

MYNYDD LLANDEGAI TO BETHESDA
MAIN LINK

ARCHAEOLOGICAL ASSESSMENT

REPORT NO. 69

1152

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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MAIN LINK

ARCHAEOLOGICAL ASSESSMENT

by H. Flook

for Dŵr Cymru/Welsh Water

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MYNYDD LLANDEGAI TO BETHESDA LINK MAIN.

1. INTRODUCTION

Welsh Water is proposing to construct a link main between Mynydd Llandegai and an existing reservoir to the northeast of Bethesda. The proposed pipeline will affect a corridor approximately 10m wide and will extend for approximately 4.3km from the reservoir east of Bontuchaf to just south of Sling.

As the area contains several known archaeological sites of some importance, The Gwynedd County Sites and Monuments Record in its role as the archaeological curator has recommended that a programme of work should be carried out to evaluate the effect of the development proposal on the archaeological heritage. A project design has been produced by the Gwynedd Archaeological Trust (Contracts Section) to satisfy a specification produced by the Gwynedd County Sites and Monuments Record.

2. ARCHAEOLOGICAL PROJECT SPECIFICATION SUMMARY (see appendix)

The aims of the assessment of these areas will be to:

- verify the existing SMR documentary information with regard to archaeology which may be affected by the development proposals
- locate and identify any further archaeological/historical sites and features which may at present be undiscovered
- evaluate the importance of what has been identified (both as a cultural landscape and as the individual items which make up the landscape)
- identify areas likely to contain buried features which may need to be assessed by other means
- assess the archaeological implications of the development Proposal
- recommend any mitigatory measures thought necessary to secure the preservation of any sites of archaeological/historical interest within the affected areas.

3. ARCHAEOLOGICAL BACKGROUND

The route passes through a number of very different kinds of terrain: from rocky slopes at over 250m OD above Bethesda, across the fairly flat river flood plain of the Afon Ogwen, just below 120m OD and up across further wooded and rocky slopes to a height of c. 210m OD on the west side of the valley.

There are six main sites of known archaeological interest recorded on the Sites and Monuments Record in the vicinity of the intended works. These are Pen-y-Gaer hillfort, Ffos Coetmor hut group and associated field system, two dismantled railway lines, Sling burial chamber, and the site of a settlement of unknown origin at Bod-Feurig Farm. In addition there have been occasional finds such as that of a stone axe hammer at Pen-y-Ffriddoedd.

4. METHODS AND TECHNIQUES

STAGE 1 - DESK TOP STUDY

Earliest available estate, OS maps and other documents were consulted at the Gwynedd Sites and Monuments Record and the University Archive at the University College of North Wales (Bangor). Selected reference works were also consulted.

List of Maps Consulted

- 1768 Penrhyn Estate Map - Llanllechid parish
- 1768 Penrhyn Estate Map - Llandegai parish
- 1914 OS 1:2500
- 1919 OS 1:2500
- 1975 OS 1:10000

Other Texts and Documents

- Royal Commission on Ancient and Historical Monuments in Wales (Caernarfonshire Inventory) Vol.I (1956)
- Atlas of Caernarfonshire, T.M. Bassett & B.L.Davies (1977)
- Narrow Gauge Railways in North Caernarfonshire Vol.II, J.I.C Boyd (1975)

Relevant aerial photographs were inspected at the Countryside Council for Wales, Bangor.

STAGE 2 - FIELD SURVEY

With the permission of landowners and tenants, a two man team from GAT walked the line of the proposed pipeline. Weather was drizzly and overcast and the light for photography was poor.

All areas within the extent of the proposed pipeline were examined visually to locate and record features identified during the documentary search and to identify further sites of interest. Sites of potential archaeological-historical significance were located directly onto enlarged 1:10,000 OS map sheets.

Each site or feature was recorded with black and white photographs at 35mm format and selected features and areas of landscape were recorded with colour slides also at 35mm format.

5. RESULTS

STAGE 1 - DESK TOP STUDY

Consultation of the SMR identified the following sites and finds:

PRN3660 - Bod-Feurig Farm (SH60356682) - site of settlement

Hut circles were cleared from Bod-Feurig Farm before 1888, producing many finds including: querns, crushers, flint arrowheads and iron slag (see gazetteer site 001)

PRN3666 Pen-y-Ffriddoedd (SH607669) - axe hammer

A perforated stone axe hammer was recovered as a casual find and is now in Bangor Museum.

PRN221 Fron Deg (SH60556686) - Burial Chamber

This site comprises the remains of a poorly preserved burial chamber. A cist containing a human skeleton was found in 1885, and a further skeleton was discovered beneath a nearby "heap of stones". There are in the partially cultivated fields, elongated mounds with possible burnt stones.

Penrhyn Quarry Rail link - quarry railway

There are records of an early track which was constructed in 1800 for horse drawn wagons and which may have run along the same alignment as the later railway in places. It ran on elliptically sectioned rails - a system devised especially for horse drawn wagons. However, it was probably superseded by a later trackway for the steam engine and any existence of the earlier route and rails may not now exist. The later railway went out of use in 1876 (see gazetteer site 002).

The L&NWR Railway Line - quarry railway

The line ran from Bethesda to Bangor between 1884 and 1963 (see gazetteer site 004).

PRN261 Pen-y-Gaer (SH62836725) - hillfort

A roughly oval defended enclosure, occupying the summit of a small hill, no internal features are visible. The rampart is overlaid by modern stone walls, and sheepfolds occupy part of the interior, but enough remains to show that the bank was of loose stones faced on both sides with orthostats and boulders laid lengthwise, prehistoric or Romano-British. (See gazetteer site 005).

PRN288 Ffos Coetmor (SH62946733) - hutgroup and field systems

The roughly circular huts lie within a system of small irregular terraced fields.

STAGE 2 FIELD SURVEY

To assess the relative importance of each site and to allow the appropriate mitigatory action to be applied, a framework of basic categories has been used as suggested by the non-statutory Criteria for Scheduling Ancient Monuments and/or Criteria for Listed Buildings laid out in Annex 3 of PPG16. The Categories are as follows:

Category A - Preservation in situ.

Sites of such archaeological importance that it is recommended that they remain preserved and protected in situ.

Category B - Detailed recording.

Sites for which detailed recording (either by full excavation or standing building analysis and controlled demolition) is recommended if damage or destruction cannot be avoided.

Category C - recording by photograph and description.

An adequate record can be achieved by written description and photograph, and survey by Electronic Distance Measuring equipment (where appropriate), if damage is inevitable.

Category D - Watching Brief Sites.

This category makes provision for those sites whose presence is suspected (e.g. from place name evidence) or whose nature is still unclear following detailed assessment (e.g. minor geophysical anomalies).

Category E - Sites requiring further investigation.

The importance or function of these sites is as yet undetermined, and they will need further investigation before they can be allocated to the appropriate category.

SITE GAZETTEER

001 Bod-Feurig Farm - possible settlement, Category B

There is strong documentary evidence for the existence of an early settlement site - hut circles were cleared before 1888 resulting in a significant number of finds coming to light. There is no visible evidence on the ground.

002 Penrhyn Quarry Railway 1800-1876 - Category D

The route of the former Penrhyn Quarry rail route - now visible as a flat trackway, approximately 2 metres wide. One side is fenced with upright thin slate slabs, the other side is stone walled - both sides are lined with small trees and bushes.

003 Possible sheepfold, nr Ty'n y Clwt Isa - Category B

Located in the field opposite Ty'n y Clwt Isa near the gated field entrance. Visible as an interrupted raised bank running into a much fainter circular shape some 5m in diameter. Possibly the remains of an old sheepfold but may incorporate an earlier site.

004 Penrhyn Quarry Railway 1879-1962 - Category C

The route and remains of embankment for the former Bangor Bethesda line. Exists as a large earth embankment approximately 1 1/2 - 2 metres high and 5 metres wide at base.

005 Pen-y-Gaer hillfort and surrounding area - Categories B and D

The hillfort itself is situated on the summit of a small hill and will not be directly affected by the proposed pipeline. However the area surrounding the hillfort contains a series of linear

arrangements of stones, possibly the remains of old field boundaries associated with the hillfort. These appear to cross the present course of the small stream running along the base of the slope of the hillfort.

006 Stepping stones - Category C

The stream (nr Nant y Ty) is crossed by a series of large stepping stones, which is documented on the 1914 25" map of Caernarvonshire and are probably of an earlier date. It could indicate links across the stream from earlier paths or tracks.

007 Tracks and footpaths - Category C

The whole area is criss-crossed by a number of old trackways and footpaths.

008 Stone walls and slate fences - Category C

Most of the fields are enclosed with dry stone walls or slate upright fences.

009 Roads - Category C

The A5 Holyhead Road and seven minor roads will be bisected by the proposed work.

SUMMARY OF RESULTS AND RECOMMENDATIONS

As might be expected, the majority of features which will be affected by the proposed pipeline are existing agricultural features representing elements of a well preserved post-medieval landscape - these take the form of old tracks and paths, stone walls and road systems (007, 008, 009). As these are generally linear features, the effect on them will be minimal and limited recording in the form of photograph and brief descriptions would be sufficient.

Several known archaeological sites will be affected by the close proximity of the pipeline route: Bod-Feurig farm (001), Pen-y-Gaer hillfort (005) and the two Penrhyn Quarry railway lines (002, 004).

At Pen-y-Gaer possible ancient field boundaries have been identified by the survey which appear to be affected by the pipeline route. It is possible that these represent the remnants of cultivated fields associated with the hillfort. Again, as they are linear features, the effect of the proposed development upon them will be limited. However, considering their potential significance, it is recommended that their surface remains should be surveyed and recorded before disturbance and a watching brief maintained during the development to allow further recording if necessary.

Bod-Feurig Farm is a known site which contained structures of prehistoric or Romano-British date until quite recently.

Further evidence of habitation and associated field systems could exist over a large area. In addition, the fact that there are a number of early burial sites as well as a stone axe hammer find in the immediate vicinity indicates even earlier prehistoric activity. It is recommended therefore that trial trenching be undertaken in the area to be disturbed by the pipeline corridor to establish whether or not any archaeology remains.

The field survey brought to light a new site in the field opposite Ty'n y Clwt Isa (003) which will be directly affected by the proposed pipeline. The banks and circular feature are possibly

the remains of a post-medieval sheepfold. However, its form and location are suggestive of a prehistoric or Romano-British hut circle. It is generally accepted that sheepfolds often occur on or near early settlement sites representing a re-use of an available building resource.

It is therefore recommended that limited trial trenching be undertaken ahead of the proposed development to ascertain the status of this potentially significant site, with (depending on the results of the trial trenching) provision for a) more detailed recording by excavation in advance of the pipe trench or b) a watching brief during construction.

The field walking stage revealed what appeared to be an existing pipe running along part of the proposed route for the new pipe (from Coetmor New Road, through the area at the base of Pen-y-gaer hillfort to the covered reservoir). We are unaware of any plans to place the new pipe in an existing trench for part of the route therefore these recommended mitigatory strategies assume that there will be significant new ground disturbance along the **whole** of the proposed route.

SUMMARY OF RECOMMENDATIONS BY CATEGORY

Category A Sites - Preservation in situ

- none

Category B Sites - Detailed recording

- 005 Pen-y-Gaer hillfort associated features
initially requires detailed survey and photographic record of surface features to be followed by a watching brief during construction (see below).

Category C Sites - Recording by Photograph and Description

- 004 Penrhyn Quarry Railway Line
- 006 Stepping stones
- 007 Tracks and footpaths
- 008 Stone walls and slate fences
- 009 Roads

Category D Sites - Watching Brief (with provision for recording as appropriate)

- 002 Penrhyn Quarry Railway Line
recording by measured drawing and photograph if evidence for early horse-drawn carriage route is identified
- 005 Pen-y-Gaer Hillfort associated features
recording in section by measured drawing and photograph

Category E Sites - Further Investigation Required

- 001 Bod-Feurig farm
assessment trench to establish whether or not any archaeology remains.
- 003 Ty'n y Clwt Isa
assessment trench to ascertain site status.

APPENDIX

GWYNEDD SITES AND MONUMENTS RECORD

Brief for Initial Archaeological Assessment of

PROPOSED MYNYDD LLANDEGAI - BETHESDA LINK MAIN

Prepared for Welsh Water

1. INTRODUCTION.

Welsh Water is proposing to construct a link main between Mynydd Llandegai and an existing reservoir to the north-east of Bethesda. The proposed pipeline will affect a corridor approximately 10m wide and will extend for several kilometres down and up the sides of the Ogwen valley north of Bethesda.

Several sites of archaeological interest are known to exist in the area of the proposal and details of these are to be found on the County Sites and Monuments Record. However, most of this area has not been studied in detail and other sites of interest may exist along the proposed route. The scale of the intended works means that an appraisal of the route is beyond the scope of a standard site visit, and for this reason it is recommended that the area should be rapidly fieldwalked so that any archaeological sites which are likely to be affected by the proposed works can be identified, and measures taken to ensure their continued survival.

This is in line with current Welsh Office advice on dealing with archaeological matters which fall within the planning process as laid out in PPG 16 (paragraphs 19-22).

The developer, Welsh Water, has intimated that they wish to commission a programme of archaeological work. This brief, which has been prepared by Gwynedd Sites and Monuments Record acting as archaeological curator, outlines the scope of work considered necessary for an assessment of the archaeological implication of the proposed work.

2. SITE LOCATION AND DESCRIPTION.

The proposed pipeline extends from the covered reservoir (SH 63226689) east of Bontuchaf north-eastwards for about 200m before bearing north-westwards to where Coetmor Road meets Henbarc Road, thereafter bearing generally westwards and ending just south of Sling (SH 60156678).

The proposed route passes through a number of very different kinds of terrain: from rocky slopes at over 250m OD above Bethesda, across a fairly flat river flood plain (Afon Ogwen) just below 120m OD, and up across further wooded and rocky slopes to a height of c. 210m OD on the west side of the valley.

The vegetation cover varies considerably, as would be expected, and thus no details can be given in this brief. It is assumed that the contractor will have visited the area before submitting a tender.

3. ARCHAEOLOGICAL BACKGROUND.

There are six main sites of known archaeological interest recorded on the Sites and Monuments Record in the vicinity of the intended works. These are Pen y Gaer hillfort (SH 62826725), a hut group and associated field system (SH 62946733), two dismantled railway lines (SH 61126716,

SH 61466737), Sling burial chamber (SH 60556686) and the site of a settlement of unknown age (SH 60356682). In addition there have been occasional finds such as that of a stone axe-hammer at Pen y Ffriddoedd (SH 607-669-).

The area has never been systematically surveyed, and notification of new sites in the Bethesda area are often passed on to the SMR by local people. It is highly likely, therefore, that further archaeological sites and remains exist in the areas to be affected by the proposal.

4. THE ASSESSMENT BRIEF.

The brief is to carry out an archaeological evaluation of the proposed pipeline, to determine the extent and survival of any archaeological remains in the pipeline corridor and any related ancillary areas, and to produce a report which assesses the archaeological implications of the scheme and proposes any mitigatory measures thought necessary to secure the continued preservation of any sites of archaeological and historical interest within the areas to be affected.

The preferred option, wherever possible, is the preservation *in situ* of significant archaeological features. The possibility of achieving this through design modification or other mitigating measures should be considered. Only where preservation *in situ* proves impracticable should a reserve option of preservation by record be considered.

The evaluation will comprise two stages of work followed by a report.

Stage 1 Desk-based assessment involves a brief appraisal of the readily available cartographic, AP and other information on the area.

Stage 2 Field search involves a rapid field assessment of the proposed pipeline corridor by surface inspection and fieldwalking (if appropriate) to locate and record any existing earthworks, buildings and other stone-built features in the area to be affected by the work on the pipeline, (including any ancillary works, temporary compounds, access tracks, etc.). Detailed field survey of individual monuments should not be undertaken, but an attempt should be made to quantify and map the total archaeological resource.

The report summarises and analyses the results of the work to date, assessing the total archaeological resource and clearly showing what features and remains of archaeological/historical interest will be affected by the works as currently planned. In particular it should contain a summary of the results of the fieldwork together with details of any archaeological features identified, and plans at an appropriate scale showing the features located.

The report will provide an interpretation of results, placing sites in their national and local context, and should contain any mitigatory measures (including design modification) thought necessary to secure the continued preservation of the archaeological remains identified.

An agreed number of copies of the report will be submitted to the client by an agreed date, and at the same time a copy should be lodged with the County Sites and Monuments Record on the understanding that it will become publicly available after a certain period (usually not exceeding six months).

5. ARCHIVE.

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions should be labelled and cross-referenced, and lodged in an appropriate place (to be decided in consultation with the Sites and Monuments Record) within six months of the completion of the project.

6. MONITORING.

The work will be monitored by Gwynedd Sites and Monuments Record acting as archaeological curator. In the light of the limited amount of work envisaged, it is proposed that a single monitoring visit is arranged following the fieldwork to discuss the results and the report before final submission.

7. PROJECT DESIGN AND TENDERING.

A written project design, including a statement of intended methodology, should be submitted on the basis of this brief. It should be accompanied by a costed tender detailing the following:

- 1) The name and suitability of the Project Director.
- 2) The proposed staffing levels.
- 3) The proposed programme of work.
- 4) An itemised estimate of cost under the following headings: staff time per stage; travel and subsistence per stage; other project costs; report preparation; overheads.

A written Project Design should be submitted to and accepted by the Gwynedd Sites and Monuments Record before any work commences. Contractors are expected to conform to the conditions set out in General Conditions for Archaeological Contractors in Gwynedd, a copy of which is appended. Before submitting a project design, it is recommended that potential contractors discuss the matter with the Gwynedd Sites and Monuments Record, from which further details or clarification of any aspects of the brief may be obtained. Work should be carried out to a timetable agreed with Welsh Water.

All parts of the archaeological work outlined here should be carried out by a suitably qualified archaeological practitioner, in accordance with the By-laws of the Institute of Field Archaeologists.

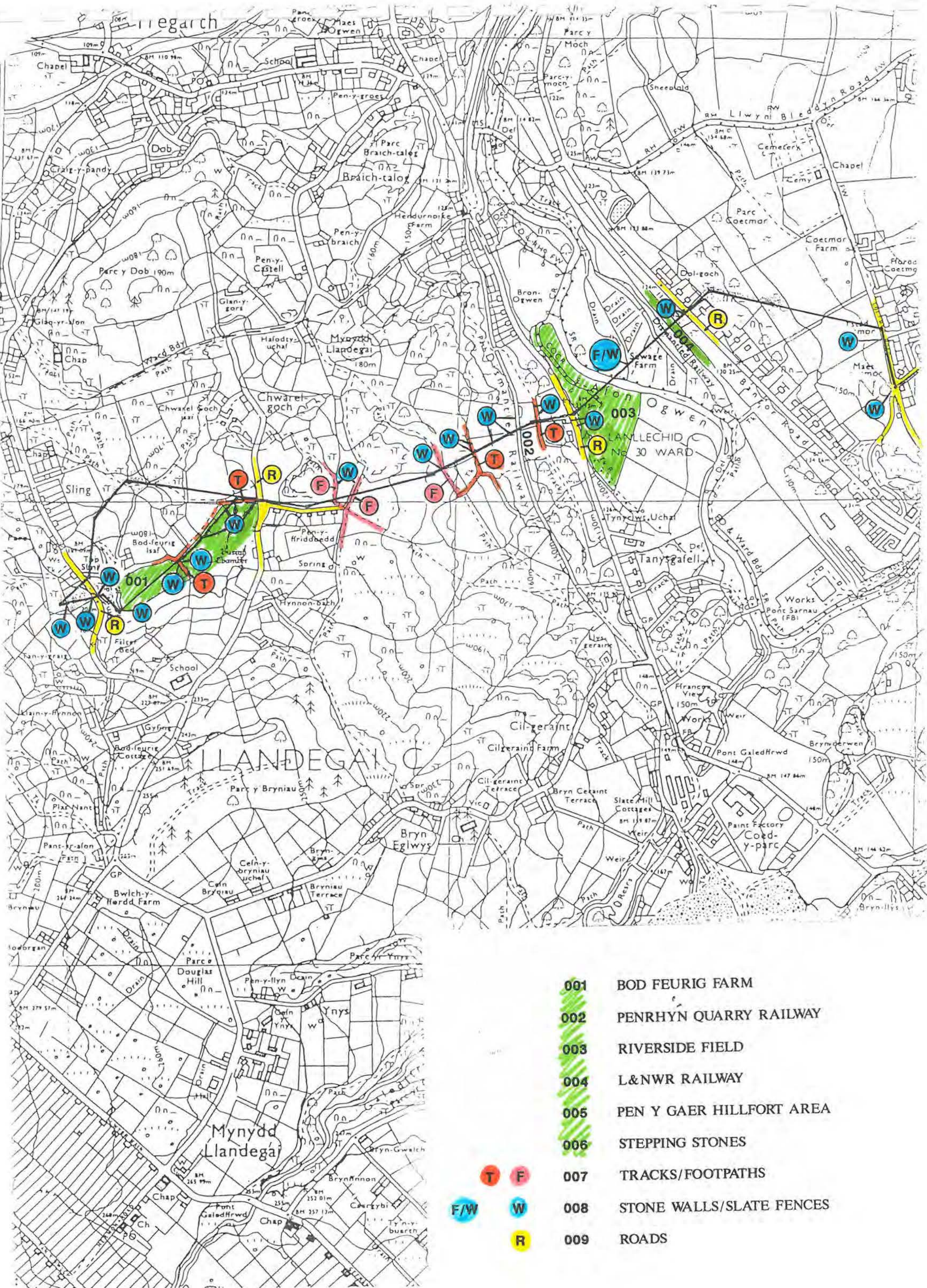
Contractors should note that the boundaries of the areas as shown may not be entirely accurate, and they are advised to check these, and other relevant details, with Manweb before commencing any work.

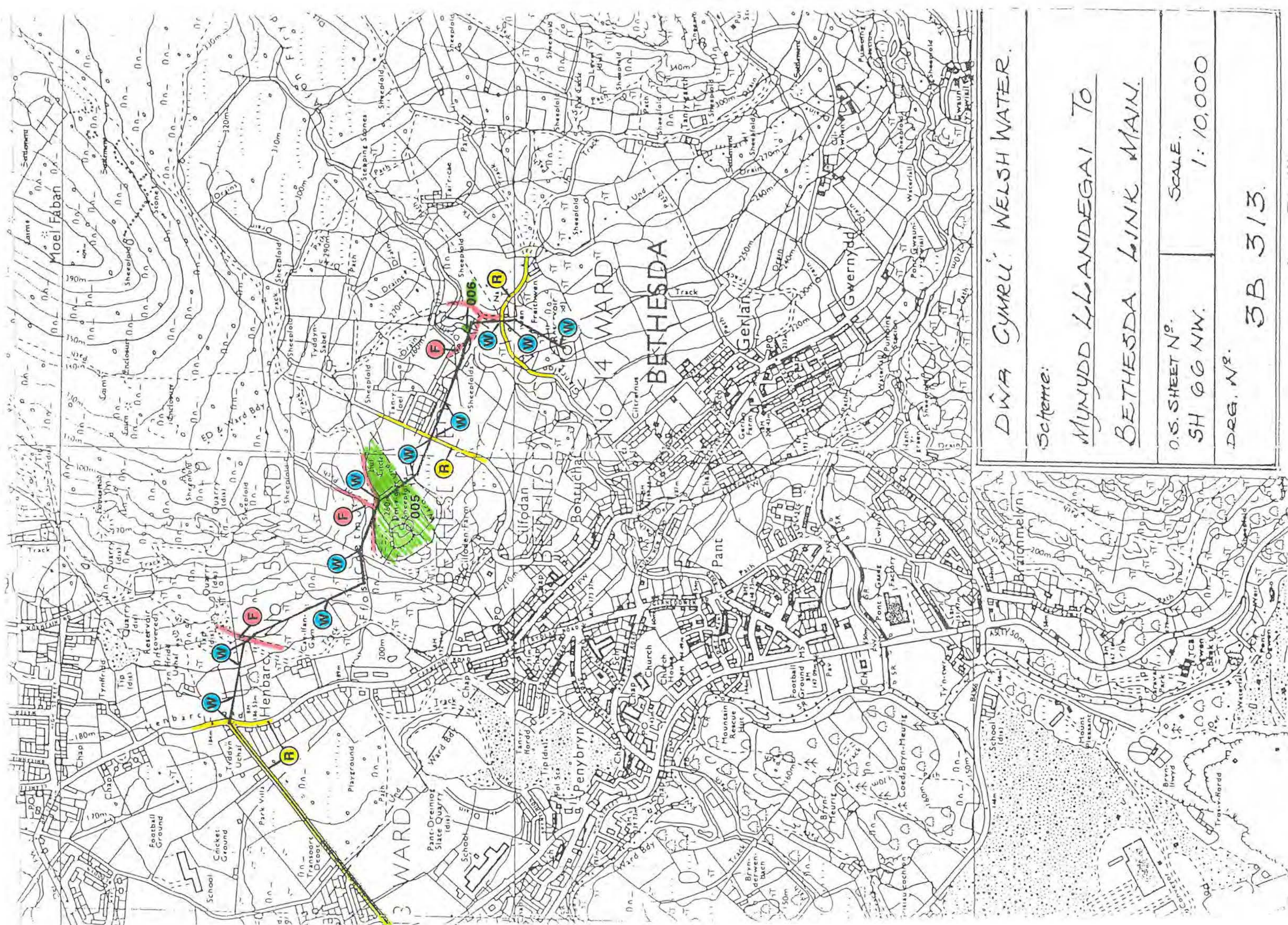
8. OTHER INFORMATION.

Further details or clarification of any aspects of the brief may be obtained from the Gwynedd Sites and Monuments Record at the address below.

Gwynedd Sites and Monuments Record,
Gwynedd Archaeological Trust,
Garth Road,
BANGOR,
Gwynedd
LL57 2SE

Tel: (0248) 370926
Fax (0248) 370925





DŴR CYMRU' WELSH WATER.

Scheme:

Mynydd Llandegai To

BETHESDA LINK MAIN.

O.S. SHEET N^o.

SCALE.

SH 66 NW.

1:10,000

DEG. N^o.

3B 313.