

PROPOSED WINDFARM  
CARMEL, ANGLESEY  
ARCHAEOLOGICAL ASSESSMENT (GAT 1188)

INITIAL REPORT NO. 99

Ymddiriedolaeth Archaeolegol Gwynedd  
Gwynedd Archaeological Trust

# **PROPOSED WIND FARM, CARMEL, ANGLESEY**

## **INITIAL REPORT**

### **1. INTRODUCTION**

Planning permission is to be sought for a wind farm to be constructed on land at Carmel, Llechcynfarwy, Anglesey. The application area involves some 300 hectares of land, divided between several farms, and it is intended to erect 25 turbines within this area.

As part of an Environmental Statement being prepared to accompany the application, Gwynedd Archaeological Trust (Contracts Section) have been contracted by Ecogen to carry out an archaeological assessment.

### **2. ASSESSMENT BRIEF**

An initial report was requested from Gwynedd Archaeological Trust, assessing the likely archaeological impact of the plans and suggesting mitigatory measures. The assessment must comply with the conditions specified in the "Brief for Initial Archaeological Assessment" prepared by Gwynedd Sites and Monuments Record for Anglesey Borough Council.

The basic requirement was for a desk-top survey and field search of the proposed area in order to assess the impact of the proposals on the archaeological and heritage features within the area concerned. The importance and condition of known archaeological remains were to be assessed and areas of archaeological potential and new sites to be identified. Recommendations regarding the appropriate siting of the turbines were to be made, with broad recommendations concerning the layout of tracks and service trenches.

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.

### **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 held by the County Archives in Llangefni (including early Ordnance Survey maps, tithe maps and schedules, Land Tax Assessments) were consulted, and their index was checked for other sites of interest. The archives at UCNW, Bangor, were searched for relevant estate maps and documents. Aerial photographs were inspected at the offices of the Countryside Council for Wales.

#### **3.2 Field Search**

This was undertaken between the 24th and 28th of March, 1994, by two members of Trust staff. Conditions for field walking were reasonable, though often overcast. The area of land

immediately south of Cae'r-fontin was too wet to walk, but all the rest of the fields were walked, and each of the proposed turbine locations was inspected.

Sites identified were marked on copies of 1:10,000 OS maps as accurately as possible without surveying. Forms were filled in assessing each site, and detailed notes made of the more important. Photographs were taken of all potential sites identified.

### 3.3 Report

All available information was collated, and transferred onto 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; descriptions of the sites and specific recommendations for further evaluation or mitigatory measures, as appropriate, are given in the relevant sections of this report.

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

### 3.4 Categories

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

#### *Category A - Sites of national importance.*

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

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

#### *Category B - Sites of regional or county importance.*

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

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

#### *Category C - Sites of district or local importance.*

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

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

#### *Category D - Minor and damaged sites.*

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

For Category D sites, rapid recording, either in advance 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.

## **4. ARCHAEOLOGICAL FINDINGS**

### **4.1 Introduction**

Archive material consulted at the Local Record Office, mainly tithe maps and Land Tax Assessments, were useful for indicating the farm boundaries and landowners in the eighteenth and nineteenth centuries, and the early Ordnance Survey maps also helped elucidate farm boundaries and access tracks.

The Archives at UCNW proved particularly interesting, by providing a number of maps which showed a complete change in the layout of the field systems during the early part of the nineteenth century.

Lists supplied by Cadw: Welsh Historic Monuments were consulted for information about listed buildings and scheduled ancient monuments. There are no scheduled ancient monuments or listed buildings within the application area, although two buildings just outside the area (the house at Tre'r Ddol and Llehcynfarwy Church) are listed Grade II.

The aerial photographs studied were a vertical coverage of Anglesey taken in 1982 for the Borough Council. No new sites were identified from them.

The fieldwork confirmed the location of those sites noted during the desktop work, and also identified new areas of interest.

### **4.2 The Archaeological Background**

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

#### *4.2.1 Prehistoric*

There are no known sites of Prehistoric date within the study area, but a number of sites are known from the surrounding area.

The parish and church of Llehcynfarwy take their name from a standing stone (Llech = stone + Cynfarwy = saints name) which once stood north of the church, and this is thought to be one of a number of standing stones on Anglesey dating to the Early Bronze Age. Of similar date are burnt mounds, of which several have been recorded from the area, and the layer of burning noticed within the study area may be one. Burnt mounds are mounds of burnt stone, usually in a horse-shoe shape surrounding a small pit, with the open ends of the horse-shoe typically facing a stream. They are thought to have been used for cooking, by heating stone in a fire and then using the hot stone to heat water in the pit. An "ancient camp", possibly a small hillfort, with associated round huts and finds were recorded at Geirn in the 19th century, although no visible evidence survives.

#### *4.2.2 Roman*

There are no Roman finds from the immediate area, although the round huts mentioned in 4.2.1 above often continued in use into the Roman period. Pottery and coins of Roman date are fairly common on Anglesey, and it can be assumed that there would have been some activity of this date within the area.

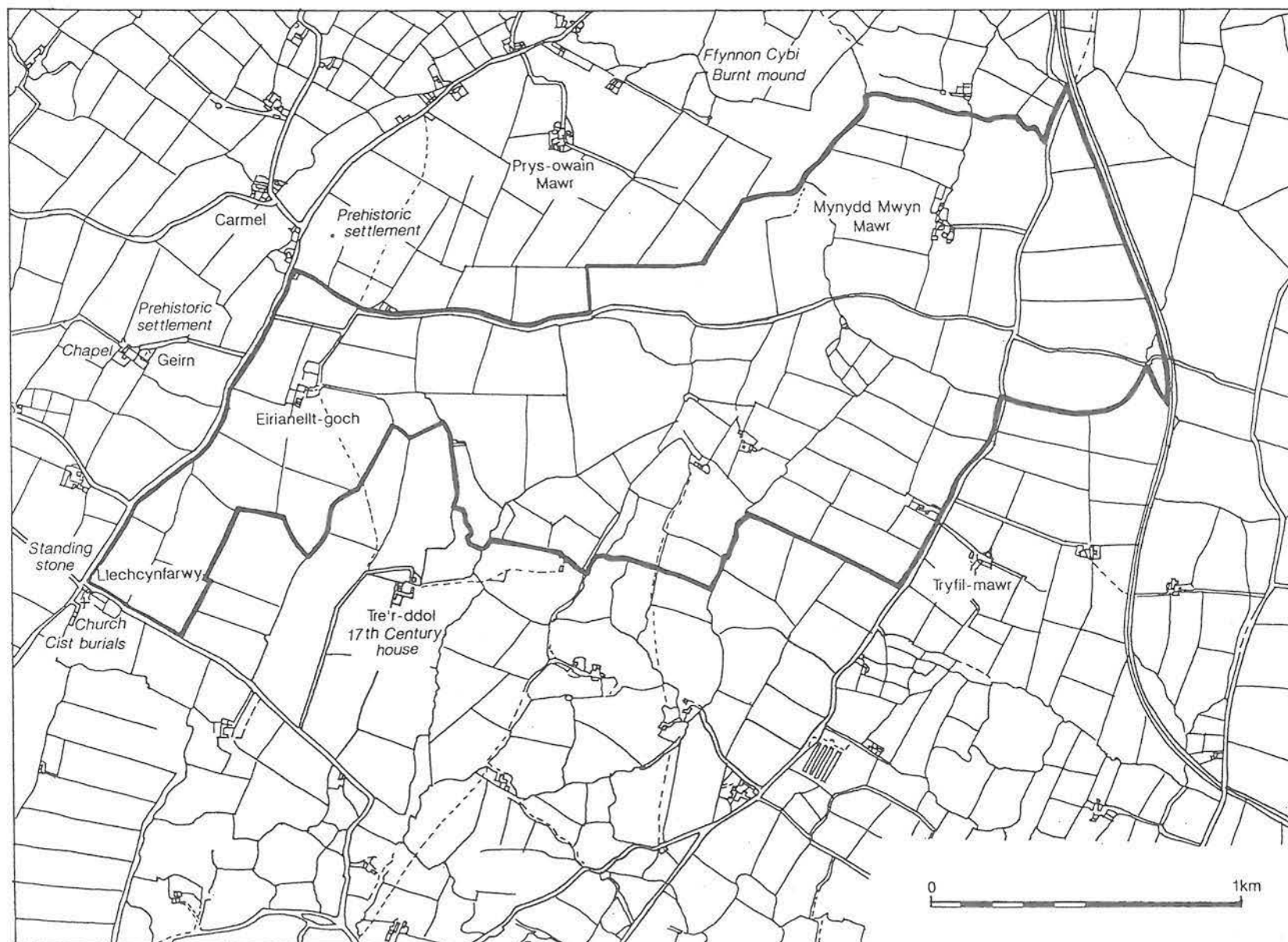


Fig 1. Location of sites of archaeological and historical interest in the area.



#### *4.2.3 Medieval and later*

The church at Llechcynfarwy is the only building remaining from Medieval times, although this has been extensively modernised, and no early fittings remain. Finds dating to the Early Medieval period are known from the area: cist burials of 6th century date were found between the church and the road when the bank was removed, and a Viking spearhead was found to the north of Llechcynfarwy in Llantrisant parish. Another Medieval chapel formerly existed in the area close to Geirn.

During the Medieval period land was divided into areas known as townships. These townships can sometimes be equated with parishes, although within the study area this does not appear to be the case. Medieval townships are recorded at Eirianell and Trefowen, with hamlets (smaller and usually slightly later in date than townships) at Tre'r-ddol, Llechcynfarwy and Geirn, all lying within the ecclesiastical parish of Llechcynfarwy. The hamlet of Penmynydd-mwyn (Mynydd-mwyn-mawr) was part of the lands of the Bishop of Bangor in 1306, and later became a detached portion of Gwredog. The exact location of the settlements is not known, but they are usually assumed to lie under the present farms of the same name. Neither is it known how the settlements would have looked, although both consolidated and dispersed forms are to be expected. However it is assumed that open field agriculture would have been practised, sometimes with ridge and furrow cultivation. Elements of these fields are preserved in the early estate maps, although little is now visible on the ground.

#### *4.2.4 Post Medieval*

Estate records in the archives show that by the 16th and 17th centuries the lands were owned by individual families who were growing in importance, and became known as the landed gentry. For the study area this included the Bold family of Tre'r Ddol (later to merge with the Meyrick's of Bodorgan), the Pritchard family of Dinam, Llangaffo, who had married into the Eirianell line, and the Bayleys of Plas Newydd. The individual farms were already identifiable at this stage, although small parcels of land (such as an isolated strip in Plas Llandrygarn) suggest an older pattern which was overlain. The smaller holdings, such as Pen Rhoswen and Twll-y-mwg are may be slightly later in date, but there is insufficient documentary evidence to date the origin of these settlements. The mill at Rhosgoch is now barely visible on the ground, although is clearly marked on estate maps. This is certainly 16th century in origin, but may be earlier, as mills are recorded in the area in 14th century documents. Another fairly early element in the landscape is the track which runs along the north side of the study area, known as the "roman road". It has not been possible to date this, but it is shown on the earliest map (1725), and is assumed to be at least medieval in origin.

The field systems now visible are shown, in two instances, to date from the early 19th century. Estate maps of Eirianellt Goch and Ynys-dodyn of the mid 18th century both show a division into much smaller fields, which bear little relationship to the field boundaries of today, and a map of 1812 suggests that the land was divided into new fields at about that time. However the farm boundaries, particularly where they occur with parish boundaries, remain fairly stable, which makes them of particular archaeological interest, as their method of construction and ecology can provide useful information, as also can the soils buried beneath them.

#### *4.2.5 Conclusions*

The region around Carmel and Llechcynfarwy holds a number of sites of archaeological and historical interest. There is potential for the survival of sites of Prehistoric date within the study area, and elements of the Medieval landscape are preserved within the present pattern of farms and tracks.

There are a number of houses and farms dating from at least the early eighteenth century, though possibly older, which together with their associated farm buildings, enclosures and field boundaries form an important element in the historic landscape.

### 4.3 Archaeology of proposed development area.

#### 4.3.1 *Introduction* (N.B. the numbers refer to the site numbers in the gazetteer)

The area proposed for the development is currently a mixture of improved pasture and arable, with some wet, low lying ground. The soils are mainly brown earths lying on boulder clay. The underlying rock is in part Precambrian Gneisses, and partly Ordovician shales. The soils are imperfectly drained, and there is considerable evidence of attempts at drainage from all periods.

The majority of the sites in the gazetteer are agricultural buildings and features of post-medieval date of local interest. Two sites are considered to be of regional importance, the track which runs along the north side of the boundary, and the remains at Ynys Dodyn. Two features of probable Prehistoric date (4) cut by the stream cannot be allocated to categories of importance without more information, and so have been placed in Category E.

#### 4.3.2 *Gazetteer of Archaeological Sites*

##### **1. Eirianellt Goch** SH38808176 *Category C*

A farmstead with a modern house but some farm buildings of at least 19th century date. The present farm may lie on the site of a Medieval settlement.

##### **2. Track** SH39008203 - SH41578188 *Category B*

A track which once formed a relatively important throughway, serving the houses at Rhosgoch, Ynys-dodyn, Cae'r-fontin and Twll-y-mwg. It is on the earliest map of 1725 as an established feature, and could be Medieval in origin. Known as the "roman road" but there is no evidence for such an early date.

##### **3. Pen Rhoswen and field boundary** SH39808204 *Category C*

The site of a small cottage, marked on a map of 1725. Now visible only as low foundations circa 6 m by 5 m. The field boundary which runs south-east from the remains to the stream is the original boundary for this holding, and is one of the boundaries to survive the re-alignment in the 19th century.

##### **4. Burnt Mound and related features** SH40048194C *Category E*

The stream which runs along the bottom of the small valley has cut through a layer of burnt stone and charcoal. This may be the remains of a Prehistoric burnt mound, although further work would be needed to substantiate this. To the north of the burnt layer, and also cut by the stream, is another feature visible as a line of stones, possibly forming a platform.

##### **5. Rhosgoch** SH40278201 *Category C*

A small building, now used as a cattle shed, but originally a cottage. Appears to be of fairly late date, probably around 1800.

##### **6. Mynydd-mwyn-mawr** SH40858228 *Category C*

A farmhouse and associated buildings, none of which look older than the 18th century. The farm may occupy the site of the Medieval settlement known as Pen-mynydd-mwyn.

##### **7. Twll-y-mwg** SH40528199C *Category C*

A cottage and associated fields covering some 6 acres. It was described as "Y Cae Bach" (The Little field) on a map of 1725, where a cottage is shown on the site of the existing building. Now in ruins, but still standing to eaves height.

##### **8. Felin Rhos-goch** SH40058179 *Category C*

The site of a mill and leat, described as a corn mill in 1596, but appears to have been converted into a fulling mill in the 18th century. The mill is now only visible as a rectangular

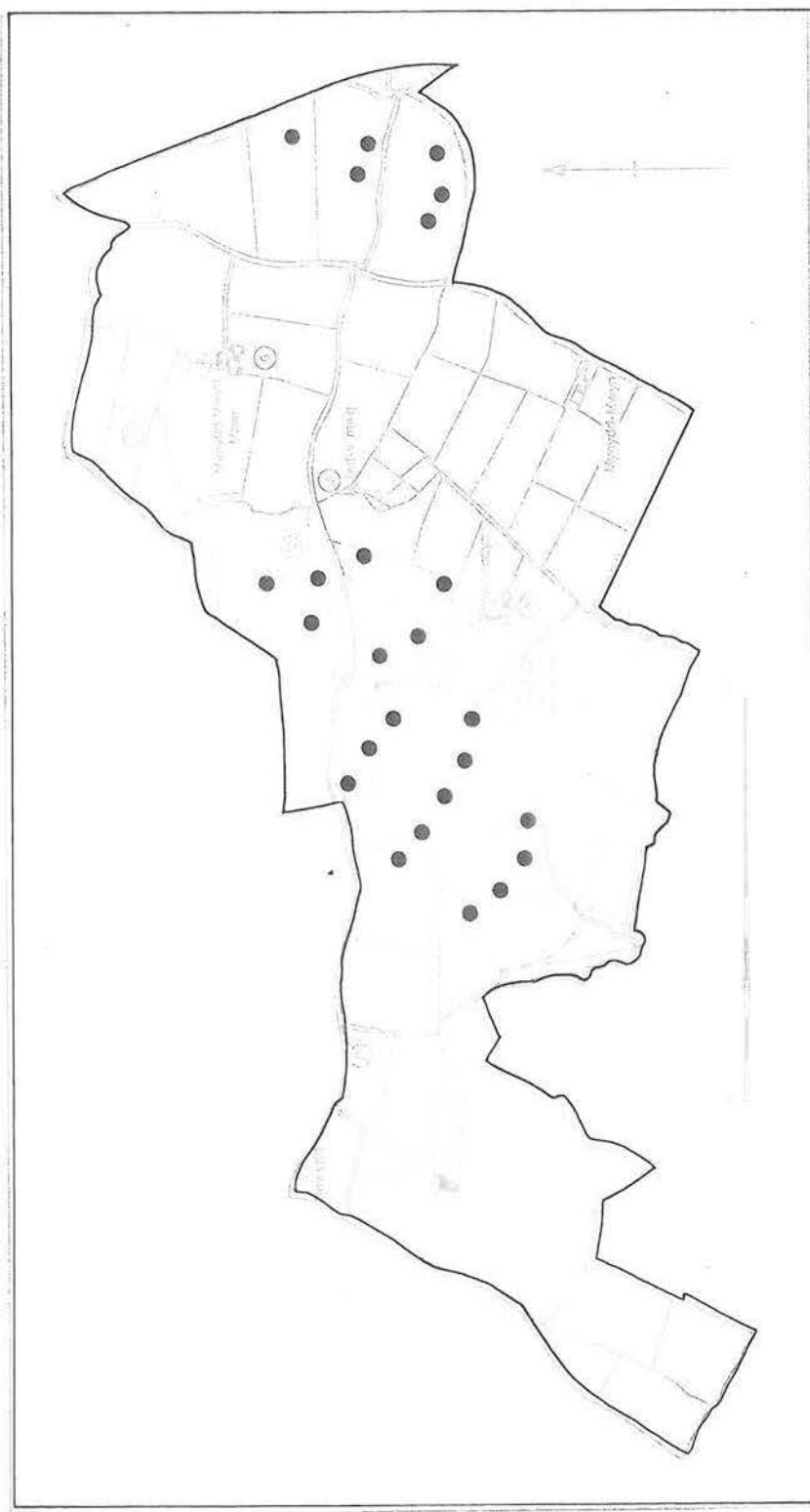


Fig. 2. Location of archaeological sites listed in the Jureathick Overlay shows location of proposed rail line within the area.



depression in the ground, but the line of the leat is marked by a significant bank, although this latter may be partly natural (a glacial feature) in origin.

**9. Ynys-dodyn SH40208160 *Category B***

A derelict farmhouse and associated outbuildings. Ynys-dodyn was a farm of some 118 acres, owned by the Penrhos Estate in the 18th century, but also mentioned in a document of 1699, when it formed part of lands held with Chwaen Wen. An interesting house of probable 17th century date.

**10. Cae'r-fontin SH40068152 *Category C***

A holding of 12 acres, owned by the Meyrick family of Bodorgan in 1725, where it is shown on a map with the house at the southern end of the holding. The present remains are at the north end, and so may be of a later date. The buildings were knocked down some ten years ago, and only building rubble and foundations remain, although the cottage was still lived in about 30 years ago.

**11. Well north-west of Mynydd-mwyn-mawr SH40568253 *Category C***

A small stone well, consisting of a small chamber part covered by a stone slab. Unusually not marked on the OS 1:2500.

**12. Remnant field bank north-east of Rhosgoch SH41388215 *Category D***

A wide terrace which sweeps across the field in an "S" shape. It could a natural feature, or the remains of an early field boundary.

**13. Field boundaries, etc.**

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. The most common type of field boundary in this area is the stone faced bank surmounted by a thorn hedge, although drystone walls are also present. Those boundaries which surround the individual farms could be Medieval in origin, but the majority of the internal field boundaries are 19th century in date. One interesting survivor is the southern Pen-rhoswen boundary mentioned in (3) above.

## **5. RECOMMENDATIONS**

### **5.1 General**

A number of sites have been identified within the study area, some of which are likely to be affected by the present placing of the turbines, and others which will not. The nature of the development means that it is usually possible to move the proposed location of the individual turbines so that known archaeological sites can be avoided, however if this should not be possible, then recommendations for recording are given below. In the case of buildings, where full survey is recommended, this recording is expected to consist of measured survey, photographs and a written description. In other cases only a photographic and written description is necessary.

One site (4) requires further assessment before its archaeological status can be established. This would only be necessary if the area around was going to be disturbed, which by the current placing of turbines seems unlikely.

### **5.2 Recommendations for further assessment**

**4. Burnt Mound and related features** The area around should be examined by trial trenching and geophysical survey if it is to be disturbed.

### 5.3 Recommendations for mitigatory measures

- 1. Eirianellt Goch** The buildings of the farmstead are unlikely to be affected by the current proposals, but should be fully surveyed in advance if they are to be disturbed. The same would apply to the site of the former farmhouse.
- 2. Track** The preferred option is for the track to be preserved *in situ*, however if it is to be used to gain access to the turbines then care should be taken to minimise any changes. If the bed of the existing track is to be disturbed, then the present make-up and method of construction should be recorded. The banks on either side should also be preserved *in situ*, but again if it is necessary to disturb either of them then the method of construction should be recorded, and the soils underneath examined for useful evidence.
- 3. Pen Rhoswen and field boundary** The existing proposals show three turbines sited close to the old field boundary which formerly separated Pen Rhoswen from Ynys-dodyn. The preferred option would be for the turbines to be sited in such a way so as not to damage this boundary or the foundation remains in the north corner. However if these are to be disturbed by the proposed installation then the remains should be fully recorded in advance of disturbance. The primary aim would be to date the boundary and remains, but previous land-use evidence may also be obtainable from soils buried beneath the field boundary.
- 5. Rhosgoch** This site is unlikely to be disturbed by the current proposals, but it would require recording if future plans were to affect it.
- 6. Mynydd-mwyn-mawr** The house and farm buildings are unlikely to be affected by the current proposals, but the traditional buildings should be recorded if future plans are to affect them.
- 7. Twll-y-mwg** The remains are unlikely to be affected by the current proposals, but they would require a full survey if they are to be disturbed.
- 8. Felin Rhos-goch** The preferred option for this site is preservation *in situ*. However if it necessary to disturb any part of the leat or mill then the sites should be fully recorded in advance of work starting, preferably by excavation, although a watching brief may suffice for part of the site.
- 9. Ynys-dodyn** This site is unlikely to be affected by the current proposals, but if it should be considered for development in some way then full recording should be carried out in advance of work starting.
- 10. Cae'r-fontin** This site is unlikely to be affected by the current proposals, but the remains would require recording if they are to be disturbed.
- 11. Well north-east of Mynydd-mwyn-mawr** This site is unlikely to be affected by the current proposals, but full recording would be required if it is to be disturbed.
- 12. Remnant field bank north-east of Rhosgoch** A watching brief should confirm the archaeological status and nature of this feature.
- 13. Field boundaries** It is recommended that where a significant part of any field boundary is to be disturbed, then it should be recorded in advance by photograph and written description.

### 5.4 Recommendations for areas of unknown archaeological potential

Previous results from similar projects have shown that many sites can only be detected by excavation, particularly in areas such as this where surface indications are slight due to ploughing. It is recommended that a continuous watching brief is undertaken during soil

stripping operations for the turbines and associated services. This is an important part of the mitigatory strategy, with potential for discovering sites which would otherwise go unrecorded.

## **6. SUMMARY OF RECOMMENDATIONS FOR FURTHER WORK AND MITIGATORY MEASURES**

### **6.1 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. If it is necessary to disturb these areas, then they will be reclassified and suitable mitigatory measures suggested following evaluation.

#### *Category E - Sites needing further investigation*

- |                                     |                 |
|-------------------------------------|-----------------|
| 4. Burnt mound and related features | Trial trenching |
|-------------------------------------|-----------------|

### **6.2 Mitigatory Measures**

This section lists the remaining sites according to category (as described in Section 3.4 above).

#### *Category A - National importance*

None.

#### *Category B - Regional importance*

- 2. Track
- 9. Ynys-dodyn

#### *Category C - Local importance*

- 3. Pen Rhoswen and field boundary
- 5. Rhosgoch
- 6. Mynydd-mwyn-mawr
- 7. Twll-y-mwg
- 8. Felin Rhos-goch
- 10. Cae'r-fontin

#### *Category D - Minor and damaged sites*

- 12. Remnant field bank north-east of Rhosgoch

A continuous watching brief should be maintained during soil stripping operations as some sites will not be suspected until topsoil stripping reveals them, and sites identified in advance of the works may require further recording during construction.

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## 8. Non Technical Summary

An initial assessment of the proposed development area has identified a number of actual and some possible sites. Recommendations for further assessment are made for those sites whose archaeological status is not yet known.

One of the sites, an area of burning and related features cut by a stream, requires further evaluation before appropriate mitigatory measures can be recommended. It is suggested that, should the area need to be disturbed, the site is initially investigated by trial trenching.

Two of the sites are considered to be of regional importance: the track known as the "roman road" which runs along the north boundary of the study area, and the remains of the house and buildings at Ynys-dodyn. The remaining sites are considered to be of local interest, and consist mainly of cottages and farms with some early field boundaries.

It is recommended that the siting of the turbines and access tracks is designed to minimise the impact it will have on any of the features. However if they are to be disturbed, then full recording should take place before construction work starts.

As with all schemes of this nature, the potential for further discoveries once soil removal commences is a possibility. Taking into account the wealth of archaeological remains in the locality (outlined in 4.2 above) it is recommended that a continuous watching brief be undertaken during soil stripping operations.