

A470 CARDIFF TO GLAN CONWY TRUNK ROAD: GELLIGEMLYN IMPROVEMENT

INITIAL ARCHAEOLOGICAL ASSESSMENT (G1644)

Report number : 400



Prepared for

HYDER

DECEMBER 2000

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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By

David Hopewell

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1. INTRODUCTION

Gwynedd Council Highways and Engineering Department is proposing to widen and improve approximately 3 km of the A470 at Gelli-gemlyn, running from a point close to Bryn-cemlyn (SH725202) to a point just to the south of Maes-mawr (SH 728233) as part of the Cardiff to Glan Conwy trunk road improvement scheme.

Gwynedd Archaeological Trust (Contracts Section) has been contracted by Hyder to carry out an archaeological assessment of the proposed improvements. The proposed route broadly follows the existing A470, but where necessary it runs on an improved alignment.

The assessment considers a defined area of interest as identified by Hyder which consists of a strip of land some 1Km wide along the length of the proposed improvements.

2. ASSESSMENT BRIEF

2.1 Brief Requirements

A report was requested from Gwynedd Archaeological Trust, to assess the likely archaeological impact of the proposals and to recommend mitigatory measures. The requirement was for a desk-top survey and field search of the corridor of interest in order to assess the impact of the proposals on the archaeological and heritage features within the road corridor and close enough to it to be affected. The importance and condition of known archaeological remains were to be assessed and any other areas of archaeological interest were to be identified. Measures to mitigate the effects of the road scheme on the archaeological features were to be recommended. The assessment was to be carried out in accordance with Volume 11 of the *Design Manual for Roads and Bridges (DMRB)* 1993 revised August 1994.

Gwynedd Archaeological Trust's proposals for fulfilling these requirements were, briefly, as follows:

- a) to identify and record the cultural heritage of the area to be affected by the proposals;
- b) to evaluate the importance of what was identified (both as a cultural landscape and as the individual items which make up that landscape); and
- c) to recommend ways in which damage to the cultural heritage can be avoided or minimised.

This report constitutes Stage 1 (initial identification of archaeological constraints) and Stage 2 (desktop assessment and field walkover, initial report and recommendations) as set out in Volume 11 of the *Design Manual for Roads and Bridges (DMRB)* 1993 revised August 1994, Section 3 Part 2 paragraphs 8.3 –8.23. Stage 3 consists of field evaluation; the present document makes recommendations for field evaluation where appropriate. Where further evaluation is necessary, and until it has been carried out, it is not possible to make recommendations for mitigation. The work has also been carried out in accordance with the Institute of Field Archaeologists *Standard and Guidance for Archaeological Desk-Based Assessments*.

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 and reference works - see bibliography) were also consulted in the University of Wales, Bangor library and the County archives at Dolgellau.

3.2 Field Search

The field search was undertaken during November 2000. The whole length of the route was walked, and relevant parts of the rest of the corridor were either walked or observed from neighbouring fields and paths. Conditions were not ideal as the fieldwork was carried out during one of the wettest periods since meteorological records began. Flooding had subsided on the fields alongside the Mawddach but all areas were saturated after long periods of rain. The poor conditions slowed the fieldwork down but did not significantly affect the results.

Sites identified were marked on copies of 1:10 000 Ordnance Survey maps, as accurately as possible without surveying. Notes were made, assessing and describing each site and photographs were taken of all potential sites identified.

3.3 Report

All available information was collated, and transferred on to a single set of maps at a scale of 1:10,000 for convenience. 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, for ease of reference; 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 *Welsh Office Circular 60/96*.

3.4 Categories

The categories listed below follow the guidelines given in the Volume 11 of the *Design Manual for Roads and Bridges (DMRB)* 1993 revised August 1994, Section 3, Part 2, Paragraph 3.4. The allocation of a site to a category defines the importance of the archaeological resource of that site.

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.

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 judged by Cadw to 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 road construction.

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, basic recording, either in advance of, or during road construction 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 and evaluation there should be no sites remaining in this category.

3.5 Definition of Impact

The area of direct impact was defined by the drawing of the proposed improvements provided by Hyder (dated March 2000, no drawing number)

The impact has been defined as none, slight, likely or considerable as follows:

None: There is no improvement or construction impact on this particular site. (Sites identified as of particular importance are, where possible, avoided by the improvement proposals. Such sites have been identified in the tables).

Slight: This has generally been used where the impact is marginal and would not by the nature of the site cause irreversible damage to the remainder of the feature, *e.g.* a boundary or a track at right angles to the A470.

Likely: In some instances the site in question would not fall within the widened section of road but would fall within the construction area and therefore may subject to its nature be removed or damaged.

Considerable: The total removal of a feature or its partial removal which would effectively destroy the remainder of the site.

3.6 Definition of Mitigatory Recommendations

Where a site is affected by the proposed improvement, mitigation measures will be included in accordance with current Welsh Office Highways Directorate policies for rescue archaeology.

For the purposes of this report the mitigation and rescue archaeology proposals as suggested by Gwynedd Archaeological Trust have been summarised as:

None: No impact, so no requirement for mitigation measures.

Detailed recording: Detailed recording requires a photographic record, surveying and the production of a measured drawing prior to the commencement of the works on site.

Archaeological excavation works may also be required, depending upon the particular feature and the extent and effect of the impact. Some of the sites would require dismantling by hand, to provide a detailed record of the method of construction and in the case of a listed structure, the salvage of materials for re-use and re-building.

Basic recording: Recording by photograph and description requires a photographic record and written description prior to the commencement of works on site. A measured survey may be required in certain cases.

Watching brief: Observation of particular identified features or areas during works in their vicinity. This may be supplemented by detailed or basic recording of exposed layers, structures or sections.

Avoidance: Features which may be affected directly by the scheme, or by the construction of the scheme, should be avoided.

Reinstatement and/or relocation: The feature should be reinstated with archaeological advice and supervision.

4. ARCHAEOLOGICAL FINDINGS AND RECOMMENDATIONS

4.1 Introduction

Archive material consulted during the desktop study provided some dating evidence for known sites, and maps of successive dates made it possible to understand how the landscape had developed. Ordnance Survey map coverage of the area was good. The tithe maps (1846) provided some additional information and included the names of some of the individual fields shown on the 1st edition OS map.

Lists supplied by Cadw: Welsh Historic Monuments gave information about listed buildings and scheduled ancient monuments. There are two listed buildings, but no scheduled ancient monuments within the area of the scheme.

4.2 Topographic description

The A470 and thus the area of interest runs along the side of the steep-sided valley of the Mawddach. The valley floor is only just above the tidal limit of the river standing at less than 10m above sea level. The land to the west of the road rises steeply reaching a height of 150m, between 200 and 300m to the west of the valley floor. The road has been terraced into the lower parts of this slope. The land on the western side of the road consists of plantations of an imported species of *Quercus* interspersed with dense infestations of *Rhododendron ponticum*. The upper parts of the slope consist of either steep scree or conifer plantations. The land above the steep valley sides, towards the edge of the 1km wide area of interest, comprises enclosed upland sheep pasture.

The valley cuts through the Maentwrog formation of silty mudstones and the Ffestiniog flags formation of siltstones and mudstones. The valley follows a fault line from Gelli-gemlyn southwards. The geology of the western side and parts of the eastern side of this part of the valley is characterised by significant intrusions of quartz-microdiorite. To the west of the area of interest are outcrops of Clogau shales. The mineralisation around these deposits contains deposits of zinc, lead, copper and more significantly, gold.

4.3 The Archaeological Background

4.3.1 Prehistoric and Roman (up to 400AD)

There are no known settlement or burial sites of the prehistoric period within the corridor of interest. Most of the land is either steeply sloping or liable to flooding and as such has a low potential for archaeological remains of human settlement or ritual practices.

The hillslopes above the steep valley sides exhibit evidence for a range of prehistoric activity. The earliest evidence of human activity is in the form of a Mesolithic flint blade (PRN 4927) discovered on the eastern side of the valley near Pont Wen.

The most usual evidence for Bronze Age activity in North Wales is in the form of burial cairns which usually contain a stone lined cist grave. Three examples of this monument type (PRNs 6216, 5135 and 3931) can be seen below Cefn Coch, about 700m to the west of the area of interest.

Foel Fanner hillfort PRN (4750) provides the most visible evidence of Iron Age activity. The site stands 0.5 km to the east of the area of interest and is the remains of a defended settlement that acted as a focus for the smaller settlements in the area such as the hut circles below Cefn Coch (PRNs 3932 and 5176) and the hut circle on the eastern slopes of the valley.

There are no known Roman sites within the corridor; the nearest site of this period is the road between the forts at Brithdir and Tomen-y-mur 4km to the east. The occupation of the Iron Age sites in the area may well have continued into the Roman period.

4.3.2 Medieval (400AD – 1485 AD)

The study area lies within the Medieval cantref of Ardudwy in the commote of Ardudwy is Artro, and formed part of the Medieval township of Llanelltyd. The surviving traces of medieval settlement are characterised by the presence of rectangular long hut platforms. One of these has been recorded within the study area at Tyddyn-bach (PRN 6208). Further examples stand below the Cefn-coch ridge (PRNs 3926 and 5200).

4.3.3 Post-Medieval and later (1485 AD to the present day)

Pennant recorded, during his Tours of Wales in 1781, that the sides of the hills in the 'very contracted' part of the valley to the south of Dolymelynlyn were 'finely covered with wood, almost to the top'.

The later history of much of this part of the Mawddach valley is bound to that of the Vaughan family and the Nannau estate (Kirkby Wyn Cato 1989). The major house and grounds in the northern part of the valley was Dolmelynlyn which stands 800 m to the north of the area of interest. The house dates from the 16th century although it has been much extended since that time. The house was sold by the Vaughans in 1796 to W.A. Madocks. A later owner Charles Williams purchased the Berth-lwyd estate extending the Dolmelynlyn estate into the northern part of the study area (Cadw 1998). The estate was acquired by the National Trust in 1936.

The other higher status house in the area, Gelli-gemlyn, was recorded as belonging to Owen Jones Ellis Nanney Esq. in the 1846 tithe schedule. The fridd which covers most of the northern part of the west side of the valley in the area of interest was, at the end of the 19th century, largely open. Woodlands were only indicated between Gelli-gemlyn and Bryn-cemlyn on the 1st edition 6" OS map. A complex network of paths is shown in this area, perhaps suggesting a degree of landscaping.

The slopes on the western side of the road are less steep at the southern end of the area of interest. This area is not wooded and represents a typical area of rough grazing. The upper slopes on the western side of the valley display similar characteristics. The Grade II listed former farmhouse and byre at Cae-mawr in this area is a good example of a 17th century vernacular domestic building of a type associated with upland farming.

4.3.4 Industry

The most significant event to occur in the Mawddach valley in post-Medieval times was the discovery of gold in the lead mines of the area (Hall 1988). Gold was initially noticed in a jig at Cwm-heisian mine, several km to the north of the study area in 1843 but initial attempts to attract investors were unsuccessful. The American gold rush of 1849, however, whetted the appetite of the stock market for British gold. Several mines in Meirionnydd produced a significant amount of gold but fabulous fortunes were not instantly forthcoming and the bubble burst amidst accusations of fraud.

There was, however, still potential in the Meirionnydd gold field and it was recognised that high-grade ore had been produced at Dolfrwynog, Prince of Wales and Clogau mines. In 1857/58 T.A. Readwin and William Williams of Bryntirion bought up the share capital of Vigra and Clogau mines in order to prospect for copper. They also restarted work on an adit on the St David's lode. Visible gold was encountered within a year. Gold production began in earnest in 1861 and high-grade ore was soon encountered. Production rose to a peak in 1862 with 320 ounces per fortnight being produced. This precipitated a scramble for shares and a reawakening of interest in Welsh gold. Unfortunately a huge investment in new machinery designed to process large amounts of quartz failed to produce a good return and by 1870 gold production had ceased.

T.A. Readwin started work at Gwynfynydd mine in the 1880s but a lack of funds resulted in the mine being taken over by William Pritchard Morgan. A rich lode was discovered in 1887 and the mine became very successful. Clogau was also reopened and was eventually acquired by a group of local

businessmen and again began to produce a good supply of gold. Both mines were taken over by Godfrey Issacs and his associates in the 1890s and in 1904 a record 20,000 ounces of gold was produced. At this time over 150 men were employed in the mines. Production again fell after 1907 and in 1916 the last mine had closed. Sporadic attempts at mining have occurred since but gold production has ceased to be a major factor in the economy of the area.

The majority of the above activity occurred to the west of the Mawddach valley. Part of one small mine, Cae-mawr, falls within the area of interest (Crew and Latham 1984). The Mine was worked by Readwin between 1862 and 1865 and continued to be used intermittently between 1891 and 1895. The only available figure for its output records that 10 tons of quartz yielded 1.35 oz of gold in 1891 (Morrison, 1975). Other trial workings are recorded on the first edition 6" OS map in Fridd Gelli-gemlyn and on the eastern side of the river (PRNs 20883 20900 20890 20884).

One further significant industrial site lies on the eastern side of the river below Coed Dol-y-clochydd. A late 16th century blast furnace was excavated by students from Plas Tan-y-bwlch revealing much new information on the techniques of iron production in this period (Crew and Williams 1986). The site was consolidated after the excavations were completed.

4.4 Conclusions

Much of the area of comprises the steep wooded slopes of the Mawddach valley and the featureless flood plain of the river. There are consequently no known Medieval or earlier settlements or ritual sites close to the road and only scattered sites on the uplands above the valley. More recent sites are mainly associated with the 'Welsh gold rush' of the late 19th century. These sites are again mainly restricted to the upper slopes, away from the road although some smaller trial workings have been recorded on the lower slopes. An archaeologically important 16th century blast furnace survives on the eastern side of the river.

4.5 Existing statutory protection

The following buildings are Grade II listed:

Milepost to the north of Gelli-gemlyn (11 in the Gazetteer).

Former farmhouse at Cae-mawr including attached byre.

There are no Scheduled Ancient Monuments within the area of interest.

5. Gazetteer of Archaeological Sites

This section enumerates those sites which are near enough to the development corridor to be affected by its construction. In practice, this includes all sites recorded during the fieldwork phase of the project. This work intensively examined a corridor, approximately 100m, wide centred on the present road. The supplied plans indicate that the proposed scheme deviates from the present line of the road in several places and these areas were examined in greatest detail. It has been assumed that the improvement works will not affect the eastern bank of the Mawddach river and the river was therefore been taken as the eastern boundary of the corridor. The recommendations are in two parts:

Recommendation for further assessment. Where the works require evaluation before full mitigatory measures can be outlined, the recommendations are for further evaluation, the results of which will allow further mitigation measures to be recommended.

Recommendation for mitigatory measures. Where the information is considered sufficient, mitigatory measures are suggested. The recommendations will only apply if the site is to be disturbed by the proposed construction.

The supplied plans indicate and it has been assumed that no occupied dwellings will be affected by the scheme and all such buildings have been allocated an impact rating of *none*.

1. Bryn-cemlyn house and terraced gardens SH72922288

Category: B Impact: None

House, buildings and terraced gardens probably dating from the 19th century stand between Bryn-cemlyn house and the Afon Mawddach. The gardens are shown on the 1889 6" ordnance survey map. The terraces are now overgrown with only occasional remnants of the original planting in the form of a few scattered box and yew bushes.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

2. Bryn-cemlyn generator house SH72952289

Category: B Impact: None

A disused shuttered concrete generator house stands on the banks of the Mawddach below Bryn-cemlyn. The generator house is somewhat dilapidated with broken roof lights and damaged doors. The generating apparatus is largely intact although somewhat rusty. The generator was powered by a simple impulse turbine known as a Pelton wheel. This style of turbine was patented in 1880 by a British engineer, Lester Pelton, working in the Californian gold fields (Crocker, 2000). The device consists of an array of divided cups set around the circumference of a wheel and is driven by a high-pressure jet of water which was directed into the cups. The turbine at Bryn-cemlyn utilises two Pelton wheels set on one axle. A ball regulator stands above the wheels. A belt driven DC dynamo made by Electroconstruction and dated 1927 stands at the opposite end of the generator house along with assorted switch gear and 2 meters.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

3. Dry-stone revetment wall SH73002279

Category: D Impact: Likely

A dry-stone revetment wall, 0.6m high and built from river cobbles runs around the break of slope above the Mawddach and a small tributary stream. The wall is now ruinous.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

4. Pathway SH73002277

Category: D Impact: Likely

A narrow path zigzags down the steep slope beside a stream to the south-west of Bryn Cemlyn. The path is disused, overgrown and visible as a 0.3m wide terrace cut into the side of the valley.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

5. Culvert and trough 72972275

Category: D Impact: Likely

A stream passes beneath the A470 via a narrow culvert. The water is then carried three metres away from the revetment wall in an iron trough.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

6. Dry-stone revetment wall SH73002275

Category: D Impact: Likely

A dry-stone revetment wall, 0.4 to 0.6m high and built from river cobbles runs around the break of slope above the Mawddach and a small tributary stream. Presumably contemporary with site 3, the wall is now ruinous.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

7. The present A470 SH72952280 to SH72342075

Category: D Impact: Considerable

The present road runs along the side of a rough steeply sloping valley and incorporates several impressive lengths of revetment wall, culverts for streams and dry-stone boundary walls.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

8. Path and revetment wall SH73122262

Category: D Impact: Likely

Occasional lengths of dry-stone revetment walls run along the break of slope 20 to 30m from the edge of the A470. The land drops steeply to the river beyond this point and it appears that the revetment formerly supported a narrow footpath that is now difficult to trace.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

9. Boundary SH73142259

Category: D Impact: Slight

The boundary indicated on the 1st edition 6" OS map has been replaced with a wire fence.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None.

10. Footpath SH73162256

Category: D Impact: Likely

A narrow path presumably a continuation of site 9 runs alongside the river.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

11. Cast iron milepost SH73282236

Category: A Impact: Considerable

A grade II listed structure described as 'A late 19th century cast iron milepost with a triangular profile stands on the east side of the A470. The north face reads 'Dolgelley 4' and the south 'Trawsfynydd 8''. The milepost has been severely damaged in recent years, presumably as a result of a road traffic accident. The upper part has been smashed, one side reading 'Dolgelley 4' is detached but still present. The other side is missing.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance and restoration if possible. It may also be possible to remove, restore and sympathetically reinstate this feature. Listed building consent must be obtained before any works commence that are likely to affect this feature.

12. Gelli-gemlyn SH73152227

Category: A Impact: None

Gelli-gemlyn house and gardens

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

13. Culvert and Leat SH73252216

Category: D Impact: Likely

A small stream running down a steep sided valley passes beneath the road via a culvert through 10m high revetment walls. The water is then carried to the river via a 1.5m wide 0.7m deep leat.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

14. Cave SH73272210

Category: D Impact: Likely

A small 5m deep cave can be seen in small cliffs a few metres to the east of the road. The cave appears to be entirely natural, is cut into soft sandy conglomerate, and is much frequented by the local horses. There appear to be no occupation deposits apart from those produced by the horses.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

15. Field wall SH73272210

Category: D Impact: Likely

Dry-stone field wall 1.4m high 0.8m wide.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

16. Garreg-arw house and bridge SH73262192

Category: A Impact: None

Garreg-arw is a stone built 19th century house standing on a narrow strip of land between the A470 and the Mawddach. Local tradition states that the house was built as a fishing lodge by the Nannau estate on land purchased from Gelli-gemlyn. Nannau did not however have fishing rights on the west bank of the river so a narrow footbridge suspended on wires from stone abutments was built. The bridge has been renewed several times most notably when one of the wires snapped in the ?1950s and a forestry worker fell from the bridge and was drowned. The house is now privately owned.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

17. Stone Garage SH73232184

Category: B Impact: None

A stone garage stands to the south of Garreg-arw. This appears to be contemporary with the house and was apparently used to store the coach during fishing trips from the Nannau estate.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

18. Possible rectangular platform SH72942274

Category: E Impact: likely

An alignment of large stones above a stream could be the remains of a rectangular platform. A large amount of scattered stones make this site difficult to assess. It could be the remains of a small square hut or a partly buried long hut.

Recommendation for further assessment: Trial trench/clearance of stone.

Recommendation for mitigatory measures: Detailed recording

19. Track or path SH72802276

Category: C Impact: Likely

A 1m wide path is cut into the slope above the road at this point. Occasional lengths of dry-stone revetment wall can be traced below the path.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording

20. Track or path SH72872278

Category: C Impact: Slight

A 1.5m wide terraced path winds up the slope from the road to join up to path 19. The 1st edition 6" OS map shows this network of paths.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording

21. Dry-stone boundary/field wall SH72842280

Category: D Impact: Slight

A dry-stone wall standing to a height of about 1.2m runs uphill from the A470 parallel to a small stream crossing over the stream about 100m up the slope.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

22. Bridge abutments SH72852280

Category: C Impact: Likely

The remains of narrow bridge abutments can be seen on the banks of the stream. The bridge originally carried a path (site 19). A break in dry-stone wall 21 suggests that all of these features were in use at the same time. The abutment on the north side of the stream is well preserved and is of dry-stone and stands to a height of 1.0m. The abutment is 1.7m wide and cut into the slope. There are no visible remains of the bridge itself but it is probable the stream was crossed by a small wooden structure or a single stone slab.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording

23. Ford SH72832273

Category: D Impact: Likely

Path 19 continues to run parallel to the road in a southerly direction for about 100m before encountering another stream. The path can be seen to cut down the side of the stream which was forded at a natural shelf in the steep slope which may have been enhanced by the addition of a few boulders.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

24. Old track or road SH73232244

Category: E Impact: Considerable

A two metre wide shelf can be seen 15-20m south-west of and running parallel to the A470. This presumably represents an earlier line of the present road. It was not, however, possible to assign a date to this feature.

Recommendation for further assessment: Trial trenching

Recommendation for mitigatory measures: Detailed recording

25. Dry-stone field\boundary wall SH73242240

Category: D Impact: Slight

A ruinous 1.5m high, single skin, dry-stone wall runs up the slope from the road. The wall becomes more substantial about 100m up the slope.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

26. Sub-circular enclosure SH73172242c

Category: E Impact: Likely

A 0.6m high wall of piled stone delineates a sub-circular enclosure c.80m in diameter. The enclosure stands on a naturally level area at the top of the slope above the road. One side of the enclosure appears to be formed by wall 25. The poor preservation of both features and the heavy Rhododendron infestation does not allow any firm conclusions to be drawn about the phasing of the features but it seems likely that both are part of the 19th century landscaping to be seen elsewhere in the woods on this side of the river. The enclosure could, however, be interpreted as being prehistoric or medieval.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording

27. Trackway SH73252235

Category: D Impact: Slight

A 1.5m wide trackway, cut into and terraced out onto the hillside, zigzags down the steep slope above the road.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

28. Leat SH73252224

Category: D Impact: Slight

A 1.0m wide, 0.6m deep, dry leat runs from several hundred metres up the mountain to the road above Gelli-gemlyn. The leat was not traced to its origin. It may represent a disused water supply for the Gelli-gemlyn complex or possibly a drain from mine workings although none are marked in the vicinity on the 1st edition 6" OS map.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

29. Trial SH73272226

Category: C Impact: Considerable

A trial level is cut into a steep rock face a few metres west of the A470 near Gelli-gemlyn. It is probable that this trial was dug in search of gold in the later part of the 19th century. The area is very overgrown with *Rhododendron ponticum* and therefore difficult to assess. Smaller associated workings also appear to have been cut into the rock a few metres to the south.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Clearance of Rhododendron and detailed recording.

30. Trials/quarry scoops SH73262223

Category: C Impact: Considerable

Two mineral or stone workings, now overgrown and rather indistinct, can be seen at the base of the crags. The 1st edition 6" OS map indicates 'Old Levels' in this area although their exact position is not shown. It is probable that these workings were dug in search of gold in the later part of the 19th century. The two workings are small scale the larger being 10m x 10m with little evidence of significant spoil production.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

31. Wall and tanks SH73202217

Category: D Impact: None

A short length of mortared wall on the side of the stream along with a variety of pipes and tanks most of which appear to fairly recent represent the abstraction point for water for the Gelli-gemlyn complex below.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

32. Linear feature SH73252224

Category: D Impact: Considerable

An 80m long linear feature alongside and parallel to the present A470 consisting of a 3.0m wide clearing in the plantation with a 1.0m wide raised area in the centre. The function of the feature is not entirely clear; it superficially resembles a disused track but terminates in a steep impassable drop to the north. In all probability, this feature is modern and associated with the present road or forestry workings.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

33. Trial level SH73222202

Category: C Impact: Considerable

A trial level has been cut 8m into the 45° slope above the road. The trial is 5m wide and a maximum of 10m deep. It is probable that this trial was dug in search of gold in the later part of the 19th century.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

34. Quarry scoop SH73232192

Category: D Impact: Considerable

A shallow 6m x 4m quarry scoop alongside the A470, probably associated with the construction of the road itself.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

35. Trial level SH73162174

Category: C Impact: Considerable

A trial level marked on the 1st edition 6" OS map can still be seen beside the A470. The trial is cut about 20m into the slope and is heavily overgrown with *Rhododendron ponticum*. Spoil heaps and possible further workings lie to the north-west. It is probable that this level was dug in search of gold in the later part of the 19th century.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

36. Dry-stone hut SH73152173

Category: C Impact: Considerable

A crude dry-stone hut built against two massive boulders, stands a few metres to the south-west of site 35 (Trial level). The hut is rectangular with external dimensions of 3m x 4m. The walls stand to a maximum height of 1.7m, the door is in the north wall and the remains of a corrugated iron roof can be seen in the interior. The hut is presumably associated with the nearby trial workings.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

37. Trial levels SH73002170

Category: C Impact: None

Three trial levels have been cut into a rock face at the top of a very steep slope rising at least 50m above the A470. All of the trials have been cut into a vein of quartz presumably in search of gold. Two of the trials were neatly cut into the rock face but abandoned after about 1m. The third continues for 5 or 6m.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

38. Quarry scoops SH73052159

Category: D Impact: Considerable

Two small quarry scoops can be seen just to the west of the A470. These appear to be associated with the construction of the present road but could be earlier.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

39. Path or Trackway SH73022155

Category: D Impact: Likely

A 50m length of 1m wide trackway can be traced running a few metres above the present line of the A470.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

40. Trial shaft SH73012154

Category: C Impact: Likely

A trial shaft stands to the north-west of the road. The shaft was following a quartz vein and is visible as vertical sided 4m x 5m oval hollow in the woodland cut to a depth of 1.5m.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

41. Dry-stone boundary wall SH72932150

Category: D Impact: Slight

A dry-stone wall encloses the abandoned homestead of Tan-yr-allt (site 42) and stands to a maximum height of 1.8m.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

42. Tan-yr-allt SH72942150

Category: B Impact: Likely

The homestead of Tan-yr-allt is listed on the 1846 tithe schedule and the building is shown on the map suggesting that it was in use at the time. The buildings were, however not shown on the 1st edition 6" O S map and had therefore presumably been abandoned by the 1880s. The remains of a substantially constructed single storey building can be seen within planted woodland on a level area above the A470. The building has external dimensions of 14m x 6m and is divided into two unequal parts by a stone wall with no connecting doorway. The gables stand to a height of 2m and are 1m thick. There is no obvious surviving fireplace. The building is very overgrown and difficult to assess but must date from the 18th century or earlier. Subcircular terraced enclosures stand to the south and south-east.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Clearance and detailed recording.

43. Cairn SH72962150

Category: E Impact: Likely

A subcircular 5m diameter cairn standing to a height of 1.5m stands just to the east of Tan-yr-allt. The cairn, given its proximity to the nearby farm buildings, is most likely to be a result of field clearance. The site could also be interpreted as a Bronze Age burial mound.

Recommendation for further assessment: Trial trench if the site is to be disturbed.

Recommendation for mitigatory measures: Detailed Recording.

44. Trackway/earlier line of the road SH73002149

Category: C Impact: Considerable

A 70m length of 2m wide overgrown trackway runs along the slope just to the west of the present A470.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

45. Track to Tan-yr-allt SH72922142

Category: C Impact: Considerable

A 2m wide track runs from Tan-yr-allt to the vicinity of the modern A470. The track is roughly metalled with a layer of loose small stones

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording

46 and 47. Trial workings and spoil heaps SH72892139 and SH72882137

Category: C Impact: Likely

Two overgrown trial workings have been cut into the base of the slope to the north-west of the woodlands around Tan-yr-allt. Both are very overgrown and inaccessible.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Clearance of undergrowth and detailed recording.

48. Trial workings SH72732123

Category: C Impact: Likely

A series of small workings can be seen at the base of the slope a few metres to the north-west of the A470. A small trial level has also been cut into the steep slope above the other workings.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording

49. Field boundary and track. SH72652114

Category: D Impact: Slight

A dry-stone field boundary and disused track run from the A470 to Maes-mawr

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

50. Dry-stone field boundary SH72432076

Category: D Impact: Considerable

A dry-stone field boundary runs uphill from the edge of the cutting for the road. It stands to a height of 1.0m and is ruinous in places.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

51. Earlier line of the A470 SH72502075

Category: D Impact: None

An earlier line of the road survives as a terrace on the slope between the A470 and the flood plain of the Mawddach.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoidance.

52. Barn SH72662108

Category: C Impact: Considerable

A 19th century mortared stone barn with a modern corrugated iron roof stands just to the south-east of the A470.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

53. Dry-stone field wall SH72752115

Category: D Impact: Considerable

The base of a dry-stone field wall, marked by a 1.5m wide rubble spread, runs down the slope between the A470 and the flood plain of the Mawddach.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

54. Dry-stone field wall and field clearance SH72852127

Category: D Impact: Considerable

The edge of the woodland to the south-east of the road is marked by a ruined wall built from river cobbles. The wall is hidden in places by field clearance cairns.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

5. SUMMARY OF RECOMMENDATIONS

5.1 Further assessment work

This section summarises the work which is recommended to evaluate those archaeological remains whose status and extent are not yet established, *i.e.* sites in Category E. They will be reclassified and suitable mitigatory measures suggested following evaluation.

Category E

18. Possible rectangular platform SH72942274	<i>Trial trenching/clearance of stone</i>
38. Old track or road SH73232244	<i>Trial trenching</i>
39. Sub-circular enclosure SH73172242c	<i>Clearance of undergrowth and possible trial trenching if the site is to be disturbed</i>
46. Cairn SH72962150	<i>Trial trench if the site is to be disturbed</i>

5.2. Mitigatory measures

This section lists the remaining sites according to category. The categorisation attempts to quantify the importance of the archaeological resource, as suggested in the *Design Manual for Roads and Bridges* Volume 11, Section 3, Part 2.

Category A – National Importance

11. Cast iron milepost SH73282236	<i>Avoidance and restoration if possible. It may also be possible to remove, restore and sympathetically reinstate this feature. Listed building consent must be obtained before any works commence that are likely to affect this feature.</i>
12. Gelli-gemlyn SH73152227	<i>Avoidance.</i>
16. Garreg-arw house and bridge SH73262192	<i>Avoidance</i>

Category B – Regional Importance

1. Bryn-cemlyn house and terraced gardens SH72922288	<i>Avoidance.</i>
2. Bryn-cemlyn generator house SH72952289	<i>Avoidance.</i>
17. Stone Garage SH73232184	<i>Avoidance.</i>
42. Tan-yr-allt SH72942150	<i>Clearance and detailed recording.</i>

Category C – Local Importance

19. Track or path SH72802276	<i>Detailed recording</i>
20. Track or path SH72872278	<i>Detailed recording</i>
22. Bridge abutments SH72852280	<i>Detailed recording</i>
29. Trial SH73272226	<i>Clearance of Rhododendron and detailed recording.</i>
30. Trials/quarry scoops SH73262223	<i>Detailed recording</i>
33. Trial level SH73222202	<i>Detailed recording</i>
35. Trial level SH73162174	<i>Detailed recording</i>
36. Dry-stone hut SH73152173:	<i>Detailed recording</i>

40. Trial shaft SH73012154	<i>Detailed recording</i>
44. Trackway/earlier line of the road SH73002149	<i>Detailed recording</i>
45. Track to Tan-yr-allt SH72922142	<i>Detailed recording</i>
46 and 47 Trial workings and spoil heaps SH72892139 and SH72882137	<i>Clearance of undergrowth and detailed recording</i>
48. Trial workings SH72732123	<i>Detailed recording</i>
52. Barn SH72662108	<i>Detailed recording</i>

Category D – Minor and damaged sites

3. Dry-stone revetment wall SH73002279	<i>Basic recording</i>
4. Pathway SH73002277	<i>Basic recording</i>
5. Culvert and trough SH72972275	<i>Basic recording</i>
6. Dry-stone revetment wall SH73002275	<i>Basic recording</i>
7. The present A470 SH72952280 to SH72342075	<i>Basic recording</i>
8. Path and revetment wall SH73122262	<i>Basic recording</i>
9. Boundary SH73142259	<i>None</i>
10. Footpath SH73162256	<i>Basic recording</i>
13. Culvert and Leat SH73252216	<i>Basic recording</i>
14. Cave SH73272210	<i>Basic recording</i>
15. Field wall SH73272210	<i>Basic recording</i>
21. Dry-stone boundary/field wall SH72842280	<i>Basic recording</i>
23. Ford SH72832273	<i>Basic recording</i>
25. Dry-stone field/boundary wall SH73242240	<i>Basic recording</i>
27. Trackway SH73252235	<i>Basic recording</i>
28. Leat SH73252224	<i>Basic recording</i>
31. Wall and tanks SH73202217	<i>Avoidance</i>
32. Linear feature SH73252224	<i>Basic recording</i>
34. Quarry scoop SH73232192	<i>Basic recording</i>
37. Trial levels SH73002170	<i>Avoidance</i>
38. Quarry scoops SH73052159	<i>Basic recording</i>
39. Path or Trackway SH73022155	<i>Basic recording</i>
41. Dry-stone boundary wall SH72932150	<i>Avoidance</i>
49. Field boundary and track. SH72652114	<i>Basic recording</i>
50. Dry-stone field boundary SH72432076	<i>Basic recording</i>
51. Earlier line of the A470 SH72502075	<i>Avoidance</i>
53. Dry-stone field wall SH72752115	<i>Basic recording</i>
54. Dry-stone field wall and field clearance SH72852127	<i>Basic recording</i>

A continuous watching brief should be maintained along the whole route during relevant stages of the work.

6. NON-TECHNICAL SUMMARY

An initial archaeological assessment was carried out along the line of the proposed road, consisting of a desktop study and field walkover. The assessment was carried out in accordance with the Design Manual for Roads and Bridges Volume 11, Section 3, Part 2, Cultural Heritage, June 1993 (incorporating amendment number 1, August 1994).

The desktop study included examination of those records which make up the Gwynedd Sites and Monuments Record, held at Gwynedd Archaeological Trust. In addition, maps and archives were examined at the County Archives at Dolgellau, in the archives of the University of Wales, Bangor.

The field walk involved one person walking the entire route of the proposed road improvement, when sites discovered from the desktop study were examined and the location of additional sites noted, and a written description made of each. All of the sites were allocated to one of five categories (ranging from A to E) and mitigation proposals were made for each.

A total of 54 sites were recorded, some of which lie just off the proposed route, but which were included because of their importance or because they lie immediately against the proposed road corridor. Sites identified within or close to the route corridor are predominantly from the Modern and Industrial period although three possible earlier sites, two prehistoric (26 and 46) and one Medieval (18) were identified.

3 sites were allocated to Category A (*i.e.* national importance).

4 sites were allocated to Category B (regional importance).

15 sites were allocated to Category C (local importance).

29 sites were allocated to Category D (minor or damaged sites).

4 sites were allocated to Category E (sites needing further investigation).

Only one of the category A sites, site 11 the grade II listed cast iron milepost, appears to be in the area that will be directly affected by the road improvements within the road corridor. This site is currently in a poor condition. It may be necessary to sympathetically restore and relocate the feature. The other category A sites are occupied dwellings and do not appear to be directly affected.

Potentially the most significant sites relate to the previous use of the wooded slopes on the west of the road. The abandoned homestead of Tan-yr-allt (site 42) dates from the 18th century or earlier and the land around it is a good example of relict farming landscape that has not been improved during the 20th century, having been preserved in a broad-leaved plantation. Any features that are to be disturbed in this area require detailed recording. A possible Bronze Age burial cairn (site 46) stands within this area and requires further evaluation.

The woodlands to the west and north-west of Gelli-gemlyn contain numerous paths, terraces, walls and other features. Some of the more substantial features such as the bridge abutments (site 22) suggest that the landowners at Gelli-gemlyn carried out some landscaping, possibly viewing this area as parkland as opposed to predominantly agricultural land. Other paths and tracks (e.g. site 38) could represent an, as yet undated, earlier line of the road along the valley. Parts of this area will be affected by the improvements and all features should be recorded in order to preserve a record of the earlier land use in this area.

Trial mineral workings most of which were probably excavated in search of gold at the end of the 19th century are scattered along the sides of the valley. Some sites are minor and only require basic recording. The larger excavations such as sites 29, 30 and 35 should be more closely examined in order to record both the mineralisation and the mining techniques employed in the workings. This could allow a rough date to be allocated to the trials and some record to be made of the expected products.

There remains the possibility of further discoveries once ground-disturbance commences. It is imperative, therefore, that an adequate watching brief be maintained during the ground disturbance and that provision be made for the adequate recording of any sites which are identified at this late stage in the development.

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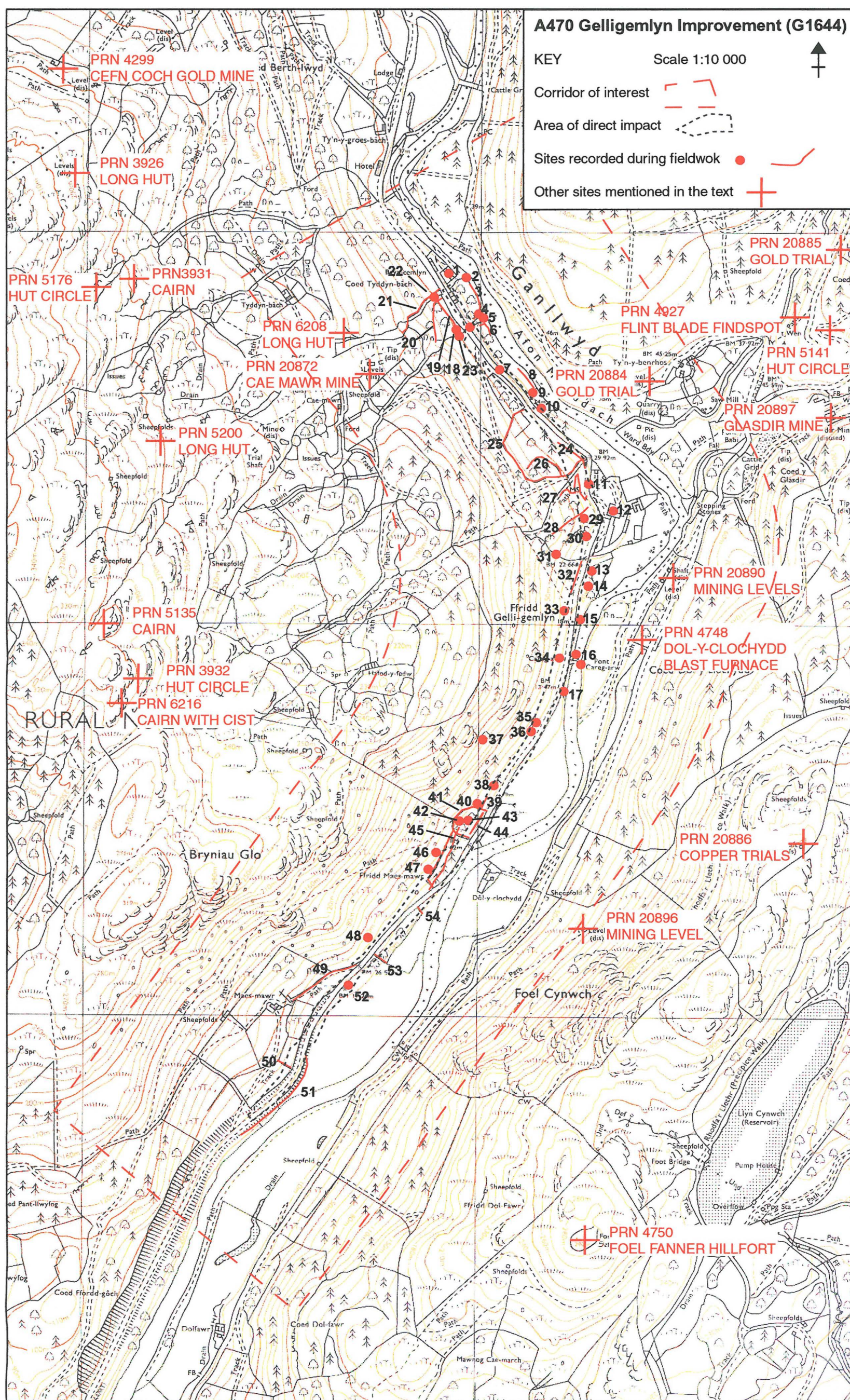




Plate 1. Cast iron milepost (site 11)



Plate 2. Gelli-gemlyn (site 12)