

# Afon Craig Las Hydro, Nantlle, Gwynedd April - May 2016 : V 1.0





Archaeological Watching Brief

Project Code: A0056.1

Report no. 0087



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Aeon Archaeology 25, Mold Road Broughton Chester CH4 OPQ



Project Code: A0056.1 Date: 26/04/2016

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- **Figure 02:** Phases of excavation for penstock trench (blue line) also showing above ground remains (red dots and pink lines) and features identified from aerial photographs (yellow lines). Scale 1:2,500 at A4.
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#### 1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commisioned by Greenearth Hydro Ltd to carry out a photographic record and archaeological watching brief of a proposed hydro-electric scheme with turbine house, buried penstock (pipeline), and electrical cable connection located on the western bank of the Afon Craig Las, approximately 1.2km south of the village of Dyffryn Nantlle, Gwynedd and within the Snowdonia National Park Authority.

The archaeological watching brief was maintained during excavation of the penstock trench and easement between NGR SH 52086 51865; the intake weir and just passed NGR SH 52295 52535; the location of the earthen field boundary (feature 10). The route was chosen in an effort to avoid an area of structural remains, visible at foundation level during walk over and also from aerial photography (see report 0059).

The breaching of the field boundary (feaure 10, plate 5) was inconclusive in verifying the age of the division. The revealed section across the wall did not provide any additional dating evidence and as such all that can be stated is that the boundary is of at least post-medieval date. This result is by no means dismissive of an early origin for the earthern boundary, perhaps in the medieval period or prehistoric era, but merely showed there was a lack of structural or artefactual evidence to provide a conclusive origin for the land division's placement.

The results of the archaeological watching brief can be seen as somewhat disappointing in the lack of any archaeological remains or artefacts, and indeed its contribution to the regional research imperative and the localised historic narrative. However, the purpose of the archaeological watching brief was to identify the archaeological remains within the localised environment and to mitigate for them primarily through avoidance. This was achieved through the careful rerouting of the penstock route to avoid these features, in particular the possible settlement site located to the east.

#### 2.0 INTRODUCTION

Aeon Archaeology was commisioned by Greenearth Hydro Ltd to carry out a photographic record and archaeological watching brief of a proposed hydro-electric scheme with turbine house, buried penstock (pipeline), and electrical cable connection. The proposed scheme intake was located on the western bank of the Afon Craig Las, approximately 1.2km south of the village of Dyffryn Nantlle, Gwynedd and within the Snowdonia National Park Authority (SNPA) (**Planning ref: NP3/22/89**).

The proposed scheme consisted of an intake weir located at **NGR SH 52086 51865** and a c.1.0km long buried penstock running north to a turbine house located at **NGR SH 52204 52750** and which was installed on the western bank of the Afon Craig Las. In addition a new buried power cable ran west from the turbine house for approximately 1.13km to an existing transformer at **NGR SH 51067 52722**. An existing trackway was used to transport materials to and from the site.

A mitigation brief was not prepared for this scheme by the SNPA Archaeologist but the following statement was made a condition of full planning permission:

#### Condition 6

Prior to any work commencing (including any ground disturbance works or site clearance) pursuant to this permission the applicant/developer shall submit to and receive written approval from the Local Planning Authority for an archaeological specification for a programme of works which must meet all relevant archaeological standards.

The reason for this condition is:

To ensure the implementation of an appropriate programme of archaeological mitigation in accordance with the requirements of Planning Policy Wales 2010 and Welsh Office Circular 60/96 Planning and the Historic Environment: Archaeology (Planning Reference NP3/22/89).

An archaeological assessment report was undertaken by Aeon Archaeology in March 2015 (**report 0059**) which identified 22 archaeological receptors within a 40.0m wide assessment corridor centred on the pipeline and cable routes. The following mitigatory measures were proposed as part of the assessment report:

#### 1. Photographic record during breaching of archaeological receptors:

- (i) Stream revetment wall (feature 7)
- (ii) Field boundary wall (feature 8)
- (iii) Former field wall (feature 9)
- (iv) Relict field wall (feature 10)
- (v) Field wall (feature 19)

#### 2. Watching brief in vicinity of archaeological features:

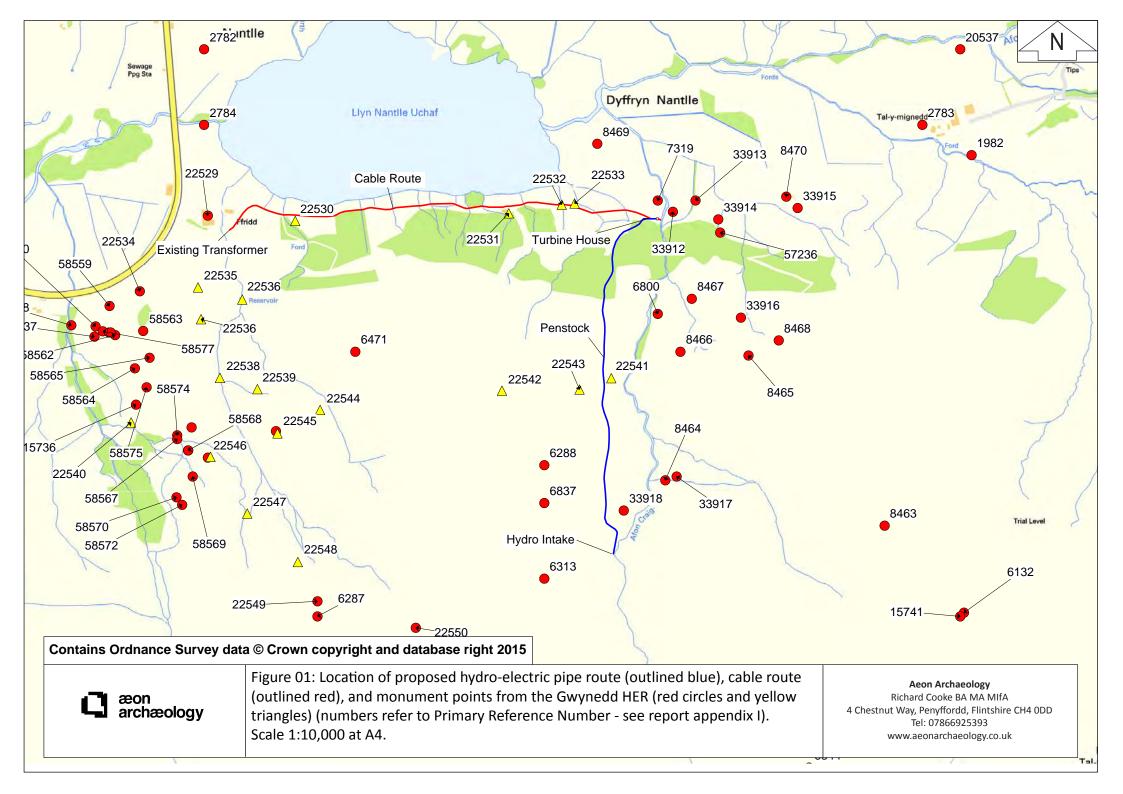
(i) Watching brief to be maintained between the field wall (feature 10) in the north and field wall (feature 19) in the south in proximity to Roman/medieval settlement (features 11-18, and 22).

Upon the commencement of works it became apparent that existing gaps/gates within field walls/boundaries (features 7, 8, 9 and 19) could be utilised for the trenching of the penstock route and as such these were not breached as part of the works.

Relevant UK legislation on heritage includes the Historic Environment Act (Wales) 2016 which superseded the Ancient Monuments and Archaeological Areas Act 1979, and the Planning (Listed Buildings and Conservation Areas) Act 1990, and sets out the requirement for Scheduled Ancient Monument Consent for any works of demolition, repair, and alteration that might affect a Scheduled Ancient Monument.

For archaeological sites that are not covered by the above Act, protection is afforded through development control, the Town and Country Planning Act 1990, Welsh Government's Planning Policy Wales (PPW 2012), and Welsh Office Circular 60/96.

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



#### 3.0 PROJECT AIMS

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

The watching brief consisteded of the following:

- Watching brief maintained on all groundworks between field wall (feature 10) and field wall (feature 19).
- A drawn, written and photographic record of field boundary (feature 10) as it was cut by the Afon Craig Las hydro scheme.
- Preparation of this full archive report.

An Archaeological Written Scheme of Investigation (WSI) was written by Aeon Archaeology and submitted to Greenearth Hydro Ltd and the Snowdonia National Park Authority in April 2014. This formed the basis of a method statement submitted for the work. The archaeological watching brief was executed in accordance with this WSI.

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

Phase 1: project planning

Phase 2: fieldwork

Phase 3: assessment of potential for analysis and revised project design

Phase 4: analysis and report preparation

Phase 5: dissemination

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

#### 4.0 METHODOLOGY - ARCHAEOLOGICAL WATCHING BRIEF

#### 4.1 Watching Brief

#### 4.2 Data Collection from Site Records

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

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

#### 4.3 Artefact Methodology

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

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

#### 4.4 Environmental Samples Methodology

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

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

#### 4.5 Report and dissemination

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

A draft copy of the report has been sent to the client and upon written approval from them paper and digital copies of the report will be sent to the regional HER (x1) (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, LL57 2RT), the Snowdonia National Park Authority (SNPA) Archaeologist (x3), and the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) (x1). Copies of all notes, plans, and photographs arising from the watching brief will be stored at Aeon Archaeology under the project code **A0056.1** with the originals being lodged in a suitable repository to be agreed with the archaeological curator.

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

#### 5.0 HISTORY OF THE SITE

(Reproduced from Aeon Archaeology report 0059; further information including mapping and provisional phase drawings are presented in the archaeological assessment Aeon Archaeology report 0059)

#### 5.1 Prehistoric and Roman Period

The site is located within the Dyffryn Nantlle Registered Landscape of Outstanding Historic Interest (HLW (Gw) 9), designated primarily for the range and quality of its extensive relict archaeological remains, mainly dating from the prehistoric, Roman, and medieval periods. In addition, there are extensive post-medieval slate quarries and associated spoil tips.

There is evidence of human occupation within the Nantlle valley since the Bronze Age, and it is likely that the copper deposits at Drws y Coed, approximately 2.3km to the east of the proposed development area, acted as a catalyst for that occupation. Evidence from the Bronze Age is however mostly limited to a scatter of burial cairns (PRN 599, 138, 2780, 1429, 3345, 1829, and 600) and burnt mounds (PRN 1388, 126, and 1389) across the northern slopes of the Nantlle valley.

Physical evidence becomes more frequent in the Iron Age and Romano periods. Approximately 149.0m to the west of the penstock route is a hut circle settlement (NPRN: 287277) situated on a steep northeast facing slope above the Nantlle valley. At the centre of the settlement is a hut circle measuring 7.5m in diameter. The hut circle has dry-stone walls that comprise of medium to large sized unworked stones that have been built into irregular courses that measure 1.20m wide and 0.30m high. In addition there is a small sub-ovoid structure that lies to the northeast measuring 5.0m long by 4.0m wide with walls 0.60m wide and 0.40m high. The field walls of the settlement join each structure and form a partially enclosed field-system of over 90.0m square that is partially shown on the RCAHMW Aerial Photographic Interpretation (Schofield, P.J. 2006).

Further physical evidence of the prehistoric period has been identified approximately 161.0m west and 196.0m southwest of the penstock route respectively, where prehistoric round huts (PRN: 6288 and 6313) are recorded on the Gwynedd Historic Environment Record.

In the wider landscape and approximately 900.0m north of the proposed turbine house location a defended enclosure that is likely to be a prehistoric hill fort (PRN: 2781) has been identified as occupying a rocky knoll at the west end of a small ridge. The enclosure measures approximately 27.0m in diameter and has wall measuring approximately 2.7m in width and constructed from large flat slabs with marked batters on each face (GAT report 580).

Additional physical evidence of the prehistoric period has been found in the form of a stone mould for casting thin metal oval plates (PRN: 2782) found approximately 430.0m north of the proposed cable route, and an axe hammer with hour glass perforation (PRN: 2783) found approximately 740.0m to the northeast.

Numerous hut circle sites are found clinging to the northern and southern upland valley slopes between the slate quarry of Pen yr Orsedd in the west and Fron quarry in the east. A large area of the south-western slopes of Mynydd Mawr is included within the Scheduled Ancient Monument of *Hut Circles and field systems north east of Gelli Ffrydiau* (CN 179), and incorporates several clusters of

hut circles with associated relict field walls enclosing paddocks. These sites constitute part of a wider relict historic landscape, in which evidence of various periods of settlement and land-use can be recognised. The group value of these early settlements is of particular importance and can be seen as being of national, if not international importance.

The extensive remains of Roman settlement within the Nantlle valley strongly suggest that the area was being exploited at this time for its resources. This would almost certainly have included the quarrying of slate and most likely the mining of copper ore. Undoubtedly food production both on the valley bottom and slopes would also have taken place, and would likely have played an important role in supplying the Roman fort of Segontium at Caernarfon.

Physical remains of the Roman period can be seen 1.0km to the north of the proposed scheme in the *Hut Circles and field systems north east of Gelli Ffrydiau* (CN 179). This scheduled area comprises a land take of approximately 0.53km<sup>2</sup> and includes the remains of at least twelve separate hut circle settlements belonging primarily to the Roman period.

#### 5.2 Early Medieval, Medieval and Post-Medieval Periods

The Early Medieval period is poorly represented within this part of northwest Wales and there are no known sites within 1.0km of the proposed pipeline. By the 12<sup>th</sup> and 13<sup>th</sup> 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 township of a commote associated with a llys was known as the *maerdref*, in which the Prince's agent would reside.

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. One such llys was located at Baladeulyn in Nantlle, although the precise location of the llys is not known. The llys and royal lands became the property of the English King upon the conclusion of the conquest of Wales (Aeon Archaeology report 0004).

Several suspected medieval long-huts have been identified within the localised landscape lying approximately 1.14km to the east (PRN: 58568 and 58570); approximately 490.0m to the west (NPRN: 287281); and approximately 120.0m to the west (NPRN: 287280) of the proposed penstock route. The latter of these is a sub-rectangular house platform that measures 7.0m in length by 4.0m in width. The site is practically indiscernible amongst long reeds but may be a longhouse and has drystone walls of large unworked stones that have been built into irregular courses that measure 0.50m wide and 0.50m high (Schofield, P.J. 2006).

The proposed route of the hydro-electric scheme is depicted in detail on the first, second and third edition 25" county series Ordnance Survey maps of 1889, 1900 and 1916 respectively (see **report 0059**). All three maps depict the area much as it exists today, with the exception that the B4418 road had not been constructed by this point in time. The farms of Fridd and Ty Coch are shown on all three maps, and the existing field boundaries are all shown.

#### 6.0 STATUTORY AND NON-STATUTORY DESIGNATIONS

The scheme lies within or in proximity to the following statutorily designated areas:

- Within the Snowdonia National Park Authority (SNPA).
- Approximately 738.0m east of the post-medieval *Ty Mawr East Slate Quarry Winding Engine House* Scheduled Ancient Monument (CN300).
- Approximately 783.0m southeast of the post-medieval *Dorothea Quarry, Pyramids, Inclines, Mill & Winding Houses, etc* Scheduled Ancient Monument (CN199).
- Approximately 887.0m southeast of the post-medieval *Cloddfa'r Lon Slate Quarry* Scheduled Ancient Monument (CN302).

#### 7.0 QUANTIFICATION OF RESULTS

#### **9.1 The Documentary Archive**

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

Watching brief day sheets 2

Digital photographs 56

#### 9.2 Environmental Samples

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

#### 9.3 Artefacts

No artefacts were recovered during the archaeological watching brief.

#### 8.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

The client was informed that in accordance with the watching brief methodology presented within the WSI document that a toothless ditching bucket would be required for the penstock excavations, however this was not adhered to and a toothed bucket was utilised throughout.

## 10.1 $1^{st}$ phase of Watching Brief (Top Field) (plates 1 and 2) $26^{th}$ March 2016

The archaeological watching brief was maintained while a tracked excavator with toothed ditching bucket excavated a 0.6m wide penstock trench (NGR SH 52057 52244 – SH 52045 52312). The top field, closest to the intake weir, had been identified as having a few relict sheepfolds, none of which were affected by excavation work.

The trench was excavated to a depth of 0.85m through a 0.15m deep deposit of dark brown sandy-silt topsoil, directly beneath which was a mid-orange brown silty-sand subsoil measuring 0.65m in depth. At the trench depth limit a firm blue-grey natural glacial clay substrata with infrequent small cobble inclusions was encountered.

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

# 10.2 $2^{nd}$ $1^{st}$ phase of Watching Brief (Middle Field) (plates 3 and 4) $2^{nd}$ April 2016

The archaeological watching brief was maintained while a tracked excavator with toothed ditching bucket excavated a 0.6m wide penstock trench between NGR SH 52078 52400 – SH 52067 52464. The middle field had been identified in the archaeological assessment as an area that had a high potential for archaeological remains; rectangular and round huts, clearance cairns and relic walls. Therefore an alternative route for the penstock trench route was adopted approximately 20.0m to the west – see figure 2.

The trench was excavated to a depth of 0.8m through a 0.15m deep dark brown sandy-silt topsoil similar to that encountered in the top field. However the subsoil changed to a bright-orange silt-sand measuring 0.55m in depth which then overlay the firm blue grey clay natural glacial substrata with infrequent small cobble inclusions at a depth of >0.8m.

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

# 10.3 $3^{rd}$ phase of Watching Brief (middle field; south of boundary feature 10) (plates 5 and 6) $5^{th}$ April 2016

The archaeological watching brief was maintained while a tracked excavator with toothed ditching bucket excavated a 0.6m wide penstock trench (NGR SH 52067 52464 – SH 52064 52525). The trenching continued on from the second phase of excavation through a waterlogged patch of ground. The middle field and bottom field were separated by a earthen boundary (feature 10), thought to be of

possible prehistoric date. The route of the penstock trench had to bisect this feature and so it required recording in section.

The trench was excavated from south to north downslope to a depth of 0.8m. The excavation entered an area of heavy waterlogging and the stratigraphy changed – becoming dominated by varying bands of natural clays. There was the familiar 0.1m deep deposit of dark brown sandy-silt topsoil, however the stratigraphy changed showing a light brown silt-clay subsoil measuring 0.2m in depth, followed by a light grey silt-clay layer measuring 0.3m in thickness in section. Below was the familiar bright-orange, brown silt-clay deposit, measuring onlyy 0.1m in depth. Finally there was 0.2m of the firm blue grey clay with infrequent small cobble inclusions to a depth >0.8m – this was the natural glacial substrata.

#### Field Boundary: Earthen Bank

The archaeological watching brief was maintained while a tracked excavator with toothed ditching bucket excavated a 2.0m wide easement for the hydro penstock trench through the suspected prehistoric field boundary (feature 10) located at NGR **SH 52295 52535**.

The earthen bank measured 0.4m in height on its south facing side and 1.1m on its north face as it was built onto a slope. It also measured approximately 1.0m in width at its crest and 1.6m at its base and it ran from east to west. It was constructed from packed layers of clay and was consolidated into the slope on its northern face by large sub-angular cobbles and small boulders. It also divided two fields. The wall is depicted on the first, second and third edition Ordnance Survey 25" County Series maps of 1889, 1900 and 1916 (see appendix) and originally formed the northern boundary of a large grazing field.

The tracked excavator removed all of the boulders and cobbles within the easement and cut through a 0.1m deep brown-grey clay-silt topsoil (1002) horizon with occasional small sub-rounded cobbles on to a plastic, blue-grey silt/clay (1003) which <0.17m in thickness and which appeared to cap the earthen bank; this strata extended from the south and over the crest of the bank before abutting with the large sub-angular cobbles and small boulders on the northern face. Below this layer was a browngrey silt-clay (1004) which the boulders were situated within, this layer was 0.25m in depth and covered both (1005) and (1006). The layer (1005) was comprised of peat that appeared to follow the natural crest of the slope, it was 6-8cm in depth and could have been an older turf line.

Lying directly under (1004) and (1005) is approximately 0.16m of grey-brown silt clay (1006) full of small sub-rounded pebbles. Directly below this layer there was a very thin deposit of a light-orange/brown clay-silt (1007) which appeared to sit within a cut [1010] in the natural clay (1001). This deposit could be the remnant of colluvium that was once washed downslope before the bank was built up into a field boundary. However (1007) may in fact be part of backfilling material similar to (1006) used to fill cut [1010] used to create an earlier boundary. The clays (1004) and (1005) may represent a later phase of construction as the boundary was rebuilt or enhanced, finally being faced with the large cobbles and small boulders.

No clear structural element to the wall could be identified aside from a degree of sorting, with larger boulders laid on the upward slope side. Furthermore, the wall was not constructed within any foundation cut and no lenses or relict soil horizons could be identified within the wall section



**Plate 1** - Context Shot, Commencement of works





Plate 2 - Shot of "Gley" in base of trench for penstock trench - no scale approx 0.85m trench depth





Plate 3 - Section of 2nd trench - in second field - top of the slope - 1m scale.





Plate 4 - Section of 2nd trench - near northern boundary of second field - bottom of the slope, (The area was heavily saturated and marshy) - 1m scale.





Plate 5 - Field boundary taken from the east - 1m scale



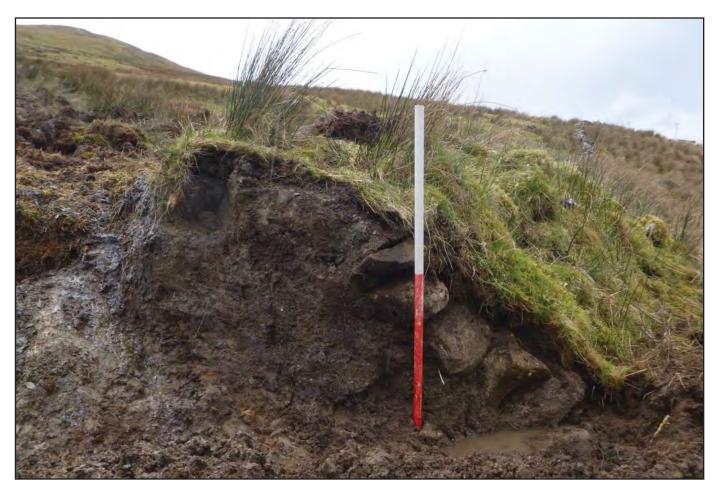
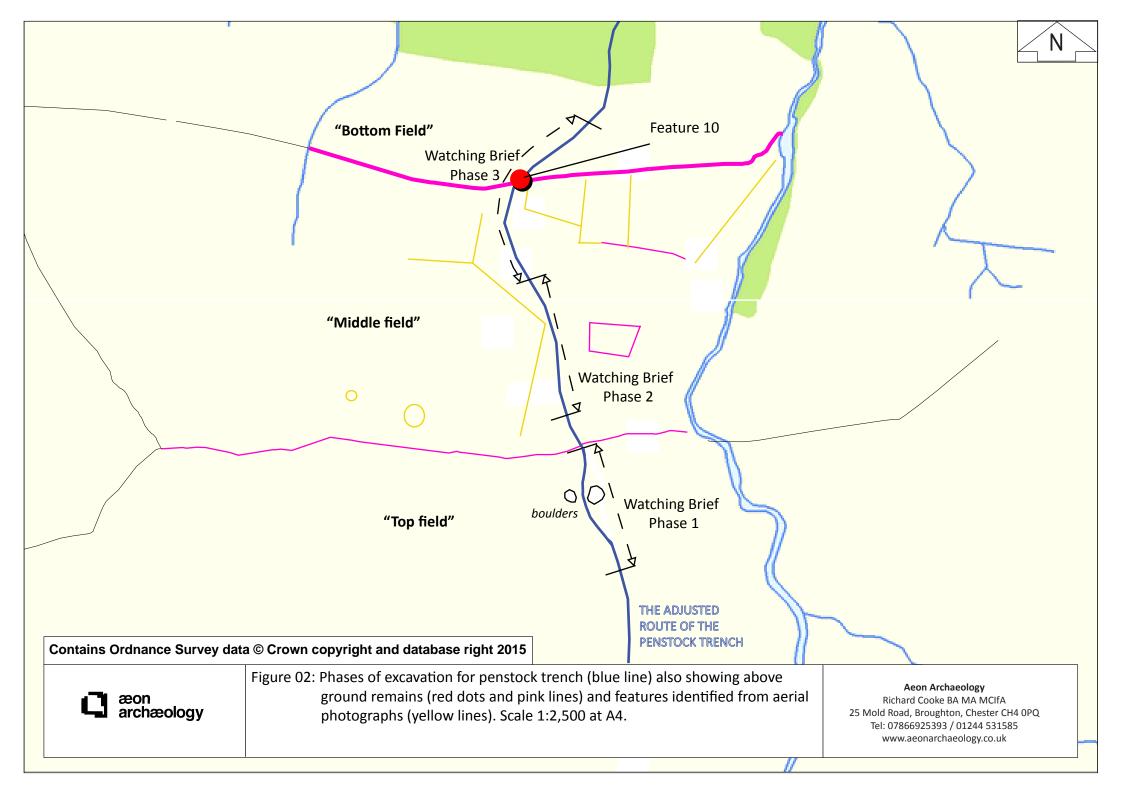
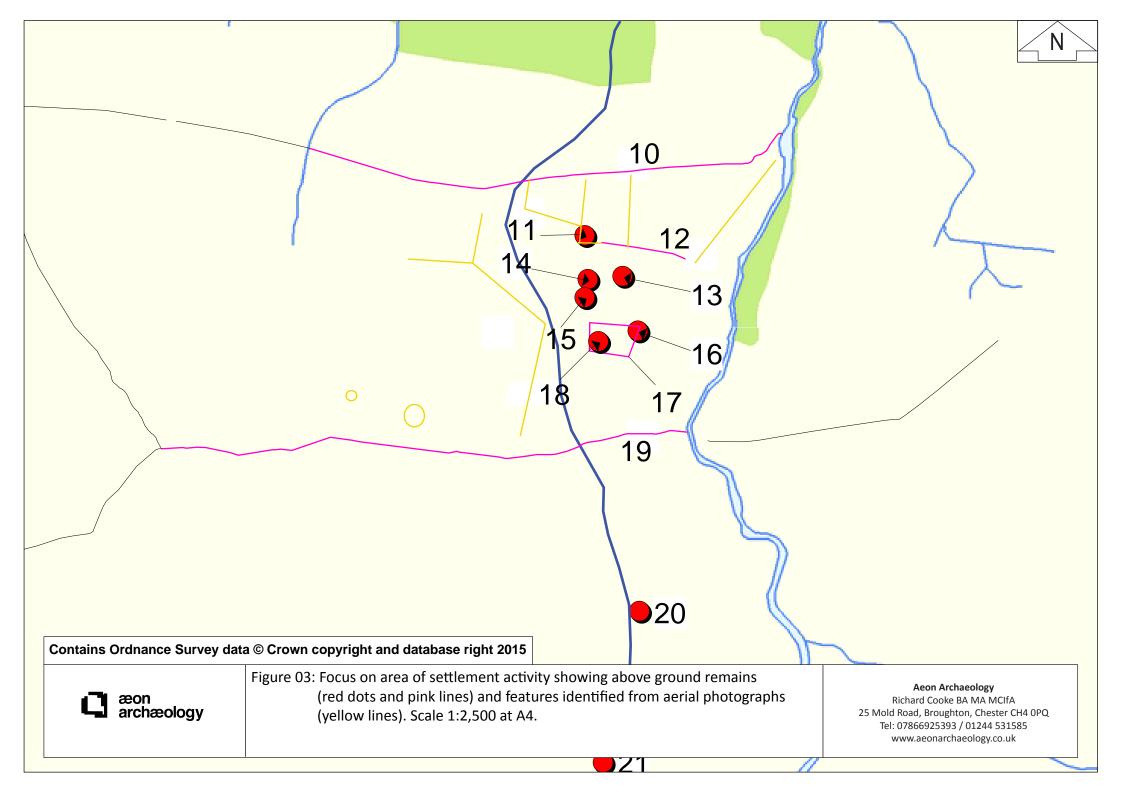


Plate 6 - Section of the field boundary following excavation - 1m scale









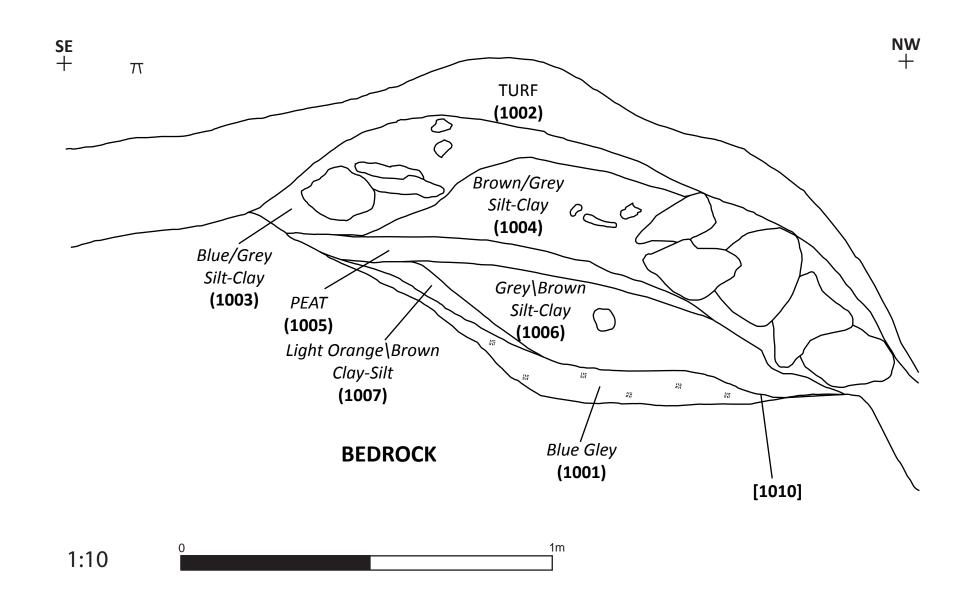
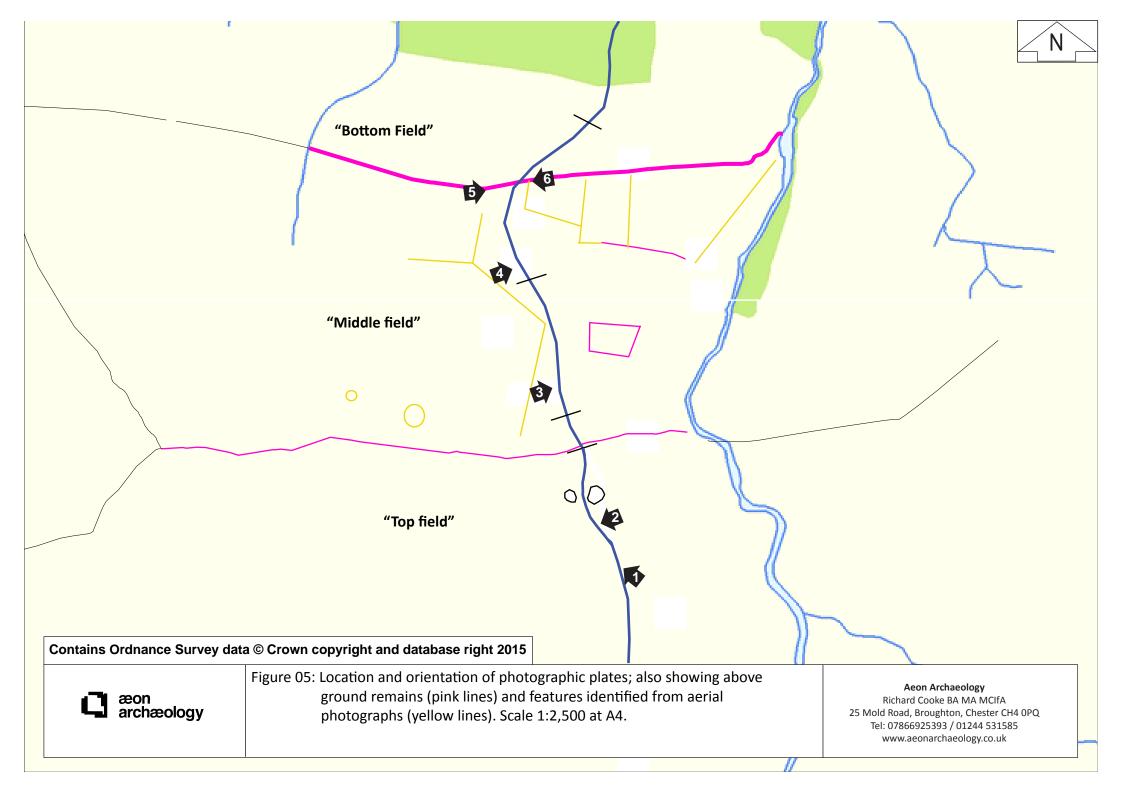




Figure 04: Section of feature 10 - earthern boundary between Top field and bottom field

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#### 9.0 CONCLUSION AND RECOMMENDATIONS

The archaeological watching brief during the excavation of the penstock trench of the Afon Craig Las Hydro scheme did not reveal any buried archaeological remains or artefacts. However, the watching brief did provide the opportunity to observe and record the structural phasing associated with the construction of the earthen boundary (feature 10). This showed that the field boundary had been constructed within a foundation cut which removed the existing light orange-brown silt-clay subsoil layer (1007), leaving it partially visible within the revealed section. After which the bank was constructed from a series of at least four deposits starting with a grey-brown silt-clay (1006) utilised to infill the foundation cut up to the existing ground level. This was then overlaid by a peat deposit which may represent a turf layer (1005) or perhaps a buried topsoil. The bank was then heightened via the deposition of a brown-grey silt-clay (1004) and then later with a blue-grey silt-clay (1003) deposit, and then later revetted using medium sized sub-rounded and sub-angular cobbles on its northern face. The results of the watching brief would suggest that the bank had been heightened and/or repaired over a potentially significant period of time, although it is possible that the distinctive layers in fact represent relatively contemporary deposits taken from differing soil horizons within the immediate locale.

The field boundary (feature 10) is shown on the historic ordnance survey maps and as such all that can be stated is that the wall is of at least post-medieval date. This result is by no means dismissive of an early origin for the field boundary, perhaps in the medieval period or prehistoric era, but merely showed there was a lack of structural or artefactual evidence to provide a conclusive origin for the wall's construction.

During the excavation of the penstock trench, especially during the third phase of the watching brief, the underlying natural clays would suggest that the area was in fact subject to sustained periods of waterlogging or water saturation, as it still is today, and thus not conducive to early habitation. That said, the archaeological assessment did identify several visible structural remains to the south and east of the penstock route thought to be possibly prehistoric in origin, although all of these features were very fragmentary and their identity was by no means certain.

The results of the archaeological excavation and watching brief can be seen as somewhat disappointing in the lack of any archaeological remains or artefacts, and indeed its contribution to the regional research imperative and the localised historic narrative. However, the purpose of the archaeological assessment was to identify the archaeological remains within the localised environment and to mitigate for them primarily through avoidance. This was achieved through the careful rerouting of the penstock route to avoid these features.

#### 10.0 SOURCES

#### OS Maps

1<sup>st</sup> edition 25 inch Ordnance Survey Map of 1889.

2<sup>nd</sup> edition 25 inch Ordnance Survey Map of 1900.

3<sup>rd</sup> edition 25 inch Ordnance Survey Map of 1916.

OS 1:10 000 Series sheet SH 55NE, SH 55SE, SH 55SW, and SH 55NW.

#### Aerial Photographs

#### OS Aerial Photographs

2006, 2009, 2010, 2013 Google mapping

#### Sources

Aeon Archaeology report 0004, 2013. Gelli Ffrydiau Hydro Scheme, Nantlle, Gwynedd.

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