

Early draft
- see later version -

HYDRO-ELECTRIC SCHEME
AFON CAMLAN, GANLLWYD
ARCHAEOLOGICAL ASSESSMENT (G1248)

REPORT NO. 117

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

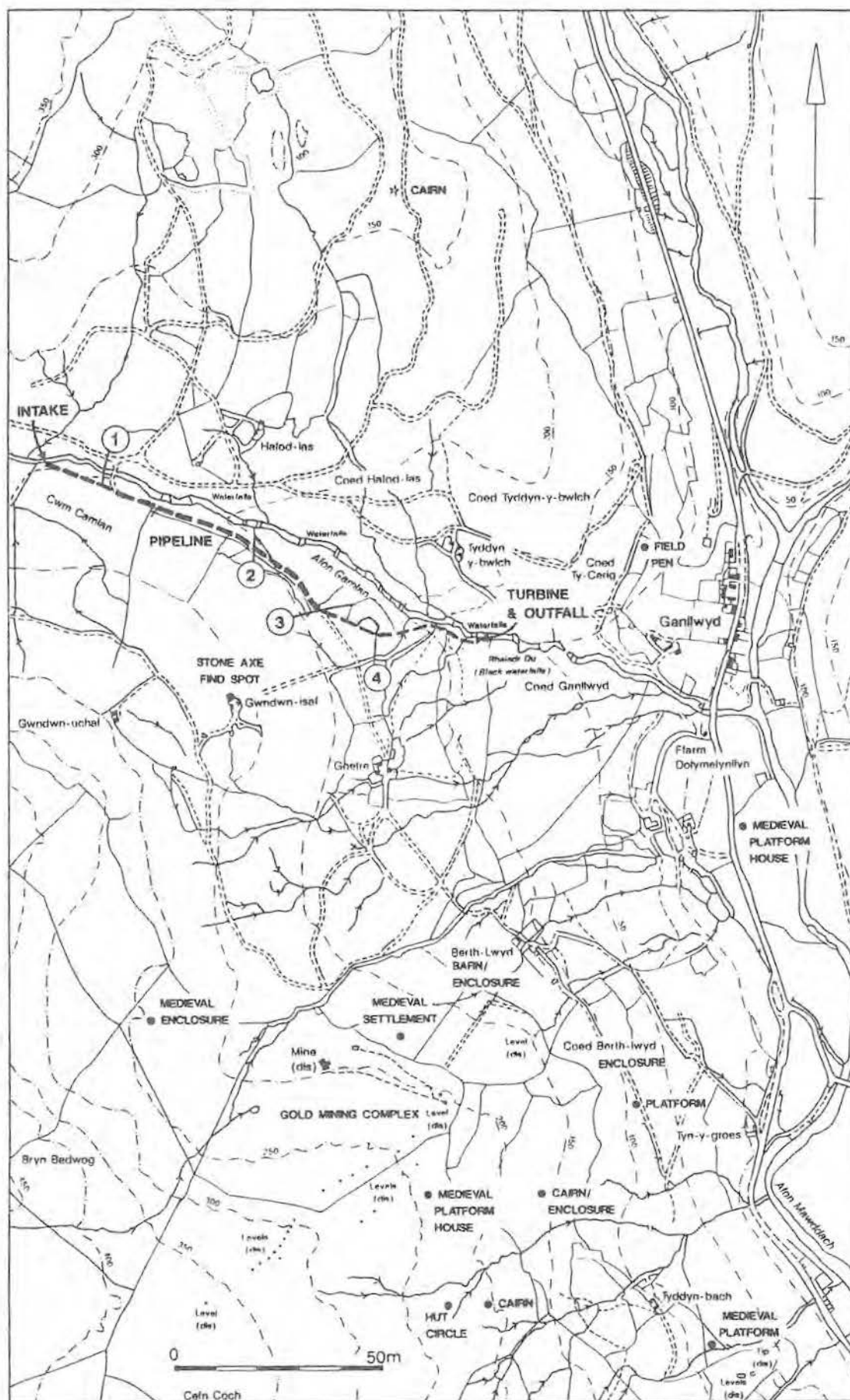
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prepared for Shawater Ltd.

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HYDRO-ELECTRIC SCHEME, AFON CAMLAN, GANLLWYD

INITIAL REPORT

1. INTRODUCTION

A hydro-electric scheme is proposed which will draw water off the Afon Camlan west of Ganllwyd, at a point upstream of the modern concrete bridge below hafod-las (approximately SH71042489), and return it to the same river above the falls of Rhaiadr Du at approximately SH72082446. Gwynedd Archaeological Trust (Contracts Section) has been asked by Shawater Ltd to carry out an archaeological assessment of the proposed scheme, to form part of an Environmental Assessment.

2. ASSESSMENT BRIEF

An initial report was requested from Gwynedd Archaeological Trust, assessing the likely archaeological impact of the scheme and suggesting mitigatory measures.

The basic requirement was for a desk-top survey and field search of the proposed area in order to assess the impact of the proposals on the archaeological and heritage features within the area concerned. The importance and condition of known archaeological remains were to be assessed and areas of archaeological potential and new sites to be identified. Measures to mitigate the effects of the proposed scheme on the archaeological resource were to be suggested, or recommendations for field evaluation (to include geophysical survey and trial trenching) if there were sites which required further evaluation before appropriate mitigatory measures could be suggested.

3. METHODS AND TECHNIQUES

3.1 Desk-top Study

Consultation of maps, computer records, written records and reference works, which make up the Sites and Monuments Record, was undertaken at Gwynedd Archaeological Trust. Records (including early Ordnance Survey maps, tithe maps and schedules, estate papers and reference works - see bibliography) were consulted in the library and the archives of the University College, Bangor and the County archives at Dolgellau. Aerial photographs were not consulted due to the heavily forested nature of the area.

3.2 Field Search

This was undertaken on the 30th of June 1994, when the whole of the proposed route of the pipeline was walked. Conditions were fine for fieldwork, with light and visibility about average for the time of year.

3.3 Report

All available information was collated, and transferred onto a single set of maps at a scale of 1:10,000. The sites were then assessed and allocated to the categories listed below. These are intended to give an idea of the importance of the site and the level of response likely to be required; descriptions of the sites and specific recommendations for further evaluation or mitigatory measures, as appropriate, are given in the relevant sections of this report.

In some cases, further investigation may result in sites being moved into different categories. The criteria used for allocating sites to categories are based on those used by the Secretary of State when considering ancient monuments for scheduling; these are set out in Annex 3 to Planning Policy Guidance 16 (Wales): Archaeology and Planning.

3.4 Categories

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

Category A - Sites of national importance.

Scheduled Ancient Monuments, Listed Buildings and sites of schedulable or listable quality, i.e. those which would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

Sites which are scheduled or listed have legal protection, and it is recommended that all Category A sites remain preserved and protected *in situ*.

Category B - Sites of regional or county importance.

Sites which would not fulfil the criteria for scheduling or listing, but which are nevertheless of particular importance within the region.

Preservation *in situ* is the preferred option for Category B sites, but if damage or destruction cannot be avoided, appropriate detailed recording might be an acceptable alternative.

Category C - Sites of district or local importance.

Sites which are not of sufficient importance to justify a recommendation for preservation if threatened.

Category C sites nevertheless merit adequate recording in advance of damage or destruction.

Category D - Minor and damaged sites.

Sites which are of minor importance or so badly damaged that too little remains to justify their inclusion in a higher category.

For Category D sites, rapid recording, either in advance of or during destruction, should be sufficient.

Category E - Sites needing further investigation.

Sites whose importance is as yet undetermined and which will require further work before they can be allocated to categories A - D are temporarily placed in this category, with specific recommendations for further evaluation. By the end of the assessment there should be no sites remaining in this category.

4. ARCHAEOLOGICAL FINDINGS

4.1 Introduction

A search of the Sites and Monuments Record held by the Gwynedd Archaeological Trust produced details of a number of sites of archaeological interest within the general region, though none of these will be directly affected by the proposed hydro-scheme. These sites include the late Prehistoric - Roman hut circles at Dolmelynlyn and Tyddyn Bach, and the medieval house platform sites at Berth-Lwyd, Cefn Coch, Dolmelynlyn, and Tyddyn Bach (see 4.2 below and fig. 1) as well as the industrial gold mining complex at Cefn Coch.

Archive material consulted at the Dolgellau Record Office, in particular the Tithe map for Llanelltyd, and estate records, were useful in indicating the farm boundaries and land owners

from the 18th to 19th centuries, and early Ordnance Survey maps also helped elucidate changing patterns of farm boundaries and tracks. Unfortunately, the Land Tax Assessments for the area provided little additional useful information.

Lists supplied by Cadw: Welsh Historic Monuments were consulted for information about listed buildings and scheduled ancient monuments. There is one scheduled ancient monument in the area: the Berthlwyd and Cefn Coch gold mining complex (see fig. 1). There are no listed buildings in the immediate vicinity.

4.2 The Archaeological Background

This section provides a summary of the archaeology and history of the surrounding area so that the findings of the assessment can be put into a wider context.

4.2.1 Prehistoric (up to 48AD)

Evidence of Prehistoric occupation in the immediate area is limited, and the potential for archaeological remains of the period is largely based on sites from the surrounding area. These sites range from settlement sites of circular houses and associated enclosures to finds of implements (see the accompanying plan), dating from the period. The settlement sites typically date to the Iron Age (600 BC - 48 AD) although occupation often continues into the Roman period, the nearest is located over 1.6km to the south.

Of interest is the Neolithic stone axe of group VII type, from Graig Lwyd, Penmaenmawr, found at Gwndwn-isaf (SH71202428), to the south of the study area. The nearest burial site of the period, a cairn with a stone lined cist, dating to the Bronze Age (1,600 - 600 BC) is situated just over 1km to the north at SH71892555.

4.2.2 Roman (48AD - 400AD)

There are no known Roman sites in the immediate area. The nearest site of the period is the Roman road between the forts at Tomen-y-mur and Brithdir, some 4km to the east, and a possible enclosed settlement situated to the north at SH719-260-A.

The exact date of the settlements and field systems mentioned in 4.2.1 above is not known, though typically they originate during the Iron Age often with occupation continuing into the Roman period.

4.2.3 Medieval (400AD -1485AD)

The study area lies within the Medieval Cantref of Ardudwy, in the Commote of Ardudwy Is Artro, and formed the northern most part of the Medieval township and parish of Llanelltyd. There are no known Medieval remains in the immediate area of the hydro scheme, however settlement sites of the period are known further south at Berth-lwyd, Cefn Coch, Dolmelynllyn and Tyddyn Coch. These mainly comprise house platforms and rectangular dry-stone huts probably the remains of seasonally occupied upland sites (Hafodydd) connected with transhumance and the utilisation of upland pasture during the summer months.

4.2.4 Post-Medieval (1485AD - present day)

The study area, as shown on the tithe map of 1846, lies just inside the northern boundaries of the farms of Gwndwn-isaf, Gwndwn-uchaf and Goetre. The farmsteads, with their various agricultural buildings, will not be affected.

The nearest industrial remains lie further south at Dolmelynllyn and Cefn Coch, where there is a 19th century gold mining complex with crushing mills, tanks, leats and dams, together with numerous buildings, tramways and inclines.

4.2.5 Summary

The immediate area of the proposed hydro scheme contains no known archaeological sites of significance. However, the limited nature of the documentary material and the lack of previous archaeological work in the study area, is in contrast with the archaeological evidence from the surrounding region. Therefore the possibility of undiscovered remains should not be overlooked.

4.3 Archaeology of the Proposed Development Area

The archaeological features within the study area are listed below. All the features have been designated Category D sites and are considered to be ofmpore; most have been damaged by forestry plantation. The positions of the features are shown on the accompanying plan (fig. 1).

- (1) A low drystone enclosure wall at SH71172485
- (2) Ruinous drystone field boundaries at SH71562469
- (3) The remains of a subcircular drystone field enclosure, within the forestry plantation at SH71722450
- (4) A small opensided enclosure in the forestry plantation at SH71802450.

5. RECOMMENDATIONS

5.1 General

The pipe will be 300 mm in diameter, and requires 300 mm cover. The trench for the pipe will therefore need to be 600 mm deep and some 500 mm wide. The working corridor will need to be some 3 - 5 m wide. The impact of the scheme on the cultural heritage could be minimised by the correct choice of route of the pipeline, and by using the most appropriate method to dig the trench and lay the pipe.

5.2 Route

It is currently proposed that the pipeline will extract water from the river Camlan upstream of the modern concrete bridge, at approximately SH71042489, (see the accompanying plan). The intake will require the heightening of a small, probably natural, weir by c.1m. From the intake point the pipe will turn south to take the water to slightly lower ground c.10m away and will then run south east, south of and parallel to the course of the river until it reaches the forest track by the concrete bridge, having crossed the stone walls of site (1). The pipe route will then follow the line of the raised forestry track for some 570m. At approximately SH71702454, the pipeline will turn off the track to run due east, and cross densely planted commercial forestry which contains the remains of sites (3) and (4), to eventually return to the same river just above the falls of Rhaiadr Du, after crossing the corner of a small field and a heavily wooded slope. The proposed turbine house and outfall point will be located at approximately SH72082446.

5.3 Archaeological Recommendations

It is recommended that the route of the pipeline is chosen so that it minimises the impact upon the known sites. In this instance the walls at (1) and (2) should be crossed at a right angle, and the wall remains at (3) and (4) within the forestry should be avoided if possible. All the

features to be disturbed should be recorded first by photograph and written description, and re-instated afterwards. An archaeologist should be on site when work starts so that the site contractors can be made aware of the location of the identified features.

It is possible that archaeological deposits exist underground with no visible above ground remains, and that these will only be discovered following soil stripping operations. It is therefore recommended that a continuous watching brief is undertaken during soil stripping, with time allowed for recording features observed.

5.4 Working method

The working corridor should be kept to the minimum (c.3-4m) needed to excavate the trench, store the soil, and reinstate. Care should be taken when reinstating that the original ground surface is kept as undisturbed as possible.

6. BIBLIOGRAPHY

6.1 Unpublished Sources

Gwynedd County Council, Dolgellau Archives
Gwynedd Archaeological Trust, Sites and Monuments Record
University College of North Wales, Archives

6.2 Published Sources

- Bowen, E. and Gresham, C., 1967 *History of Merioneth*
Cadw: Welsh Historic Monuments, *List of Scheduled Ancient Monuments*
Cadw: Welsh Historic Monuments, *List of Buildings of Special Architectural or Historic Interest*
Crew, P. and Latham, J., 1984 *The National Trust. Mining on the Dolmelynlyn Estate: a short note.*
Dictionary of Welsh biography 1959
Hall, G. W., 1988 *The Gold Mines Of Merioneth*
Latham, J., et al., 1983 *The National Trust: An Archaeological Field Survey of the Dolmelynlyn Estate*
Lewis, S., 1833 *A Topographical Dictionary of Wales*
Margary, I. D., 1957 *Roman Roads in Britain Vol. II*
Ordnance Survey maps:
1" first edition, 1823, revised 1836
1:10,000 1973, 1920, 1889 (6")
1:2,500 1889, 1908
Parry, Owen, 1953 *The Hearth Tax of 1662 in Merioneth*, Journal of the Merioneth Historical and Record Society, Vol. II, part 1
RCAHM(W), 1921 *Inventory of Ancient Monuments of Merioneth*
RCAHM(W), 1960 *Inventory of Ancient Monuments of Caernarfonshire, Vol. II*
RCAHM(W), 1964 *Inventory of Ancient Monuments of Caernarfonshire, Vol. III*
Smith, P., 1988 *Houses of the Welsh Countryside*
Williams-Jones, K., 1976 *The Merioneth Lay Subsidy Roll, 1292-3*