structures from boundary walls and telephone boxes to cathedrals. Listing gives statutory protection and restrictions apply. Consent may be required for works to, or that affect the setting of, a Listed Building and the Local Planning Authority conservation officer should be consulted if in doubt.

There are 9 Listed Buildings within 1.0km of the proposed pipeline route but none lie within the 40.0m assessment zone centred on the pipe or within 100.0m.

5.4 National Monuments Record (figure 2)

The Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) maintains the National Monuments Record (NMR) for Wales. This is a register of non-designated archaeological sites represented as single point data or as polygons. These are identified through their National Primary Reference Number (NPRN) and include sites which are of archaeological/historical interest, artefact find spots, documentary evidence, and locations of past events such as archaeological projects that are not statutorily protected.

There are 105 non-designated monument points within 1.0km of the pipeline route but none lie within the 40.0m assessment zone centred on the pipe.

The pipe route lies within 100.0m of the following:

- (i) Approximately 25.0m south of the Iron Age/ Roman *Hendre Eirian, Circular Enclosure* (NPRN: 302750);
- (ii) Approximately 43.0m north of the prehistoric *Ceunant Egryn Hut Circle* (NPRN: 89298);
- (iii) Approximately 44.0m north of the post-medieval *Ceunant Egryn Sheep Fold* (NPRN: 89290);
- (iv) Approximately 44.0m south of the medieval *Pen-y-Dinas East Deserted Rural Settlement* (NPRN: 89268);
- (v) Approximately 45.0m south of the unknown *Hendre Eirian East Terraced Ground* (NPRN: 89706);
- (vi) Approximately 57.0m north of the medieval *Ceunant Egryn Enclosed Settlement* (NPRN: 56000);
- (vii) Approximately 73.0m north of the medieval/ post-medieval *Ceunant Egryn Enclosure Complex* (NPRN: 89388);
- (viii) Approximately 87.0m northeast of the post-medieval *Ceunant Egryn Spoil Tip* (NPRN: 89098);
- (ix) Approximately 100.0m east of the post-medieval *Hendre Eirian House* (NPRN: 28490).

5.5 Historic Landscape Character Areas (HLCAs) (figure 3)

Cadw, National Resource Wales (formerly the Countryside Council for Wales), and the International Council of Monuments and Sites (ICOMOS UK) compiled the two volume Register of Landscapes of Historic Interest in Wales. This includes 58 landscapes of outstanding or special historic interest, which are considered to be the best examples of different types of historic landscapes in Wales. The Register provides information to decision makers and landscape managers, to help ensure that the historic character of the landscape is sustained, and that where change is contemplated, it is well-informed.

The proposed development site lies within the following Historic Landscape Area (HLA):

- (i) The *Ardudwy Landscape of Outstanding Historic Interest* (HLW (Gw) 2).

Historic Landscape Characterisation takes a closer look at the historic landscape by showing the processes that have shaped the landscape over centuries of human activity, contributing to its present character. Detailed characterisation studies have been compiled by the four Welsh Archaeological Trusts for all 58 areas on the Register. They are used by local government and developers to help assess the impact of development proposals on the historic landscape.

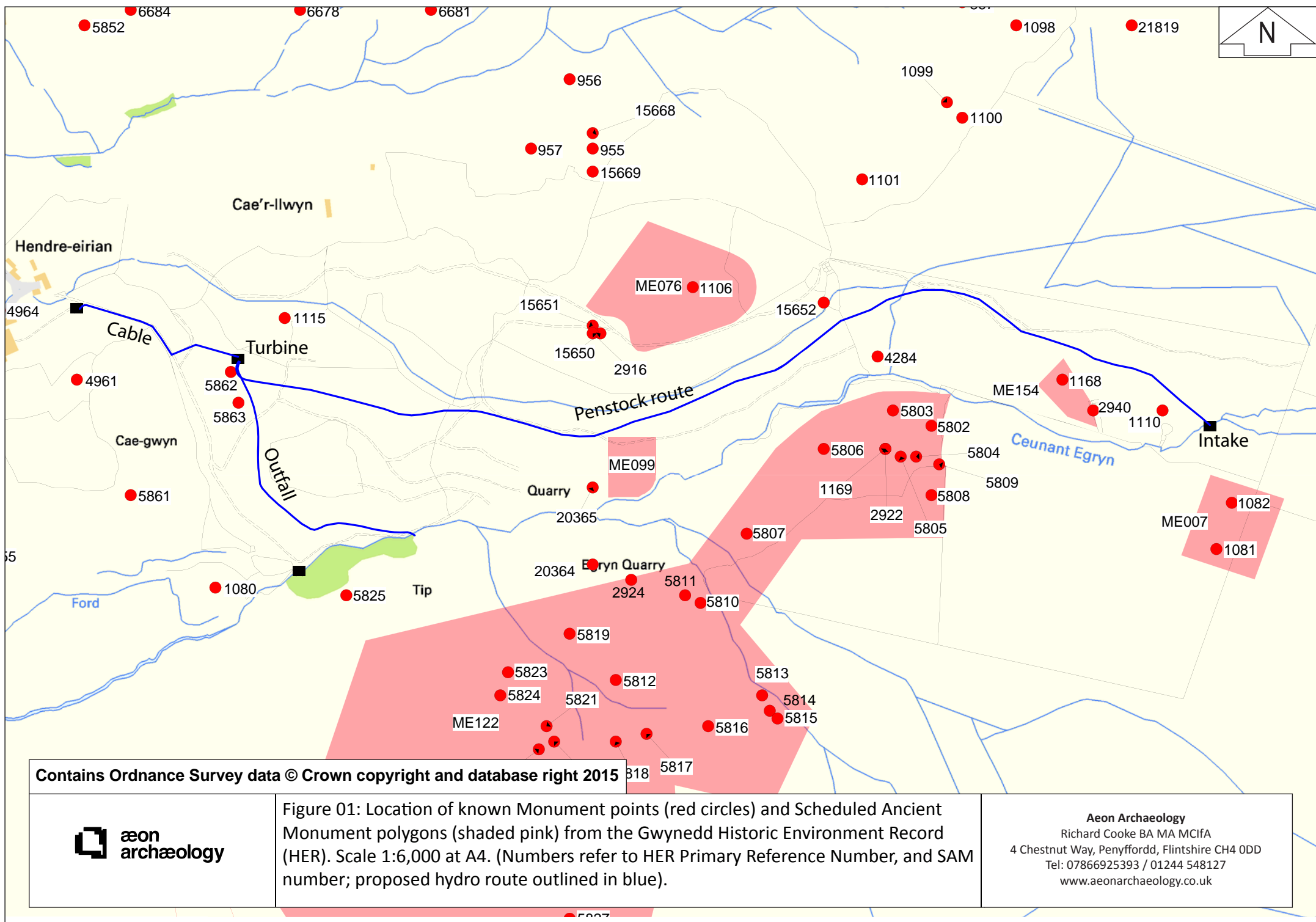
The proposed development area lies within the following Historic Landscape Character Areas (HLCAs):

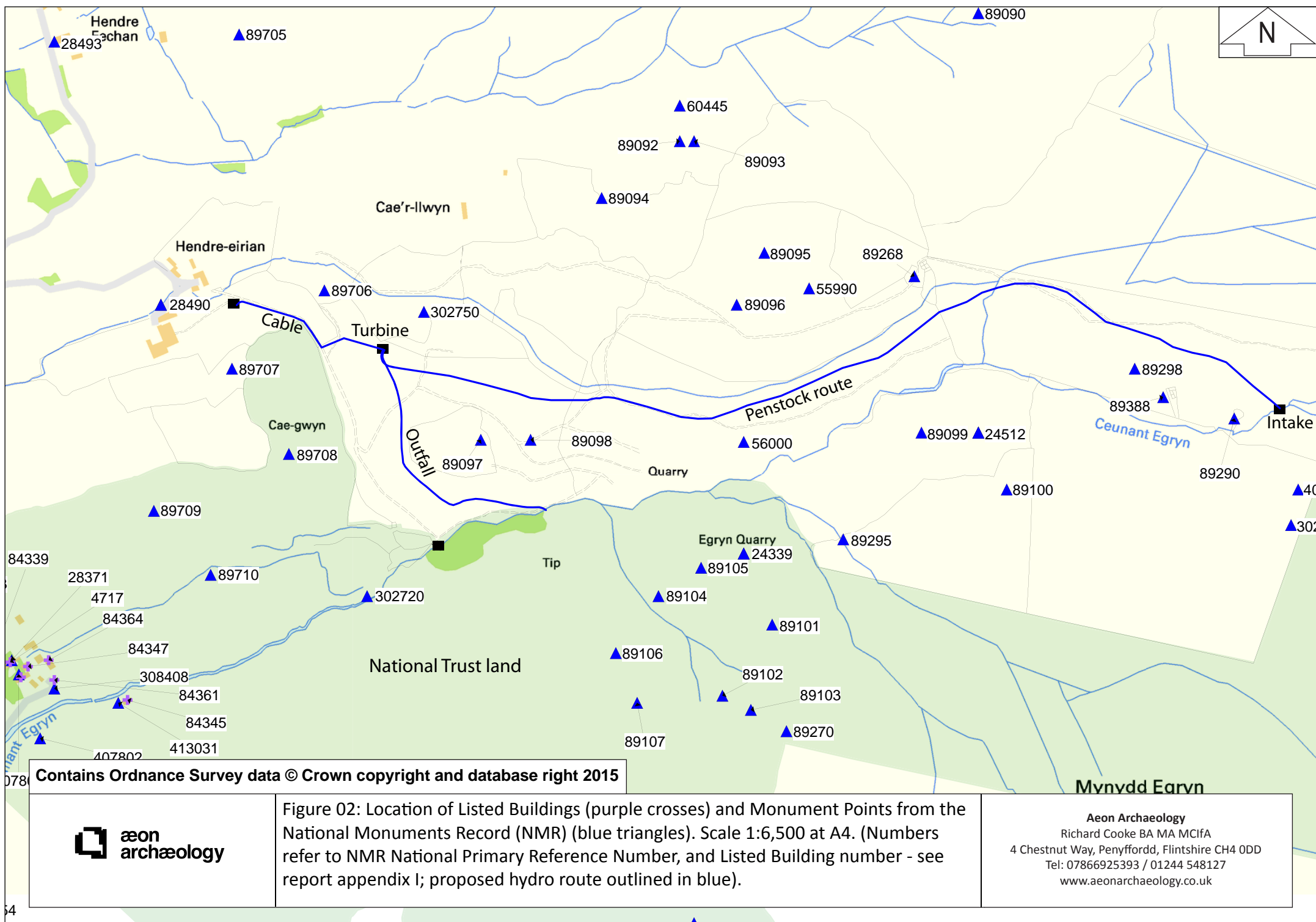
- (i) The *Is Mynydd & Mynydd Egryn* Historic Landscape Character area (HLCA: 2);
- (ii) The *Fieldscape, Mid-Hill Slopes Around Cae'r-Llwyn* Historic Landscape Character area (HLCA: 7);
- (iii) The *Fieldscape, Lower Hill Slopes* Historic Landscape Character area (HLCA: 1).

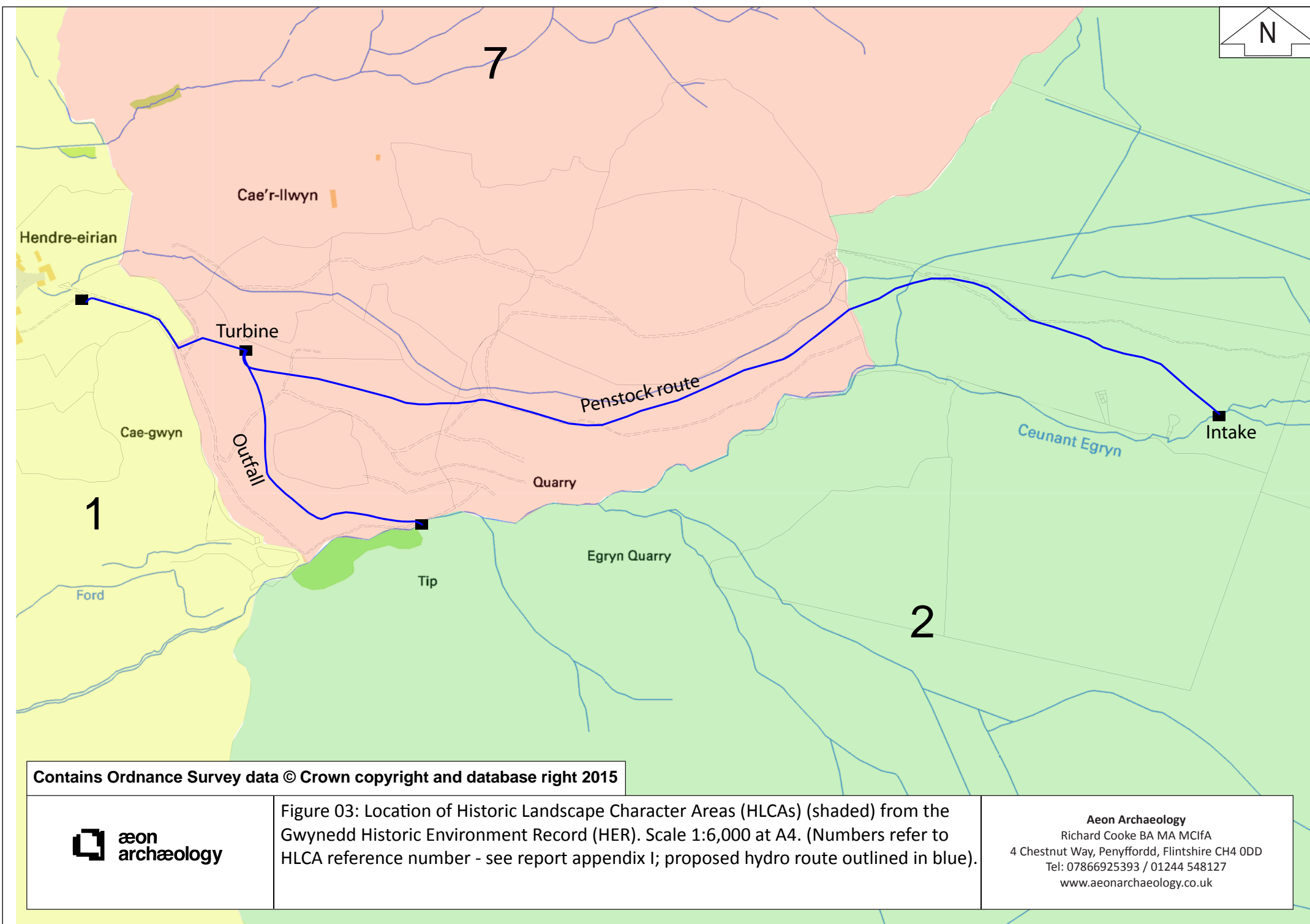
5.6 Historic Parks and Gardens

Cadw holds a Register of Historic Parks and Gardens of Special Historic Interest. These Registered landscapes are graded I, II* or II, and include private gardens, public parks and other green spaces. They are valued for their design, diversity and historical importance. Inclusion on the Register brings no additional statutory controls, but there is a presumption in favour of conservation of the designated site. Local authorities are required to consult Cadw on applications affecting sites Registered as grade I or II* and the Garden History Society on sites of all grades.

There are no historic parks and gardens within the 40.0m wide assessment corridor centred on the pipe route or within 1.0km of the proposed development area.







6.0 ARCHAEOLOGICAL BACKGROUND

(reproduced from Aeon Archaeology report 0029; further information including mapping and provisional phase drawings are presented in the archaeological assessment Aeon Archaeology report 0029)

6.1 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).

There are two Neolithic Scheduled Ancient Monument (SAM) burial chambers on Mynydd Egryn known as *Carneddau Hengwm* (ME007). Both are exceptionally interesting and unusually well preserved. They feature in 17th and 18th century writings as they were quite close to the main road of this period. The northern cairn is built in the style of the Severn-Cotswold lateral chamber, although it has been seriously disturbed over time and the chamber under the capstone at the west end is not easy to define. The chamber at the east end contains two opposed lateral chambers, and although the northern chamber is now damaged, the southern one is measured at 4.0m long and 1.0m wide. Early drawings of this cairn have suggested that there was a false portal at the east end, and a characteristic fine drystone wall edging has been found along the tomb at certain points. These stylistic features demonstrate the introduction of new religious and architectural ideas to this long-established Ardudwy community.

The development of funerary practice into the Bronze Age period within the localised landscape can be seen approximately 480.0m southeast of the proposed hydro intake point, with the Scheduled Ancient Monument of *Mynydd Egryn Ring Cairn* (ME156). Excavation of the central area in 1919 failed to identify any evidence of burial but the structural features, most notably the distinctive kerb of outward leaning stones have survived relatively undisturbed. Further evidence of the Bronze Age can be seen approximately 70.0m south of the proposed pipe route, where a mound and hollow (PRN: 4284) were identified by the RCAHMW and almost certainly represents a Bronze Age burnt mound.

Approximately 70.0m to the north of the proposed hydro-electric pipe route, the imposing Iron Age hillfort of *Pen y Dinas* (ME076) dominates the immediate landscape. The hillfort, called Castell Dinas by Pennant, Dinas Gortyn by Stukely, and known locally as Pen Dinas, occupies a small hillock which has been scarped and surrounded by a ditch. At the top of the scarp are the remains of a massive wall 4.5m wide at the base which encloses a level circular area with an average diameter of 49.0m. The elaborate in-turned entrance on the west side is approached through an outer bailey, possibly of a second period of occupation, and consisting of a semi-circular outwork with an entrance flanked by further defensive works. On the gentle slopes west of the fort are remains of platform houses probably late medieval in date (PRN: 2916). Crawford, who excavated the site in 1919, first considered Pen y Dinas to be a medieval fortress. Whilst he changed his opinion later, it is quite possible that although originally of the prehistoric period, such a fine strategic position would have attracted local chieftains in the dark ages, and occupation and adoption in the 12th and 13th centuries should not be ruled out (HER).

Further evidence of the prehistoric period within the localised landscape can be seen approximately 28.0m south of the proposed pipe route and 111.0m south of Pen y Dinas SAM, with the prehistoric/Roman *Ceunant Egryn Enclosed Settlement* Scheduled Ancient Monument (ME099). The enclosed settlement lies on the steep northern slope of the Ceunant Egryn, below the rampart of Pen y Dinas. It is a levelled area with a concentric circle settlement, although the enclosure wall extends only around the upper side where it is scarped into the slope. There may have never been a wall on the south side as the sheer drop down to the Afon Egryn may have been thought of as impenetrable in itself. The evidence of a wall may have otherwise eroded away down the hillside.

The central hut was placed on an artificially levelled platform located towards the east side of the enclosure. This would have been created by digging into the slope and building up the dug-out material downslope. A pathway that is possibly ancient passes the site on the north (feature 10; see section 7.0), and appears to be revetted on the lower side. The area is covered with field walls (feature 11; see section 7.0) and some of these are likely to be of the same date as the site (HER).

In closer proximity to the proposed hydro-electric intake point, the prehistoric enclosed settlement and Scheduled Ancient Monument of *Ceunant Egryn Hut Group* (ME154) lies approximately 13.0m to the south of the proposed pipe route. This hut group represents a multi-period complex of settlement and paddocks, with at least three hut circles lying within a conjoined oval enclosure. The site was disturbed within the medieval period for the construction of rectilinear buildings, most likely to house livestock (RCAHMW). The Royal Commission identified two further hut circles (PRN: 1110) approximately 100.0m to the southeast which may well have been contemporary with the SAM hut group. Indeed, during the course of this fieldwork two further possible round huts were identified along with a linear stretch of walling, possibly forming part of a paddock (features 2 and 3; see section 7.0).

A further prehistoric hut group SAM (ME157) lies approximately 470.0m southeast of the proposed intake point and comprises three small hut foundations, two of which appear to be joined to each other, and an associated small paddock or enclosure. Two additional sites which have been identified as possible prehistoric round huts were seen at the western end of the proposed scheme (PRN: 5862 and 5863) using aerial photography by the GAT in 1994 (GAT report 105).

In closer proximity to the proposed hydro outfall, a *Circular Enclosure/Concentric Circle* (PRN: 1080) of pre-Roman to Post Roman date is located approximately 110.0m to the west. At the upper end of a tongue of land lying next to the river, the central hut circle of about 7.6m in diameter is no more than a heap of fallen stones, but the embanked area of the middle circle is quite clear. The outer circle of about 68.6m diameter partly underlies modern field walls.

6.2 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 recorded Early Medieval site within 1.0km of the proposed pipeline. Approximately 26.0m north of the pipeline route is a *circular enclosure* (PRN: 1115) on a steep hill. It is cut into the slope on its top side and terraced out below to a height of 2.7m, producing a level area 20.1m in diameter which is surrounded by the remains of a dry-stone wall 1.8-2.7m wide at the base. Partial destruction makes it impossible to determine the position of the entrance or entrances. Bowen and

Gresham include this site in their concentric circles and circular enclosures classification, which they tentatively place in the immediate Post-Roman period.

Although the above site is the only recorded Early Medieval site on the Gwynedd HER within 1.0km, there are several other monuments where the exact date is unknown and which could be of Early Medieval origin. This includes the *Circular Enclosure/Concentric Circle* (PRN: 1080) described in the previous section, as well as other monuments such as the *Tyddyn y Felin Homestead* (PRN: 1078) located 1.0km to the north.

Approximately 310.0m southwest of the proposed outfall point lies the *Enclosed Hut Circle Settlement and Long huts East of Egryn Abbey* SAM (ME153) tentatively recorded as Iron Age/Roman on the Gwynedd HER. The homestead enclosure consists of a hut circle 9.7m in diameter inside a courtyard which is itself surrounded by an outer enclosure 55.0m in overall diameter. The courtyard is best preserved on the northern side and of the outer enclosures only a section on the southeast side remains. Bowen and Gresham include the site in their concentric circle and circular enclosure classification, which they place in the immediate post Roman period. In this case post Roman dating is supported by the fact that the enclosure appears to overlie a system of cultivation terraces of the type associated in the area with homesteads of Romano-British date.

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 (Aeon Archaeology report 0023).

Within the localised landscape the medieval period is particularly well represented for this part of northwest Wales, with thirty-eight recorded medieval sites located within 1.0km of the proposed pipeline route. Approximately 120.0m south of the hydro-electric pipe route lies the *medieval Settlement & Fields Systems above Egryn Abbey* SAM (ME122) which is a complex of hut circles, platform houses, and relict field systems and paddocks, which very likely belonged to Egryn Abbey. The SAM polygon covers an area about 1000.0m long and 100.0m-250.0m transversely on gently sloping land between about 182.0-228.0m OD. The fields tend to be irregular in shape and vary considerably in size though most seem to be less than 100.0m in length. The field walls are usually rough stone, occasionally orthostatic, and rarely more than 0.5m in height. The steadings are of more substantial construction and seems generally to consist of two or three small adjoining rectangular structures, either huts or rooms, with an adjacent paddock (HER).

Approximately 900.0m to the north of the pipe route lies the deserted rural settlement of *Tyddyn y Felin* 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.

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 earliest documentary evidence of the property of Hendre-Eirian is from a letter to the Bishop of Bangor from Hugh Evans, the head of the household in 1818 (B/PDM/106), in which he states the following:

‘To the right reverend the Lord Bishop of Bangor and to his Registrar – I Hugh Evans of Hendre-Eirian in the Parish of Llanaber in the county of Merioneth – farmer – do hereby certify that a certain building and messuage called Hendre-Eirian in the parish of Llanaber in the county of Merioneth is intended forthwith to be used as a place of religious worship by an assembly or congregation of Protestants; and I do hereby require you to register the same according to the provisions of an act passed in the fifty-second year of his majesty King George the Third intitled ‘An Act to repeal certain Acts, and amend other Acts, relating to religious worships and assemblies, and persons teaching or preaching therein.’

The property is not mentioned again until an official legal document in 1831 signed by Margaret Evans, the wife of Hugh Evans who had died without leaving a will, in which she is made the benefactor of Hendre-Eirian (B1831-122). The property and indeed the proposed pipeline route is first depicted on the tithe map for the parish of Llanaber in 1841, in which it is depicted much as it exists today. The field boundaries shown closely resemble those currently in existence and it can be hypothesised that very little alteration to the field system has occurred in the intervening years. The tithe map does however show very little detail, and aside from the field boundaries the only other feature of note is the trackway leading southeast from Hendre-Eirian.

Table 1. Apportionment to the 1841 Tithe Map for the Parish of Llanaber

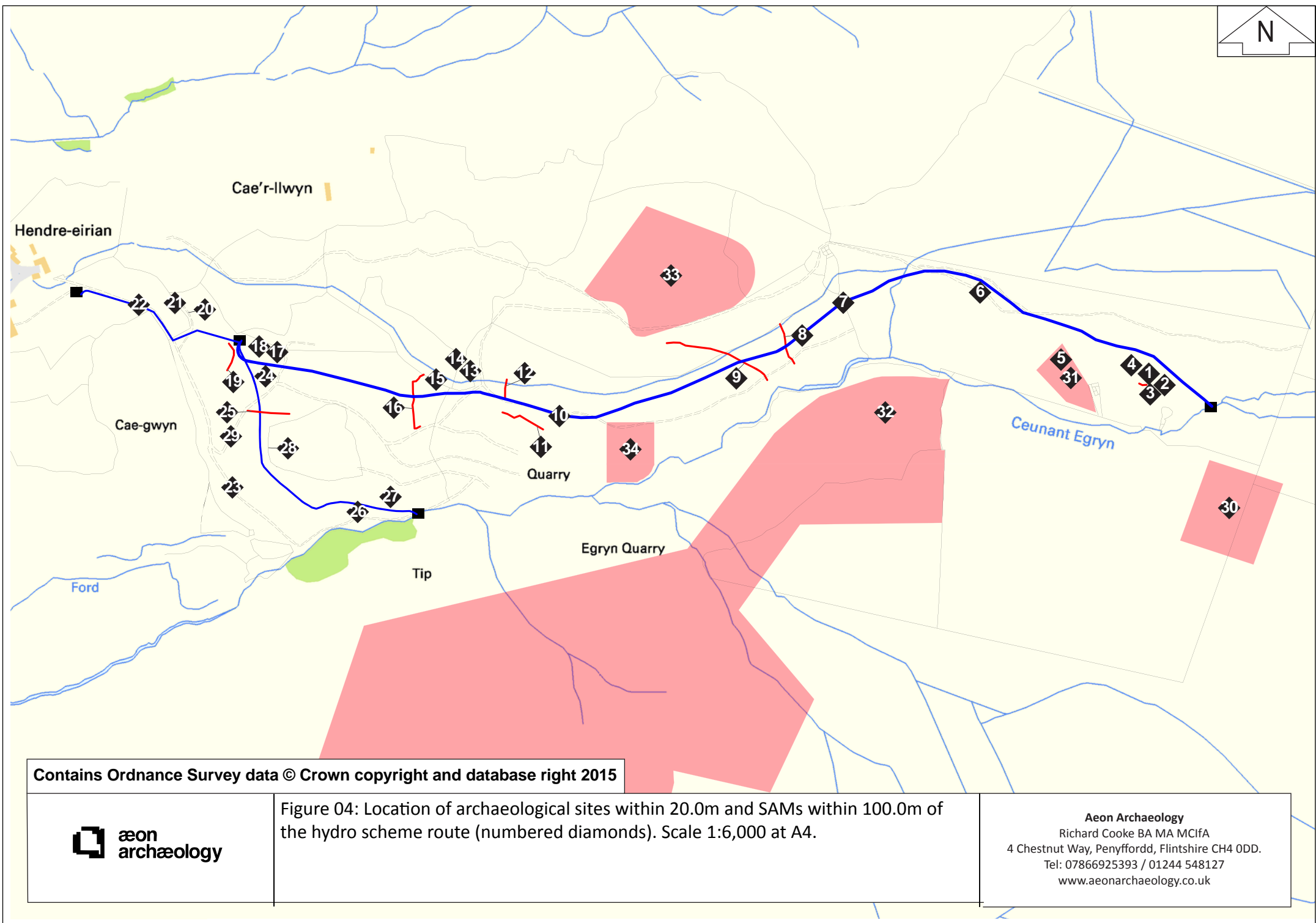
Field Number	Field Name	Landowner	Occupier	Landuse	A/R/P
66	Hen Erddi	Thomas Hartley	Evan Williams	Arable	3/3/30
77	Ffridd Issa	Thomas Hartley	Evan Williams	Pasture	19/1/4
81	Buarth pen y ffridd	Thomas Hartley	Evan Williams	Arable	0/2/5
82	Buarth pen y ffridd	Thomas Hartley	Evan Williams	Arable	1/3/0
83	Ffridd musydd	Thomas Hartley	Evan Williams	Rough Pasture	7/2/35
88	Ffridd Uchaf	Thomas Hartley	Evan Williams	Pasture	36/2/20
903	Allotment	Thomas Hartley	Evan Williams	Mountain Pasture	22/0/34

As can be seen from the Llanaber tithe apportionment of 1841 (table 1) the proposed hydro-electric pipeline route passes through seven enclosed fields, as it would do today. The field names refer to descriptive topographical locations or former usage such as *Hen Erddi* (old garden) and *Ffridd Uchaf* (upper frith-pasture).

All of the fields were owned by Thomas Hartley of the Llwyn Estate in Dolgellau. Hartley was the second son of John and Ann Hartley and inherited the Llwyn Estate through his marriage to Mary Nannau, daughter of the Rev Robert Nannau of Llwyn. He became Deputy Lieutenant for Merioneth in 1827 (Hughes, H & Hookham, T. 1830).

The tithe apportionment details that the land tenant at the time of the survey was Evan Williams, and it is clear that at some time between at least 1831 and 1841 the tenancy had passed from the Evans to the Williams family. No further information concerning the Williams family could be found within the 1840's to 1860's census, however the 1871 census detailed that the property was tenanted by Edward Williams (61), Ellen Williams (30), Ellis Williams (26), Laura Williams (24), and two servants. By the time of the 1881 census the farm was being worked by Ellis Williams now 36 years of age, along with his wife Margaret Williams (33), and their children Maggie Williams (8), Ellen Williams (7), Ellis J. Williams (1), as well as a general servant and two farm labourers.

The proposed route of the hydro-electric scheme is again depicted on the first edition 25" county series Ordnance Survey map of 1889. This map again shows the route passing through seven enclosed fields as shown on the tithe map of 1841, however a lot more detail is depicted including the hillfort at Pen Dinas (ME076), footpaths, and the Egryn slate quarry (PRN: 20365). The area is only partially covered on the second edition map of 1901, and is not depicted at all on the third edition map.



7.0 QUANTIFICATION OF RESULTS

7.1 The Documentary Archive

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

Watching brief day sheets:	10
Digital photographs:	71
Context Sheets:	8
Drawings:	3 on 2 sheets

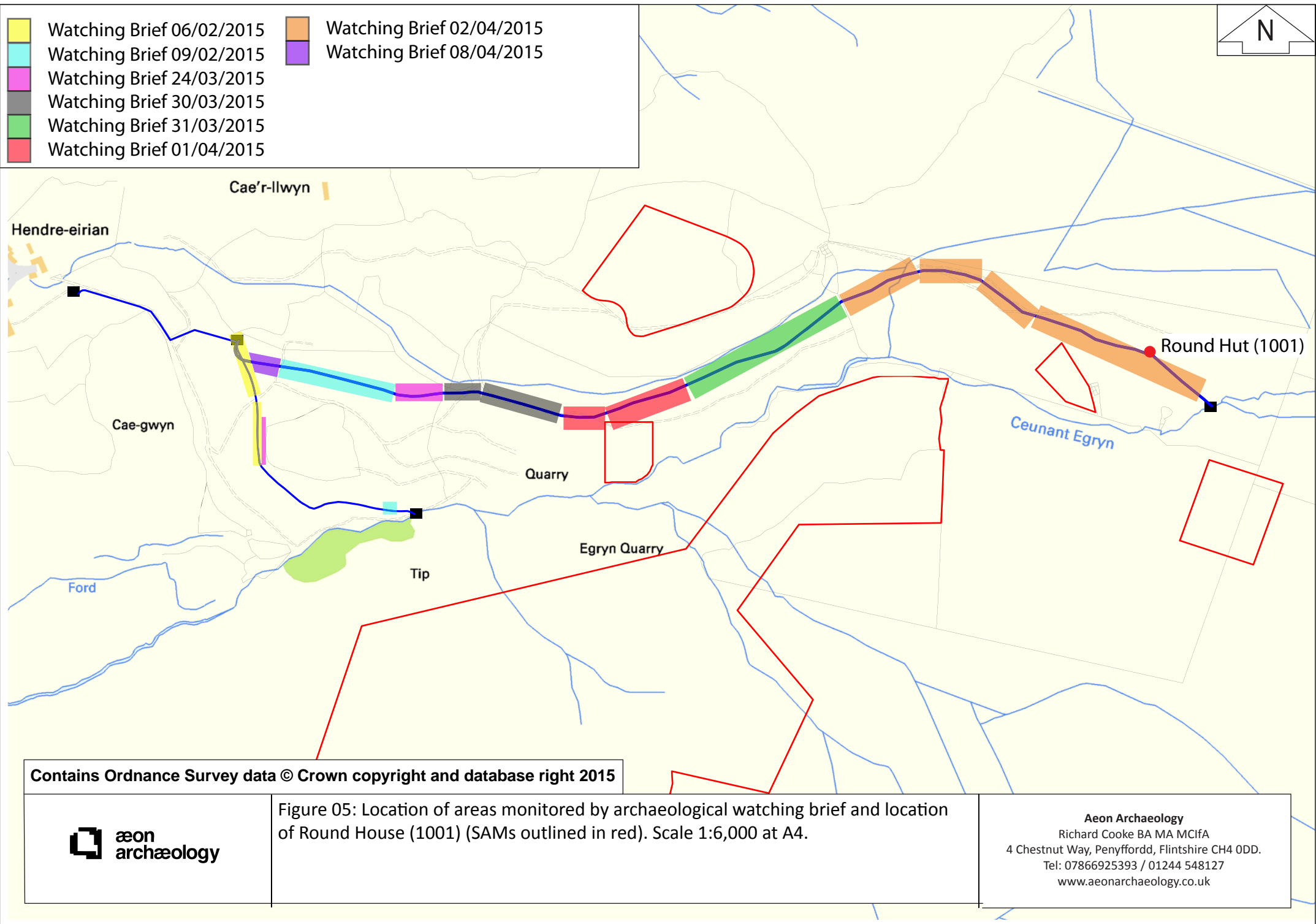
7.2 Environmental Samples

Two environmental samples were taken during the archaeological watching brief, both from contexts relating to the prehistoric Round House (1001). Neither of these samples have been processed as part of the post-fieldwork programme although the potential to use these samples remain as a possibility for future research.

7.3 Artefacts

The following artefacts were recovered during the archaeological watching brief:

Fragment of hand-stone from saddle quern:	1
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8.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

6th February 2015 (Figure 5)

Tailrace - Chainage 179-91 (plates 1 and 2)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 5.0m wide easement for the hydro tailrace trench from Ch179-91 (NGR SH 60076 20605 – SH 60068 20693). The easement was excavated to a depth of 0.25m through a soft, mid red-brown sand-silt topsoil horizon with fairly frequent small sub-rounded cobbles on to a reasonably firm mid red-brown clay-sand natural glacial substrata with frequent small sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

Turbine House footprint (plates 3 and 4)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 5.0m square footprint for the new turbine house building at NGR SH 59973 20792. The footprint was excavated to a depth of 0.3m through a soft, mid red-brown silt-clay topsoil horizon with fairly frequent small sub-rounded cobbles on to a reasonably firm light brown-orange clay-sand natural glacial substrata with frequent small sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

Tailrace - Chainage 0-60 (plates 5 and 6)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 1.0m wide tailrace trench from Ch0-60 (NGR SH 60053 20773 – SH 60064 20707). The trench was excavated to a depth of 0.6m through a 0.3m deep soft, mid red-brown silt-clay topsoil horizon with fairly frequent small sub-rounded cobbles on to a reasonably firm light brown-orange clay-sand natural glacial substrata with frequent small sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

9th February 2015 (Figure 5)

Slate Tip – feature 27 (plate 7)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a bench through the slate tip (feature 27) located at NGR SH 60237 20551. The tip was made up from small, medium and large pieces of quarried angular slate debris piled against the southern facing slope of the Ceunant Egryn and cast from the quarry located to the immediate north.

The tip was removed to a depth of approximately 1.0m on to the buried topsoil horizon, although the bench repeatedly re-filled with slate from the tip higher up the slope.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

Penstock - Chainage 1330-1160 (plates 8 and 9)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 3.0m wide easement for the hydro penstock trench from Ch1330-1160 (NGR SH 60108 20741 – SH 60263 20702). The easement was excavated to a depth of 0.25m through a soft, mid red-brown silt-clay topsoil horizon with frequent small and medium sized sub-rounded cobbles on to a reasonably firm mid brown-orange clay-sand natural glacial substrata with frequent medium and large sized sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

Field wall – feature 16 (Plate 10)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 3.0m wide easement for the hydro penstock trench through the redundant post-medieval field wall (feature 16) located at NGR SH 60280 20724 – SH 60270 20654.

The wall measured 1.2m in height by 1.0m in width and was constructed from small, medium and large sized sub-rounded and sub-angular glacial cobbles. It was of dry-stone bond to approximately seven courses with a rudimentary core of stone rubble. The wall revetted the natural slope and was constructed directly on to a soft, mid red-brown silt-clay topsoil horizon with frequent small and medium sized sub-rounded cobbles. This lay above a reasonably firm mid brown-orange clay-sand natural glacial substrata with frequent medium and large sized sub-rounded cobble inclusions.

24th March 2015 (Figure 5)

Additional Tailrace – Chainage 110-179 (plate 11)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 4.0m wide easement for the hydro tailrace trench from Ch110-179 (NGR SH 60068 20666 – SH 60082 20603). This easement was additional to what had been excavated on the 6th February 2015 due to an error in the fallout pipe levels requiring an additional easement higher up the slope. The easement was excavated to a depth of 0.2m through a soft, mid red-brown silt-clay topsoil horizon with fairly frequent small sub-rounded cobbles on to a reasonably firm light orange sand-clay natural glacial substrata with frequent small sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

Penstock - Chainage 1160-1100 (plate 12)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 3.0m wide easement for the hydro penstock trench from Ch1160-1100 (NGR SH 60263 20702 – SH 60309 20702). The easement was excavated to a depth of 0.25m through a soft, mid red-brown silt-clay topsoil horizon with frequent small and medium sized sub-rounded cobbles on to a reasonably firm mid brown-orange clay-sand natural glacial substrata with frequent medium and large sized sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

30th March 2015 (Figure 5)

Penstock - Chainage 1100-940 (plates 13 and 14)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 3.0m wide easement for the hydro penstock trench from Ch1100-940 (NGR SH 60309 20702 – SH 60477 20688). The easement was excavated to a depth of 0.25m through a soft, mid red-brown silt-clay topsoil horizon with frequent small and medium sized sub-rounded cobbles on to a reasonably firm mid brown-orange clay-sand natural glacial substrata with frequent medium and large sized sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

31st March 2015 (Figure 5)

Penstock - Chainage 550-780 (plate 15)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 3.0m wide easement for the hydro penstock trench from Ch550-780 (NGR SH 60819 20819 – SH 60626 20714). The easement was excavated to a depth of 0.25m through a soft, mid red-brown silt-clay topsoil horizon with frequent small and medium sized sub-rounded cobbles on to a reasonably firm mid brown-orange clay-sand natural glacial substrata with frequent medium and large sized sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

Relict Field Wall – feature 9 (Plates 16 and 17)

The archaeological mitigatory response was supposed to include a hand-excavated trench across the part of prehistoric relict field wall (feature 9) (NGR SH 60726 20718 – SH 60599 20765) prior to it being breached by the penstock trench and easement. However upon attendance with the Client and site contractor it became apparent that the penstock trench could be narrowed to 0.5m and excavated

through an existing gap in the relict wall from either side. Furthermore, the tracked excavator and other plant machinery could be diverted around the northern limit of the wall thus eliminating any impact upon it and indeed the requirement for the archaeological excavation across the part to be breached.

The wall was photographed (plate 16) prior to the excavation of the penstock trench and a watching brief was maintained while the tracked excavator with toothless mini ditching bucket dug the trench to a depth of 0.7m. The trench was cleaned by hand and photographed (plate 17). The trench cut through a 0.3m deep fairly soft dark red-brown silt-clay topsoil which contained two large sub-rounded cobbles, almost certainly belonging to the relict wall but seemingly not in-situ and most likely a tumbled deposit. No structural form could be identified and the two stones sat within the topsoil horizon. The trench further cut through 0.4m of light orange-brown slightly silty-clay natural glacial substrata.

1st April 2015 (Figure 5)

Penstock - Chainage 780-940 (plates 18 and 19)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 3.0m wide easement for the hydro penstock trench from Ch780-940 (NGR SH 60626 20714 – SH 60477 20688). The easement was excavated to a depth of 0.25m through a soft, mid red-brown silt-clay topsoil horizon with frequent small and medium sized sub-rounded cobbles on to a reasonably firm mid brown-orange clay-sand natural glacial substrata with frequent medium and large sized sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

2nd April 2015 (Figure 5)

Penstock - Chainage 550-10 (plates 20 and 21)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 2.0m wide easement for the hydro penstock trench from Ch550-10 (NGR SH 60819 20819 – SH 61293 20701). The easement was excavated to a depth of 0.18m through a soft, mid grey-brown silt-clay topsoil horizon with frequent small and medium sized sub-rounded cobbles on to a firm light grey clay natural glacial substrata with frequent medium and large sized sub-rounded cobble inclusions and patches of solid manganese-rich bedrock extending to ground level.

At chainage 100 (NGR SH 61221 20759) the circular wall of a prehistoric round house constructed from small and medium sized sub-rounded cobbles was located within the trench. The penstock was subsequently diverted to avoid this feature which was revisited on the 8th and 9th April to be recorded.

7th April 2015 (Figure 5)

Penstock - Chainage 0-10 (plates 22 and 23)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 4.0m wide easement for the hydro penstock trench from Ch0-10 (NGR SH 61299 20698 – SH 61299 20698). The easement was excavated to a depth of 1.0m through a 0.5m deep deposit of large, medium and small sized sub-rounded glacial boulders; a 0.3m deep mid red-brown natural clay substrata; and a 0.2m deep light grey natural clay substrata.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

8th April 2015 (Figure 5)

Penstock - Chainage 1300-1373 (plates 24 and 25)

The archaeological watching brief was maintained while a tracked excavator with toothless ditching bucket excavated a 4.0m wide easement for the hydro penstock trench from Ch1300-1373 (NGR SH 60103 20742 – SH 60065 20742 – SH 60056 20770). The easement was excavated to a depth of 0.6m through a 0.2m deep reasonably soft dark grey-brown silt-clay topsoil with fairly frequent small sized sub-rounded cobble inclusions, onto a fairly loose light orange sand-clay natural glacial substrata with frequent small and medium sized sub-rounded cobble inclusions.

No archaeological deposits, structures or features were identified during the watching brief and no artefacts were recovered.

8th – 9th April 2015 (Figure 5)

Round House (1001) PRN: 60221 (Figures 6-9; Plates 26-30)

Description

At approximately chainage 100 and centred on NGR SH 61221 20759 the circular wall of a round house (1001), probably of the prehistoric or Roman period, was uncovered within the penstock easement.

Upon careful cleaning back with the tracked excavator utilising a toothless ditching bucket and revealing the highest surviving remains of the structure, the round house was subsequently cleaned by hand and photographed (plates 26-28) as well as being drawn in plan (figure 7). During the cleaning, a fragment of what is probably a hand-stone from a saddle quern (SF 01) (plate i) was recovered from the loose rubble within the wall structure (1003) at its south-western return. The hand-stone measured 16.0cm in length by 10.5cm in width by 3.0cm in depth, and weighed 746g. It had been carved from a mid-grey hard grit-stone with 1-3mm quartz inclusions, with a flat surface on one side and a curved edge on the opposing face forming a semi-circular profile. It appeared to have been broken at either end and on the right hand edge. This artefact is of probable prehistoric date.

The round house wall measured 0.9m in width and had a maximum surviving height of 0.42m above the natural clay at the north-eastern return. It was constructed from approximately 80% small and medium sized undressed sub-rounded cobbles averaging 0.25m in size, with a fairly soft dark red-brown silt-clay in-filling the voids (1003). This fill occasionally had lenses of lighter brown-grey silt suggesting waterlogged conditions within the wall structure, which was sampled for possible later environmental processing or Carbon 14 dating.

The wall did not appear to have any formal structure and no facing stones or integrated wall core could be identified. In fact, the wall appeared to be of fairly loose construction utilising smaller pieces of stone rubble, with the exception of the north-eastern end where the wall survived to a higher level and medium sub-rounded cobbles had been incorporated into the structure. Moreover, twelve pieces of unworked white opaque quartz were recovered within the wall structure during cleaning and the excavation of an exploratory sondage across the wall (plate ii). These pieces of quartz varied in size from a maximum of 115mm in length to a minimum of 40mm in length, and at least three pieces had clearly been fractured, although not seemingly worked. This would suggest that some of the quartz at least had been quarried from a vein rather than being a glacial erratics found at ground level.

The wall ran east from the north-western trench baulk partially into the south-eastern baulk, before largely running parallel with it and returning on a north-through-a-northwest alignment into the north-western trench baulk again. Thus forming the southern third of a round house with an internal diameter of at least 4.7m, and an external diameter of at least 7.2m.

A sondage measuring 1.3m in length was placed across the south-western side of the round house wall and up against the north-western trench edge. This revealed that the wall had been constructed within a foundation trench [1002] cut into the natural glacial clay horizon (1004). The foundation trench measured 0.9m in width by 0.4m in depth, and had slightly concaved sides and a flat base. The round house wall (1003) had been placed directly into the foundation cut and extended a maximum of 0.42m above the top of the cut.

The sondage section and indeed the section of the trench edge across the round house was cleaned and recorded. This showed that after the construction of the round house wall (1003) within foundation trench [1002], a reasonably soft mid orange-brown silt-clay deposit (1005) had formed within the interior of the structure and butted up against the internal face of the round house wall, thus post-dating it. This deposit measured 0.04m in depth and although removed across half of the interior of the round house during cleaning, appeared in the trench section showing that it had occupied the whole of the revealed internal space. The deposit contained occasional small sub-rounded pebbles and occasional charcoal flecks, as such a bulk sample of the deposit was taken for the possibility of Carbon 14 dating at a later opportunity. The most likely interpretation for deposit (1005) is that it was an internal floor surface that had formed while the round house had been in use.

Above this deposit a reasonably soft dark red-brown silt-clay deposit (1008) with approximately 50% medium sized sub-angular cobbles had formed. This layer measured c.1.1m in width by a maximum of 0.24m in depth and was limited to the immediate internal limits of the round house wall, almost certainly representing a demolition layer once the round house had fallen out of use.

A subsoil deposit (1007) measuring 0.24m in depth and of soft mid/dark red-brown silt-clay with occasional small angular pebble inclusions had formed across the entirety of the round house, filling in the internal hollow of the structure and thus burying it from view with perhaps the exception of the upper limits of the round house wall. This deposit was then overlain by a topsoil (1006) measuring

0.3m in depth and of soft dark grey-brown silt-clay with occasional medium sized sub-rounded cobble inclusions, almost certainly representing demolition material from the round house wall.

The interior of the round house and the area immediately around it was cleaned by hand for any related features but none were found, although probable floor deposit (1005) was not removed within the north-western quadrant and as such archaeological features may have been present beneath this layer.

Discussion

The close proximity of the prehistoric enclosed settlement and Scheduled Ancient Monument of *Ceunant Egryn Hut Group* (ME154) approximately 93.0m to the southwest coupled with the identification both by the RCAHMW and Aeon Archaeology of a further four possible round houses and paddock walls to the east of the SAM polygon and within 30.0m of the uncovered round house (1001) (PRN: 60221), strongly suggests that this hut circle forms part of this extended group of prehistoric monuments.

The round houses so far discovered have been done so through the visual identification of the round house walls at ground level. Round house (1001) was not visible at the surface in this way, although as with the other huts in close proximity a concentration of reeds appears to have formed due to localised waterlogged conditions caused through the presence of buried structural remains.

The round house is unusual in its form, as there was no apparent outer or inner drip gully and the wall was constructed within a foundation trench utilising small sized rubble which would not have been conducive as an efficient wall structure. The explanation to this may be that the foundation trench doubled up as a drip gully, the presence of silt lenses within its fill supporting the hypothesis that it had indeed held water. Furthermore, the better preserved north-western return of the round house wall incorporated larger stones to those found within the foundation cut itself, suggesting that the above ground parts of the wall had been of larger rubble sat upon a foundation of smaller stones that acted as an incorporated drip gully.

The inclusion of the probable hand-stone saddle quern fragment (SF 01) and the large quantity of unworked opaque quartz (plates i and ii respectively) into the wall structure is unlikely to be by accident, and probably represents a ritual deposition of material within the wall. The quartz, although unworked, did show that at least three pieces had been fractured, probably as a result of being quarried from a quartz vein as opposed to being found as a glacial erratic at ground level. The deposition of these fragments would classify them as *manuports*, natural items that have been moved from their original context by human agency but otherwise remain unaltered.

Such deliberate depositions of quarts have been seen within the localised environment with as yet unpublished excavations of the *Mynydd Egryn Ring Cairn* ME156 approximately 480.0m to the southeast. Indeed, an alternative interpretation is that the round house (1001) is in fact a Bronze Age ring cairn, although the concentration of the stone rubble almost exclusively to the circular foundation trench and not around it would strongly suggest that the stone is in-situ rather than an accumulation within the cut. Moreover, no evidence of kerbing could be identified within the feature and the locality is not as prominent as one would expect with ring cairns making this theory less tenable.

The penstock route was diverted to the south of the round house and the trench was backfilled thus preserving the monument in-situ.



Plate 01: Tailrace strip Ch179 - Ch91, from the north. Scale 1.0m.



Plate 02: West facing section of tailrace strip Ch179 - Ch91, from the west. Scale 0.5m.



Plate 03: Stripped turbine house footprint, from the north. Scale 1.0m.



Plate 04: West facing section of stripped turbine house footprint, from the west. Scale 0.5m.



Plate 05: Stripped tailrace Ch0 - Ch60, from the north. Scale 0.5m.



Plate 06: East facing section of stripped tailrace Ch0 - Ch60, from the east. Scale 0.5m.



Plate 07: Cleared slate tip (feature 27), from the west. Scale 1.0m.



Plate 08: Stripped penstock Ch1160 - Ch1330, from the east. Scale 1.0m.

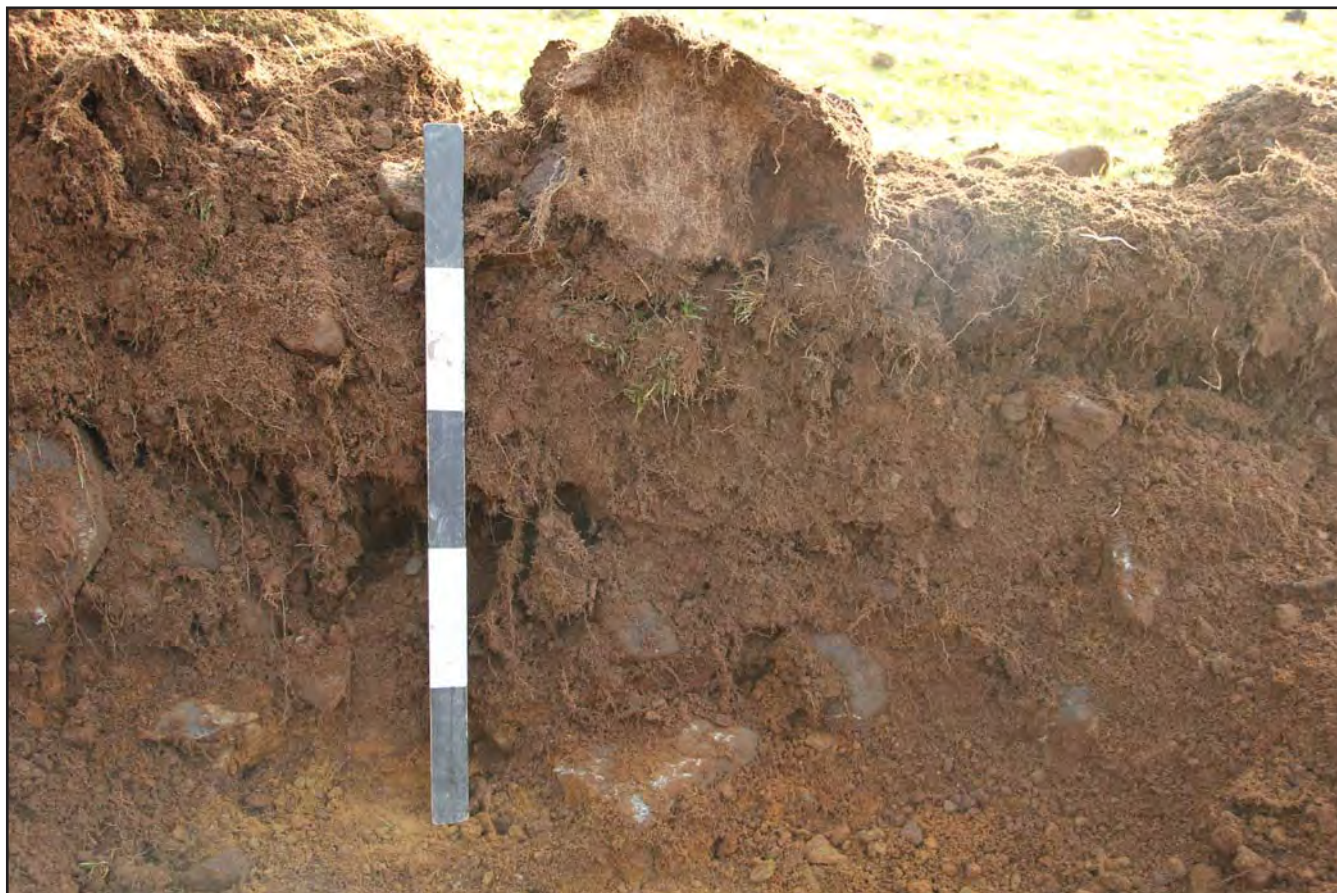


Plate 09: North facing section of stripped penstock Ch1160 - Ch1330, from the north. Scale 0.5m.



Plate 10: Breached field wall (feature 16), from the south. Scale 0.5m.



Plate 11: Additional stripped tailrace Ch110 - Ch179, from the north. Scale 1.0m.



Plate 12: Stripped penstock Ch1160 - Ch1100, from the east. Scale 1.0m.



Plate 13: Stripped penstock Ch1100 - Ch940, from the west. Scale 0.5m.



Plate 14: South facing section of stripped penstock Ch1100 - Ch940, from the south. Scale 0.5m.



Plate 15: Stripped penstock Ch550 - Ch780, from the west. Scale 0.5m.



Plate 16: Relict field wall (feature 9) prior to the excavation of the penstock trench, from the east. Scale 0.5m.



Plate 17: Penstock trench through existing gap in relict wall (feature 9), from the south. Scale 0.5m.



Plate 18: Stripped penstock Ch780 - Ch940, from the east. Scale 0.5m.



Plate 19: South facing section of stripped penstock Ch780 - Ch940, from the south. Scale 0.5m.



Plate 20: Stripped penstock Ch550 - Ch10, from the west. Scale 0.5m.



Plate 21: South facing section of stripped penstock Ch550 - Ch10, from the south. Scale 0.5m.



Plate 22: Stripped penstock Ch0 - Ch10, from the south. Scale 0.5m.



Plate 23: West facing section of stripped penstock Ch0 - Ch10, from the west. Scale 0.5m.



Plate 24: Stripped penstock Ch1300 - Ch1373, from the east. Scale 0.5m.



Plate 25: South facing stripped penstock Ch1300 - Ch1373, from the south. Scale 0.5m.



Plate 26: Round House (1001), from the northwest. Scale 1.0m.



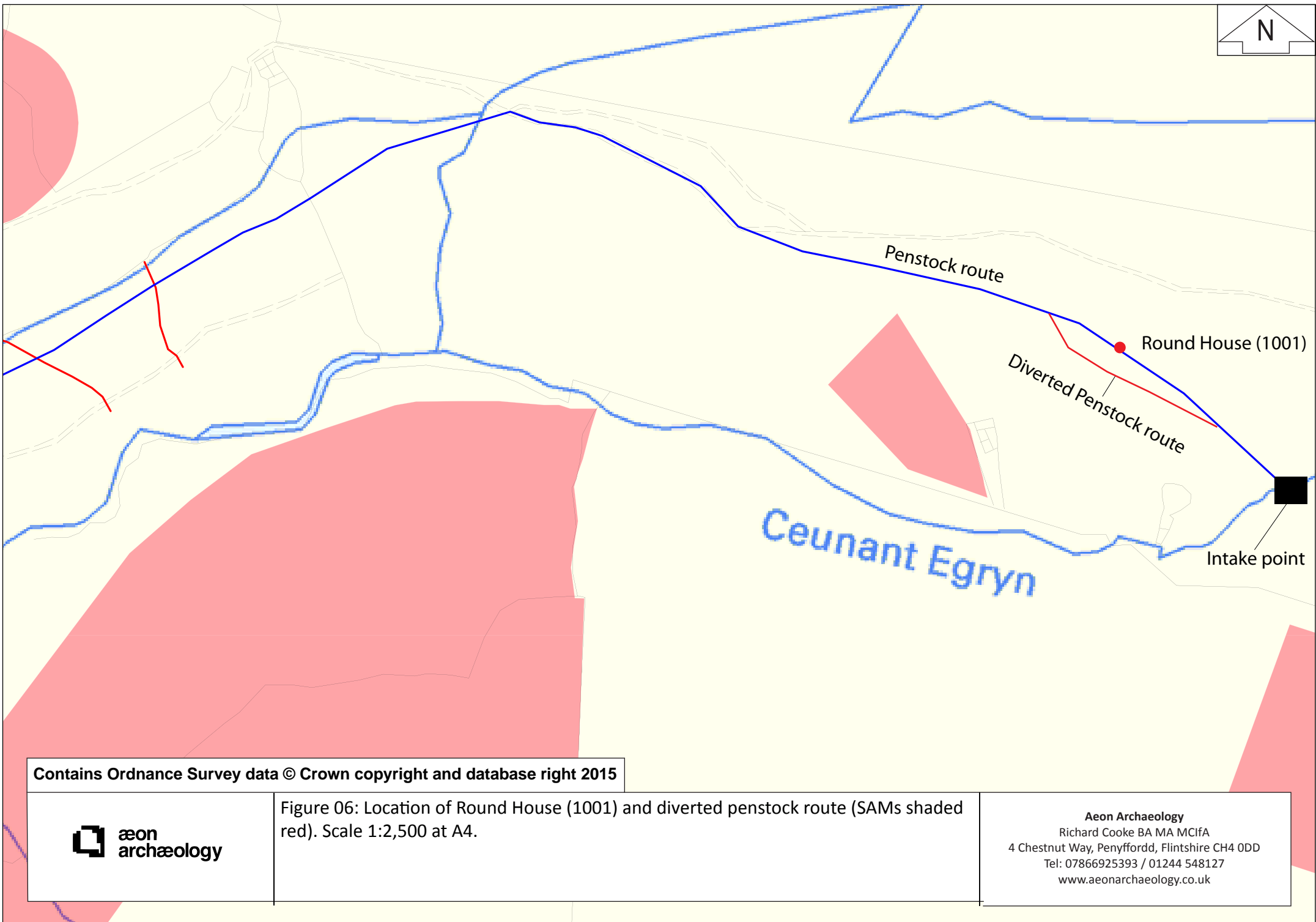
Plate 27: Round House (1001), from the southeast. Scale 1.0m.

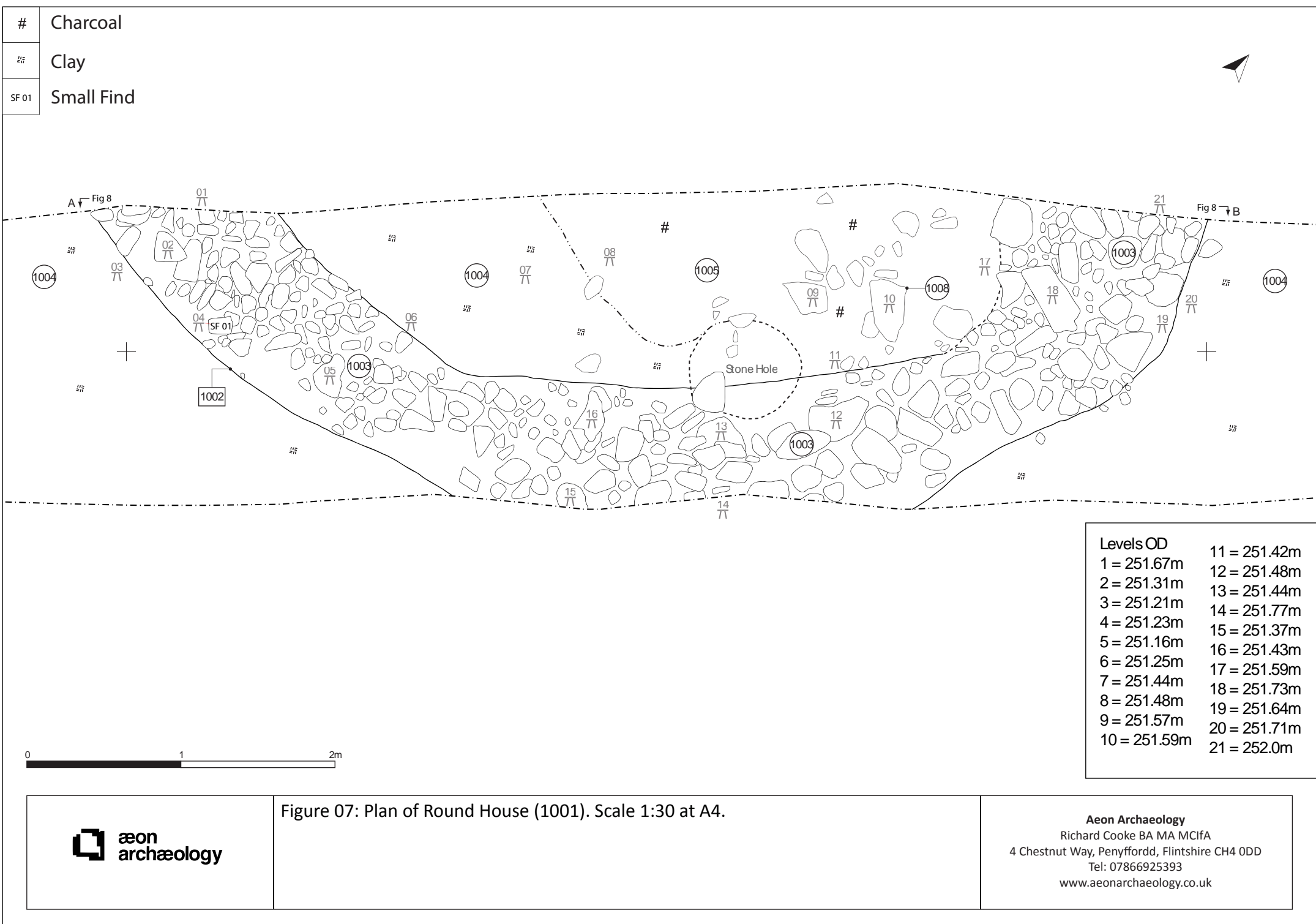


Plate 28: Round House (1001), from the north. Scale 1.0m.



Plate 29: Sondage across Round House (1001) showing wall (1003) and foundation cut [1002], from the southeast. Scale 0.5m.



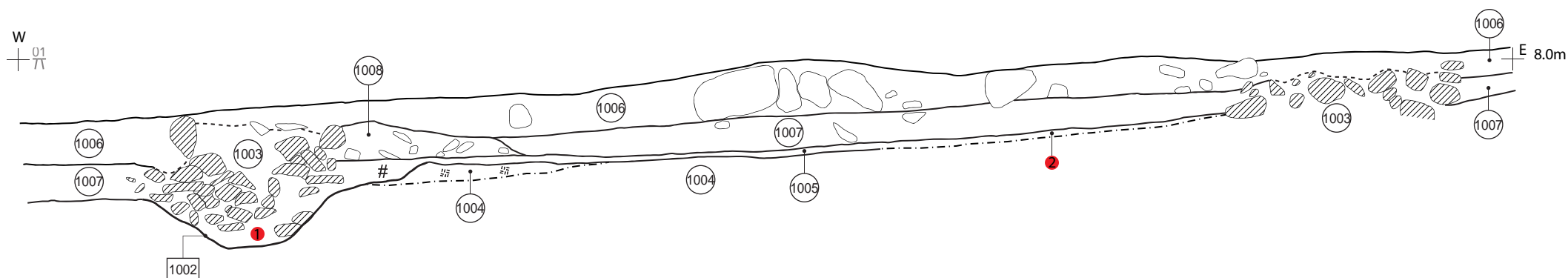


Levels OD
1 = 251.23m

Charcoal

Clay

Environmental Sample



Contexts

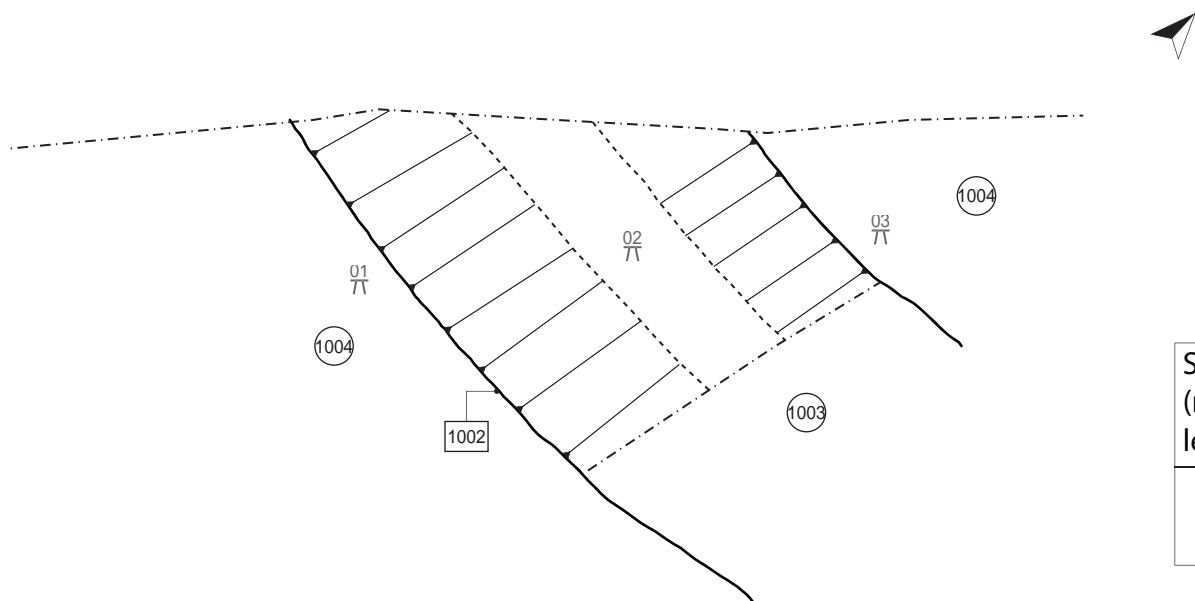
1002 = Cut of foundation trench
1003 = Stone wall of Round Hut
1004 = Natural clay
1005 = Relict subsoil/surface
1006 = Topsoil
1007 = Subsoil
1008 = Demolition material

Located on Figure 7



Figure 08: South facing section of Round House (1001). Scale 1:30 at A4.

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1:20 at A4



Scale 0.5m.



Figure 09 and Plate 30: Round House foundation trench [1002].

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9.0 CONCLUSION AND RECOMMENDATIONS

The archaeological watching brief during the excavation of the penstock and tailrace easements as part of the mitigatory response to the construction of a hydro-electric scheme at Hendre Eirian, did not reveal any archaeological sites or artefacts along its route with the exception of a probable prehistoric round house located 100.0m northwest of the intake weir.

This feature was exposed, cleaned and recorded in-situ, with the exception of a small hand-excavated sondage across the round house wall in order to ascertain information about its construction. The round house enclosed an internal area of at least 4.7m and measured at least 7.2m in external diameter, although the centre point of the structure had not been exposed and as such the overall dimensions would have been somewhat larger.

The round house wall was found to have been constructed from small sub-rounded cobbles laid within a foundation trench which almost certainly doubled up as an integrated drip gulley. Towards the north-western end the wall survived to a height of 0.82m, including its foundations, and utilised larger sub-rounded cobbles as part of the wall construction. A thin internal deposit that formed once the walls had been constructed is likely to be a relict floor surface that accumulated while the round house had been in use.

Bulk samples of silt concentrations within the round house wall as well as the relict floor deposit were taken but have not been processed. If additional analysis work of the round hut is required these two samples would be possible candidates for Carbon 14 dating.

A fragment of a probable hand-stone from a saddle quern and a concentration of opaque quartz were recovered from the hut wall and are likely to represent a ritualistic deposition during construction.

No other archaeological remains or artefacts were encountered along the rest of the penstock and tailrace routes.



Plate i: Fragment of saddle quern hand-stone. Scale 5.0cm.



Plate ii: Quarts fragments from round house wall (1003). Scale 5.0cm.

10.0 SOURCES

OS Maps

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

Sources

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APPENDIX I – GAZETTEER OF CONTEXTS

Context	Dimensions (m)	Description
1001	N.A.	Group number for Round House PRN: 60221.
1002	0.9m wide x 0.4m deep	Cut of foundation trench for round house wall (1003). Curvilinear, slightly concaved sides, flat base, partly truncated at west end. Filled by (1003).
1003	0.9m wide x 0.82m deep	Round house wall. Fairly soft dark red-brown silt-clay with lenses of silt, and 80% small and medium sized undressed sub-rounded cobbles averaging 0.25m. Concentrations of small unworked pieces of opaque quartz fragments – bulk sample 01 – fragment of hand-stone of saddle quern 01.
1004	.0.1m deep	Natural glacial substrata in proximity of round house (1001). Firm, mid orange slightly silty-clay with occasional small rounded pebbles.
1005	4.5m long x >1.2m wide x 0.04m deep	Relict floor surface in round house (1001). Reasonably soft, mid orange-brown silt-clay with occasional charcoal flecks and small sub-rounded pebbles – bulk sample 02.
1006	0.3m deep	Topsoil in proximity of round house (1001). Soft, dark grey-brown silt-clay with occasional medium sub-rounded cobbles.
1007	0.24m deep	Subsoil in proximity of round house (1001). Soft, mid/dark red-brown silt-clay with occasional small angular pebbles.
1008	1.1m wide x 0.24m deep	Demolition material from round house (1001). Reasonably soft, dark red-brown silt-clay with 50% medium sized sub-angular cobbles.

APPENDIX II – GAZETTEER OF ARTEFACTS

Find no.	Context	Form	Material	Dimensions	Description	Plate
01	1003	Hand-stone from saddle quern (prehistoric/Roman)	Stone	16.0cm long x 10.5cm wide x 3.0cm deep	Carved from a mid-grey hard grit-stone with quartz inclusions measuring 1-3mm, with a flat surface on one side and a curved edge on the opposing face forming a semi-circular profile. It appeared to have been broken at either end and on the right hand edge.	I

APPENDIX III – GAZETTEER OF ENVIRONMENTAL SAMPLES

Sample no.	Context	Quantity	Reason
01	1003	Half bag	Sample from round house wall (1003).
02	1005	Half bag	Sample from relict floor surface (1005) in round house (1001).

APPENDIX IV: SCHEDULED AND NON-SCHEDULED SITES WITHIN 1.0KM

Undesignated monuments within 1km of the proposed development area as listed on the Gwynedd HER (figure 1)

PRN	Name	Type	Broadclass	Period
841	Homestead, Possible, Eithinfynydd	Hut circle settlement	Domestic	Roman
842	?Cairn, E of Eithinfynydd	Cairn	Religious, Ritual and Funerary	Prehistoric
867	Clearance Cairns and Field Boundaries, Eithinfynydd	Clearance cairn	Agriculture and Subsistence	Roman
868	Clearance Cairns and Field Boundaries, Eithinfyndd	Clearance cairn	Agriculture and Subsistence	Roman
955	Platform House and Fields, Pen y Dinas	House platform	Agriculture and Subsistence	Medieval
956	Round Hut, Pen y Dinas	Hut circle	Domestic	Prehistoric
957	Round Hut, Pen y Dinas	Hut circle	Domestic	Prehistoric
1071	Defended Settlement, Eithinfynydd	Defended settlement	Defence	Roman
1078	Sub-Roman Homestead, Tyddyn y Felin	Hut circle settlement	Domestic	Roman
1079	Egryn 1: Circular Enclosure/Concentric Circle	Enclosed settlement	Domestic	Roman
1080	Circular Enclosure/Concentric Circle, Egryn (2)	Enclosed settlement	Domestic	Roman
1081	Carneddau Hengwm Long Cairn, Burial Chamber (S)	Chambered tomb	Religious, Ritual and Funerary	Neolithic
1082	Carneddau Hengwm Long Cairn, Burial Chamber (N)	Chambered tomb	Religious, Ritual and Funerary	Neolithic

1085	Alleged Long Barrow/Natural Mound, Eithinfynydd	Barrow	Religious, Ritual and Funerary	Unknown
1087	Stone Circle, Hengwm	Stone circle	Religious, Ritual and Funerary	Prehistoric
1088	Stone Circles, Hengwm	Stone circle	Religious, Ritual and Funerary	Prehistoric
1089	Llecheiddior Stone Circle and Cup Mark	Stone circle	Religious, Ritual and Funerary	Prehistoric
1097	Round Cairn, Pen y Dinas	Cairn	Religious, Ritual and Funerary	Bronze Age
1098	Clearance Cairn/Round Cairn, E of Eithinfynydd	Cairn	Unassigned	Prehistoric
1099	Round Cairn/Clearance Cairn, Pen y Dinas	Cairn	Unassigned	Unknown
1100	Round Cairn/Clearance Heaps, Pen y Dinas	Cairn	Unassigned	Unknown
1101	Round Cairn/Clearance Mound, Eithinfynydd	Cairn	Unassigned	Prehistoric
1102	Mound/Cairn, Above Egryn Abbey	Mound	Unassigned	Unknown
1103	Mound/Cairn, Above Egryn Abbey	Mound	Unassigned	Unknown
1104	Complex Ring Cairn, Hengwm	Cairn	Religious, Ritual and Funerary	Unknown
1106	Pen y Dinas Camp	Hillfort	Defence	Prehistoric
1110	Hut Group, Ceunant Egryn	Hut circle settlement	Domestic	Unknown
1111	Hut Group (Unenclosed), Mynydd Egryn	Hut circle settlement	Domestic	Unknown
1115	Circular Enclosure - Hendre Eirian	Enclosure	Agriculture and Subsistence	Early Medieval

1116	Ceunant Egryn Enclosed Settlement	Enclosed settlement	Domestic	Roman
1141	Medieval Farmstead, Above Egryn Abbey	Deserted rural settlement	Domestic	Medieval
1163	Hut Circle, E of Eithinfynydd	Hut circle	Domestic	Unknown
1165	Hut Circles, Hengwm	Hut circle settlement	Domestic	Prehistoric
1166	Cairn, Hengwm	Cairn	Religious, Ritual and Funerary	Unknown
1168	Hut Circle and Medieval Complex, Ffridd Llwyn Gurfal	Hut circle	Domestic	Medieval
1169	Hut Group, Above Egryn Abbey	Hut circle settlement	Domestic	Medieval
1193	Enclosed Homestead, Tal y Bont	Enclosed settlement	Domestic	Unknown
2916	Platform House Near Pen y Dinas	House platform	Religious, Ritual and Funerary	Medieval
2922	Field System, Above Egryn Abbey	Field system	Agriculture and Subsistence	Medieval
2924	Field System, Above Egryn Abbey	Field system	Agriculture and Subsistence	Medieval
2940	Decorated Lead Spindle Whorl, Findspot, Egryn	Findspot	Object	Medieval
3866	Trackway: Pont Fadog - Bwlch y Rhiwgyr	Trackway	Transport	Post-Medieval
3914	Bronze Horse-Tackle - Findspot, Nr. Carnedd Hengwm	Findspot	Object	Prehistoric
4284	Egryn - Prehistoric Hearth	Hearth	Unassigned	Prehistoric
4957	House, Egryn Abbey, Supposed Site of Hospital, Llanaber	Hospital	Civil	Medieval
4958	Romano-British Homestead	Enclosed settlement	Domestic	Roman

4961	Homestead	Farmstead	Domestic	Unknown
4964	Barn - Hendre Eirian	Barn	Agriculture and Subsistence	Medieval
5069	Settlement, Tyddyn y Felin	Deserted rural settlement	Domestic	Medieval
5630	Hut Circle, Tyddyn y Felin	Hut circle	Domestic	Prehistoric
5632	Pond, Egryn	Pond	Water Supply and Drainage	Unknown
5799	Hut Group and Paddock Remains, Egryn	Hut circle settlement	Domestic	Bronze Age
5800	Unenclosed Huts, Egryn	Hut circle settlement	Domestic	Bronze Age
5801	Possible Hut Circle, Egryn	Hut circle	Domestic	Bronze Age
5802	Platform House, Egryn	House platform	Domestic	Medieval
5803	Hut Remains, Egryn	Hut	Domestic	Medieval
5804	Hut Circle, Egryn	Hut circle	Domestic	Prehistoric
5805	Hut Circle Remains Egryn	Hut circle	Domestic	Prehistoric
5806	Enclosed Hut Group, Egryn	Hut circle settlement	Domestic	Prehistoric
5807	Platform House, Egryn	House platform	Domestic	Medieval
5808	Platform House, Egryn	House platform	Domestic	Medieval
5809	Platform House, Egryn	House platform	Domestic	Medieval

5810	Platform House, Egryn	House platform	Domestic	Medieval
5811	Rectangular Structure, Egryn	Structure	Unassigned	Post-Medieval
5812	Platform House, Egryn	House platform	Domestic	Post-Medieval
5813	Platform House, Egryn	House platform	Domestic	Post-Medieval
5814	Platform House, Egryn	House platform	Domestic	Medieval
5815	Platform House, Egryn	House platform	Domestic	Medieval
5816	Platform House, Egryn	House platform	Domestic	Medieval
5817	Platform House, Egryn	House platform	Domestic	Post-Medieval
5818	House and Enclosure, Egryn	House	Domestic	Post-Medieval
5819	Platform House, Egryn	House platform	Domestic	Post-Medieval
5820	Platform House, Egryn	House platform	Domestic	Post-Medieval
5821	Possible House, Egryn	Hut	Domestic	Post-Medieval
5822	Platform House, Egryn	House platform	Domestic	Post-

				Medieval
5823	Platform House, Egryn	House platform	Domestic	Post-Medieval
5824	Platform House, Egryn	House platform	Domestic	Post-Medieval
5825	Platform House, Egryn	House platform	Domestic	Medieval
5826	Platform House and Paddock, Egryn	House platform	Domestic	Post-Medieval
5827	Platform House, Egryn	House platform	Domestic	Post-Medieval
5828	Two Platform Houses, Egryn	House platform	Domestic	Post-Medieval
5829	Enclosed Homestead, Egryn	Enclosed settlement	Domestic	Medieval
5830	Platform House, Egryn	House platform	Domestic	Post-Medieval
5831	Platform House, Egryn	House platform	Domestic	Post-Medieval
5832	Two Platform Houses, Egryn	House platform	Domestic	Post-Medieval
5833	Platform House, Egryn	House platform	Domestic	Post-Medieval

5845	Platform, Egryn	Platform	Domestic	Post-Medieval
5852	Possible Homestead, Hendre-fechan	Enclosure	Domestic	Unknown
5855	Field System Remains, Egryn	Field system	Agriculture and Subsistence	Unknown
5856	Enclosed Homestead, Hendre-fechan	Enclosure	Domestic	Prehistoric
5857	Rectangular Feature, Eithin-fynydd	Feature	Unassigned	Unknown
5858	Possible Moated Farmstead, Bryn-y-bwyd	Farmstead	Domestic	Unknown
5859	Rectangular Feature, Hengwm	Enclosure	Unassigned	Unknown
5860	Sub-Circular Feature, Egryn Abbey	Enclosure	Unassigned	Unknown
5861	Field System and Possible Settlement, Egryn	Deserted rural settlement	Agriculture and Subsistence	Medieval
5862	Circular Enclosure, Hendre-eirian	Enclosure	Unassigned	Prehistoric
5863	Circular Enclosure, Hendre-eirian	Enclosure	Unassigned	Prehistoric
5864	Possible Homestead, Cae-mur-poeth	Enclosure	Domestic	Unknown
5926	Sheepfold	Sheep fold	Agriculture and Subsistence	Post-Medieval
6188	Possible Hut, Hengwm	Hut	Domestic	Unknown
6312	Lynchets/Cultivation Ridges, Is Mynydd	Lynchet	Agriculture and Subsistence	Unknown
6670	Walls and Circular Features, Eithinfynydd	Field system	Unassigned	Unknown

6672	Ruined House, Eithin Fynydd	House	Domestic	Post-Medieval
6673	Sheepfold, Eithin Fynydd	Sheep fold	Agriculture and Subsistence	Post-Medieval
6674	Sub-Circular Feature, Eithin Fynydd	Feature	Unassigned	Unknown
6676	Ruined House and Enclosure, Eithin Fynydd	House	Domestic	Post-Medieval
6677	Lynchets, Eithinfynydd	Lynchet	Agriculture and Subsistence	Unknown
6678	Enclosure, Eithin Fynydd	Enclosure	Agriculture and Subsistence	Unknown
6679	Circular Enclosure, Eithin Fynydd	Enclosure	Agriculture and Subsistence	Unknown
6680	Lynchets, Eithin Fynydd	Lynchet	Agriculture and Subsistence	Unknown
6681	Rectangular Enclosure, Eithin Fynydd	Enclosure	Agriculture and Subsistence	Unknown
6682	Possible Enclosure, Eithin Fynydd	Enclosure	Agriculture and Subsistence	Unknown
6683	Possible Hut Circle, Eithin Fynydd	Hut circle	Domestic	Prehistoric
6684	Rectangular Building, Eithin Fynydd	Building	Domestic	Post-Medieval
9832	Llanaber Medieval Township	Township	CIVIL	Medieval
11512	Enclosure, Bwlch Y Rhiwgyr	Enclosure	Monument <by form>	Prehistoric
12355	Egryn Abbey; Plas yn Egrin / Abbey Farm	Building	Domestic	Post-Medieval

15648	DRS, Cae-mur-poeth	Deserted rural settlement	Domestic	Medieval
15649	DRS, Cae-mur-poeth	Deserted rural settlement	Domestic	Medieval
15650	DRS, Near Pen y Dinas	Deserted rural settlement	Domestic	Medieval
15651	DRS, Near Pen y Dinas	Deserted rural settlement	Domestic	Medieval
15652	DRS, Near Pen y Dinas	Deserted rural settlement	Domestic	Medieval
15653	DRS, Near Pen y Dinas	Deserted rural settlement	Domestic	Medieval
15654	DRS, Near Pen y Dinas	Deserted rural settlement	Domestic	Medieval
15655	DRS, Tyddyn y Felin	Deserted rural settlement	Domestic	Medieval
15668	Platform House, Pen y Dinas	Deserted rural settlement	Domestic	Medieval
15669	Platform House, Pen y Dinas	Deserted rural settlement	Domestic	Medieval
16975	Is-y-graig Medieval Township	Township	CIVIL	Medieval
18234	Fieldscape, Lower Hill Slopes - Landscape	Landscape	Unassigned	Multi-Period
18240	Fieldscape, Mid-hill Slopes Around Cae'r-llwyn - Landscape	Landscape	Unassigned	Multi-Period
18330	Homestead and Associated Features, SW of Hendre Waelod	Homestead	Agriculture and Subsistence	Post-Medieval
19164	Sub-Circular Enclosure/Settlement Platform, SW Of Hendre Waelod	Platform	Domestic	Iron Age

20364	Slate Quarry, Egryn	Slate quarry	Industrial	Post-Medieval
20365	Slate Quarry, Hendre Eirian	Slate quarry	Industrial	Post-Medieval
21819	Hafod Uchaf Mine	Gold mine	Industrial	Post-Medieval
33923	Cairns, Eithinfynydd	Cairn	Religious, Ritual and Funerary	Prehistoric
33924	Cairn, Eithinfynydd	Cairn	Religious, Ritual and Funerary	Prehistoric
33925	Rectangular Feature, Eithinfynydd	Structure	Domestic	Medieval
33926	Wall, Possible, Eithinfynydd	Bank (earthwork)	Agriculture and Subsistence	Medieval
33927	Wall, Possible, Eithinfynydd	Wall	Unassigned	Unknown
33928	Building, Possible, Eithinfynydd	Structure	Unassigned	Unknown
33929	Field Wall, Eithinfynydd	Wall	Agriculture and Subsistence	Post-Medieval
33930	Field Wall, Eithinfynydd	Wall	Agriculture and Subsistence	Post-Medieval
33931	Field Wall, Eithinfynydd	Wall	Agriculture and Subsistence	Unknown
33932	Enclosure and Platform, Possible, Eithinfynydd	Enclosure	Domestic	Medieval
33933	Field Barn, Possible, Eithinfynydd	Field barn	Agriculture and Subsistence	Post-Medieval

33934	Enclosure, Possible, Eithinfynydd	Enclosure	Unassigned	Unknown
33935	Cairn, Possible, Eithinfynydd	Cairn	Religious, Ritual and Funerary	Bronze Age
33936	Trackway, Eithinfynydd	Trackway	Transport	Post-Medieval

Scheduled Ancient Monuments within 1km of the proposed development area (figure 1)

SAM no.	Name	Type	General	Broadclass
ME007	Carneddau Hengwm Long Cairns	Chambered long cairn	Prehistoric	Religious, Ritual and Funerary
ME076	Pen y Ddinas Camp	Hillfort	Prehistoric	Defence
ME099	Ceunant Egryn Enclosed Settlement	Enclosed hut circle	Prehistoric	Domestic
ME122	Settlement & Fields Systems above Egryn Abbey	House platform	Medieval	Domestic
ME129	Llecheiddior Stone Circle	Stone circle	Prehistoric	Religious, Ritual and Funerary
ME136	Hengwm Stone Circles	Stone circle	Prehistoric	Religious, Ritual and Funerary
ME153	Enclosed Hut Circle Settlement and Long huts E of Egryn Abbey	Enclosed hut circle settlement	Prehistoric	Domestic
ME154	Ceunant Egryn Hut Group	Enclosed hut circle	Prehistoric	Domestic
ME156	Mynydd Egryn Ring Cairn	Ring cairn	Prehistoric	Religious, Ritual and Funerary
ME157	Mynydd Egryn Settlement	Enclosed hut circle	Prehistoric	Domestic
ME159	Enclosed Hut Circle North of Tyddyn Mawr	Enclosed hut circle	Prehistoric	Domestic

ME202	Eithin-Fynydd Platform House Settlement	Deserted Rural Settlement	Medieval	Domestic
ME236	Pen y Dinas Cairn	Round cairn	Prehistoric	Religious, Ritual and Funerary

Listed Buildings within 1km of the proposed development area (figure 2).

Number	Name	Locality	Grade
4717	Egryn Abbey	Llanaber	II*
84332	'Old House' to south of Egryn Abbey	Dyffryn Ardudwy	II
84339	Barn to NW of Old House		II
84345	Field cow-house at Egryn		II
84347	Former Mill and Store	Llanaber	II
84354	Milepost	Llanaber	II
84361	Root clamp at Egryn	Llanaber	II
84363	Shelter Shed	Llanaber	II
84364	Stable, cartshed and attached cowhouse at Egryn	Llanaber	II

NMR Monument Points within 1km of the proposed development area

NPRN	Name	Broadclass	Type	Period
8426	Egryn calvinistic methodist sunday school (capel egryn), egryn	Religious, ritual and funerary	Chapel	Post medieval
15484	Cae-mur-poeth, n.e. Of	Agriculture and subsistence	Farmstead	Medieval?
15490	Eithin-fynydd	Civil	Settlement	Medieval?
24339	Field system s of egryn quarry	Agriculture and subsistence	Field system	Medieval
24512	Egryn quarry, e.of, ?Homestead	Domestic	Homestead	Unknown
28234	Cae hir	Domestic	House	Post medieval?
28371	Egryn hall;egryn abbey;plas yn egrin;abbey farm, llanaber	Domestic	Farmhouse	Medieval;post medieval
28490	Hendre eirion	Domestic	House	Post medieval?
28493	Hendre fechan	Domestic	Dwelling	Post medieval?
33973	Egryn manganese mine	Industrial	Manganese mine	Unknown
41692	Hendre einion - barn	Agriculture and subsistence	Barn	Post medieval?
55990	Pen-y-dinas; castell dinas cortin or gortyn	Defence	Hillfort	Iron age
55995	Mynydd egryn hut circle settlement	Agriculture and subsistence	Unenclosed hut circle settlement	Prehistoric

56000	Ceunant egryn enclosed settlement - 'esgryn fort'	Domestic	Enclosed settlement	Iron age
56006	Hengwm	Domestic	Hut circle	Prehistoric
56009	Ceunant egryn	Unassigned	Enclosure complex	Medieval
56010	Pen-y-dinas south east	Agriculture and subsistence	Enclosure complex	Medieval;post medieval
56139	Settlement to the east of egryn abbey	Agriculture and subsistence	Settlement;field system	Medieval
60445	Pen-y-dinas	Domestic	Hut circle	Prehistoric
60924	Is mynydd	Agriculture and subsistence	Field system	Prehistoric;unknown
89079	Eithin fynydd	Agriculture and subsistence	Enclosure	Prehistoric?;unknown?
89082	Eithin fynydd e	Agriculture and subsistence	Enclosure?	Prehistoric?;unknown?
89083	Eithin fynydd e	Domestic	Long hut?	Medieval;post medieval
89084	Eithin fynydd e	Agriculture and subsistence	Field system	Prehistoric
89085	Eithin fynydd e	Agriculture and subsistence	Enclosure	Medieval;post medieval
89086	Eithin fynydd e	Agriculture and subsistence	Hut circle;homestead	Prehistoric
89087	Eithin fynydd e	Agriculture and subsistence	Settlement	Medieval;post medieval
89088	Enclosure west of hengwm stone circles, mynydd egryn	Religious, ritual and funerary	Enclosure	Prehistoric
89089	Sheepfolds, hengwm, mynydd egryn	Agriculture and subsistence	Sheep fold	Medieval;post medieval
89090	Clearance cairns, hengwm, mynydd egryn	Agriculture and subsistence	Clearance cairn	Medieval;post

				medieval;unknown
89091	Enclosure, hengwm, mynydd egryn	Unassigned	Enclosure;natural feature	Unknown
89092	Pen-y-dinas n	Domestic	Hut circle settlement	Prehistoric
89093	Pen-y-dinas n	Agriculture and subsistence	Long hut;enclosure	Medieval;post medieval
89094	Pen-y-dinas n	Agriculture and subsistence	Terraced ground	Prehistoric;unknown
89095	Pen-y-dinas, buildings and enclosures	Agriculture and subsistence	Long hut	Medieval;post medieval
89096	Pen-y-dinas	Agriculture and subsistence	Hut;field	Medieval;post medieval
89097	Pen-y-dinas w	Agriculture and subsistence	Enclosure?;natural feature?	Unknown
89098	Ceunant egryn	Industrial	Spoil tip	Post medieval
89099	Ceunant egryn	Agriculture and subsistence	Enclosure;hut circle settlement	Prehistoric?;medieval?
89100	Ceunant egryn	Domestic	Hut	Medieval;post medieval
89101	Mynydd egryn	Agriculture and subsistence	Settlement	Medieval;post medieval
89102	Mynydd egryn	Agriculture and subsistence	Hut circle;enclosure	Medieval;post medieval
89103	Mynydd egryn	Agriculture and subsistence	Long hut	Medieval;post medieval
89104	Mynydd egryn	Domestic	Unenclosed hut circle settlement	Prehistoric
89105	Mynydd egryn	Agriculture and subsistence	Enclosure	Prehistoric?;unknown?

89106	Mynydd egryn	Agriculture and subsistence	Longhouse;field system	Medieval;post medieval
89107	Mynydd egryn	Agriculture and subsistence	Hut circle settlement	Prehistoric?;unknown?
89108	Mynydd egryn	Agriculture and subsistence	Terraced ground	Medieval;post medieval
89109	Mynydd egryn	Agriculture and subsistence	Settlement	Medieval;post medieval
89110	Mynydd egryn	Agriculture and subsistence	Sheep fold?	Medieval;post medieval
89111	Mynydd egryn	Agriculture and subsistence	Enclosure	Medieval;post medieval
89112	Mynydd egryn	Domestic	Enclosure?	Medieval?;post medieval?;unknown?
89113	Mynydd egryn	Religious, ritual and funerary	Enclosure	Prehistoric?;unknown?
89114	Hengwm	Agriculture and subsistence	Enclosure	Prehistoric
89115	Egryn manganese mine and linear mining features	Industrial	Mining feature	Post medieval
89116	Hengwm	Industrial	Level	Post medieval
89136	Bwlch-y-rhiwgyr	Religious, ritual and funerary	Enclosure	Prehistoric
89145	Eithin fynydd	Agriculture and subsistence	Cultivation marks	Prehistoric?;unknown?
89150	Eithin fynydd e	Domestic	Enclosure?	Unknown
89151	Eithin fynydd e	Agriculture and subsistence	Hut circle settlement	Prehistoric
89153	Trawsdir e	Agriculture and subsistence	Hut	Prehistoric?;unknown?

89154	Trawsdir e	Agriculture and subsistence	Sheep fold	Medieval;post medieval
89155	Trawsdir se	Agriculture and subsistence	Settlement?	Prehistoric
89156	Is mynydd w	Domestic	Homestead;enclosure	Prehistoric
89157	Is mynydd w	Agriculture and subsistence	Platform?	Prehistoric
89158	Is mynydd w	Agriculture and subsistence	Settlement	Medieval;post medieval
89159	Is mynydd w	Agriculture and subsistence	Hut circle settlement	Prehistoric?;unknown?
89160	Is mynydd w	Agriculture and subsistence	Hut circle settlement	Prehistoric
89161	Is mynydd w	Domestic	Long hut?	Medieval;post medieval
89236	Is mynydd n	Agriculture and subsistence	Sheep fold	Post medieval
89268	Pen-y-dinas e	Agriculture and subsistence	Farmstead	Medieval;post medieval
89269	Mynydd egryn w	Agriculture and subsistence	Enclosure	Medieval;post medieval
89270	Mynydd egryn w	Agriculture and subsistence	Sheep fold	Post medieval
89273	Hafotty mines n0rth west	Unassigned	Building	Post medieval
89283	Eithin fynydd e	Domestic	Settlement	Post medieval
89290	Ceunant egryn sheep fold	Agriculture and subsistence	Sheep fold	Post medieval
89295	Mynydd egryn n	Agriculture and subsistence	Enclosure	Prehistoric
89298	Ceunant egryn	Domestic	Hut circle	Prehistoric

89388	Ceunant egryn enclosure complex	Agriculture and subsistence	Enclosure complex	Medieval;post medieval
89705	Hendre fechan	Domestic	Homestead?;enclosure?	Iron age?;unknown?
89706	Hendre eirian e	Agriculture and subsistence	Terraced ground	Unknown
89707	Cae gwyn	Domestic	Homestead	Medieval;post medieval
89708	Cae gwyn	Agriculture and subsistence	Field system	Unknown
89709	Egryn abbey east	Agriculture and subsistence	Settlement;farmstead	Medieval;post medieval
89710	Egryn abbey e	Agriculture and subsistence	Enclosure	Unknown
89711	Cae mur poeth	Domestic	Homestead?;enclosure?	Unknown
265197	Hengwn, garden, talybont	Gardens, parks and urban spaces	Garden	Post medieval
302717	Homestead, sebonig	Domestic	Homestead	Roman
302719	Mynydd egryn, homestead	Domestic	Homestead	Early medieval
302720	Homestead, mynydd egryn	Domestic	Homestead	Roman
302721	Tyddyn- y- felin, homestead	Domestic	Homestead	Roman
302750	Hendre eirian, circular enclosure	Domestic	Homestead	Iron age;roman
302785	Hengwm cairn circle	Religious, ritual and funerary	Cairn	Bronze age
302786	Carneddau hengwm, south cairn	Religious, ritual and funerary	Chambered tomb	Unknown;neolithic

302789	Llecheiddion stone circle	Religious, ritual and funerary	Stone circle	Bronze age
302790	Hengwm stone circles	Religious, ritual and funerary	Stone circle	Bronze age
302875	Round cairn, w. Of eithen-fynydd	Religious, ritual and funerary	Cairn	Bronze age
308408	Egryn abbey potato clamp	Agriculture and subsistence	Potato clamp	Post medieval
401800	Carneddau hengwm, north cairn	Religious, ritual and funerary	Chambered tomb	Unknown;neolithic
404113	Eithin fynydd platform house settlement	Domestic	House platform	Post medieval;medieval
407801	Egryn, dower house	Domestic	House	Medieval
407802	Egryn, prehistoric enclosure	Agriculture and subsistence	Enclosed settlement	Iron age;roman
411807	Stone clearance west of trawsdir	Agriculture and subsistence	Field	Modern
413031	Egryn abbey, field barn	Agriculture and subsistence	Field barn	18th century
413033	Egryn abbey, hengwm, round hut	Domestic	Hut circle	Iron age

Historic Landscape Character areas (HLCAs) within 1km of the proposed pipeline route (figure 3)

HLCA	HLCA name	Landscape
1	Fieldscape, Lower Hill Slopes	GW2
2	Is Mynydd & Mynydd Egryn	GW2
3	Southern Coastal Strip	GW2
6	Upper Slopes Around Llyn Erddyn	GW2
7	Fieldscape, Mid-Hill Slopes Around Cae'r-Llwyn	GW2

