



**Hendre-Eirian Hydro Electric Scheme,
Tal-y-Bont, Barmouth, Gwynedd.
April 2014**

aeon archaeology



Archaeological Assessment
Project Code: A0029.1
Report no. 0029



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Hendre-Eirian Hydro Electric Scheme, Tal-y-Bont, Barmouth, Gwynedd. April 2014

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Archaeological Assessment
Aeon Archaeology
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Project Code: A0029.1

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1.0 Non Technical Summary

1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commissioned by Greenearth Hydro Ltd to undertake an archaeological assessment of a proposed new hydro-electric scheme in advance of planning application. The proposed scheme intake is to be 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.

The archaeological assessment identified twenty-nine archaeological sites within the 40.0m wide assessment corridor centred on the pipe route. These included seven previously unknown round/rectangular huts, as well as six relict field walls all of probable prehistoric date. Despite a plethora of nationally important archaeological sites within reasonably close proximity to the proposed scheme, it should be entirely possible to limit direct physical impact to locally important field walls and trackways. The exception to this is a relict field wall of probable prehistoric date which will require breaching and as such recommendations have been made for a limited trial trench to be placed across this feature prior to the commencement of works. In addition, a watching brief has been recommended during groundworks in vicinity of fourteen features to ensure that if any associated buried remains are uncovered they are suitably mitigated for and recorded.

The report also ascertained that there are five Scheduled Ancient Monuments within 100.0m of the proposed penstock route and as such there will be an adverse visual impact upon all of the SAMs during the construction phase. These impacts will be entirely limited to this part of the work and it is not envisaged that there will be any further visual impact upon completion of the proposed scheme. However, it is recommended that Cadw are contacted and informed of the proposed works in case Scheduled Monument Consent is required for any of the monuments.



2.0 Introduction, Aims and Project Design

2.0 INTRODUCTION, AIMS AND PROJECT DESIGN

Aeon Archaeology was commissioned by Greenearth Hydro Ltd to undertake an archaeological assessment of a proposed new hydro-electric scheme in advance of planning application. The proposed scheme intake is to be 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 (figure 1).

The proposed scheme will consist of an intake weir located at **NGR SH 61298 20680** and a 1.45km long buried penstock (pipe) running west to a new turbine house located at **NGR SH 59973 20792**. The hydro scheme will then empty back into the Ceunant Egryn at **NGR SH 60116 20487** via a 0.34km buried outfall pipe running southeast from the turbine. In addition a new power cable will run northwest from the turbine house for approximately 0.15km to an existing transformer located at **NGR SH 59831 20832**.

The current proposals are to install a concrete weir faced with stone at the intake point and to feed the water via a 280mm diameter black HDPE plastic pipe buried within a trench measuring approximately 0.8m in depth by 0.4m in width. The footprint of the new turbine house will measure approximately 3.5m by 3.5m and will have external stone cladding and a slate roof. The estimated system output is 66kW generating an annual energy production of 140MWh, the equivalent of the requirement of 38 average UK homes.

A mitigation brief has not been prepared for this scheme by the Snowdonia National Park Authority (SNPA) archaeologist, but verbal recommendation has been given by the SNPA archaeologist and Cadw to the client to commission an archaeological assessment (Client email correspondence dated 22/11/2013).

This archaeological assessment is for the proposed development area, which includes the water intake point, the pipeline, the turbine house, the water outflow, the new power supply, and a 40.0m wide assessment corridor centred on the proposed pipeline route.

As part of the archaeological assessment a 1.0km search area centred on the proposed route was utilised for a search of the Gwynedd Historic Environment Record (HER). This provided a background historical narrative of the area and included source material from the Gwynedd Archives and Record Office, as well as the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW), and the National Library of Wales. Information on Scheduled Ancient Monuments and Listed Buildings was obtained from Cadw.

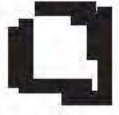
The following report conforms to the guidelines specified in *Standard and Guidance for Archaeological Desk-based Assessment* (Institute of Field Archaeologists, 1994, rev. 2007).

The archaeological assessment considered the following:

- (i) The history of the site;
- (ii) The significance of any remains in their context both regionally and nationally;
- (iii) The potential impact of the proposed development on known sites of archaeological importance including their setting.

The archaeological assessment was undertaken in four stages:

- (i) Archival research
- (ii) Field visit/site walkover of all accessible areas
- (iii) Written report
- (iv) Project archive



3.0 Methods and Techniques

3.0 METHODS AND TECHNIQUES

3.1 Archival research

The archaeological assessment involved the study of the following records:

- The regional Historic Environment Record (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, LL57 2RT) was examined for information concerning the study area. This included an examination of the core HER, and secondary information held within the record which included unpublished reports, the 1:2500 County Series Ordnance Survey maps, and the National Archaeological Record index cards and aerial photography.
- The National Monuments Record (NMR RCAHMW, National Monuments Record of Wales, Plas Crug, Aberystwyth, SY23 1NJ) was checked for sites additional to the HER.
- Information about Listed Buildings and Scheduled Ancient Monuments from Cadw were examined in the regional HER. The Register of Outstanding and Special Historic Landscapes and the Register of Parks and Gardens was checked, and also the location of World Heritage Sites.
- Secondary sources were examined, including the Inventories of the Royal Commission on Ancient and Historical Monuments for Wales, and works held within the regional libraries.
- Evidence from aerial photographs was collated. Vertical and oblique collections held by the NMR, CCW and Welsh Government were examined.
- Archive maps were consulted in the National Library of Wales at Aberystwyth, and at the Gwynedd archives. This included the relevant estate maps and tithe maps and information from Land Tax Assessments.
- Results from previous archaeological work within the area was also reviewed.

3.2 Site walkover

The site walkover was carried out on 4th December 2013 by Richard Cooke BA MA MIFA, archaeological contractor and consultant at Aeon Archaeology. The weather conditions were ideal for the field search being both bright and clear. All archaeological sites and view points were photographed using a digital SLR (Canon 550D) set to maximum resolution (72 dpi). Where the report assesses the potential visual impact of the proposed scheme upon the historic environment, a digital SLR set to 35mm focal length was utilised to emulate visual distances.

3.3 Assessment report

All features identified from the archival research and site walkover were assessed and allocated to categories of international, national, regional/county, local and none/unknown importance as listed in section 6.0. These are intended to place the archaeological feature within a geographical context of importance and thus help inform the most suitable level of mitigatory response. The criteria used for allocating features to categories of importance are based on existing statutory designations and, for non-designated assets, the Secretary of

State's non-statutory criteria for Scheduling Ancient Monuments; these are set out in National Planning Policy Framework (NPPF) and Welsh Office Circular 60/96.

3.4 Project archive

A full archive including plans, photographs and written material was prepared. All plans, photographs and written descriptions were labelled and cross-referenced using Aeon Archaeology pro-formas. A draft copy of the report was sent to the client and upon written approval from them copies of the report will be sent to the regional HER (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, LL57 2RT), the Snowdonia National Park Authority (SNPA), and the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW). All notes, plans, and photographs arising from the assessment are stored at Aeon Archaeology under the project code **A0029**.



4.0 Archaeological and Topographical Background

4.0 ARCHAEOLOGICAL AND TOPOGRAPHICAL BACKGROUND

4.1 Topographic Description

The proposed hydro-electric scheme intake is 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. A 1.45km long buried penstock (pipe) will then run roughly west to a new turbine house located at NGR SH 59973 20792. The hydro scheme will then empty back into the Ceunant Egryn at NGR SH 60116 20487 via a 0.34km buried outfall pipe running southeast from the turbine. In addition a new power cable will run northwest from the turbine house for approximately 0.15km to an existing transformer located at NGR SH 59831 20832.

The site lies within the parish of Llanaber, within the historic county of Meirionnydd and unitary authority of Gwynedd. It lies adjacent to the National Trust land and property of Egryn Abbey. Mostly given over to rough pasture, the farmland is dominated by acid grassland within which there are cushions of gorse. On the lower slopes there is improved and semi-improved grassland and some mature trees in vicinity of the house and farm buildings. The site is mostly enclosed by dry-stone walls although wooden post and wire fence has also been utilised in places. The land is primarily given over to hill sheep farming, although some cattle farming also takes place, generally on the lower slopes

The assessment area slopes gradually at first from approximately 253m OD at the proposed hydro intake but becomes steeper on the lower slopes, with the proposed turbine house lying at approximately 96m OD.

The bedrock geology is of the Llanbedr Formation, a sedimentary inter-bedded siltstone and mudstone bedrock that formed approximately 508 to 528 million years ago in the Cambrian Period when the local environment was dominated by deep seas. The superficial deposits are of Devensian – Diamicton till, that formed up to 2 million years ago in the Quaternary Period when the local environment was dominated by Ice Age conditions (British Geological Survey).

4.2 Statutory and non-statutory designations

4.2.1 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 (see appendix I) 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);

4.2.2 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 (see appendix I) 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).

4.2.3 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 (see appendix I) but none lie within the 40.0m assessment zone centred on the pipe or within 100.0m.

4.2.4 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 (see appendix I) 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).

4.2.5 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).

4.2.6 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.

4.2.7 Events

The proposed development area was included within a survey of hut groups by the Gwynedd Archaeological Trust (GAT) in 1994 (GAT report 105) and the western end of the scheme was included within a desk-based assessment by GAT of a water mains renewal scheme from Ceilwart to Barmouth (GAT report 181) in 1995. The latter of these reports identified a number of features within the area including a possible medieval homestead, a field system and possible medieval settlement at Cae-Gwyn, and several prehistoric circular enclosures.

In 1997 the area to the north of the proposed development site, around Eithin Fynydd, was included within a pilot assessment of sites commissioned by the former Countryside Council for Wales (GAT report 250). This identified a range of archaeological features dating from the early prehistoric to the post-medieval periods, and demonstrated a considerable continuity of use within the localised landscape.

The location of the proposed pipeline route is also included with the Historic Landscape Characterisation of Ardudwy (GAT report 473) carried out in 2003 and The Muckle Partnership carried out an extensive archaeological survey of Egryn Abbey, located to the southwest of the proposed pipeline, also in 2003.

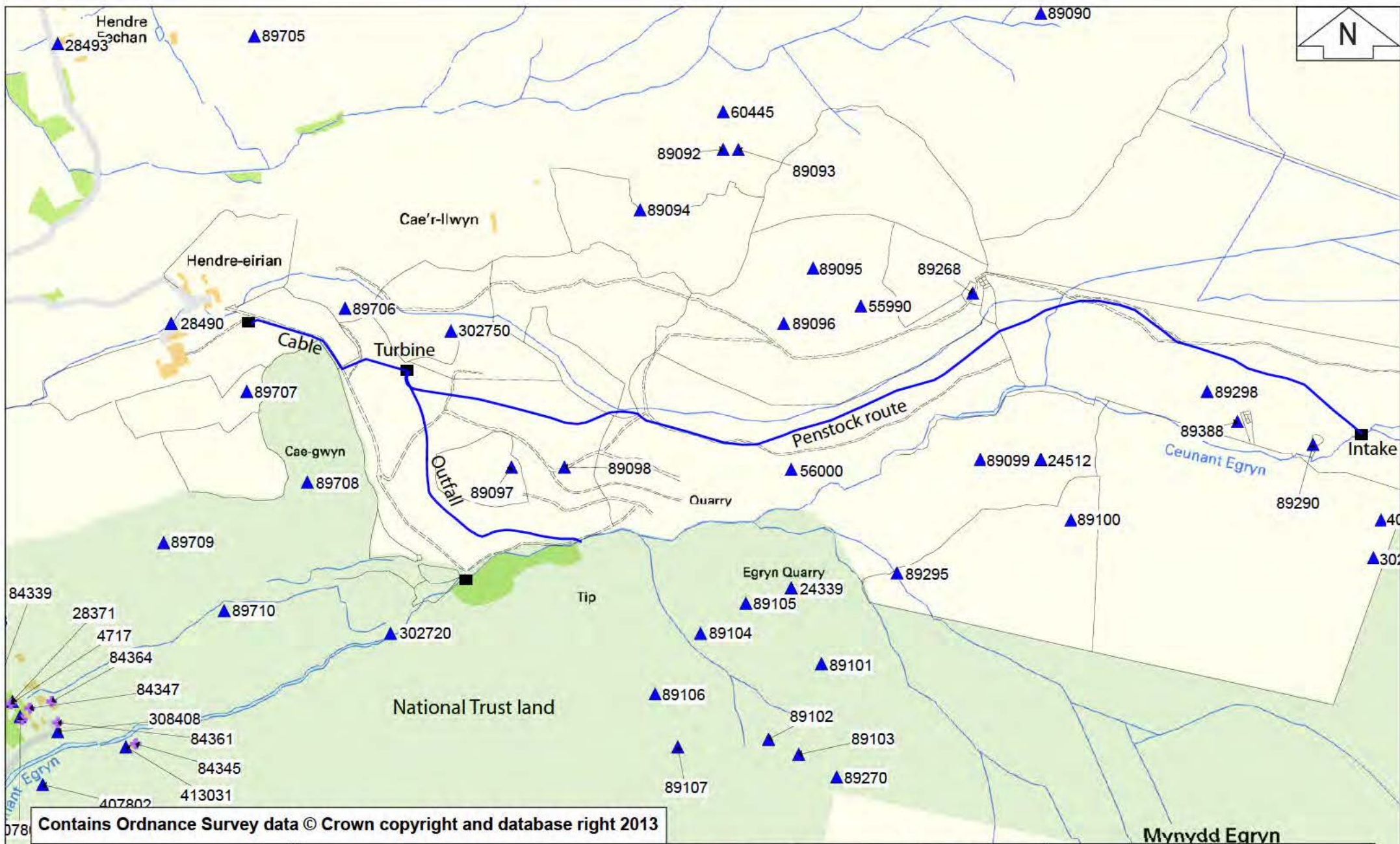
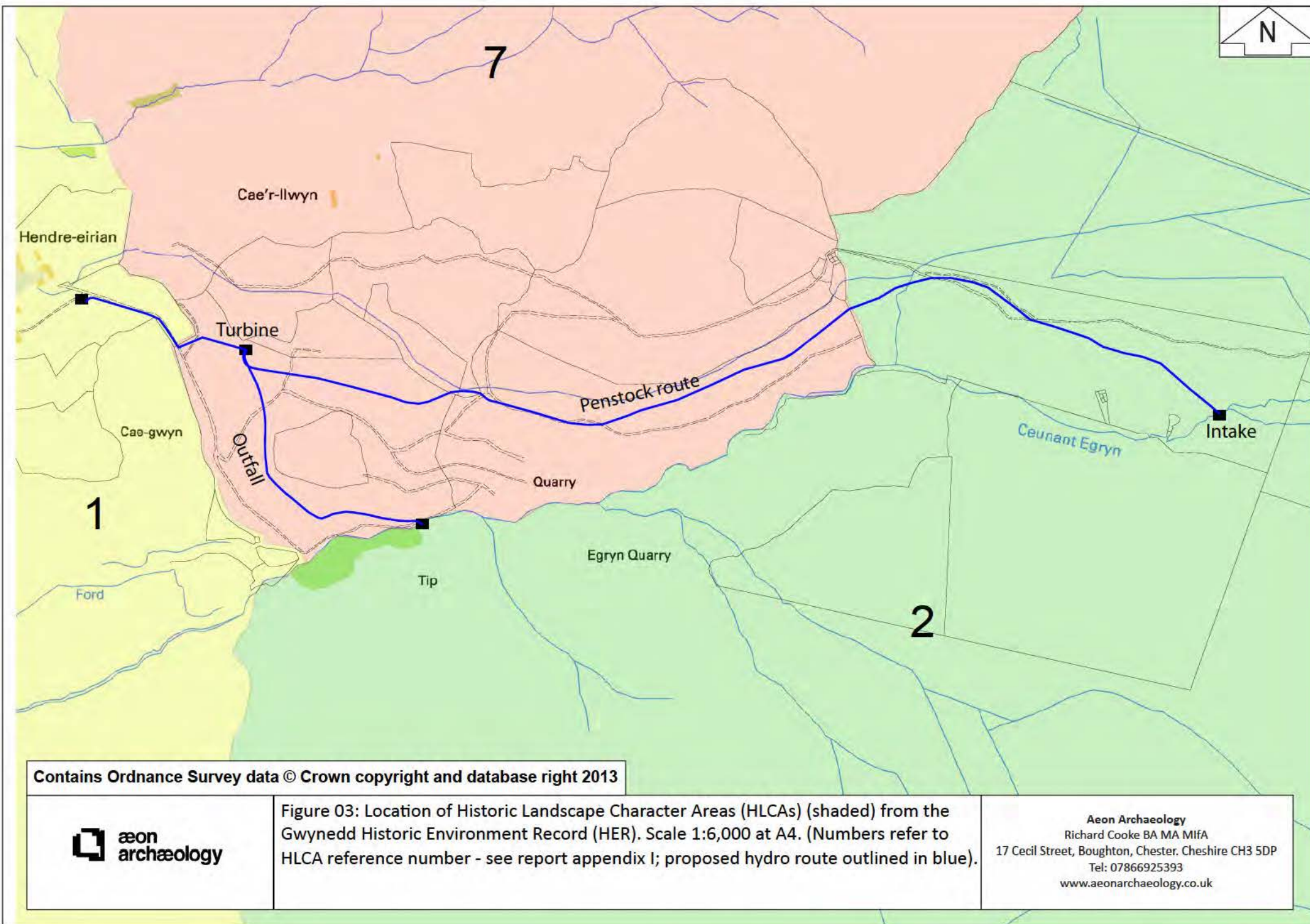


Figure 02: Location of Listed Buildings (purple crosses) and Monument Points from the National Monuments Record (NMR) (blue triangles). Scale 1:6,500 at A4. (Numbers refer to NMR National Primary Reference Number, and Listed Building number - see report appendix I; proposed hydro route outlined in blue).





5.0 The Historical Context

5.0 THE HISTORICAL CONTEXT

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, Listed Building reference and/or their National Primary Reference Number (NPRN) 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 Arddudwy 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 Arddudwy 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.

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 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 (figure 4), 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 (feature 22; see section 7.0) leading southeast from Hendre-Eirian.

Table 2. 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 2) 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).

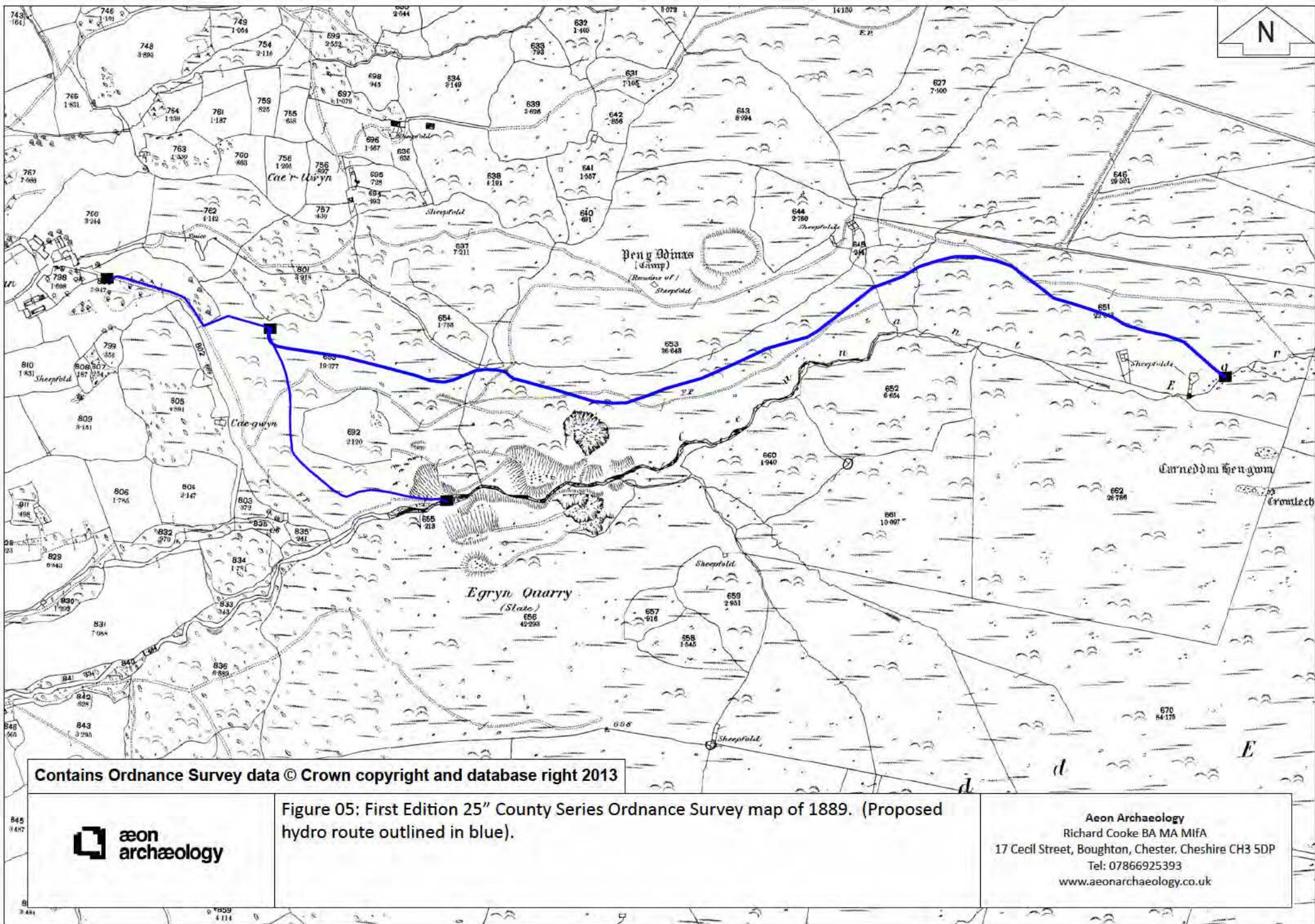
The tithe apportionment details that the land tenant at the time of the survey was Evan Williams, and it is clear that at some time between at least 1831 and 1841 the tenancy had passed from the Evans to the Williams family. No further information concerning the Williams family could be found within 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 (figure 5). 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.

5.3 Aerial Photographs

As part of the archaeological 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 and 1971, as well as modern aerial photographs. All of the photographs showed the Scheduled Ancient Monuments in close proximity to the site in detail, although no additional sites were observed.







6.0 Assessment of Historical Assets

6.0 ASSESSMENT OF HISTORICAL ASSETS

6.1 Definitions

Definitions of importance, impact, and significance of effect as used in the gazetteer (section 6.2) are listed below. Definitions of assessment and mitigation techniques as used in the gazetteer are listed in appendix II.

1. Definition of Categories of importance

The following categories were used to define the importance of the archaeological resource.

| Significance | Description |
|---------------------------------|---|
| International (Very High) | Archaeological sites or monuments of international importance, including World Heritage Sites. Structures and buildings inscribed as of universal importance as World Heritage Sites. Other buildings or structures of recognised international importance. |
| National (High) | Ancient monuments scheduled under the Ancient Monuments and Archaeological Areas Act 1979, or archaeological sites and remains of comparable quality, assessed with reference to the Secretary of State's non-statutory criteria. Listed Buildings. Undesignated structures of national importance. |
| Regional/ County (Medium) | Conservation Areas Archaeological sites and remains which, while not of national importance, score well against most of the Secretary of State's criteria. |
| Local (Low) | Archaeological sites that score less well against the Secretary of State's criteria. Historic buildings on a 'local list'. |
| Negligible/None | Areas in which investigative techniques have produced no or only minimal evidence for archaeological remains, or where previous large-scale disturbance or removal of deposits can be demonstrated. |
| Unknown | Archaeological sites whose importance cannot be determined with the information currently at hand. This can include sites where the extent of buried remains is unknown. |

2. Definition of Impact

The direct impact of the proposed development on each site was estimated. The impact is defined as follows:

| Magnitude | Direct Impacts | Indirect Impacts |
|------------------------|--|--|
| High Adverse | Complete removal of an archaeological site. Complete destruction of a designated building or structure. | Radical transformation of the setting of an archaeological monument. A fundamental change in the setting of a building. |
| Medium Adverse | Removal of a major part of an archaeological site and loss of research potential. Extensive alteration (but not demolition) of a historic building or feature, resulting in an appreciable adverse change. | Partial transformation of the setting of an archaeological site (e.g. the introduction of significant noise or vibration levels to an archaeological monument leading to changes to amenity use, accessibility or appreciation of an archaeological site). Partial adverse transformation of the setting of a designated building. |
| Low Adverse | Removal of an archaeological site where a minor part of its total area is removed but the site retains a significant future research potential. Change to a historic building or feature resulting in a small change in the resource and its historical context and setting. | Minor change to the setting of an archaeological monument or historic building. |
| Negligible/ Neutral | No impact from changes in use, amenity or access. No change in the ability to understand and appreciate the resource and its historical context and setting. | No perceptible change in the setting of a building or feature. |
| Low Beneficial | Land use change resulting in improved conditions for the protection of archaeological remains or understanding/ appreciation of a historic building or place | Decrease in visual or noise intrusion on the setting of a building, archaeological site or monument. Improvement of the wider landscape setting of a building, archaeological site or monument. |
| Medium Beneficial | Land use change resulting in improved conditions for the protection of archaeological remains, or understanding/ appreciation of a historic building or place, including through interpretation measures (heritage trails, etc). Removal of harmful alterations to better reveal the significance of a building or structure, with no loss of significant fabric. | Significant reduction or removal of visual or noise intrusion on the setting of a building, archaeological site or monument; and Improvement of the wider landscape setting of a building, archaeological site or monument Improvement of the cultural heritage amenity, access or use of a building, archaeological site or monument. |
| High Beneficial | Arrest of physical damage or decay to a building or structure; | Exceptional enhancement of a building or archaeological site, its cultural heritage amenity and access or use |

3. The significance of effect

The significance of effect is derived from the importance of the resource and the magnitude of the impact upon it.

Very large - A serious impact on a site of international or national importance with little or no scope for mitigation. These effects represent key factors in the decision making process.

Large - Lesser impacts on sites of national importance and serious impacts on sites of regional importance, with some scope for mitigation. These factors should be seen as being very important considerations in the decision making process.

Moderate - Moderate or minor impacts on sites of regional importance and minor to major impacts on sites of local or minor importance. A range of mitigatory measures should be available.

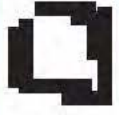
Slight - Negligible impacts on sites of regional, local or minor importance and minor and moderate impacts on minor or damaged sites. A range of basic mitigatory measures should be available.

Neutral - No perceptible effect or change to sites of all categories.

The significance of effect will be determined using the table below, a basic matrix combining archaeological value and magnitude of impact.

Determination of Significance of Effect

| | | | | | |
|-----------------------------|----------------------|----------------------------|--------------------|---------------------|---------------------|
| Archaeological Value | International | Neutral | Moderate or Large | Large or Very Large | Very Large |
| | National | Neutral | Moderate or Slight | Moderate or Large | Large or Very Large |
| | Regional | Neutral | Slight | Moderate | Moderate or Large |
| | Local | Neutral | Neutral or Slight | Slight | Moderate or Slight |
| | Negligible | Neutral | Neutral or Slight | Neutral or Slight | Slight |
| | | None | Low | Medium | High |
| | | Magnitude of impact | | | |



7.0 Site Gazetteer - Physical Impacts

7.0 SITE GAZETTEER – PHYSICAL IMPACTS

The field walkover discovered 29 sites of archaeological and historic interest within the 40.0m wide assessment corridor, as listed below.

In accordance with Paragraph 128 of the National Planning Policy Framework and Welsh Office Circular 60/96 each heritage asset has been assigned a level of importance ranked from International through to National, Regional/County, Local, and None. If it is not possible to assess the importance of the site from the visible remains, then it is ranked Unknown with the suspected importance level placed in brackets if possible. Identified sites were also assigned a level of impact ranked from High through to Medium, and Low. Levels of impact can be considered as both adverse or beneficial, and can be direct (physically impacting upon a site) or indirect (indirectly physically impacting upon a site). The significance of effect is determined from the importance level of the resource and the magnitude of the impact upon it. Where it is expected that a site will be impacted upon by the proposed works then mitigation/assessment recommendations are provided. All archaeological/historical sites identified are depicted on figure 6 and the location/orientation of photographs are shown on figures 7a, 7b and 7c.

| | |
|--|----------------------------|
| 1. Round Hut | PRN: 1110 |
| Figure: 1, 6 and 7a | Plate: 1 |
| NGR: SH 61224 20725 | Period: Prehistoric |
| <p>Description</p> <p>A mound in the grass measuring 4.0m in diameter with a rough collection of stones, some on edge around the perimeter, is located at this point. The hut remains measure approximately 0.3m in height and accounts for one of the two huts observed during a field visit by a RCAHMW inspector, the other round hut being feature 4. This round hut may well form a group with two further possible round/ rectangular huts (features 2 and 3) to the immediate south, and is most probably of prehistoric date. The group may also be contemporary with the hut group SAM (ME154) located approximately 87.0m to the west.</p> <p>This hut circle lies approximately 8.0m south of the proposed hydro pipe route and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut group it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> | |
| Category of importance: National | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the hut circle | |



Plate 01: Round hut feature 1, from the northeast. Scale 1.0m.

| | |
|--|--------------------------------------|
| 2. Possible Round/Rectangular Hut | PRN: 55807 |
| Figure: 6 and 7a | Plate: 2 |
| NGR: SH 61225 20715 | Period: Unknown (Prehistoric) |
| <p>Description</p> <p>A possible round or rectangular hut is located at this point. It measures approximately 3.0m in width and 5.0m in length, orientated from east to west. The perimeter of the structure is outlined in stones, some set on edge, measuring approximately 0.4m in height. This structure may well form a group with another possible round/ rectangular hut to the immediate southwest (feature 3), as well as with the two round huts (features 1 and 4). The group may also be contemporary with the hut group SAM (ME154) located approximately 87.0m to the west. The structure is quite possibly part of a prehistoric hut group, although its rectangular shape suggests that it could also be Romano-British or medieval in date.</p> <p>This structure lies approximately 11.0m south of the proposed hydro pipe route and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut group it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> | |
| Category of importance: Unknown (National) | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the hut circle | |



Plate 02: Round/rectilinear hut feature 2, from the west. Scale 1.0m.

| | |
|--|--------------------------------------|
| 3. Possible Round/Rectangular Hut | PRN: 55808 |
| Figure: 6 and 7a | Plate: 3 |
| NGR: SH 61219 20701 | Period: Unknown (Prehistoric) |
| <p>Description</p> <p>A round or rectangular hut is located at this point. It measures approximately 3.0m in width and 5.0m in length, orientated from east to west. The perimeter of the structure is outlined in stones, some set on edge, measuring approximately 0.4m in height. A wall measuring 1.5m in width and approximately 9.0m in length runs from the northern part of this structure, possibly forming part of a paddock enclosure. This structure may well form a group with another possible round/ rectangular hut to the immediate northeast (feature 2), as well as with the two round huts (features 1 and 4). The group may also be contemporary with the hut group SAM (ME154) located approximately 87.0m to the west. The structure is quite possibly part of a prehistoric hut group, although its rectilinear shape suggests that it could also be Romano-British or medieval in date.</p> <p>This structure lies approximately 16.0m south of the proposed hydro pipe route and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut group it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> | |
| Category of importance: Unknown (National) | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the hut circle | |



Plate 03: Round/rectilinear hut feature 3, from the east. Scale 1.0m.

| | |
|--|----------------------------|
| 4. Round Hut | PRN: 1110 |
| Figure: 1, 6 and 7a | Plate: 4 |
| NGR: SH 61204 20738 | Period: Prehistoric |
| <p>Description</p> <p>A mound in the grass measuring 4.0m in diameter with a rough collection of stones, some on edge around the perimeter, is located at this point. The hut remains measure approximately 0.25m in height and most likely accounts for one of the two huts observed during a field visit by a RCAHMSW inspector, the other round hut being feature 1. This round hut may well form a group with two further possible round/ rectangular huts (features 2 and 3) to the immediate southeast, and is most probably of prehistoric date. The group may also be contemporary with the hut group SAM (ME154) located approximately 87.0m to the west.</p> <p>This hut circle lies approximately 3.0m south of the proposed hydro pipe route and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut group it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> | |
| Category of importance: National | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the hut circle | |



Plate 04: Round hut feature 4, from the southeast. Scale 1.0m.

| | |
|---|----------------------------|
| 5. Ceumant Egryn Hut Group Scheduled Ancient Monument (ME154) | PRN: 1168 |
| Figure: 1, 6 and 7a | Plate: n.a. |
| NGR: SH 61110 20753 | Period: Prehistoric |
| <p>Description</p> <p>The prehistoric enclosed settlement and Scheduled Ancient Monument of <i>Ceumant Egryn Hut Group</i> (ME154) lies approximately 20.0m 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) (features 1 and 4) approximately 87.0m to the southeast which may well have been contemporary with the SAM hut group.</p> <p>This hut group SAM lies approximately 20.0m south of the proposed hydro pipe route and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut group it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> <p>The potential indirect non-physical (visual) impact of the proposed scheme upon this monument is assessed in section 8.0.</p> | |
| Category of importance: National | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| <p>Recommendations for further mitigatory measures: 1. Maintain watching brief in vicinity of the hut circle SAM.</p> <p>2. Inform Cadw of proposals – Scheduled Monument Consent may be required</p> | |

| | |
|---|--------------------------------------|
| 6. Trackway | PRN: 55809 |
| Figure: 6 and 7a | Plate: n.a. |
| NGR: SH 60415 20863 – SH 61419 20761 | Period: Unknown (prehistoric) |
| <p>Description</p> <p>A rough trackway measuring approximately 2.5m in width runs from east to west along the top of the field. There has clearly been stone clearance and vehicle rutting of this trackway in recent years, but the origins of this trackway may be far older. It runs in close proximity to the <i>Ceunant Egryn Hut Group</i> SAM (ME154); the medieval <i>deserted rural settlement</i> (PRN: 15652), and <i>Pen y Dinas hillfort</i> SAM (ME076) and as such could be of prehistoric or medieval date.</p> <p>The trackway has no obvious structure and exists more as a linear strip of field clearance and compaction. The proposed hydro pipeline will be trenched through approximately 130.0m length of the trackway, and although the potential for the presence of a buried structure is minimal there is the possibility of associated buried archaeology. As such it is recommended that a watching brief be maintained during initial ground disturbance works in this area, with a view to reduce this if the soil horizons prove unsuitable to the preservation of remains.</p> | |
| Category of importance: Unknown (Regional/county) | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Unknown (slight adverse) | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief initially | |

| | |
|--|------------------------------|
| 7. Field wall | PRN: 55810 |
| Figure: 4, 5, 6 and 7a | Plate: 5 |
| NGR: SH 60819 20829 – SH 60859 20746 | Period: Post-Medieval |
| <p>Description</p> <p>A dry-stone field wall measuring 1.5m in height and 0.8m in width runs from north to south and divides two enclosed grazing fields. The wall is constructed from medium and large sized sub-rounded and sub-angular cobbles and had been rebuilt in recent years. The boundary is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic boundary.</p> <p>The proposed hydro pipeline will utilise the existing gap in the wall and as such there will be no impact upon the feature.</p> | |
| Category of importance: Local | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: None | |



Plate 05: Field wall feature 7, from the west. Scale 1.0m.

| | |
|---|----------------------------|
| 8. Relict field wall | PRN: 55811 |
| Figure: 6 and 7a | Plate: 6 |
| NGR: SH 60763 20739 – SH 60745 20788 | Period: Prehistoric |
| <p>Description</p> <p>A dry-stone relict field wall measuring approximately 1.5m in width and 0.5m in height runs north to south for approximately 51.0m at this point. The wall is constructed from dry-stone medium and large sized sub-rounded cobbles and had become ruinous along its length. The wall is clearly of antiquity and its close proximity to the <i>Ceumant Egryn Enclosed Settlement</i> SAM (ME099) in the southwest and <i>Pen y Dinas hillfort</i> SAM (ME076) in the north increases the potential of this being part of a prehistoric relict field system associated with one or both of these nationally important monuments. As such the relict field wall can be seen to be of regional/county – national importance.</p> <p>The proposed scheme will require the relict field wall to be breached so that the penstock can be buried within a trench. It does not appear to be possible to avoid this monument and as such it is recommended that a small trench be excavated across the wall at the point of breach and in advance of the proposed works. Any revealed deposits should be recorded at an appropriate level and the revealed wall section should be drawn and photographed. Upon completion of the proposed scheme the wall should be reinstated to its appearance prior to the works. In addition the size of all vehicles including mechanical excavators should be limited so that compression damage to the wall does not occur.</p> | |
| Category of importance: Regional/county - National | |
| Level of impact: Low - medium adverse direct physical | |
| Significance of effect: Moderate adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Trial trench and reconstruction | |



Plate 06: Relict field wall feature 8, from the east. Scale 1.0m.

| | |
|---|----------------------------|
| 9. Relict field wall | PRN: 55812 |
| Figure: 6 and 7a | Plate: 7 |
| NGR: SH 60726 20718 – SH 60599 20765 | Period: Prehistoric |
| <p>Description</p> <p>A dry-stone relict field wall measuring approximately 1.5m in width and 0.6m in height runs northwest to southeast for approximately 138.0m at this point. The wall is constructed from dry-stone medium and large sized sub-rounded cobbles and had become ruinous along its length, although is better preserved than relict wall feature 8. The wall is clearly of antiquity and its close proximity to the <i>Ceunant Egryn Enclosed Settlement</i> SAM (ME099) in the southwest and <i>Pen y Dinas hillfort</i> SAM (ME076) in the north increases the potential of this being part of a prehistoric relict field system associated with one or both of these nationally important monuments. As such the relict field wall can be seen to be of regional/county – national importance.</p> <p>The proposed scheme will require the relict field wall to be breached so that the penstock can be buried within a trench. However an existing opening in the wall, almost certainly not original, should be wide enough to be utilised for the pipe trench. There is the potential for associated buried remains in vicinity of the relict field wall and as such it is recommended that a watching brief be maintained during groundworks so that any such remains can be recorded.</p> | |
| Category of importance: Regional/county - National | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief | |



Plate 07: Relict field wall feature 9, from the east. Scale 1.0m.

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| 10. Trackway | PRN: 55813 |
| Figure: 6 and 7b | Plate: 8 |
| NGR: SH 60839 20784 – SH 60358 20710 | Period: Unknown (prehistoric) |
| <p>Description</p> <p>A rough trackway measuring approximately 1.5m in width runs from east to west through the field. There has clearly been stone clearance and vehicle rutting of this trackway in recent years, but the origins of this trackway may be far older. It runs in close proximity to the north of the <i>Ceunant Egryn Enclosed Settlement</i> SAM (ME099) before swinging round to the northeast and leading to <i>Pen y Dinas hillfort</i> SAM (ME076). The close proximity of these two prehistoric monuments strongly suggests that this trackway is also prehistoric in date.</p> <p>The trackway has no obvious structure although stone clearance has clearly taken place and there this appears to form a kerbing on the downward slope. The proposed hydro pipeline will be trenched through approximately 135.0m length of the trackway, and although the potential for the presence of a buried structure is minimal there is the possibility of associated buried archaeology. As such it is recommended that a watching brief be maintained during initial ground disturbance works in this area, with a view to reduce this if the soil horizons prove unsuitable to the preservation of remains.</p> | |
| Category of importance: Unknown (Regional/county) | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Unknown (slight adverse) | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief initially | |



Plate 08: Trackway feature 10, from the east. Scale 1.0m.

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| 11. Relict field wall | PRN: 55814 |
| Figure: 6 and 7b | Plate: 9 |
| NGR: SH 60383 20675 – SH 60436 20654 | Period: Prehistoric |
| <p>Description</p> <p>A dry-stone relict field wall measuring approximately 1.5m in width and 0.6m in height runs northwest to southeast for approximately 57.0m at this point. The wall is constructed from dry-stone medium and large sized sub-rounded cobbles and has become ruinous along its length. The wall is clearly of antiquity and its close proximity to the <i>Ceumant Egryn Enclosed Settlement</i> SAM (ME099) in the east and <i>Pen y Dinas hillfort</i> SAM (ME076) in the northeast increases the potential of this being part of a prehistoric relict field system associated with one or both of these nationally important monuments. As such the relict field wall can be seen to be of regional/county – national importance.</p> <p>The proposed hydro pipeline will not impact physically upon this feature and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Regional/county - national | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: None | |



Plate 09: Relict field wall feature 11, from the west. Scale 1.0m.

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| 12. Relict field wall | PRN: 55815 |
| Figure: 6 and 7b | Plate: 10 |
| NGR: SH 60387 20695 – SH 60389 20718 | Period: Prehistoric |
| <p>Description</p> <p>A dry-stone relict field wall measuring approximately 1.0m in width and 0.4m in height runs north to south for approximately 24.0m at this point. The wall is constructed from dry-stone medium and large sized sub-rounded cobbles and has become ruinous along its length. The wall is clearly of antiquity and its close proximity to the <i>Ceumant Egryn Enclosed Settlement</i> SAM (ME099) in the east and <i>Pen y Dinas hillfort</i> SAM (ME076) in the northeast increases the potential of this being part of a prehistoric relict field system associated with one or both of these nationally important monuments. As such the relict field wall can be seen to be of regional/county – national importance.</p> <p>The proposed hydro pipeline will not impact physically upon this feature and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Regional/county - national | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: None | |



Plate 10: Relict field wall feature 12, from the south. Scale 1.0m.

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| 13. Field wall | PRN: 55816 |
| Figure: 4, 5, 6 and 7b | Plate: 11 |
| NGR: SH 60347 20709 – SH 60368 20790 | Period: Post-Medieval |
| <p>Description</p> <p>A dry-stone field wall measuring 1.3m in height and 0.5m in width runs from north to south before turning and heading west, dividing two enclosed grazing fields. The wall is constructed from medium and large sized sub-angular cobbles and had been rebuilt in recent years. The boundary is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic boundary.</p> <p>The proposed hydro pipeline will breach this field wall and as such it is proposed that a basic record be taken of the wall boundary prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording level and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report | |



Plate 11: Field wall feature 13, from the south. Scale 1.0m.

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|---|------------------------------|
| 14. Field wall | PRN: 55817 |
| Figure: 4, 5, 6 and 7b | Plate: 12 |
| NGR: SH 60318 20707 – SH 60329 20749 | Period: Post-Medieval |
| <p>Description A dry-stone field wall measuring 0.5m in height and 1.0m in width runs from south to north before turning and heading northwest, dividing two enclosed grazing fields. The wall is constructed from medium and large sized sub-rounded cobbles and has fallen into ruin. The boundary is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic boundary. The ruinous nature of the wall suggests that it could have earlier origins and a prehistoric date should not be discounted.</p> <p>The proposed hydro pipeline will breach this field wall and as such it is proposed that a basic record be taken of the wall boundary prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording. As there is some doubt over the exact age of this boundary wall it is recommended that a watching brief be maintained while the wall is being breached in order to record any archaeological features that may be disturbed or revealed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report – and a watching brief to be maintained during the wall breach | |



Plate 12: Field wall feature 14, from the northwest. Scale 1.0m.

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| 15. Field wall | PRN: 55818 |
| Figure: 4, 5, 6 and 7b | Plate: 13 |
| NGR: SH 60318 20706 – SH 60247 20752 | Period: Post-Medieval |
| <p>Description</p> <p>A dry-stone field wall measuring 1.0m in height and 1.0m in width runs from southeast to northwest and divides two enclosed grazing fields. The wall is constructed from medium and large sized sub-rounded and sub-angular cobbles. The boundary is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic boundary.</p> <p>The proposed hydro pipeline will utilise the existing gap in the wall and as such there will be no impact upon the feature.</p> | |
| Category of importance: Local | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: None | |



Plate 13: Field wall feature 15, from the southwest. Scale 1.0m.

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|---|------------------------------|
| 16. Field wall | PRN: 55819 |
| Figure: 4, 5, 6 and 7b | Plate: 14 |
| NGR: SH 60280 20724 – SH 60270 20654 | Period: Post-Medieval |
| <p>Description</p> <p>A dry-stone field wall measuring 0.7m in height and 1.0m in width runs from north to south dividing two enclosed grazing fields. The wall is constructed from medium and large sized sub-angular and sub-rounded cobbles. The boundary is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic boundary.</p> <p>The proposed hydro pipeline will breach this field wall and as such it is proposed that a basic record be taken of the wall boundary prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording level and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report | |



Plate 14: Field wall feature 16, from the east. Scale 1.0m.

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| 17. Possible Round/ Rectangular Hut | PRN: 55820 |
| Figure: 6 and 7c | Plate: 15 |
| NGR: SH 60083 20750 | Period: Unknown (Prehistoric) |
| <p>Description</p> <p>A possible round or rectangular hut with an internal diameter of between 3.5-4.0m is located at this point. The possible hut wall remains measure approximately 0.35m in height and constitutes one of three possible huts at this location (see features 18 and 24). The walls are of dry-stone construction of medium and large sub-angular and rounded cobbles. The feature appears to be a round or possibly rectangular hut although field clearance has clearly taken part in parts of this field and it is possible that this feature is the result of this.</p> <p>The possible hut circle lies approximately 6.0m north of the proposed hydro pipe route and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> | |
| Category of importance: Unknown (National) | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the possible hut circle | |



Plate 15: Possible round/rectangular hut feature 17, from the west. Scale 1.0m.

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|---|--------------------------------------|
| 18. Possible Round/ Rectangular Hut | PRN: 55821 |
| Figure: 6 and 7c | Plate: 16 |
| NGR: SH 60072 20753 | Period: Unknown (Prehistoric) |
| <p>Description</p> <p>A possible round or rectangular hut with an internal diameter of between 4.0-5.0m is located at this point. The possible hut wall remains measure approximately 0.35m in height and constitutes one of three possible huts at this location (see features 17 and 24). The walls are of dry-stone construction of medium, large and very large sub-angular and rounded cobbles. The feature appears to be a round or possibly rectangular hut although field clearance has clearly taken part in parts of this field and it is possible that this feature is the result of this.</p> <p>The possible hut circle lies approximately 6.0m north of the proposed hydro pipe route and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> | |
| Category of importance: Unknown (National) | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the possible hut circle | |



Plate 16: Possible round/rectangular hut feature 18, from the west. Scale 1.0m.

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| 19. Relict field wall/ lynchet | PRN: 55822 |
| Figure: 6 and 7c | Plate: 17 |
| NGR: SH 60035 20736 – SH 60038 20770 | Period: Prehistoric |
| <p>Description A dry-stone relict field wall/ lynchet measuring approximately 1.3m in width and 0.3m in height runs northwest to southeast before turning and heading south for approximately 38.0m at this point. The wall is constructed from dry-stone medium and large sized sub-rounded cobbles and has become ruinous along its length. The wall may well be contemporary with the two possible round/ rectangular huts (features 17 and 18) located approximately 27.0m to the east, as well as two prehistoric circular enclosures (PRN: 5862 and 5863) located 13.0m to the west. It is probable that this lynchet formed part of a prehistoric settlement at this location.</p> <p>The proposed hydro pipeline will not impact physically upon this feature however the lynchet runs within 4.0m of the proposed route and as such it is recommended that a watching brief be maintained in this area during groundworks in case of associated buried remains.</p> | |
| Category of importance: Regional/county - national | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the lynchet | |



Plate 17: Relict field wall/ lynchet feature 19, from the north. Scale 1.0m.

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| 20. Trackway | PRN: 55823 |
| Figure: 6 and 7c | Plate: 18 |
| NGR: SH 59964 20758 – SH 59954 20827 | Period: Post-Medieval |
| <p>Description A trackway measuring approximately 1.5m in width runs from southwest to northeast before turning and heading northwest through the field. The trackway is not shown on the tithe or Ordnance Survey map but is most likely to date to the construction of Hendre-Eirian in the 18th Century.</p> <p>The trackway has a clear kerbing structure of large sub-angular stones on the downward side, and has clearly been terraced into the natural slope. The proposed hydro pipeline will be trenched across the track and as such it is recommended that a basic record be taken of the feature prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording level and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report | |



Plate 18: Trackway feature 20, from the south. Scale 1.0m.

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| 21. Field wall | PRN: 55824 |
| Figure: 4, 5, 6 and 7c | Plate: 19 |
| NGR: SH 59978 20784 – SH 59950 20831 | Period: Post-Medieval |
| <p>Description</p> <p>A dry-stone field wall measuring 1.3m in height and 0.5m in width runs from southeast to northwest dividing two enclosed grazing fields. The wall is constructed from medium and large sized sub-rounded cobbles. The boundary is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic boundary.</p> <p>The proposed hydro pipeline will breach this field wall and as such it is proposed that a basic record be taken of the wall boundary prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording level and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report | |



Plate 19: Field wall feature 21, from the east. Scale 1.0m.

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| 22. Trackway | PRN: 55825 |
| Figure: 4, 5, 6 and 7c | Plate: 20 |
| NGR: SH 59804 20849 – SH 60007 20630 | Period: Post-Medieval |
| <p>Description A rough trackway measuring approximately 2.0m in width runs from northwest to southeast connecting the property of Hendre-Eirian with the fields to the south and the east. The trackway is first depicted on the tithe map for the parish of Llanaber 1841 (figure 4), and it is probable that the trackway is contemporary with the construction of the property in the 18th century.</p> <p>The trackway has no obvious structure although stone clearance has clearly taken place as well as terracing of the natural slope. The proposed hydro pipeline will be trenched through approximately 67.0m length of the trackway, and as such it is proposed that a basic record be taken of the feature prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording level and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report | |



Plate 20: Trackway feature 22, from the south. Scale 1.0m.

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| 23. Trackway | PRN: 55826 |
| Figure: 6 and 7c | Plate: 21 |
| NGR: SH 60003 20629 – SH 60345 20587 | Period: Post-Medieval |
| <p>Description</p> <p>A trackway measuring approximately 1.5m in width runs from northwest to southeast connecting the property of Hendre-Eirian with the Hendre-Eirian slate quarry (PRN: 20365). The trackway is first depicted on the first edition Ordnance Survey map of 1889 (figure 5), and it is probable that the trackway is contemporary with the construction of the property in the 18th century.</p> <p>The trackway has no obvious structure although stone clearance has clearly taken place as well as terracing of the natural slope. The proposed hydro pipeline will be trenched through approximately 9.0m length of the trackway, and as such it is proposed that a basic record be taken of the feature prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording level and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report | |



Plate 21: Trackway feature 23, from the west. Scale 1.0m.

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| 24. Possible round hut | PRN: 58971 |
| Figure: 4, 5, 6 and 7c | Plate: 22 |
| NGR: SH 60075 20728 | Period: Unknown (Prehistoric) |
| <p>Description</p> <p>A possible round hut with an internal diameter of between 3.0-4.0m is located at this point. The possible hut wall remains measure approximately 0.35m in height and lies in close proximity to two other possible huts at this location (see features 17 and 18). The walls are of dry-stone construction of medium, large and very large sub-angular and rounded cobbles. The feature appears to be a round or possibly rectangular hut although field clearance has clearly taken part in parts of this field and it is possible that this feature is the result of this.</p> <p>The possible round hut lies approximately 14.0m south of the proposed hydro pipe route and 17.0m east of the proposed outfall route, and as such will not be directly impacted upon by the proposed scheme. However, due to the potential for buried archaeological remains associated with the hut it is recommended that a watching brief be maintained during ground disturbance works in this area.</p> | |
| Category of importance: Unknown (national) | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the possible hut circle | |



Plate 22: Possible round hut feature 24, from the west. Scale 1.0m.

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| 25. Possible relict field wall | PRN: 58972 |
| Figure: 4, 5, 6 and 7c | Plate: 23 |
| NGR: SH 60053 20678 – SH 60107 20674 | Period: Unknown (prehistoric) |
| <p>Description</p> <p>A possible dry-stone relict field wall measuring approximately 3.0m in width and 0.3m in height runs east to west for approximately 54.0m at this point. The wall is constructed from dry-stone medium and large sized sub-angular cobbles and has become ruinous along its length. The wall may well be contemporary with the three possible round/ rectangular huts (features 17, 18 and 24) located approximately 52.0m to the north. It is probable that this field wall formed part of a prehistoric settlement at this location, although field clearance has clearly taken part in parts of this field and it is possible that this feature is the result of this.</p> <p>The proposed hydro pipeline outfall will be required to be trenched through this feature, however it will pass through a part where the wall appears to fade out. This may be indicative of an entrance through the wall and it is recommended that a watching brief be maintained in this area during groundworks in case of associated buried remains.</p> | |
| Category of importance: Unknown (regional/county – national) | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the possible relict field wall | |



Plate 23: Possible relict field wall feature 25, from the west. Scale 1.0m.

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| 26. Quarry scoop | PRN: 58973 |
| Figure: 4, 5, 6 and 7c | Plate: 24 |
| NGR: SH 60195 20554 | Period: Post-medieval |
| Description A quarry scoop measuring approximately 4.0m in length, 4.0m in width, and 1.75m in depth has been excavated at this point. The scoop is almost certainly associated with the Egryn slate quarry located approximately 50.0m to the east, which is depicted in detail on the first edition Ordnance Survey map of 1889 (figure 5). The proposed hydro outfall pipe will pass approximately 2.0m to the north of the quarry scoop and as such the feature will not be affected by the proposed works. | |
| Category of importance: Local | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: None | |



Plate 24: Quarry scoop feature 26, from the south. Scale 1.0m.

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| 27. Slate tip | PRN: 58974 |
| Figure: 4, 5, 6 and 7c | Plate: 25 |
| NGR: SH 60237 20551 | Period: Post-medieval |
| <p>Description A slate tip measuring approximately 50.0m in length and 35.0m in width is located at this point. The slate waste clings to the steep hillside slope and is part of the Egryn slate quarry located approximately 50.0m to the east, which is depicted in detail on the first edition Ordnance Survey map of 1889 (figure 5).</p> <p>The proposed hydro scheme outfall pipe will be required to be trenched through approximately 5.0m of the edge of the slate tip, and it is recommended that a watching brief is maintained in this area to ensure that there are no buried structures associated with the slate quarry.</p> | |
| Category of importance: Regional/ county | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Maintain watching brief in vicinity of the slate tip | |



Plate 25: Slate tip feature 27, from the southwest. Scale 1.0m.

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| 28. Field wall | PRN: 58975 |
| Figure: 4, 5, 6 and 7c | Plate: 26 |
| NGR: SH 60079 20638 | Period: Post-medieval |
| <p>Description A dry-stone field wall measuring 0.9m in height and 0.5m in width runs from north to south before turning and forming a large circular enclosure. The wall is constructed from medium and large sized sub-angular cobbles. The boundary is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic boundary.</p> <p>The proposed hydro outfall will pass approximately 10.0m to the west of this feature and as such it will not be impacted upon by the proposed works.</p> | |
| Category of importance: Local | |
| Level of impact: None | |
| Significance of effect: Neutral | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: None | |

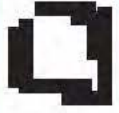


Plate 26: Field wall feature 28, from the west. Scale 1.0m.

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| 29. Trackway | PRN: 58976 |
| Figure: 4, 5, 6 and 7c | Plate: 27 |
| NGR: SH 60076 20702 | Period: Post-medieval |
| <p>Description</p> <p>A trackway measuring approximately 2.0m in width runs from southwest to northeast before turning and heading southeast, connecting the property of Hendre-Eirian with the Hendre-Eirian slate quarry (PRN: 20365). The trackway is first depicted on the 1841 tithe map for the parish of Llanaber (figure 4) and as such is considered to be of local importance as a historic trackway.</p> <p>The trackway has no obvious structure although stone clearance has clearly taken place as well as terracing of the natural slope. The proposed hydro pipeline will be trenched across the trackway, and as such it is proposed that a basic record be taken of the feature prior to the commencement of works. However, the record presented in this report should be seen as being commensurate with a basic recording level and as such no further assessment or mitigatory measures are proposed.</p> | |
| Category of importance: Local | |
| Level of impact: Low adverse direct physical | |
| Significance of effect: Slight adverse | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Basic record – completed as part of this report | |



Plate 27: Trackway feature 29, from the west. Scale 1.0m.



8.0 Site Gazetteer - Non Physical Impacts

8.0 SITE GAZETTEER – NON PHYSICAL IMPACTS

As part of the report an assessment of the indirect non-physical (visual) impacts upon statutorily designated monuments within 100.0m of the proposed pipeline route was undertaken.

Identified sites were assigned a level of impact ranked from High through to Medium, and Low. Levels of impact can be considered as both adverse or beneficial, and the report assessed the potential visual impact both during construction and upon completion of the project. The significance of effect is determined from the importance level of the resource and the magnitude of the impact upon it. Where it is expected that a site will be impacted upon by the proposed works then mitigation/assessment recommendations are provided. All archaeological/historical sites identified are depicted on figure 6 and the location/orientation of photographs are shown on figures 7a, 7b and 7c.

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| 30. Carneddau Hengwm Long Cairns Scheduled Ancient Monument (ME007) | PRN: 1081 and 1082 |
| Figure: 6 and 7a | Plate: 28 |
| NGR: SH 61329 20550 | Period: Prehistoric |
| <p>Description</p> <p>There are two Neolithic Scheduled Ancient Monument (SAM) burial chambers on Mynydd Egryn known as <i>Carneddau Hengwm</i> (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.</p> <p>It is expected that the proposed hydro-electric scheme will have a medium-high adverse visual impact upon the SAM during the construction phase. This is due both because of the close proximity to the works as well as the impact upon the historic setting of the monument within the landscape, as the attention of the viewer is drawn from the intervisibility with the <i>Ceumant Egryn Hut Group</i> SAM (ME154). However, this impact will be limited to the period of construction and there is not expected to be any visual impact upon the SAM upon completion of the project.</p> | |
| Category of importance: National | |
| Level of impact during construction: Medium-high adverse indirect non-physical (visual) | |
| Level of impact upon completion: None | |
| Significance of effect during construction: Moderate-large adverse | |
| Significance of effect upon completion: None | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Inform Cadw of proposals – Scheduled Monument Consent may be required | |



Plate 28: View from Carneddau Hengwum SAM (ME007) towards proposed hydro route (outlined in red), from the southeast.

| | |
|---|----------------------------|
| 31. Ceumant Egryn Hut Group Scheduled Ancient Monument (ME154) | PRN: 1168 |
| Figure: 6 and 7a | Plate: 29 |
| NGR: SH 61110 20739 | Period: Prehistoric |
| <p>Description The prehistoric enclosed settlement and Scheduled Ancient Monument of <i>Ceumant Egryn Hut Group</i> (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).</p> <p>It is expected that the proposed hydro-electric scheme will have a high adverse visual impact upon the SAM during the construction phase. This is because of the close proximity to the works. However, this impact will be limited to the period of construction and there is not expected to be any visual impact upon the SAM upon completion of the project.</p> | |
| Category of importance: National | |
| Level of impact during construction: High adverse indirect non-physical (visual) | |
| Level of impact upon completion: None | |
| Significance of effect during construction: Large adverse | |
| Significance of effect upon completion: None | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Inform Cadw of proposals – Scheduled Monument Consent may be required | |



Plate 29: View from Ceunant Egryn Hut Group SAM (ME154) towards proposed hydro route (outlined in red), from the south.

| | |
|--|-------------------------|
| 32. Settlement and Field Systems above Egryn Abbey Scheduled Ancient Monument (ME122) | PRN: 5802 - 5828 |
| Figure: 6 and 7a | Plate: 30 |
| NGR: SH 60924 20716 | Period: Medieval |
| <p>Description</p> <p>Approximately 120.0m south of the hydro-electric pipe route lies the <i>medieval Settlement & Fields Systems above Egryn Abbey</i> 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).</p> <p>It is expected that the proposed hydro-electric scheme will have a medium adverse visual impact upon the SAM during the construction phase. This is because of the close proximity to the works. However, this impact will be limited to the period of construction and there is not expected to be any visual impact upon the SAM upon completion of the project.</p> | |
| Category of importance: National | |
| Level of impact during construction: Medium adverse indirect non-physical (visual) | |
| Level of impact upon completion: None | |
| Significance of effect during construction: Moderate adverse | |
| Significance of effect upon completion: None | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Inform Cadw of proposals – Scheduled Monument Consent may be required | |



Plate 30: View from the medieval Settlement and Field Systems above Egryn Abbey SAM (ME122) towards proposed hydro route (outlined in red), from the southeast.

| | |
|--|----------------------------|
| 33. Pen Dinas Scheduled Ancient Monument (ME076) | PRN: 1106 |
| Figure: 6 and 7b | Plate: 31 |
| NGR: SH 60614 20821 | Period: Prehistoric |
| <p>Description</p> <p>Approximately 70.0m to the north of the proposed hydro-electric pipe route, the imposing Iron Age hillfort of <i>Pen y Dinas</i> (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).</p> <p>It is expected that the proposed hydro-electric scheme will have a medium adverse visual impact upon the SAM during the construction phase. This is because of the close proximity to the works and the elevated position of the hillfort. However, this impact will be limited to the period of construction and there is not expected to be any visual impact upon the SAM upon completion of the project.</p> | |
| Category of importance: National | |
| Level of impact during construction: Medium adverse indirect non-physical (visual) | |
| Level of impact upon completion: None | |
| Significance of effect during construction: Moderate adverse | |
| Significance of effect upon completion: None | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Inform Cadw of proposals – Scheduled Monument Consent may be required | |



Plate 31: View from the Pen Dinas SAM (ME076) towards proposed hydro route (outlined in red), from the northwest.

| | |
|---|----------------------------|
| 34. Ceunant Egryn Enclosed Settlement Scheduled Ancient Monument (ME099) | PRN: 1116 |
| Figure: 6 and 7b | Plate: 32 |
| NGR: SH 60550 20630 | Period: Prehistoric |
| <p>Description</p> <p>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.</p> <p>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).</p> <p>It is expected that the proposed hydro-electric scheme will have a high adverse visual impact upon the SAM during the construction phase. This is because of the close proximity to the works. However, this impact will be limited to the period of construction and there is not expected to be any visual impact upon the SAM upon completion of the project.</p> | |
| Category of importance: National | |
| Level of impact during construction: High adverse indirect non-physical (visual) | |
| Level of impact upon completion: None | |
| Significance of effect during construction: Large adverse | |
| Significance of effect upon completion: None | |
| Recommendations for further assessment: None | |
| Recommendations for further mitigatory measures: Inform Cadw of proposals – Scheduled Monument Consent may be required | |

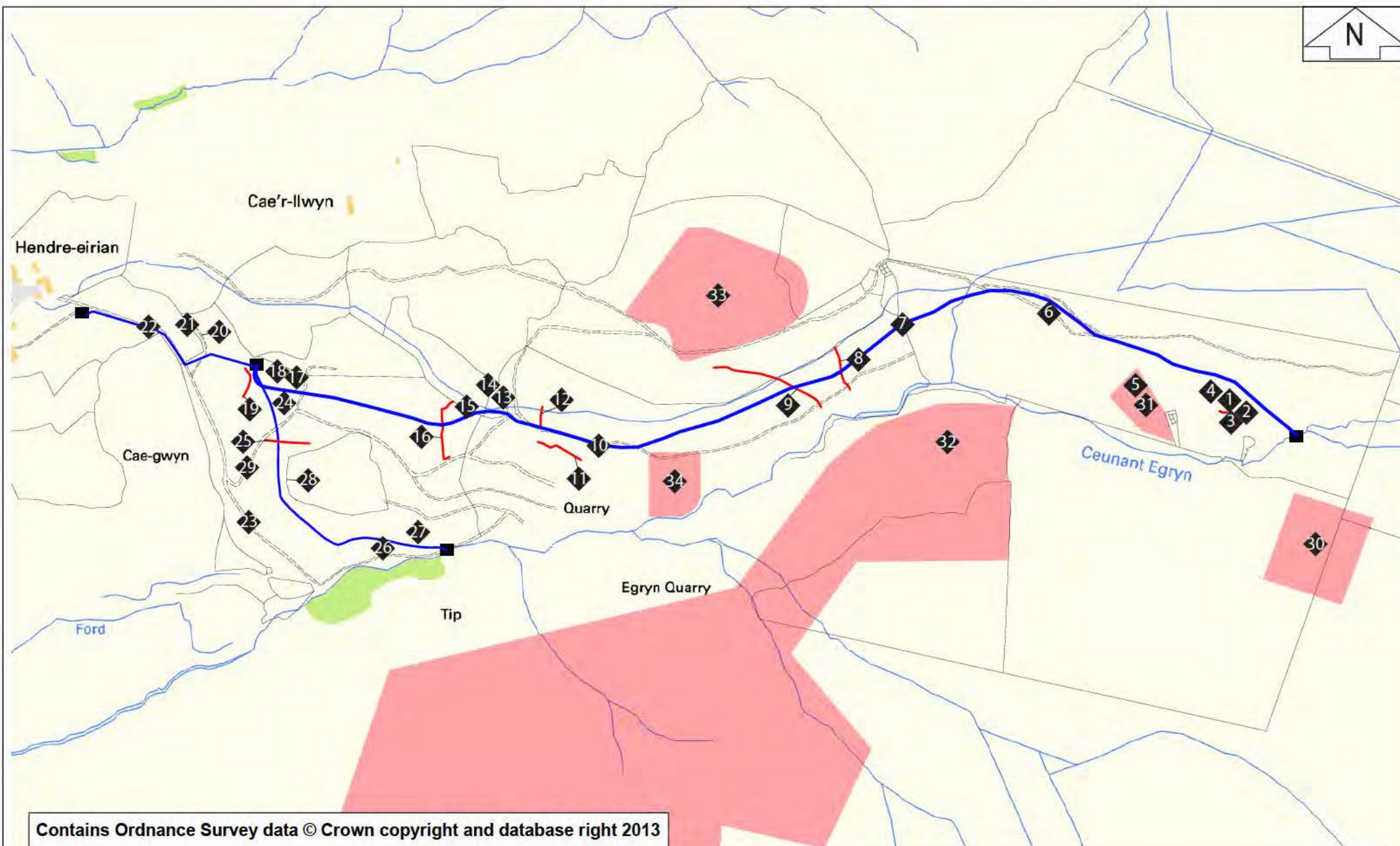


Plate 32: View from the Ceunant Egryn Enclosed Settlement SAM (ME099) towards proposed hydro route (outlined in red), from the south.

| Table 4: Summary of archaeological features. GREEN = no action required; RED= Action required | | | | | | |
|--|-------------------------------------|-----------------------------|------------------------------------|--------------------------|--------------------|---|
| Number | Name | Importance | Impact | Significance of effect | Further Assessment | Mitigation Recommendations |
| PHYSICAL DIRECT AND INDIRECT IMPACTS | | | | | | |
| 1 | Round hut | National | None | Neutral | None | Watching brief in vicinity |
| 2 | Possible round/ rectangular hut | Unknown (national) | None | Neutral | None | Watching brief in vicinity |
| 3 | Possible round/ rectangular hut | Unknown (national) | None | Neutral | None | Watching brief in vicinity |
| 4 | Round hut | National | None | Neutral | None | Watching brief in vicinity |
| 5 | Ceunant Egryn Hut Group SAM (ME154) | National | None | Neutral | None | Watching brief in vicinity and inform Cadw of proposals – SMC may be required |
| 6 | Trackway | Unknown (regional/ county) | Low adverse direct physical | Unknown (slight adverse) | None | Watching brief in vicinity |
| 7 | Field wall | Local | None | Neutral | None | None |
| 8 | Relict field wall | Regional/ county - National | Low-medium adverse direct physical | Moderate adverse | None | Trial trench and reinstate |
| 9 | Relict field wall | Regional/ county - National | None | Neutral | None | Watching brief in vicinity |
| 10 | Trackway | Unknown (regional/ county) | Low adverse direct physical | Unknown (slight adverse) | None | Watching brief in vicinity |
| 11 | Relict field wall | Regional/ county - National | None | Neutral | None | None |

| | | | | | | |
|---|---|--|--|---|------|---|
| 12 | Relict field wall | Regional/ county - National | None | Neutral | None | None |
| 13 | Field wall | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| 14 | Field wall | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| 15 | Field wall | Local | None | Neutral | None | None |
| 16 | Field wall | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| 17 | Possible round/ rectangular hut | Unknown (national) | None | Neutral | None | Watching brief in vicinity |
| 18 | Possible round/ rectangular hut | Unknown (national) | None | Neutral | None | Watching brief in vicinity |
| 19 | Relict field wall/ lynchet | Regional/ county - national | None | Neutral | None | Watching brief in vicinity |
| 20 | Trackway | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| 21 | Field wall | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| 22 | Trackway | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| 23 | Trackway | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| 24 | Possible round hut | Unknown (national) | None | Neutral | None | Watching brief in vicinity |
| 25 | Possible relict field wall | Unknown (regional/ county – national) | None | Neutral | None | Watching brief in vicinity |
| 26 | Quarry scoop | Local | None | Neutral | None | None |
| 27 | Slate tip | Regional/ county | Low adverse direct physical | Slight adverse | None | Watching brief in vicinity |
| 28 | Field wall | Local | None | Neutral | None | None |
| 29 | Trackway | Local | Low adverse direct physical | Slight adverse | None | Basic record – complete |
| NON-PHYSICAL INDIRECT (VISUAL) IMPACTS | | | | | | |
| 30 | Carneddau Hengwm long Cairns SAM (ME007) | National | Construction = Medium to high adverse; | Construction = Moderate to large adverse; | None | Inform Cadw of proposals – SMC may be required |

| | | | | | | |
|----|--|----------|---|---|------|--|
| | | | Completion = None | Completion = None | | |
| 31 | Ceunant Egryn Hut Group SAM (ME154) | National | Construction = High adverse; Completion = None | Construction = Large adverse; Completion = None | None | Inform Cadw of proposals – SMC may be required |
| 32 | Settlement and Field Systems above Egryn Abbey SAM (ME122) | National | Construction = Medium adverse; Completion = None | Construction = Moderate adverse; Completion = None | None | Inform Cadw of proposals – SMC may be required |
| 33 | Pen Dinas SAM (ME076) | National | Construction = Medium adverse; Completion = None | Construction = Moderate adverse; Completion = None | None | Inform Cadw of proposals – SMC may be required |
| 34 | Ceunant Egryn Enclosed Settlement SAM (ME099) | National | Construction = High adverse; Completion = None | Construction = Large adverse; Completion = None | None | Inform Cadw of proposals – SMC may be required |

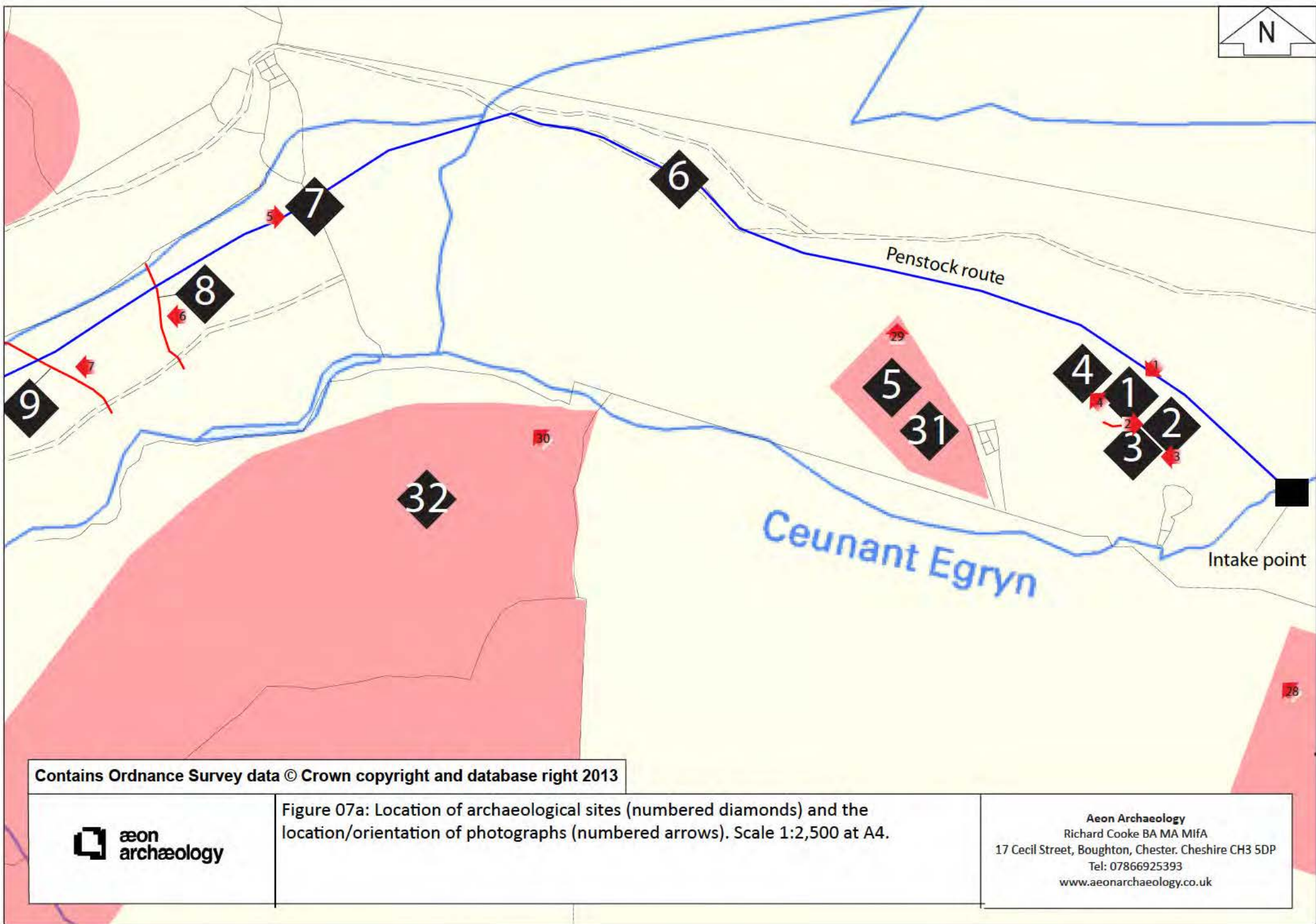


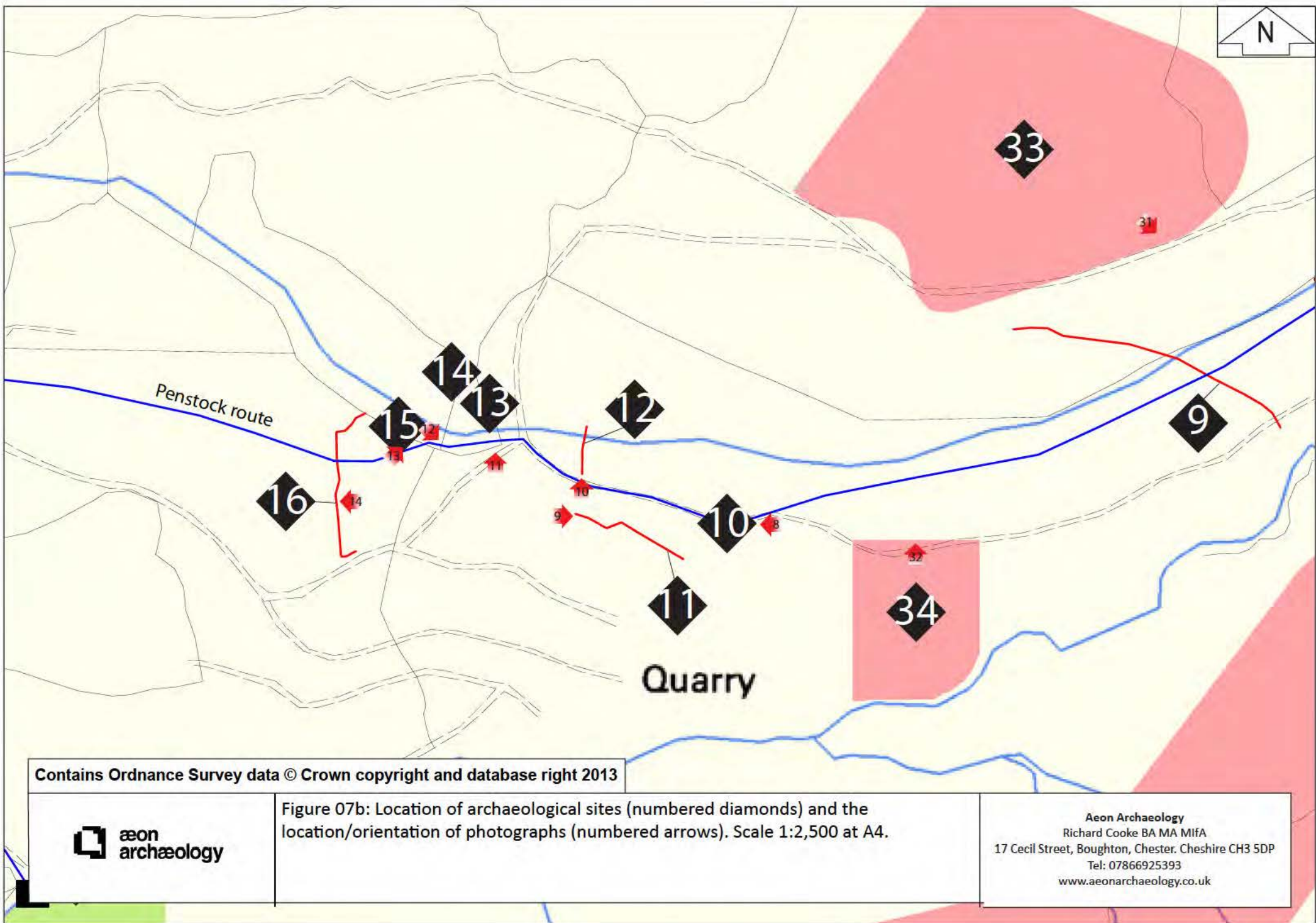
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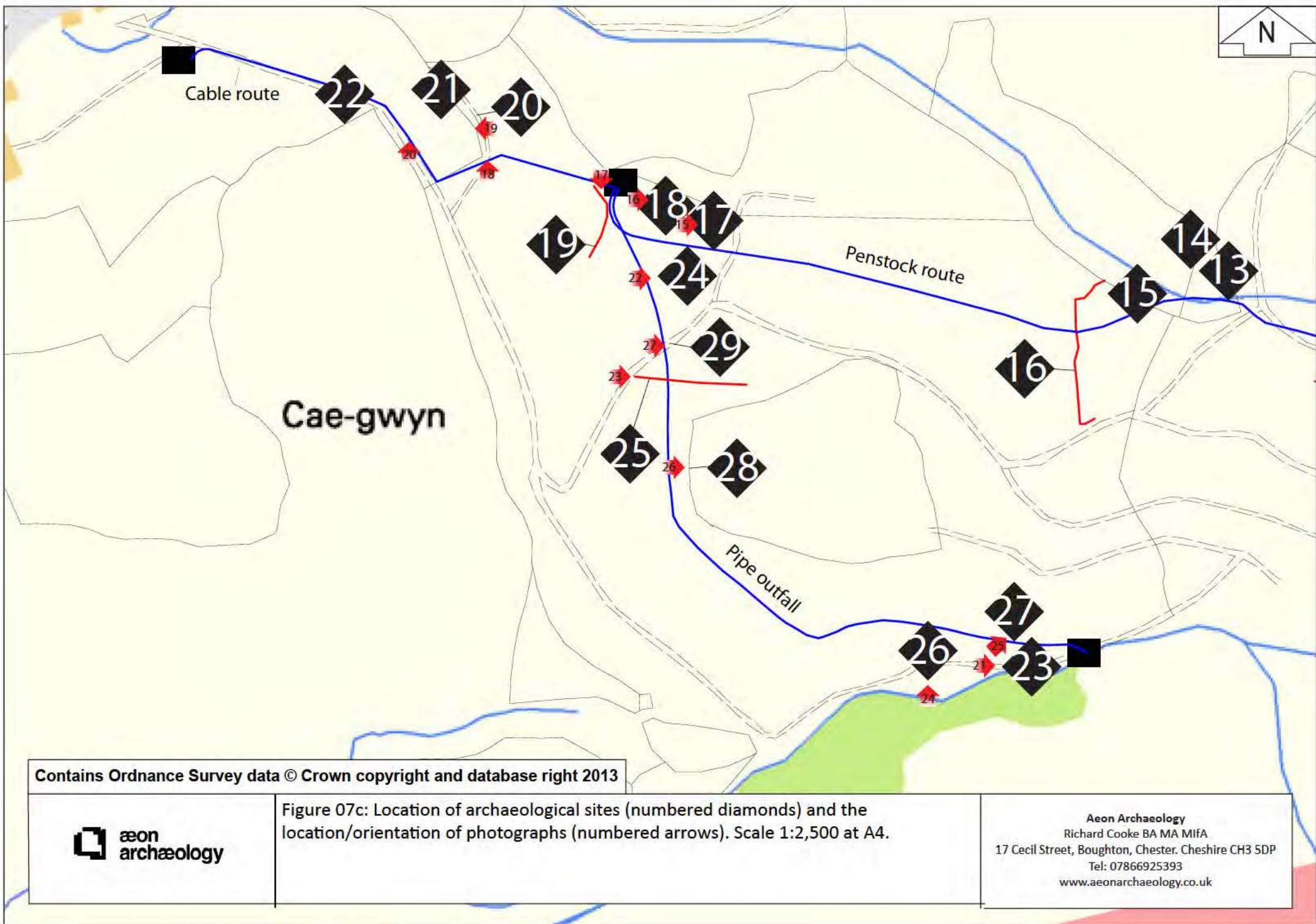


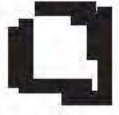
Figure 06: Location of archaeological sites within 20.0m and SAMs within 100.0m of the proposed hydro scheme route (numbered diamonds). Scale 1:6,000 at A4.
(Numbers refer to the site gazetteer - see report section 7.0)

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9.0 Impact and Recommendations

9.0 IMPACT AND RECOMMENDATIONS

9.1 Direct physical impact

Construction phase

The proposed development scheme is expected to have a *low-medium adverse direct physical* impact upon a relict field wall (feature 8) during the construction phase. The field wall is considered to be of *regional/county – national* importance and as such the significance of effect is expected to be *moderate adverse*. In addition the proposed scheme will have a *low adverse direct physical* impact upon eleven other features including six trackways (features 6, 10, 20, 22, 23, and 29), which range in importance from *local* to *unknown (regional/county)* significance. This is expected to result in a *slight adverse* significance of effect on four of the trackways (features 20, 22, 23, and 29) and an *unknown (slight adverse)* significance of effect upon the remaining two trackways (features 6 and 10).

The remaining *low adverse direct physical* impacts will be to four field walls (features 13, 14, 16, and 21) all of which are considered to be of *local* importance resulting in a *slight adverse* significance of effect, and to a slate tip (feature 27) considered to be of *regional/county* importance resulting in a *slight adverse* significance of effect.

Completion phase

The proposed development scheme is not expected to have any direct physical impact upon any known sites of archaeological and historical significance upon completion.

9.2 Indirect physical and non-physical (visual) impact

Construction phase

The proposed scheme is expected to have a *medium adverse visual* impact upon the Settlement and Field Systems above Egryn Abbey (ME122) and the Pen Dinas (ME076) Scheduled Ancient Monuments (features 28 and 29) during the construction phase. Both of these monuments are of *national* importance and as such there will be a *moderate adverse* significance of effect in both cases. In addition it is expected that there will be a *moderate-high adverse visual* impact upon the Carneddau Hengwm Long Cairns SAM (ME007) (feature 26) as well as a *high adverse visual* impact upon the Ceunant Egryn Hut Group SAM (ME154) (feature 27) and the Ceunant Egryn Enclosed Settlement SAM (ME099) during construction of the hydro scheme. These monuments are also of *national* importance and as such the significance of effect is expected to be *moderate-large adverse* and *large adverse* respectively.

Completion phase

The proposed development scheme is not expected to have any direct physical impact upon any known sites of archaeological and historical significance upon completion.

9.3 Historic Landscapes

The proposed development site currently lies within the *Is Mynydd & Mynydd Egryn* (HLCA: 2), the *Fieldscape, Mid-Hill Slopes Around Cae'r-Llwyn* (HLCA: 7), and the *Fieldscape, Lower Hill Slopes* (HLCA: 1) Historic Landscape Character Areas. Due to the proposal to bury the hydro penstock it is not expected that there will be a loss or alteration to any of the historic landscape character areas.

9.4 Site Specific Recommendations

Due to the potential for preserved buried remains it is recommended that a watching brief is maintained during groundworks in vicinity of the round/rectangular huts (features 1-4, 17, 18, and 24); the Ceunant Egryn Hut Group Scheduled Ancient Monument (ME154) (feature 5); the trackways (features 6 and 10); the relict field walls (features 9, 19 and 25); and the slate tip (feature 27). In addition it is recommended that a small trial trench is placed across the relict field wall (feature 8) prior to the commencement of groundworks so that the wall can be fully recorded prior to breaching. This feature should also be reinstated upon completion of the works and all construction traffic should be limited in size to avoid compression damage.

It is also recommended that Cadw are contacted and informed of the proposals as Scheduled Monument Consent (SMC) may be required in relation to the visual impacts upon the Carneddau Hengwm Long Cairns (ME007), the Ceunant Egryn Hut Group (ME154), the Settlement and Field Systems above Egryn Abbey (ME122), Pen Dinas (ME076), and the Ceunant Egryn Enclosed Settlement (ME099) Scheduled Ancient Monuments, as well as the close proximity of the works to the Ceunant Egryn Hut Group SAM (ME154).

9.5 General recommendations

There are a plethora of nationally important archaeological sites within reasonably close proximity of the proposed hydro scheme. However site specific recommendations have been made for a watching brief to be maintained in the vicinity of a number of sites (section 8.4) and as such this should provide suitable monitoring in the chance that associated archaeological remains are uncovered. As such there are no general recommendations for further assessment or mitigatory measures in relation to the scheme.



10.0 Sources

10.0 SOURCES

OS Maps

1st edition 25 inch Ordnance Survey Map of 1889.

2nd edition 25 inch Ordnance Survey Map of 1901.

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

Aerial Photographs

RAF Aerial Photographs

106G/UK/1468 frames 6210 – 6212. Dated 4th May 1946

CPE/UK/1939 frames 3023 – 3027 and 3032 – 3035. Dated 20th January 1947

58/2649 frames 99 – 101 and 139. Dated 5th December 1958

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97-035 frame 011. Dated 1997

99-935 frame 190. Dated 1999

2013 Google mapping

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Dolgellau Archives and Record Office – Z/F/141. *Map of Llwyn Estate*

National Library of Wales - B/PDM/106. *Parish/town: Llanaber, 1818, Sept 12. Name and description of Meeting House: Hendre Eirian, denomination: protestants*

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National Library of Wales - Map 7736 134/2/4. *Plan of farms and lands in the parish of Dolgelley called Trefeilie, Hafodlas, Tyddy-ed-ny-fed and pen-yr-allt.*

Tithe Map and Apportionment of the Parish of Llanaber 1841.

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- NMR Site Record Cards
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- The Muckle Partnership, 2003. *Archaeological survey of Egryn Abbey, Merioneth, Gwynedd*



Appendix I: Scheduled and Non-Scheduled Sites within 1km

APPENDIX 1: 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, Eithinfynydd | 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 north 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 trawdir | 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 |



Appendix II: Definitions of further assessment and mitigatory measures

APPENDIX 2: DEFINITIONS OF FURTHER ASSESSMENT AND MITIGATORY MEASURES

1. Definition of field evaluation techniques

Field evaluation is sometimes necessary when the importance of an identified archaeological feature cannot be ascertained via an archaeological desk based assessment alone. There are several different techniques but the three most common are geophysical survey, trial trenching, and supervised metal detector survey:

Geophysical survey

This technique is a non-intrusive form of archaeological field evaluation. It utilises a magnetometer which detects differences within the earth's magnetic field caused by the presence of iron in the soil. This iron often takes the form of magnetised iron oxides in the topsoil which have been re-deposited into lower archaeological features through cutting and backfill. A magnetometer can also detect iron artefacts within the soil and the presence of burnt stone material such as on hearths, kilns, and burnt mounds.

Trial trenching

Where a site is suspected to contain more subtle archaeological features such as pits, a geophysical survey may not be appropriate due to its lack on sensitivity in detecting these features. Indeed, trial trenching can also be utilised when anomalies have been identified during the geophysical survey and clarification is required in order to identify them. Trial trenches usually measure 20m by 2m although can vary in size if targeting geophysical anomalies. Trenches are excavated using a mechanical tracked excavator and supervised by an archaeologist. The topsoil and subsoil are removed onto buried features or if absent, on to the natural glacial substrata. Any archaeological remains found are usually evaluated and recorded prior to backfilling of the trench, so that further site specific mitigatory recommendations can be made.

Supervised Metal Detector Survey

Some types of underlying substrata and bedrock can mask the results of investigation techniques such as geophysical survey. In such instances an archaeologically supervised metal detector survey can be undertaken. This involves the supervision of metal detectorists by a suitably qualified archaeologist and the spatial mapping of artefacts as they are discovered. This technique can give a geographical spread of metal finds and thus be indicative of 'hotspot' areas which may require further investigation by trial trenching for example.

2. Definition of Mitigatory Recommendations

None:

No further action is required.

Detailed recording:

A photographic and concise descriptive record is required, along with a digital survey.

Basic recording:

A photographic and basic descriptive record is required.

Watching brief:

Monitoring is required by a suitably qualified archaeologist during the proposed development. An archaeological watching brief is divided into four categories according to the IFA, 2001.

Institute for Archaeologists 2001 Standard and Guidance for an archaeological watching brief:

- comprehensive (present during all ground disturbance)
- intensive (present during sensitive ground disturbance)
- intermittent (viewing the trenches after machining)
- partial (as and when seems appropriate).

Avoidance:

These features should be avoided by the proposed development and any ancillary works including the establishment of compound and material lay-down areas. It may be necessary to surround the feature with a barrier and/or signage to avoid accidental damage.

Reinstatement:

These features should be reinstated to their original location and condition. Supervision by an archaeologist is required.

