

ARCHAEOLOGICAL ASSESSMENT OF A499 LLANWNDA-ABERSOCH IMPROVEMENT

ABERDESACH-LLANAELHAEARN

REPORT NO. 403

Prepared for
Gwynedd Council

February 2001

by
Jane Kenney



Ymddiriedolaeth Archaeolegol Gwynedd

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1. INTRODUCTION

Gwynedd Council Highways and Engineering Department is proposing to widen and improve approximately 8.1 km of the A499, running from Aberdesach to Llanaelhaearn, as part of the Llanwmda to Abersoch improvement scheme.

The proposals are to be accompanied by an Environmental Statement, and Gwynedd Archaeological Trust was contracted by Gwynedd County Council to undertake an archaeological assessment of the route, to be presented as part of the Environmental Statement.

An archaeological assessment was carried out in March 1998. The basic 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 evaluated, and areas of archaeological potential and new sites identified. Measures to mitigate the effects of the road scheme on the archaeological resource were suggested.

Following the assessment report (GAT Report No. 298) Gwynedd Council asked Gwynedd Archaeological Trust to prepare a project design for the archaeological evaluation of the scheme. The present report includes both the assessment results and the design for the evaluation phase, with proposals for mitigation work.

2. METHODOLOGY

A full archaeological programme involves two principal phases: an assessment, which takes place prior to the granting of planning permission, or Public Inquiry; and mitigation work. The purpose of the assessment is to inform the planning process of the impact of the scheme upon the archaeological resource, and to make appropriate mitigatory recommendations. These recommendations would attempt to minimise any impact upon the archaeological resource, although in certain cases they might include a provision for the recording of specific features, or the excavation of sites which would be affected by the scheme.

The aim would be to complete all phases of the assessment prior to any planning decision, but in reality aspects of the field evaluation often have to be carried out after the planning decision has been made.

A full archaeological assessment usually comprises six phases:

- i. Desktop study
- ii. Field walk
- iii. Initial report
- iv. Field evaluation
- v. Draft final report
- vi. Final report

The first three phases of the assessment have been carried out, and this document details the evaluation work, and summarises the mitigation work. Full mitigation measures can, however, only be set following the completion of the evaluation phase.

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). This identified sites which require further field evaluation.

The purpose of the field evaluation phase is to investigate those sites and areas, identified in the assessment, which are believed to be of archaeological interest, but which cannot be interpreted from initial assessment techniques. It is defined in *Standard and Guidance for Archaeological Field Evaluations* (IFA 1994) as "a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land or underwater. If such archaeological remains are present Field Evaluation defines their character and extent, and relative quality; and it enables an assessment of their worth in a local, regional, national or international context as appropriate".

2.1 Desk-top Study

The desk-top study involved the consultation of maps, computer records, written records and reference works, which make up the Sites and Monuments Record. Records (including early Ordnance Survey maps, tithe maps and schedules and reference works - see bibliography) were also consulted in the library and the archives of the University College of North Wales, Bangor, and the County archives at Caernarfon. Aerial photographs held by Gwynedd Council were inspected.

2.2 Field Search

The fieldwork for the initial assessment was undertaken between 16th and 25th March 1998 by a member of Trust staff. It involved one person walking the entire route of the proposed new alignment. Sites discovered from the desktop study were examined, the locations of additional sites noted, and a written description made of each.

Conditions were generally good for fieldwalking; most of the land being under pasture and the weather being mainly dry. Recent heavy rain had caused some flooding and waterlogging in low-lying areas. The preferred line was examined in detail, and the condition of the sites outside the line was recorded. Light and visibility were good, and the whole of the proposed route was walked.

Wherever possible, farmers were consulted in case they held any information pertaining to their land.

Sites identified were marked on 1:10,000 maps as accurately as possible without surveying. Written descriptions were made of all sites and a photographic record of the more important features was produced.

In order to update the assessment for the current report the sites were revisited in the field. Their condition was checked to ensure that their status had not changed in the period between the assessment and the present report. This revision survey was carried out on 20th February 2001, and involved a rapid visual survey of the sites, and a photographic record of any sites that had been altered.

2.3 Report

All information was transferred onto maps at a scale of 1:1,000 for ease of reference. The sites were then assessed and allocated to the categories listed below; 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 Welsh Office Circular 60/96 *Planning and the Historic Environment: Archaeology*.

2.3.1 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 that would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

Sites that 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 that 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 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.

2.3.2 Definition of Impact

The impact of the road development on each site was estimated. The impact is defined as *none, slight, unlikely, likely, significant, considerable or unknown* as follows:

None:

There is no construction impact on this particular site.

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.* part of a trackway or field bank.

Unlikely:

This category indicates sites that fall within the band of interest but are unlikely to be directly affected. This includes sites such as standing and occupied buildings at the margins of the band of interest.

Likely:

In some instances the site in question would not fall within the area to be directly affected by the proposed road, but would fall within the construction area and therefore may, subject to its nature, be removed or damaged.

Significant:

The partial removal of a site affecting its overall integrity. Sites falling into this category may be linear features such as roads or tramways where the removal of part of the feature could make overall interpretation problematic.

Considerable:

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

Unknown:

This is used when the location of the site is unknown, but thought to be in the vicinity of the proposed road.

2.3.3 Definition of Mitigatory Recommendations

The alignment of the proposed improvement avoids, as far as possible, sites of archaeological interest. Where a site is affected, mitigation measures will be included in accordance with current National Assembly for Wales 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.

Avoid

Where possible, the site should be excluded from the proposed road improvement works. This is used where the site is of high archaeological value, and so should be preserved, or where there appears to be no need to have an impact upon the site. However, other (e.g. engineering) factors may need to override this recommendation for sites of lower archaeological importance, so recording is recommended as an alternative.

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, and limited measured survey where applicable.

Watching brief:

At the commencement of the improvement works on site, all sites affected by the works would need to be observed at relevant stages of construction.

2.4 GAT personnel involved in the project

The initial assessment survey was carried out by Dave Hopewell, and the assessment report, completed in April 1998, was written by Dave Hopewell and Anne Richards. The resurvey, in February 2001, to check site status, was carried out by Jane Kenney. A preliminary report on the design of the field evaluation work was written by Andrew Davidson in July 1998, and Jane Kenney combined the assessment and evaluation reports to produce the present document, completed 22nd February 2001.

3. THE ARCHAEOLOGICAL BACKGROUND

3.1 Topography

The primary topographic elements are the narrow strip of coastal land between the sea and the higher ground to the east. The road runs along the coastal strip, and in places divides the uplands on the east from the lower lying coastal farmland on the west. The lower land is primarily divided into pasture fields with accompanying farmsteads. East of the road the land rises steeply towards the crags of Gryn Goch, Gryn Ddu and Moel Pen-llechog, where two granite quarries have been cut into the cliffs.

Three distinct types of field pattern are visible along the coastal strip: a few examples of small, regular grid fields are visible at the west end of the corridor below Moel Pen-llechog and the granite quarry on Gryn Ddu. These patterns are usually associated with late enclosure, and are here presumably linked

with quarry workers' holdings. The majority of the area is divided into medium sized, regular fields, which are typical of 18th and 19th century improvements. Some of the fields have been combined in more recent years to create larger fields. Elsewhere, notably at the foot of the slope of Gym Ddu, there are the remains of an older, irregular system of field enclosures, many of which are unimproved. This same area is dominated by industrial archaeological remains.

There are two nucleated settlements within the study area: Clynnog and Llanaelhaearn, both of which have ecclesiastical origins in the Early Medieval period, and two later concentrations of housing at Aberdesach and Gyrn Goch.

3.2 The Prehistoric period

Settlements and burial sites of the prehistoric period are known close to the corridor of interest, although not within it. On the lower lying ground of the coastal belt lie two megalithic chambered tombs of the Neolithic period. One is located on a ridge top near Bachwen to the south-west of Clynnog Fawr at SH40764947 (PRN 101 and SAM Cn 8). It consists of a rectangular chamber formed by three original and one modern upright, with a roughly triangular cap stone of c. 3m x 2m, the upper surface of which is covered in artificial cup marks. On a slight mound to the south-east of Aberdesach at SH43005107 is the Penarth burial chamber (PRN 199 and SAM Cn 78). This is composed of the remains of a rectangular chamber 1.6m long formed by three supporters, and a fallen cap stone measuring 3.2m x 2.4m x up to 0.85m thick.

To the west of Penarth burial chamber is a cairn (PRN 197) occupying a small mound 0.5m high and 7m diameter. In 1910 a stone cist was found in the centre containing the fragmentary bones of a child and sherds of Prehistoric Beaker ware. Several mounds of burnt stone have been found in the area, signifying activity within the later Bronze Age (2000 – 1000 BC) (PRNs 102, 200 & 1373).

The fragmentary remains of three round huts (PRN 196) are located just to the south of the Penarth burial chamber at SH42775082. These form the only prehistoric settlement remains on the lower ground, but their presence suggests other settlements formerly existed, but that all upstanding traces have been removed during by agricultural practices. Other scattered huts and field systems of the Iron Age exist at several locations in the marginal uplands (e.g. PRN 217 and 604).

3.3 The Roman period

The Roman period is not well represented on the ground, but many of the Iron Age settlements, which abound in the area, are assumed to have continued in occupation throughout the period. The Roman military road from Segontium (Caernarfon) to Pen Llystyn (Bryncir) lay to the east of the Clynnog hills. A hoard of Roman coins has been found to the north of the area of interest near Groeslon.

3.4 The Medieval period

The area was formerly in the medieval commote of Uwch Gwyrfa in the cantref of Arfon. Medieval townships are known to have existed at Pennardd, Clynnog Fawr and Elernion. Medieval parish churches are at Clynnog Fawr and Llanaelhaearn. The location of the commotal centre is uncertain (Bassett & Davies 1977, 71).

Clynnog Fawr was an important ecclesiastical centre during the medieval period. Tradition says St Beuno received the endowment of Clynnog in 616 AD from Cadfan, (Hyde Hall 1952, 214). It developed, like Bangor and Aberdaron, into a Clas, or mother church, and became a place of pilgrimage. Following the conquest, Clynnog became a collegiate church with extensive land holdings, although by the late 15th century many of these had been sold to pay for the building of the new church. This church remains one of the finest parish churches in north-west Wales.

Outside the south-western corner of the church stands a shaft of local granite with a vertical sundial engraved on it (SAM Cn062). It is described as being of Irish type dating from 10th to 12th century. The stone is not in its original position, as it previously stood at Llyn y Gele Farm.

Ffynnon Beuno is located on the outskirts of Clynnog Fawr at SH41324945 and probably dates to the late 15th century (PRN 103). It consists of a stone basin enclosed on three sides by a step with stone benches on the north-east and south-west sides. The roughly dressed and coursed enclosing wall has 18th century coping and other details. It had a reputation for healing as late as the 18th century when patients were dipped in the well and laid overnight on rushes on a tomb in Capel Beuno (Baring-Gould 1908 & Jones 1954).

The church at Llanaelhaearn (a grade II* listed building) has a 12th century nave, a 14th century chancel window and 16th or 17th century transepts, but the whole building was restored in 1892 (Davidson 1997 & PRN 6937). Pennant visited the village and church at Llanaelhaearn during his 18th century tour of Wales, but only commented on the 'fine well, once much frequented for its reputed sanctity' (Pennant 1991, 217). The well is located to the south of Llanaelhaearn at SH38424462 outside the proposed road improvement (PRN 2232). The church and associated well are dedicated to St Aelhaearn, who was closely associated with St Beuno at Clynnog. Two 5th or 6th century inscribed stones are located at Llanaelhaearn (Nash-Williams 1950, 88-89). One roughly hewn pillar stone bears the Latin inscription 'ALORTVS ELMETIACO HICIACET' *Aliortus the Elmetian lies here* commemorating a man who died away from his home in Yorkshire (Nash-Williams 1950, 88 & PRN 1564). It is now mounted on the north wall of the north transept in Llanaelhaearn church. Another pillar stone (PRN 1563) 1m x 0.4m wide, bears the Latin inscription 'ME . LI . TV (C?)'. Other Medieval inscribed stones are located in the churchyard. One has a shallow impression of a rude cross with a long shaft on its east face (PRN 1565), while an igneous boulder incised with a Latin cross is used as a gatepost at the back of the vicarage (PRN 1567). An upright stone 1.3m high standing 35m south-west of the nave is possibly an early medieval gravestone (PRN 1566). Another stone incised with the capital letter 'M' disappeared after reconstruction of the churchyard wall in 1975 (PRN 1568).

A number of ruined houses, which are probably the remains of medieval settlement, lie in the marginal ground east of the road.

3.5 The post medieval period

Many of the buildings on the tithe maps of the 1840s are still present on the modern OS maps, although the names of some have changed. The remains of buildings no longer identified may still be visible on the ground. The 16th century portion of the Grade II Listed Building at Elernion is incorporated in the later house. It belonged to Jones of Werglod Fawr in the early 19th century (Hyde Hall 1952, 216). The St Beuno Inn, now The Coach Inn, above the main road in the centre of Clynnog Fawr is also a Grade II Listed Building. It was a substantial coaching inn with early 17th century origins, which was remodeled in the 19th century, with a south wing added in 1912. Other Grade II Listed Buildings in Clynnog Fawr are catalogued below (section 3.8). Beyond the road corridor the Grade II Listed Building, Tyddyn-hen, lies to the west, and a hovel at Tan-y-Bwlch, a rare surviving example of vernacular peasant construction (grade II*), is found in upper Clynnog.

3.6 Roads

There was a principal route from Caernarfon to Nefyn going through Clynnog Fawr from at least the 13th century which probably followed the same route as the present A499 (Bassett & Davies 1977, 78), and which had formed part of the pilgrim route to Bardsey from Early Medieval times. In 1768 Caernarvonshire Turnpike Trust was formed, and a turnpike road branched off the principal Caernarfon to Tremadog route at Llanwnda going through Clynnog and Llanaelhaearn to Pwllheli, with a toll-gate at Llanaelhaearn (Pritchard 1956). This road opened up the remoter areas of the Lleyn peninsular, and by 1811 there were regular goods services to Pwllheli and by 1822 a coach to accommodate the 'gentlemen and clergy of Lleyn and Evionydd' was running between Bangor, Caernarfon and Pwllheli (Dodd 1925, 145-146). By 1840 the toll-gate at Llanaelhaearn was replaced by the two gates at Clynnog and Maes Mawr, near Pwllheli (Pritchard 1956, 69). The Trust remained in power until 1882.

3.7 Industrial Background

A manganese pit and a disused quarry were shown on the 1900 1:2500 OS map close to the road, just south of Clynnog Fawr. Two lime kilns were located near the coast to the north of Clynnog Fawr with a third on the coast to the south-west (OS 1:10000).

Several small granite sett quarries operated to the south-west of Clynnog from SH393465 to SH400471 between 1864 and 1947. Four small quarries amalgamated in 1903 to become Tan-y-Graig. Both Tan-y-Graig and Tyddyn Hywel, to the east, started with short 2 foot gauge incline railways down to the road, but these were later extended to form longer systems with four inclines connecting the quarries to two piers on the coast (Boyd 1981, 264-268). By 1916 all the quarries were in common ownership, and the railways were replaced by an aerial ropeway to a new pier (Bradley 1992, 409).

3.8 Existing statutory protection

Two scheduled ancient monuments lie within the corridor:

Cn 62 10th century sundial in Clynnog Churchyard (Site number 82 in the gazetteer)

Cn 91 Ffynnon Beuno (Site number 79 in the Gazetteer)

Listed buildings

Grade I

Eglwys Sant Beuno, 15th century church, 16th century chapel (82).

Grade II*

Ffynnon Beuno, 18th century walls surrounding earlier well (79).

Grade II

Bod Cybi, small village house associated with the poet Eben Fardd, Clynnog Fawr (83).

Bodfasarn, 17th century former inn and adjoining wing at Clynnog Fawr (83).

Capel Ebenezer, well preserved Methodist chapel, Clynnog Fawr (83).

Cefngwreichion, typical upland single storey farmhouse of the early 19th century, Clynnog Fawr (85).

The Coach Inn, 17th century in origin, Clynnog Fawr (83).

Cwrt (The Court House), late 17th century house at Clynnog Fawr (83).

Doorway at Lleuar Fawr, Clynnog Fawr (83).

Lychgate to St Beuno churchyard, good example of late medieval lychgate, Clynnog Fawr (82).

Maes Glas, well preserved early 19th century village house, Clynnog Fawr (83).

Post Office, village shop with unaltered mid 19th century shopfront, Clynnog Fawr (83).

Schoolhouse, substantial mid 19th century building, with historical importance, Clynnog Fawr (83).

Sundail in St Beuno churchyard, Clynnog Fawr (82).

Ty Capel, small house in late Georgian tradition, Clynnog Fawr (83).

4. GAZETTEER OF ARCHAEOLOGICAL SITES

This section lists those sites that fall within the development corridor. This inevitably includes a large number of sites that will not be directly affected, such as standing buildings. The recommendations take into account the likely impact of the road and the archaeological importance of the site. However, when the nature of a site cannot be fully interpreted without further work, then field evaluation is recommended so that full mitigation recommendations can be made. 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. All sites can be located by reference to maps 1 to 5 included with this report. For a summary of sites and mitigation measures see appendix 1.

1. Extension to the church-yard of Eglwys Sant Aelhaearn SH38694495

Category: D Impact: Unlikely

Recent extension to churchyard.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid.

2. Tan y Allt cottage SH38594507

Category: C Impact: Unlikely

Building shown on 1839 tithe map. Well-preserved early 19th century cottage.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid.

3. Three modern houses SH38634510

Category: D Impact: Unlikely

Three mid 20th century, single storey houses.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid.

4. Site of rectangular building SH38674511

Category: D Impact: Likely

Rectangular building and enclosure shown on aerial photograph. Probably destroyed during road improvements.

Recommendation for further assessment: None

Recommendation for mitigatory measures: Watching Brief

5. Clearance cairn SH38644519

Category: E Impact: Likely

Probable clearance cairn on river bank. Sub-rectangular outline suggests that it may overlie an earlier structure.

Recommendation for further assessment: Field evaluation.

Recommendation for mitigatory measures: Dependant on field evaluation

6. Site of building shown on tithe map SH38534522

Category: D Impact: Likely

Building marked on 1839 tithe map. The site is no longer visible and may have been destroyed when the A499 was widened.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Watching Brief

7. Bryn Fynnon SH38414535

Category: B Impact: Unlikely

Much modernised two-storey house marked on 1839 tithe map. Building retains elements of 18th century or earlier structure. The owner reported that there was originally a waterwheel on the south-eastern side of the house possibly powering machinery in a dairy. Local tradition also suggests that this was the site of a drover's inn.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid.

8. Terraced houses SH38394538

Category: C Impact: Unlikely

A Terrace of late 19th century houses.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

9. Pond SH38324558

Category: D Impact: Considerable

A pond, recently landscaped.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None

10. Milestone SH383545468

Category: D Impact: None

A sandstone milestone, 1.1m in height and triangular in plan. Inscription as follows; CARNARVON 13M PWLLHELI 7M. This could not be found in February 2001. The area has been recently landscaped, and the milestone seems to have been removed.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None

11. Converted cottage SH38354569

Category: C Impact: Unlikely

Cottage, possibly mid 19th century converted into a garage. The western gable end has been rebuilt to include garage doors. Windows infilled.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

12. Overgrown mounds SH38244568

Category: E Impact: Unlikely

Overgrown mounds, most probably modern clearance or dumping.

Recommendation for further assessment: Quick assessment by trial trench.

Recommendation for mitigatory measures: Basic recording (depending on results of assessment)

13. Banks SH38364587

Category: E Impact: Unlikely

Unimproved land containing poorly defined low banks and ditches along with some stone cleared from adjacent field. One possible roundhouse identified with an internal diameter of 7m. Area very marshy and difficult to assess. The majority of the area falls outside the road corridor.

Recommendation for further assessment: Field evaluation involving geophysical survey and trial trenching.

Recommendation for mitigatory measures: Dependant on evaluation.

14 and 15. Penlon farmhouse and outbuildings SH38264590 & SH38254597

Category: C Impact: Unlikely

The house and outbuildings both appear on the 1839 tithe map. The house is a substantial Victorian two storey building. The outbuildings have been recently converted into a dwelling.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

16. Possible enclosure SH38274605

Category: E Impact: Considerable

Level area beside the old Trefor road. Dimensions 26mx50m. Curvilinear edge falling away into uneven boggy land. Possible earlier enclosure.

Recommendation for further assessment: Field evaluation including geophysical survey and trial excavation.

Recommendation for mitigatory measures: Dependant on results of further assessment.

17. Earlier line of road SH38174612

Category: C Impact: Slight

A 6m wide linear raised area in scrubby woodland, presumably representing an earlier line of the road to Trefor. Ditches and standing water to either side.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid or basic recording.

18. Graig house and outbuildings SH38354610

Category: C Impact: Unlikely

Building shown on 1838 tithe map. Now modernised.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid.

19. Possible cairn SH38294615

Category: E Impact: Considerable

Possible cairn visible as low, 7m diameter mound in field

Recommendation for further assessment: Geophysical survey and trial trenching.

Recommendation for mitigatory measures: Dependent on results of further assessment.

20. Possible rectangular structure SH38254621

Category: E Impact: Unlikely

Poorly defined rectangular arrangement of stones that could be the remains of a building.

Recommendation for further assessment: Geophysical survey, trial trenching.

Recommendation for mitigatory measures: Dependent on results of further assessment.

21. Circular stony area in field SH38284625

Category: D Impact: Considerable

5m diameter stony area in field. The field has been heavily improved and a stream has been diverted. The stone may be infill for a wet area in the field.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Watching brief

22. Tai Newyddion SH38474644

Category: C Impact: Unlikely

Building shown on tithe map.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

23. Possible ridge and furrow SH38364657

Category: D Impact: Considerable

Possible ridge and furrow detected on aerial photographs suggesting medieval agriculture. Nothing visible during field walking.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Watching brief

24. Cefn Buarddau old farm SH38504687

Category: A Impact: Unlikely

Former grade III listed building awaiting re-survey. 18th century 2 storey 2 window stone house, with stable adjoining north.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

25. Cefn Buarddau new farm. SH38534686

Category: C Impact: Unlikely

Victorian farmhouse

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

26. House SH38634684

Category: D Impact: Unlikely

Mid 20th century corrugated iron-clad cottage.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

27. Brynteg cottage SH38634685

Category: C Impact: Unlikely

19th century single storey building extended and modernised

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

28. Tramway SH38564692-SH38704684

Category: C Impact: Significant

The line of the tramway between Tan y Graig quarry and the sea can be seen to run through a cutting across the road improvement corridor. The tramway was in use between the early 1880s and 1903 when it was superseded by an aerial ropeway. See also feature 29.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording

29. Tunnel SH38644687

Category: C Impact: Likely

The tramway passed beneath the road via a granite and concrete tunnel. The north-western side is open but the south-eastern side is partially blocked. Access was not possible at the time of the assessment due to dense undergrowth and flooding

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

30. Terrace SH38704690C

Category: C Impact: Unlikely

A terrace of later 19th century two storey, stone-built houses.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

31. Granite wall SH38754698C

Category: D Impact: Considerable

Well-built stone walls and revetments utilising both dry and mortared local granite. The walls were built alongside the present A499 by local stone masons when the road was improved immediately before the Second World War. The road was improved as far as the field adjoining Parsal farm.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording and sympathetic reinstatement of walls where appropriate.

32. Track SH38834693C

Category: D Impact: None

Cobbled track. Now visible as isolated 20m length of 2m wide farm track.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None

33. Old field boundary SH38754696-SH38804690

Category: D Impact: Slight

Old field boundary detected on aerial photographs. Now barely visible in field crossed by drainage ditches.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None

34. Route of old road SH38894714-SH38964734

Category: C Impact: Considerable.

The route of the road running to the south-east of Parsal shown on the 1839 tithe map has changed. The earlier route can be seen as a poorly defined level area in the fields. A modern barn now stands on the site of a building shown on the tithe map.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording, watching brief.

35. Building SH39024723

Category: D Impact: None

Mid 20th century corrugated iron-clad cottage. When site was visited in February 2001 the cottage had been demolished, and a breeze-block house was being built in its place.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None

36. Cairn SH39234734

Category: E Impact: Unlikely

Cairn; contains some clearance but could overlie earlier structure.

Recommendation for further assessment: Field evaluation.

Recommendation for mitigatory measures: Dependant on results.

37. Orthostat SH39374738

Category: D Impact: None

A single 1.2m high orthostat at the edge of a stony area in the field. This could be part of an earlier boundary or structure.

Recommendation for further assessment: None.
Recommendation for mitigatory measures: None

38. Low banks etc. SH39384734C

Category: E Impact: None

A large stony area in unimproved land. Stone has been imported to this area during the clearance of nearby fields. Poorly defined, low banks and possible structures can be seen beneath the clearance suggesting the presence of a prehistoric settlement.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None.

39. Discontinuity in field boundary SH39334750

Category: D Impact: Unlikely

Discontinuity in line of field boundary suggests the presence of an earlier track.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None

40. Ridge and furrow SH39384752C

Category: C Impact: Slight

Possible ridge and furrow, evidence of medieval agriculture, could be seen on aerial photographs. Low undulations could be seen in the field during field walking.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid or watching brief.

41. Tram rails reused in fence SH39324758

Category: D Impact: Considerable.

A length of tram rail forms part of the fence.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

42. Circular feature SH39324761

Category: E Impact: Unlikely

A circular feature could be seen on aerial photographs. This could not be seen during field walking. It was noted however, that the ground was very stony in this area.

Recommendation for further assessment: Geophysical survey and trial excavation

Recommendation for mitigatory measures: To be decided.

43. Quarry offices SH39404756

Category: C Impact: Likely

A single-storey concrete-rendered building. Boyd's plan (Boyd, 1981) identifies this building as an office presumably associated with Tyddyn Hywel Quarry. The building is now derelict and largely inaccessible due to dense thickets of blackthorn etc.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid or detailed recording.

44. Hut SH39474757

Category: C Impact: None

Small stone built hut, now derelict, probably associated with activities at Tyddyn Hywel Quarry in the late 19th century.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

45. Tramway SH39424759-SH39684733

Category: C Impact: Significant

The line of the tramway from Tyddyn Hywel to the sea runs in a cutting across the line of the proposed road. This could not be inspected in any great detail during the assessment, as it was flooded and very overgrown. It was equally over grown in February 2001, but could be seen more clearly, because of the lack of leaves on the trees. See also feature 46.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

46. Tunnel SH39424760

Category: C Impact: Likely

A tunnel built from local granite carries the Tyddyn Hywel tramway beneath the line of the present road. This feature was flooded and overgrown at the time of the assessment, and was in the same condition in February 2001.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid or detailed recording in conjunction with feature 45.

47. Stone culvert SH39444762

Category: D Impact: Likely

Stone-built culvert running under road, probably dating from the 19th century

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording

48. Stone footbridge SH39474762

Category: C Impact: Likely

Simple stone bridge over a small fast running stream. The bridge is heavily overgrown and difficult to assess but can be seen to consist of a single 1.6m x 0.5m slab set onto dry-stone supports.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid or detailed recording.

49. Modern bungalow SH39364763

Category: D Impact: Unlikely

A modern bungalow and associated landscaping impinges on the Tyddyn Hywel tramway at this point.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: None

50. Old field boundary SH39464777-SH39514773

Category: D Impact: Significant

A very low bank, probably the remains of a field boundary or track could be seen to run across the line of the proposed road.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording and watching brief

51. Clearance cairn SH39574776

Category: E Impact: Unlikely

An overgrown clearance cairn with a diameter of 5m and a maximum height of 0.5m.

Recommendation for further assessment: Field evaluation.

Recommendation for mitigatory measures: Dependant on results

52. Linear hollow SH39544790-SH39604793

Category: E Impact: Unlikely

A shallow linear hollow could be seen to run across the field. This could be a ploughed out field boundary or track.

Recommendation for further assessment: Field evaluation.

Recommendation for mitigatory measures: Dependant on results

53. Discontinuity in field boundary SH39634799

Category: D Impact: Likely

A discontinuity in the line of the field boundary reflects the line of an earlier road marked on the 1839 tithe map (feature 54)

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

54. Line of road SH39594797-SH39914832

Category: D Impact: Slight

The line of an earlier road could be seen on the 1839 tithe map. This could not however be traced with any certainty during field walking.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Watching brief

55. Linear and curvilinear features SH39634810

Category: E Impact: Unlikely

Linear and curvilinear features were detected on the aerial photographs. There is a spring and a natural break of slope in the field that could account for the above observations.

Recommendation for further assessment: Field evaluation.

Recommendation for mitigatory measures: Dependant on results

56. Capel Seion SH39954833

Category: A Impact: Unlikely

Chapel built in 1875 of local granite. Former Grade III listed building awaiting re-survey.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

57. Gwelfor SH39974835

Category: B Impact: Unlikely

18th century cottage in good condition.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

58. Farm and outbuildings SH40014842

Category: C Impact: Unlikely

19th century cottage and farm buildings, well preserved and unmodernised.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

59. Cottage SH40184849

Category: C Impact: Unlikely

19th century cottage

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

60. Terrace SH40224850

Category: D Impact: Unlikely

Early 20th century two storey terrace.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

61. Victorian House SH40274852

Category: C Impact: Unlikely

Two storey, stone-built Victorian house.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

62. Sportsman's row SH40384858

Category: B Impact: Unlikely

A row of houses of various styles and dates comprising a two storey house probably dating from the 18th century, an early 19th century terrace and two Victorian stone built houses.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

63. Bridge SH40454864

Category: A Impact: Unlikely

Pont-y-Felin, 18th century bridge. Former grade III listed building, awaiting re-survey.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

64. Bryn Awel SH40594872

Category: C Impact: Unlikely

Late 19th century house.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

65. Ty Lon: buildings on tithe map SH40604879

Category: C Impact: Unlikely

19th century two storey house and outbuildings. Outbuildings may include an earlier cottage.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

66. Quarry SH40824903

Category: C Impact: Significant

Small steep-sided quarry identified on 1:2500 O.S. maps as a manganese pit.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

67. Plas Cae'r Pwsan SH40934915

Category: C Impact: Unlikely

Large house probably late 19th century.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

68. Cae'r Pwsan: buildings shown on tithe map (circa 1840) SH40974923

Category: C Impact: Unlikely

Modernised 18th century farmhouse and farm buildings. Former grade III listed building awaiting re-survey. Farm now used as scrap metal yard.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

69. Line of earlier road SH40974917-SH411744933

Category: C Impact: Considerable

The line of a road passing to the south-east of Cae'r Pwsan can be seen as a 2m wide terrace above the field boundary. This was depicted on the tithe map (circa 1840) but was not shown to continue as far as Clynnog. The obvious terrace extends as far as the road shown on the tithe map but additional lengths of road could be seen further to the west (sites 75 and 78). The fact that the road was truncated by the 1840s suggests that it was an earlier road that had been superseded by the road that is now the A499.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

70. Overgrown sheepfold SH41184934

Category: E Impact: Considerable

A sheepfold was marked on recent O.S. maps. The area is now overgrown and impenetrable.

Recommendation for further assessment: Clearance of vegetation.

Recommendation for mitigatory measures: Dependant on further assessment.

71. Circular feature SH41124918

Category: E Impact: Unlikely

A circular feature was detected on the aerial photographs. This could not be seen on the ground. Much of this area is, however, very overgrown.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

72. Quarry SH41174925

Category: C Impact: Likely

Small, (5m x 7m) steep-sided quarry cut into contorted shale. The beginnings of a portal for a level can be seen on the southern side. This was obviously abandoned at a very early stage.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid or basic recording

73. Field bank or track SH41174925-SH41234928

Category: C Impact: Unlikely

This substantial terrace was detected on the aerial photographs. The area is now very overgrown but this feature is best interpreted as a field boundary or track. It is also cut by a disused track running downhill close to its north-eastern end.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

74. Camfa'r Bwth: Buildings shown on tithe map (circa 1840) SH41274933

Category: C Impact: Unlikely

House: probably later 19th century.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

75. Line of earlier road SH41214937

Category: C Impact: Considerable.

The field wall is very substantial here suggesting that the road described as feature 69 continued in this direction.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

76. Linear feature SH41174950-SH41254944

Category: D Impact: Considerable

A slight dip could be seen running down the field. This could be either an earlier boundary or a result of drainage works.

Recommendation for further assessment: Field evaluation.

Recommendation for mitigatory measures: Dependant on results

77. Linear terrace SH41264942-SH41284944

Category: C Impact: Considerable.

A linear terrace could be seen to run along the top of a field next to the modern A499. This is probably a continuation of the earlier road (features 69 and 75). A hollow running in a northerly direction across the adjacent field could also be a continuation of this road.

Recommendation for further assessment: None

Recommendation for mitigatory measures: Detailed recording.

78. Rectangular platform SH41274942

Category: D Impact: Likely

A rectangular stone-faced platform adjacent to the road obviously predates the modern stone and corrugated iron shed now standing at this point. The platform has approximate dimensions of 2m x 4 or 5m and stands to a height of 0.6m.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording and watching brief

79. Fynnon Beuno SH41334946

Category: A (SAM Cn 91 and Grade II* Listed building) Impact: Unlikely

Possibly 18th century surrounding walls and steps forming sides of a rectangular well. This was being repointed and generally improved in February 2001.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

80. Rectangular structure SH41404965

Category: E Impact: Considerable

Foundations of a small stone-built rectangular building with external dimensions of 4m x 3m.

Recommendation for further assessment: Trial excavation.

Recommendation for mitigatory measures: Dependent on results of further assessment

81. Plas y Bryn SH41394974

Category: C Impact: Unlikely

Substantial Victorian house

Recommendation for further assessment: None.
Recommendation for mitigatory measures: Avoid

82A. Eglwys Sant Beuno and churchyard SH41454970C

Category: A (church-grade I listed building, sundial-SAM Cn 62, grade II listed building, lychgate-grade II listed building)

Impact: (i) to buildings: Unlikely, (ii) to churchyard: Likely

15th century church of St. Beuno, 16th century chapel of St. Beuno and lychgate in the north-east corner of the churchyard. The churchyard itself extends to within a few metres of the proposed line of the road.

Recommendation for further assessment: Field evaluation of area to North and west of cemetery.

Recommendation for mitigatory measures: Avoid or detailed recording if there is to be any impact on the churchyard. Total avoidance of cemetery is however recommended.

82B. Possible ecclesiastical enclosure SH 4128 4972 - 4136 4953

Category: E Impact: Considerable

Curved field boundary, which may form part of a large enclosure around the church.

Recommendation for further assessment: Field evaluation involving geophysical survey and trial trenching.

Recommendation for mitigatory measures: Dependant on results of field evaluation.

83. Clynnog Fawr Village SH41504970C

Category: A/E Impact: Unlikely

Clynnog Fawr was an important medieval ecclesiastical centre. The present village contains the following grade II listed buildings:

Bod Cybi, small village house associated with the poet Eben Fardd.

Bodfasarn, 17th century former inn and adjoining wing.

Capel Ebenezer, well preserved Methodist chapel.

The Coach Inn, 17th century in origin.

Cwrt (The Court House), late 17th century house.

Doorway at Lleuar Fawr.

Maes Glas, well preserved early 19th century village house.

Post Office, village shop with unaltered mid 19th century shop front.

Schoolhouse, substantial mid 19th century building, with historical importance.

Ty Capel, small house in late Georgian tradition.

Recommendation for further assessment: Geophysical survey and trial excavation along the line of the proposed road corridor to north and west of village.

Recommendation for mitigatory measures: Avoid of all buildings. Other measures dependent on results of further assessment

84. Linear and circular feature SH41534987

Category: E Impact: Considerable

A linear feature running to a circular feature was recorded on the aerial photographs. Nothing is at present visible on the ground.

Recommendation for further assessment: Geophysical survey

Recommendation for mitigatory measures: Dependant on results of further assessment

85. Cefngwreichion SH41825016

Category: C (grade II listed building) Impact: Unlikely

Probably early 19th century cottage and semi-derelict farm buildings.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

86. Mound SH41945029

Category: E Impact: Unlikely

Mound 4m in diameter in marshy ground. Possibly a burnt mound.

Recommendation for further assessment: Field evaluation.

Recommendation for mitigatory measures: Dependant on results

87. Lime kiln SH41895072

Category: C Impact: Unlikely

Well preserved 19th century lime kiln.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

88. Possible banks SH42315091

Category: E Impact: Considerable.

Vague shapes, possibly banks were detected in the north-western end of the field from aerial photographs. The relevant area of the field was noticed to be uneven but no definite features could be seen during the assessment.

Recommendation for further assessment: Geophysical survey

Recommendation for mitigatory measures: Dependant on results of further assessment.

89. Pen y Bryn Bach cottage SH42485110

Category: C Impact: Unlikely

Semi-derelict early 19th century cottage.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

90. Curvilinear bank SH42485118

Category: E Impact: Considerable

Slight curvilinear bank forming a hollow or enclosure with dimensions of 10m x 6m. This could be interpreted as an early enclosure or a quarry scoop.

Recommendation for further assessment: Geophysical survey.

Recommendation for mitigatory measures: Dependant on results of further assessment

91. Cairn SH42685107

Category: B Impact: None

Cairn and cist burial

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

92. Cottage SH42565120

Category: C Impact: Unlikely

Later 19th century cottage

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid

93. 19th century house SH42555134

Category: C Impact: Unlikely

19th century house.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Avoid.

94. Building SH42695130

Category: C Impact: Likely

Unusual 19th century building, possibly agricultural. Semi-derelict. By February 2001 it had been renovated into a stable, with a new roof, but none of the architectural features had been changed.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Detailed recording.

Field boundaries

Category D

The pattern and nature of field boundaries are an important part of the historic landscape. Their construction, linear plan and ecological diversity can provide valuable information about the landscape and its evolution.

Recommendation for further assessment: None.

Recommendation for mitigatory measures: Basic recording.

Areas of unknown archaeological potential

Category E

Previous results from similar projects have shown that many sites exist which cannot be seen on the surface. The finding of archaeological sites late in the construction programme can often cause tremendous difficulties, and it is therefore appropriate to undertake an evaluation programme, which will help identify sites at an early stage. The evaluation techniques suitable are geophysical survey and trial excavation, carried out on a strategic sampling basis. This should be backed up by a continuous watching brief during the early stages of construction.

Recommendation for further assessment: Geophysical survey and trial excavation should be carried out for a percentage of the route on open areas of agricultural land which has potential for containing sites of archaeological interest.

Recommendation for mitigatory measures: Watching brief.

5. RECOMMENDATIONS

5.1 Summary of findings

The archaeological assessment identified 94 archaeological sites within a corridor 100 m wide, along the full length of the proposed improvement. Many of these will not be affected by the proposed works, and Tables A and B list those sites which will be affected by the proposed road scheme, as given on drawings 1654/TA/72 to 75, dated 11/96.

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

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

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

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

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

5.2 Field evaluation

Field evaluation is necessary to allow the reclassification of the category E sites, and to allow the evaluation are areas of land where there are no visible features, but for which there is potential for sites to exist. Two principal techniques will be used for carrying out the evaluation: geophysical survey and trial trenching.

5.2.1 Geophysical survey

This technique will involve the use of a magnetometer, which detects variation in the earth's magnetic field caused by the presence of iron in the soil. This is usually in the form of weakly magnetised iron oxides, which tend to be concentrated in the topsoil. Features cut into the subsoil and back-filled or silted with topsoil contain greater amounts of iron and can therefore be detected with the gradiometer. Strong readings can be produced by the presence of iron objects, and also hearths or kilns. Surveys will be carried out in areas of not less than 20m by 20m, and readings will be taken every 0.5m, giving 800 readings per grid. Data will be presented in a series of X-Y and Grey-scale plots, and location of each of the grids will be shown on a map at a scale not less than 1:2500.

Other forms of geophysical survey are available, of which resistivity survey is the other most commonly used. However, for rapid coverage of large areas, the magnetometer is usually considered the most cost effective method. It is also possible to scan a large area very rapidly by walking with the magnetometer, and marking the location of any high or low readings, but not actually logging the readings for processing. However this method produces very variable results, and is not recommended for this particular scheme, although the technique will be used for evaluating linear features.

5.2.2 Trial trenching

Trial trenching will be carried out by excavating trenches of an appropriate size to evaluate the sites listed in Table B. Other trenches will be sited in order to achieve a representative sample across the area of the proposed road. These trenches will typically measure between 20 m. and 30 m. long by 2 m. wide. The turf and topsoil will be removed by mechanical excavator, and the resulting surface will be cleaned by hand and examined for features. Anything noted will be further examined, so that the nature of any remains can be understood, and mitigation measures can be recommended. The location of all trenches will be shown on maps at a scale of not less than 1:2500. All trenches containing features of relevance will be planned at a scale of 1:20, and sections will be recorded at a scale of 1:10. Full context records will be kept for all trenches. All trenches and features will be photographed in colour film and colour transparency.

5.2.3 Recommendations for field evaluation

Twenty-one sites are recommended for field evaluation if they are to be disturbed by the roadworks, however, many of these are on the edge of the road corridor, and can probably be avoided.

An area of particular archaeological potential is that within the immediate vicinity of Clynnog Fawr. This village was an important Christian centre from Early-medieval times onwards, and there is good potential for the survival of settlement and religious remains adjacent to the present village and church. The importance of the area is raised by the proximity of the Bachwen Neolithic burial chamber.

Associated with the church is the possibility of a large ecclesiastical enclosure. This is visible as a pattern of curvilinear hedge lines, and the opportunity to test by excavation the validity of the hypothetical enclosure should not be missed. James (1992) has highlighted several similar sites in South Wales where churches are located within, what appear to be large curvilinear enclosures. James admits that the relationship between these features and the churches they enclose may be fortuitous, and require excavation to test his theory.

When the boundaries forming the theoretical enclosure around Clynnog Fawr were inspected on the ground, it was found that most resembled the adjacent boundaries, and had neither hedges nor walls that indicated a date earlier than the 18th or 19th centuries. However, this does not discount the possibility of the line of earlier boundaries being reused. One boundary (site 82B), close to the church, did seem a little different in character. It is particularly ruinous and the hedge growing on it is composed of varied species, often indicative of a long established boundary. The ruinous state could merely be due to neglect, and deliberate planting could have artificially increased the number of species, so neither factor is firm evidence of a particularly old boundary. However, the level of the field is higher than the boundary, and the field slopes steeply down against the boundary, suggesting an in-filled ditch. This slope is cut by the track, which runs along the north-eastern side of the field, and so may predate the present field layout.

This area is within the road corridor, and a high priority should be placed on the inspection of any section of this boundary to be destroyed during the road works. Excavation could provide evidence to date the boundary, and possibly demonstrate its relationship to the early church site.

Other fields close to Clynnog Fawr village, which fall within the road corridor, should be surveyed using geophysical techniques, to ascertain whether there are any features associated with the medieval activity in the area. Six smaller sites (16,19,42,84,88 and 90) are also suitable for geophysical evaluation.

The sites recommended for geophysical survey should also undergo trial excavation, although the quantity and location would be decided by the results of the geophysical survey. Sites 12 and 70 appear to be minor sites and require assessment by trial trenching and clearance of vegetation.

The category E sites that fall outside the band of interest will not be further assessed unless it appears that they will be affected by the road improvements. A programme of evaluation work consisting of geophysical survey and trial excavation should be carried out on open areas of unknown archaeological potential.

Table A: Summary of Evaluation recommendations

Site No.	Site Name	Impact	Evaluation	Mitigation
5	Clearance Cairn	Likely	Evaluate	Dependant
12	Overgrown mounds	Unlikely	Evaluate if affected by roadworks	Dependant
13	Banks	Unlikely	Evaluate if affected by roadworks	Dependant
16	Possible enclosure	Considerable	Evaluate	Dependant
19	Possible cairn	Considerable	Evaluate	Dependant
20	Possible rectangular structure	Unlikely	Evaluate	Dependant
36	Cairn	Unlikely	Evaluate if affected by roadworks	Dependant
42	Circular feature	Unlikely	Evaluate	Dependant
51	Clearance cairn	Unlikely	Evaluate if affected by roadworks	Dependant
52	Linear hollow	Unlikely	Evaluate if affected by roadworks	Dependant
55	Linear features	Unlikely	Evaluate	Dependant
70	Sheepfold	Considerable	Clear vegetation and evaluate further	Dependant
76	Linear feature	Considerable	Evaluate	Dependant
80	Rectangular structure	Considerable	Evaluate	Dependant
82A	Eglwys Sant Beuno and surrounding area	Unlikely/ Considerable	Evaluate area north and west of cemetery	Avoid cemetery/ Dependant
82B	Curved bank, possible ecclesiastical boundary	Considerable	Evaluate	Dependant
83	Clynnog Fawr Village	Unlikely	Evaluate area north and west of village	Avoid existing buildings/ Dependant
84	Linear and circular feature	Considerable	Evaluate	Dependant
86	Mound	Unlikely	Evaluate if affected by roadworks	Dependant
88	Possible banks	Considerable	Evaluate	Dependant
90	Curvilinear bank	Considerable	Evaluate	Dependant
	Areas of unknown potential	Considerable	Evaluate	Dependant

5.2.3.1 Site specific details for evaluation**12, 13, 20, 36, 51, 52, 86**

These sites are unlikely to be affected by the roadworks and will not be further assessed unless they are to be disturbed in anyway; in which case evaluation work will be recommended.

5 Clearance cairn

Trial excavation in trench of 10 sq m.

16 Possible enclosure

Magnetometer survey of an area not less than 1600 sq m which is to include an area within and outside the feature.

Trial excavation of 80 sq metres in two trenches.

19 Possible cairn

Magnetometer survey of an area not less than 1600 sq m

Trial excavation of 60 sq m

42 Circular feature

Magnetometer survey of an area not less than 1600 sq m
Trial excavation of 60 sq m

55 Linear features

Magnetometer survey of an area not less than 1600 sq m
Trial excavation of 60 sq m

76 Linear feature

Trial excavation of 40 sq m

82A Eglwys Sant Beuno and surrounding area

Because of its location close to the site of the church, this area, which lies between the 800 m and 1800 m chainage marks, and totaling approximately 20,000 sq m, is considered to be of high archaeological potential. A sampling rate of 20% for geophysical survey and 2% for trial excavation is therefore recommended.

Magnetometer survey of an area not less than 4000 sq m (10 grids of 20m by 20m)
Trial excavation of 400 sq m

82B Curved boundary

In addition to the work around the church, specified in 82 above, a trial trench should be dug through the curved boundary, which may be part of an ecclesiastical enclosure.

Trial excavation of 60 sq m

83 Clynnog Fawr Village

This area is included within Site 82.

84 Linear and circular feature

Magnetometer survey of an area not less than 1600 sq m
Trial excavation of 60 sq m

88 Possible banks

Magnetometer survey of an area not less than 1600 sq m
Trial excavation of 60 sq m

90 Curvilinear bank

Magnetometer survey of an area not less than 1600 sq m
Trial excavation of 60 sq m

5.2.3.2 Evaluation of areas of unknown archaeological potential

In addition to the area adjacent to Clynnog (Site 82 above), the road will affect other areas of undeveloped land where there is potential for archaeological remains. These are in the southern section, and are situated between the 1250 and 2500 m. chainage marks, and between the 3,100 and 3,500 m. chainage marks. This amounts to 1650 m. in length, and 33,000 sq m if an average width of 20 m. is used. Sampling rates used for the evaluation of areas varies considerably, from 1% up to 100%, depending upon the wealth of archaeology in the immediate vicinity. In this instance a low sample rate is recommended consisting of 10% geophysical survey and 1% trial trenching. This would therefore involve 3,300 sq m of geophysical survey and 330 sq m of trial excavation.

5.3 Mitigation phase

The purpose of the assessment is to ensure the impact of the scheme upon the archaeology is minimal, and this is done through recommending appropriate mitigation measures. The measures vary depending upon the proposed impact and the importance of the site. It is recommended that all sites of regional or national importance, which have been identified to date, are avoided by the scheme. Sites of local importance, which cannot be avoided, should be recorded. Attention is drawn to certain areas where archaeological sites may exist, so that a watching brief can be maintained during initial construction phases in those areas. A watching brief is also recommended for the entire route, during the early phases of construction.

Five of the six category A sites fall within the road corridor; all but one are standing buildings and should be preserved *in situ*. Clynnog Fawr village has been treated as one site, because all of the buildings that fall within the band of interest could be assigned to category A or B, and should therefore be avoided. The churchyard of Eglwys St Beuno is very close to the line of the road. It is strongly recommended that the development does not impinge on this. Detailed survey and excavation will be required if disturbance cannot be avoided.

Four of the five category B sites are standing buildings, which should be preserved *in situ*. The cairn (91) is beyond the edge of the road corridor, and should not be affected.

The most significant category C sites are associated with the late 19th century quarries in the mountains to the south-east. The office building (43) stands adjacent to the current road and requires detailed recording if it is to be affected. Two disused tramways (28 and 46) cross the line of the proposed road; the relevant sections of these should be surveyed in detail. Two stone-built tunnels carried the tramway beneath the road and these should also be recorded in detail.

Sites 69 75 and 77 represent the remains of a road which appears to have fallen out of use by the 1840s, and which may provide evidence about the earlier development of Clynnog. These sites fall within the road corridor, and detailed recording and limited excavation will be required here in order to record both the line and the character of the old road.

The 19th century building converted into a stable (94), close to the crossroads at Aberdesach, should be planned and recorded photographically if it is to be affected.

A little more than half of the category C sites are occupied standing buildings which, although they fall within the band of interest, are unlikely to be affected. Two small quarries likely to be affected by the road improvements require basic recording.

The majority of the minor sites (category D) which fall within the road corridor require only basic recording and a watching brief when the topsoil is disturbed.

Basic recording of all field boundaries is recommended.

There remains the possibility of further discoveries once ground-disturbance commences. It is, therefore, recommended that a 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.

Table B: Summary of Mitigation recommendations for sites where no evaluation has been recommended

Site No.	Site Name	Importance	Impact	Mitigation
4	Site of rectangular building	D	Likely	Watching Brief
6	Site of building shown on tithe map	D	Likely	Watching brief
21	Circular stony area in field	D	Considerable	Watching brief
23	Possible ridge and furrow	D	Considerable	Watching brief
28	Tramway	C	Significant	Detailed recording
29	Tunnel	C	Likely	Detailed recording
31	Granite wall	D	Considerable	Basic recording
34	Old road	C	Considerable	Basic recording
40	Ridge and Furrow	C	Slight	Watching brief
41	Tram rails	D	Considerable	Basic recording
43	Quarry offices	C	Likely	Detailed recording
45	Tramway	C	Significant	Detailed recording

46	Tunnel	C	Likely	Detailed recording
47	Stone culvert	D	Likely	Basic recording
48	Stone footbridge	C	Likely	Detailed recording
50	Old field boundary	D	Significant	Basic recording and watching brief
53	Discontinuity in field boundary	D	Likely	Basic recording
54	Line of road	D	Slight	Basic recording
66	Quarry	C	Considerable	Basic recording
69	Line of earlier road	C	Considerable	Detailed recording
72	Quarry	C	Possible	Basic recording
75	Line of earlier road	C	Considerable	Detailed recording
77	Linear terrace	C	Considerable	Detailed recording
78	Rectangular platform	D	Likely	Detailed recording
94	Farm building	C	Likely	Detailed recording
	Field boundaries	C	Considerable	Basic recording
	Areas of unknown archaeological potential		Considerable	Watching brief

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April 1998.

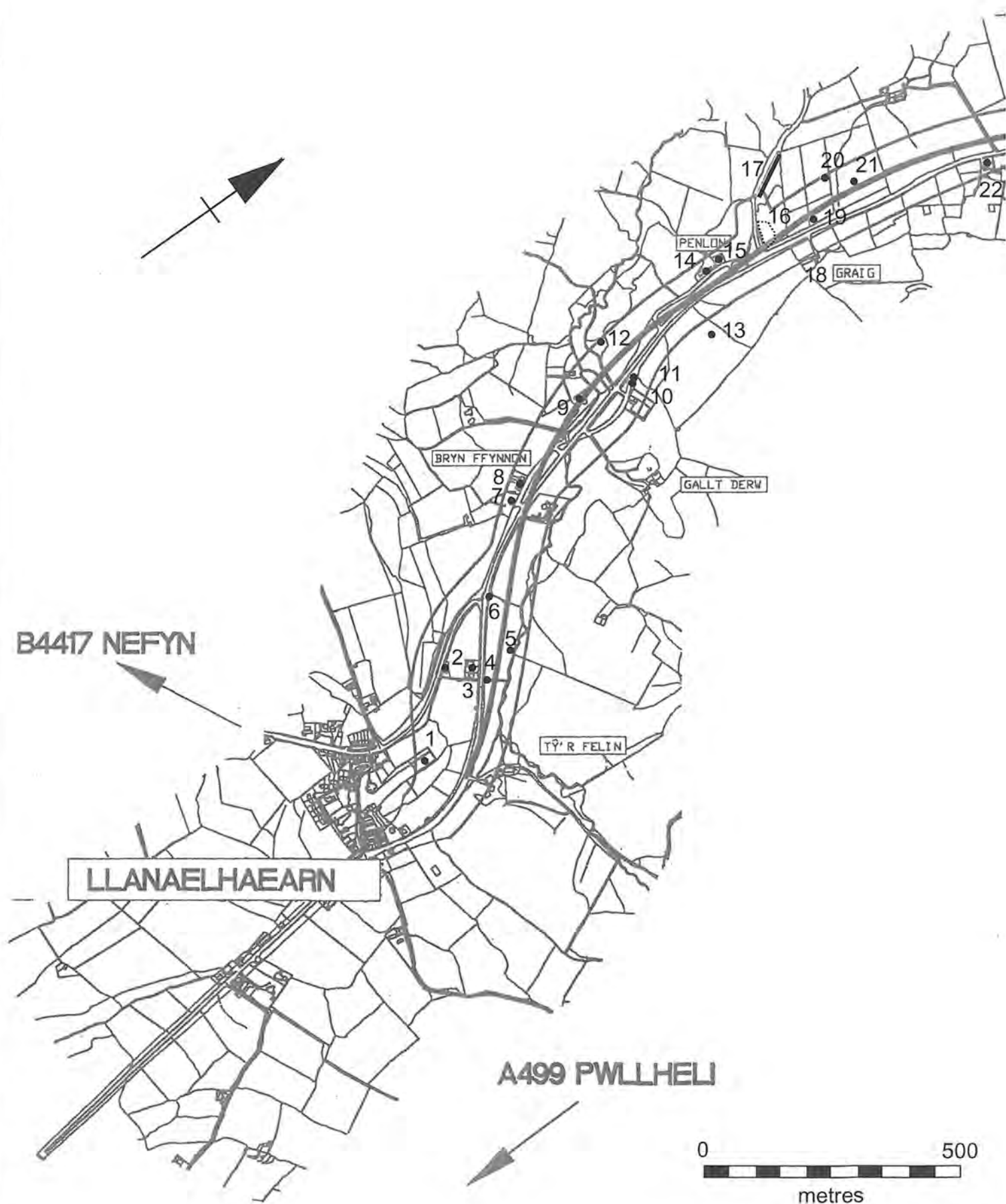
Appendix 1

Summary of sites and recommendations

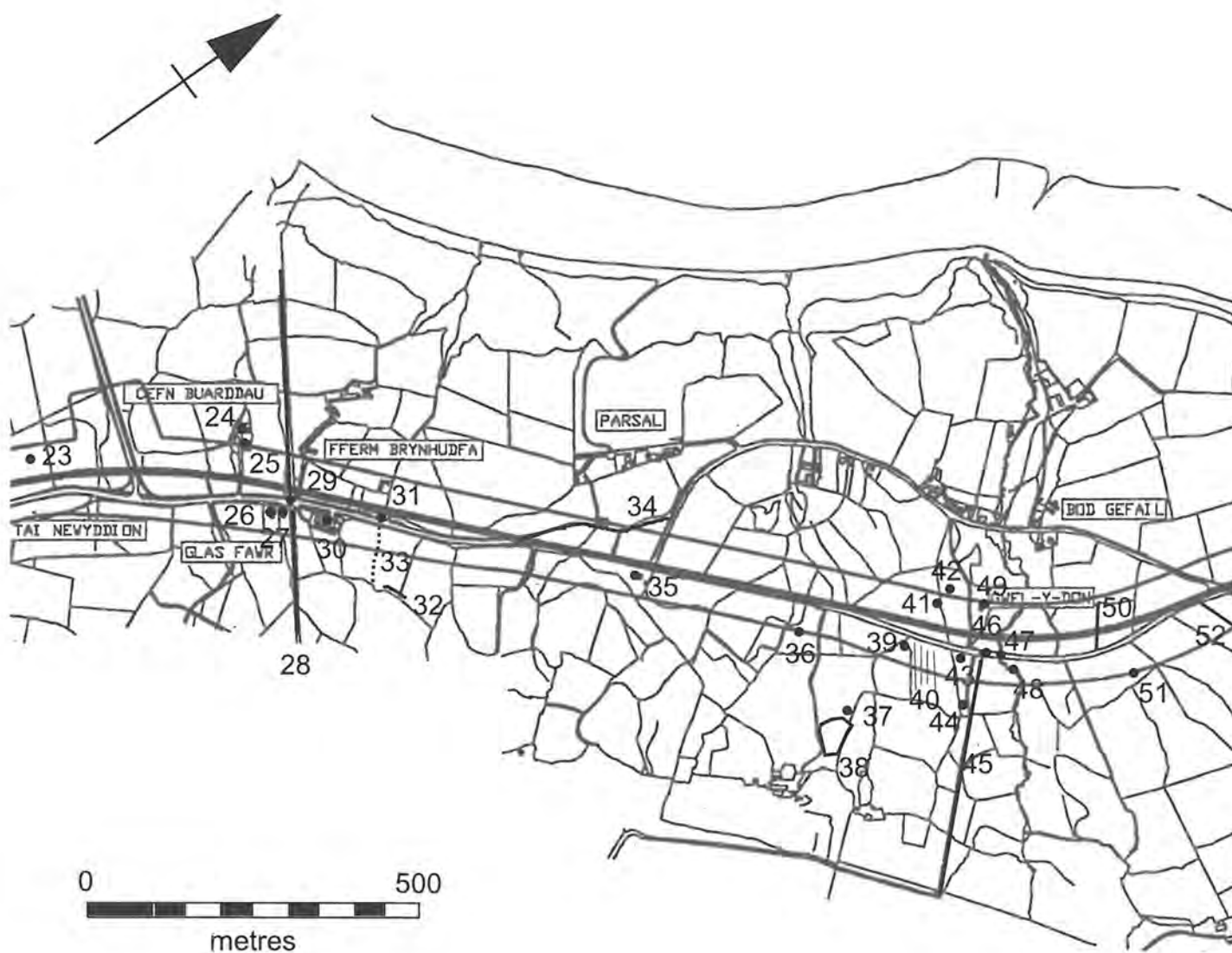
Importance	Site No.	Site Name	Impact	Evaluation	Mitigation
A	24	Cefn Buarddau	Unlikely	None	Avoid
A	79	Ffynnon Beuno	Unlikely	None	Avoid
A/E	82A	Eglwys Sant Beuno and surrounding area	Unlikely/ Considerable	Evaluate area north and west of cemetery	Avoid cemetery
A/E	83	Clynnog Fawr Village	Unlikely	Evaluate area north and west of village	Avoid existing buildings
A-D	56-65	Sites within Gyrn Goch	Unlikely	None	Avoid
B	7	Bryn Ffynnon	Unlikely	None	Avoid
B	87	Lime kiln	Unlikely	None	None
B	91	Cairn	None	None	Avoid
C	11	Converted cottage	Unlikely	None	Avoid
C	14/15	Penlon farmhouse and outbuildings	Unlikely	None	Avoid
C	17	Earlier line of road	Slight	None	Avoid
C	18	Graig house and outbuildings	Unlikely	None	Avoid
C	2	Tan y Allt cottage	Unlikely	None	Avoid
C	22	Tai Newyddion	Unlikely	None	Avoid
C	25	Cefn Buarddau new house	Unlikely	None	Avoid
C	27	Brynteg cottage	Unlikely	None	Avoid
C	28	Tramway	Significant	None	Detailed recording
C	29	Tunnel	Likely	None	Detailed recording
C	30	Terrace	Unlikely	None	Avoid
C	34	Old road	Considerable	None	Basic recording
C	40	Ridge and Furrow	Slight	None	Watching brief
C	43	Quarry offices	Likely	None	Detailed recording
C	44	Hut	None	None	Avoid
C	45	Tramway	Significant	None	Detailed recording
C	46	Tunnel	Likely	None	Detailed recording
C	48	Stone footbridge	Likely	None	Detailed recording
C	66	Quarry	Considerable	None	Basic recording
C	67	Plas Cae'r Pwsan	Unlikely	None	Avoid
C	68	Cae'r Pwsan	Unlikely	None	Avoid
C	69	Line of earlier road	Considerable	None	Detailed recording
C	72	Quarry	Likely	None	Basic recording
C	73	Field bank/track	Unlikely	None	Avoid
C	74	Camfa'r Bwth	Unlikely	None	Avoid
C	75	Line of earlier road	Considerable	None	Detailed recording
C	77	Linear terrace	Considerable	None	Detailed

					recording
C	8	Terraced houses	Unlikely	None	Avoid
C	81	Plas y Bryn	Unlikely	None	Avoid
C	85	Cefngwreichion	Unlikely	None	Avoid
C	89	Pen y Bryn	Unlikely	None	Avoid
C	92	Cottage	Unlikely	None	Avoid
C	93	19 th century house	Unlikely	None	Avoid
C	94	Farm building	Likely	None	Detailed recording
D	1	Extension to church-yard	Unlikely	None	Avoid
D	10	Milestone	None	None	None
D	21	Circular stony area in field	Considerable	None	Watching brief
D	23	Possible ridge and furrow	Considerable	None	Watching brief
D	26	House	Unlikely	None	Avoid
D	3	Three modern houses	Unlikely	None	Avoid
D	31	Granite wall	Considerable	None	Basic recording
D	32	Track	None	None	None
D	33	Old field boundary	Slight	None	None
D	35	Building	None	None	None
D	37	Orthostat	Unlikely	None	None
D	39	Field boundary	Unlikely	None	None
D	4	Site of rectangular building	Likely	None	Watching Brief
D	41	Tram rails	Considerable	None	Basic recording
D	47	Stone culvert	Likely	None	Basic recording
D	49	Modern bungalow	Unlikely	None	None
D	50	Old field boundary	Significant	None	Basic recording and watching brief
D	53	Discontinuity in field boundary	Likely	None	Basic recording
D	54	Line of road	Slight	None	Basic recording
D	6	Site of building shown on tithe map	Likely	None	Watching brief
D	78	Rectangular platform	Likely	None	Detailed recording
D	9	Pond	Considerable	None	None
E	12	Overgrown mounds	Unlikely	Field evaluation	Dependant on results
E	13	Banks	Unlikely	Field evaluation	Dependant on results
E	16	Possible enclosure	Considerable	Field evaluation	Dependant on results
E	19	Possible cairn	Considerable	Field evaluation	Dependant on results
E	20	Possible rectangular structure	Unlikely	Field evaluation	Dependant on results
E	36	Cairn	Unlikely	Field evaluation	Dependant on results
E	38	Low banks etc	None	None	None
E	42	Circular feature	Unlikely	Field evaluation	Dependant on results

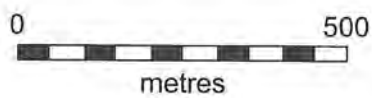
E	5	Clearance Cairn	Likely	Field evaluation	Dependant on results
E	51	Clearance cairn	Unlikely	Field evaluation	Dependant on results
E	52	Linear hollow	Unlikely	Field evaluation	Dependant on results
E	55	Linear features	Unlikely	Field evaluation	Dependant on results
E	70	Sheepfold	Considerable	Clearance of vegetation	Dependant on further assessment
E	71	Circular feature	Unlikely	None	Avoid
E	76	Linear feature	Considerable	Field evaluation	Dependant on results
E	80	Rectangular structure	Considerable	Field evaluation	Dependant on results
E	82B	Curved bank, possible ecclesiastical boundary	Considerable	Field evaluation	Dependant on results
E	84	Linear and circular feature	Considerable	Field evaluation	Dependant on results
E	86	Mound	Unlikely	Field evaluation	Dependant on results
E	88	Possible banks	Considerable	Field evaluation	Dependant on results
E	90	Curvilinear bank	Considerable	Field evaluation	Dependant on results



Map 1

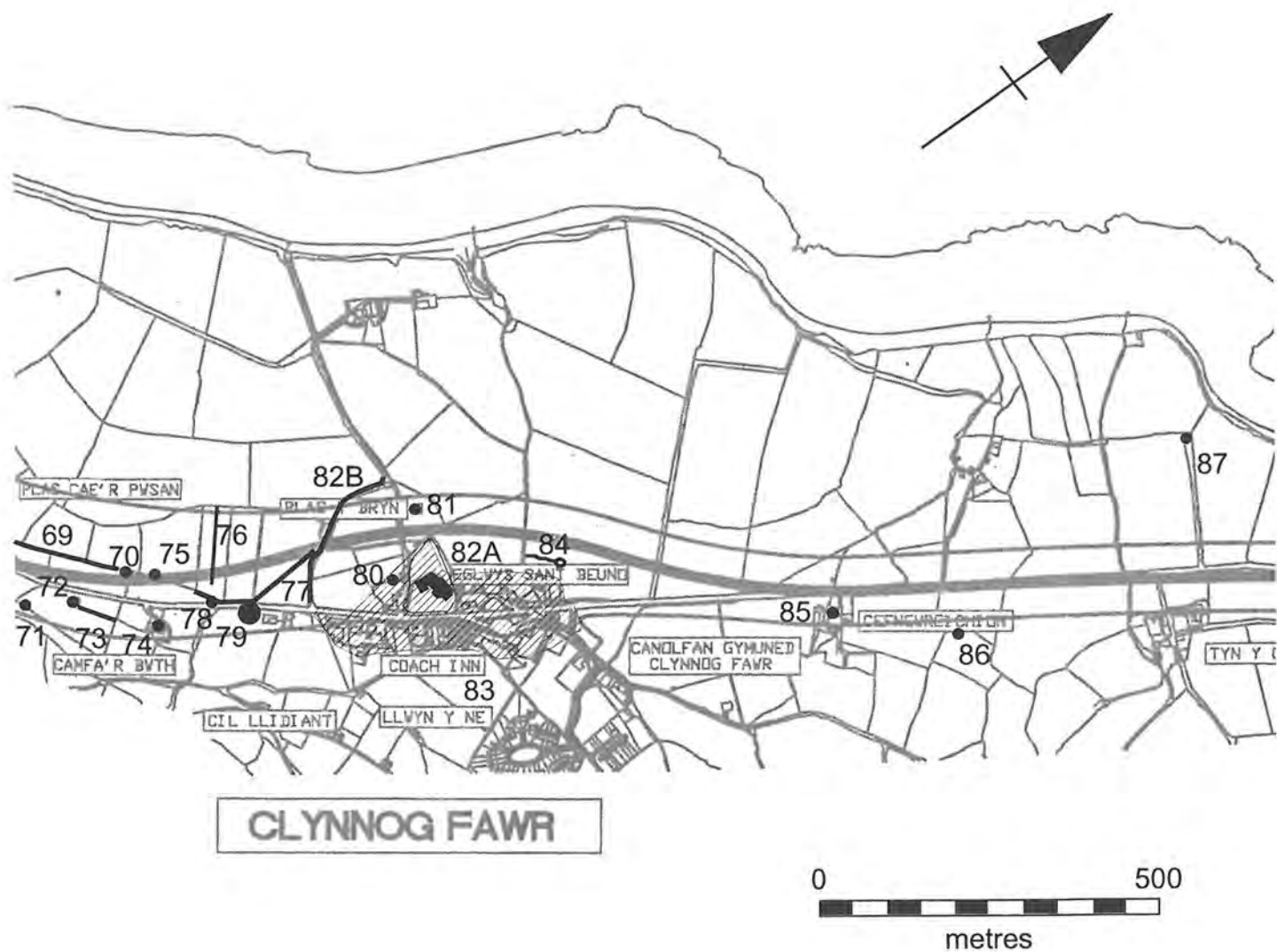


Map 2

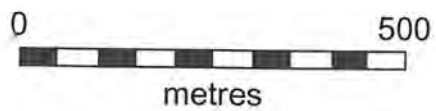
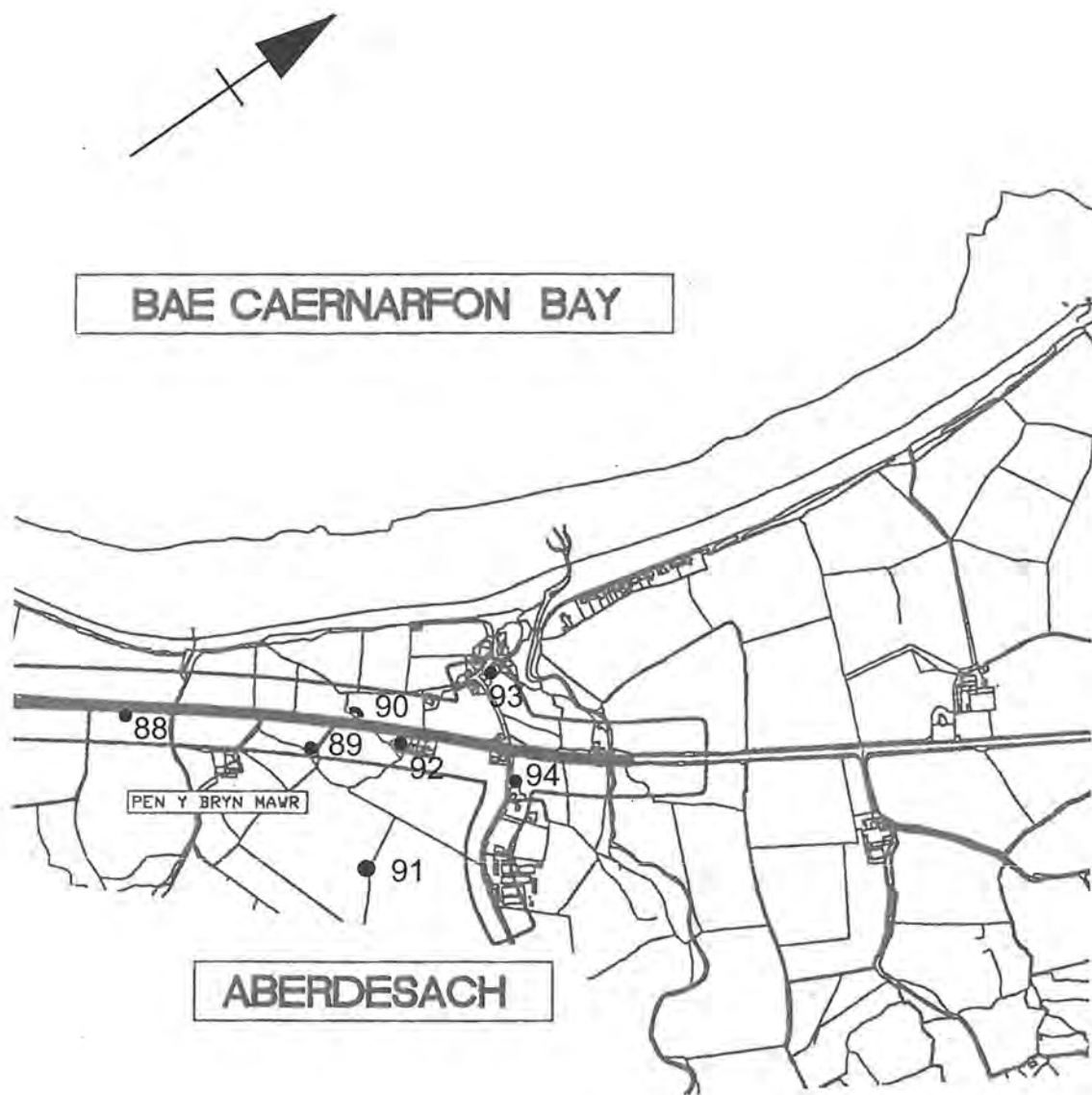


GYRN GOCH

Map 3



Map 4



Map 5

