

# **BLAEN BOWI WIND FARM EXTENSION PROPOSAL**

## **AN ARCHAEOLOGICAL IMPACT ASSESSMENT**

**JUNE 2004**



Report No. 2004/71

Paratowyd gan Archaeoleg Cambria  
ar gyfer Dulas Ltd.  
Prepared by Cambria Archaeology  
for Dulas Ltd.



A R C H A E O L E G

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# ARCHAEOLEG CAMBRIA ARCHAEOLOGY

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RHIF Y PROSIECT / PROJECT RECORD NO. 51295

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JUNE 2004

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### AN ARCHAEOLOGICAL IMPACT ASSESSMENT

Gan / By

Duncan Schlee

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# **BLAEN BOWI WIND FARM EXTENSION PROPOSAL**

## **An Archaeological impact Assessment June 2004**

### **Project Record No. 51295**

<b>CONTENTS</b>	<b>1</b>
Summary	2
8 Cultural Heritage	3
8.1 Introduction	3
8.2 Geographical location and associated aspects	3
8.3 Methodology	3
8.4 Background	4
8.5 The historic landscape	6
8.6 Archaeological sites and their significance	7
8.7 Predicted impacts to archaeology - Physical impacts	8
8.8 Visual Impacts	9
8.9 Mitigation Measures	10
Tables	
Table 8.1: Archaeological sites within the proposal area and their categories of significance	8
Table 8.2: The significance of physical impacts on the known Archaeological Resource	9
Photographs	
Photos 1-5	11-13
Figures	
Figures 1-4	13-15
Appendix 1: Historic Landscape Character Area Description	16

## Summary

*This report was produced as an assessment of the archaeological implications of the proposed extension to the Blaen Bowi Wind Farm. The report forms part (section 8) of a larger environmental impact assessment undertaken by Dulas Ltd. on behalf of Wind Jen. The report is presented here as a stand-alone document for archive purposes in a format provided by the client. Because the site lies within a designated Landscape of Special Historic Interest, an ASIDOHL has been deemed necessary in order to fully assess the impact of the proposed development.*

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## 8 CULTURAL HERITAGE ASSESSMENT

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### 8.1 Introduction

This section the of the environmental statement for the proposed extension of the Blaen Bowi Wind Energy Project is an assessment of the potential impact of the proposed scheme on cultural heritage, comprising the archaeological and historic landscape features within the study area. In addition to direct impacts within the proposal area, the potential of the scheme to impact upon aspects of cultural heritage beyond the immediate area of the wind farm, will be considered.

Cambria Archaeology Field Operations have previously undertaken an archaeological assessment for the original proposal for the wind farm in September 1999 (PRN39006). A subsequent watching brief (PRN 44299) was carried out during the construction of the footings for the initial three wind turbines in January 2002.

The existing three wind turbines are located to the south of the remains of four Bronze Age round barrows that are situated on the summit of Moelfre hill. There are also post-medieval features on the surrounding hill slopes.

The original assessment covered a larger area than that involved in the final construction plan but did not include the area of the current proposal for an additional three turbines of the same type as the existing three, but located on the northern slopes of the hill.

This project therefore assesses the potential impact of the current proposal on the existing archaeological remains in the new area. Much of the background work for the current project, especially the site history, is derived from the previous studies.

### 8.2 Geographical location and associated aspects

The Blaen Bowi wind energy site is situated in fields on the gradually sloping sides of

Moelfre hill, near Newcastle Emlyn, Carmarthenshire (NGR SN32603610). This is an isolated extension of the upland to the west. The B4333 Newcastle Emlyn to Cynwyl Elfed road bounds the site to the east and a minor road to Capel Iwan bounds it to the south. The new project area occupies the northern half of the hill. Most of the fields within the project area are currently under pasture, mostly for sheep, and are very occasionally shallow ploughed.

The underlying solid geology consists of Ordovician shales of the Ashgill series with little evidence of remnant drift deposits (British Geological Survey, 1994). The natural soil is a Cambic stagnohumic gley with some Manod C brown podsoils on the lower slopes (Soil Survey of England and Wales, 1983).

The project area is split unevenly between the parishes of Cenarth and Llangelor. It is situated on the western edge of the Drefach Felindre area of Special Historic Interest in the Cadw/ICOMOS register of Historic Landscapes of Wales 1998 (page 20). The area is also within the Historic Landscape Character area of Rhos Penboyr (section 388).

The inclusion of the project area within an area of special historic importance may mean that an ASIDOHL (Assessment of the Significance of the Impact of Development on the Historic Landscape) may be required for the proposed development.

### 8.3 Methodology

The aims of the assessment were:

To assess the character, extent, significance, and vulnerability of the known cultural heritage within the survey

area, and to evaluate the importance of these features, placing them in their local, regional and national contexts.

To identify any new archaeological sites, features and deposits within the survey area, and to identify any additional

investigations that may be required to assess their character, extent, significance and vulnerability.

To identify the impact of the proposed turbines, and associated infrastructure on the cultural and historic landscape, the setting of the SAMs, and other significant archaeological features within the study area, and to advise the client of legal constraints (such as those pertaining to Scheduled Ancient Monuments) and on any on appropriate mitigation that may be considered.

The assessment was undertaken using existing documentary, cartographic, and aerial photographic resources held in the County SMR and NMR county records offices and other repositories of archaeological information.

A field visit was undertaken to advise the client on the siting of the new tracks and turbines and associated infrastructure and to review the current state of the known archaeological features and to identify, assess and record any new archaeological sites or features identified during the documentary research.

Information gathered during the documentary research and fieldwork has been collated into a project archive catalogued in accordance with the National Monuments Record's recommended procedures. This archive is held by Cambria Archaeology Field Operations at Llandeilo and will normally be available for

consultation after a period of six months unless otherwise specified.

## **8.4 Background**

The project area and its surrounding region have been subject to human settlement from prehistoric times onwards; settlement, however, later declined and was not to rise again probably until the post medieval period. As a consequence little recorded archaeology is represented within the project area. The agricultural landscape of the area – its fields,

hedges and most of the boundaries - are a relatively recent creation.

### ***The prehistoric and Roman periods (8500 BC - c.400 AD)***

Like many primarily upland Welsh landscapes, the project area and its environs have preserved much evidence of prehistoric activity, chiefly in the form of standing earthworks from the bronze age (2500 - 700 BC), and iron age (700 BC - 1st century AD). Preservation has been assisted by the low-intensity agricultural regimes traditionally practiced within the region.

Four Bronze Age round barrows or burial mounds (Crugiau Moelvre; PRNs 2274, 2275, 2276 and 42510) occupy the summit of Moelfre immediately to the south of the project area. It is generally assumed that by the Bronze Age, much of the upland landscape in the region would have been cleared of tree cover, so that then, as now, the barrows would have formed prominent landscape features of the region (RCAHM, 1917, 225).

This type of site is present in relatively large numbers within the landscape of this region, suggesting a settled population during this period. It is however, uncertain if this population would have been settled on the uplands, in the vicinity of the barrows, or at lower altitudes.

Three of these barrows have SAM status, while the fourth, which has only recently been identified, does not.

Prehistoric funerary monuments were often constructed in prominent locations to

maximize their visibility in the landscape over considerable distances. The Crugiau Moelvre goup has panoramic views with the Preselis to the West-South-west and Frenni Fawr to the West.

It is also thought that intervisibility between monuments and other landscape features was an important consideration in the choice of location for funerary monuments. Other Bronze Age funerary monuments in the vicinity of the Moelfre Hill barrows, whose

locations would have been visible, even if the sites themselves were not, include:

Crugyorllwyn round barrow (PRN 2293)  
NGR SN35083423. (SAM Cm108)

Crug Glas round barrow (PRN 2316)  
NGR SN39113349 (SAM Cm113)

Crug Bach round barrow (PRN 2317)  
NGR SN39393363. (SAM Cm112)

Carn Wen round barrow (PRN 2318)  
NGR SN39903397. (SAM Cm111)

Crug Gwyn round barrow (PRN 1802)  
NGR SN40063204. (SAM Cm117)

Crug Bach round barrow (PRN 2319)  
NGR SN39603147. (SAM Cm118)

Crugyorllwyn round barrow (PRN 2302)  
NGR SN35083423. (SAM Cm105)

Crug Perfa round barrow (PRN 2303)  
NGR SN35583414. (SAM Cm104)

Carn Wen round barrow (PRN 2305)  
NGR SN35883424. (SAM Cm)

Trychrug-Crug Glas round barrow cemetery  
(PRN 42576) NGR SN29753143 (SAM Cm090)

#### *Early medieval (c.400 - 1110 AD)*

Pre-Norman administration of West Wales was based on small kingdoms or *gwledydd*, which had been established before the 8th century AD. One such *gwlad* was Dyfed which, at this time, comprised what is now

Pembrokeshire and western Carmarthenshire. Within each *gwlad* were smaller units of administration or estates known as *cantrefi*, which derived their name from their composition from a hundred 'townships' or *trefi*; the *cantref* was divided into groups of *trefi* called *cwmwdau* (or 'commotes'). The precise date for the evolution of the latter administrative units is not known, however, and they may have arisen during the post-Conquest period. The project area lay within the commote occupying that part of Cantref

Emlyn east of, and above, the River Cych, and for that reason became known as Emlyn Uwch Cych (Rees, n.d., 24-5; Richards, 1969, 66).

The area formerly lay within the parishes of Penboyr and East Cilrhedyn, the parish churches of which both appear to have origins within the later medieval period, at least (Ludlow, 1998, (a) and (b)). Later 19th century changes to the parish boundaries left it lying within Cenarth and Llangeler, whose churches have equally early origins. However, formal parish administration was an Anglo-Norman introduction into Carmarthenshire where it was not firmly fixed until the post-medieval period and, in areas, was not finally defined until relatively recently.

Whilst much speculation can be undertaken on the nature and extent of pre-Norman administration, both ecclesiastical and secular, there is scant record for this period in terms of physical archaeology within the region, and none in the immediate environs. This absence is a characteristic of upland Carmarthenshire as a whole.

#### *Later medieval (1110 - 1500 AD)*

The post-Conquest history of the region may, unlike the early medieval period, have left some evidence of human land use within the project area.

Unlike so much of the surrounding area Emlyn Uwch Cych remained in Welsh hands for nearly 200 years after the initial Anglo-Norman conquest of South-West Wales, which saw Emlyn Is Cych - the other commote of Cantref Emlyn - divorced from the cantref to form the Anglo-Norman Lordship of Cilgerran (Hilling, 1992, *et al.*). From its center at

Newcastle Emlyn, Emlyn Uwch Cych was to form an axial component of the estates of the great Rhys ap Gruffydd ('The Lord Rhys'), the last native lord of southwest Wales and a major baron in his own right during the 12th century. His grandson, Rhys ap Maredudd, secured his hold on the region by building the castle from which Newcastle Emlyn derives its name.

Several other castles were founded within Emlyn including Tomenseba (PRN 2273), a

motte castle - possibly without a bailey - lying some 900m due north of the project area (Rees, 1932; RCAHM, 1917, 226). The context for the establishment of the latter is not known, however; it may be a castle of the Welsh lords but equally may represent an Anglo-Norman campaign castle of brief occupation.

In either case, the immediate environs of the project area represented a 'Welshry', ie. land held under existing, native forms of tenure as opposed to the familiar manorial system typical of the 'Englishries'. Land may therefore have been farmed piecemeal from a common block of land, possibly represented by the common known to have occupied Moelfre and its environs in the post medieval period (see below).

There is no reason why the trackways within the area (PRNs 39010 and 39011), which might even represent an early north-south routeway across Moelfre prior to the establishment of the B4333 route, may not have their origins within the medieval period, while to the north, a pattern of cropmarks may represent former field boundaries associated with a drainage system for which there is no ground evidence. However, the latter lie beyond the project area. They may be prehistoric in origin, or be 'assarts' (encroachments made into marginal land)

belonging to the land-hunger at the close of the medieval period.

The area remained in Welsh hands until 1289 when, after an unsuccessful rebellion, Rhys ap Maredudd's lands were confiscated by the crown and remained intermittently in royal

hands until 1536 when, at the Act of Union, Emlyn Uwch Cych was absorbed into the County of Carmarthen. Emlyn Is Cych became a part of Pembrokeshire.

East Cilrhedyn Parish lay either side of the River Cych, in both the lordship of Cilgerran and Welsh Emlyn and similarly came to lie in both Carmarthenshire and Pembrokeshire.

### *The post-medieval period (1500 AD to present)*

The post-medieval period in Carmarthenshire is characterised by a rapid population acceleration from at least the mid 18th century, reaching a high point in 1871.

As populations increased, so new land was taken into cultivation and settlement through various forms of enclosure - parliamentary enclosure, enclosure by estates, enclosure by private individuals and enclosure by squatters on the fringes of common land.

The tithe map for Penboyr parish, of 1840, and East Cilrhedyn parish, of 1841, show that most of the project area was unenclosed common moorland, while the fields on the north side of the Capel Iwan road were partially enclosed.

This large tract of common moorland, including Moelfre, was enclosed by Act of Parliament in 1866. This is when the current field boundaries were created. The Ordnance Survey 1:10560 First Edition map of 1891 shows these boundaries.

Waun Lwyd (PRN 39014) is a derelict dwelling dating from the later 19th century. In the previous studies it was not included in the project area, but the proposed expansion now brings it within the study area.

The trackways (PRNs 39010 and 39011) appear to reflect the present system of boundaries and may therefore be contemporary with its enclosure; however, it

may be equally possible that these boundaries followed pre-existing trackways.

## **8.5 The historic landscape**

As mentioned previously, Moelfre hill, around which the Wind farm is situated is included within the Drefach and Velindre designated Landscape of Special Historic Interest in Wales. This area is significant for the intensity of the woollen textile industry that grew up within the narrow valleys, utilising the swiftly flowing streams to power industrial production. The valleys dissect the upland

plateau of between 200 and 300m above OD, of which Moelfre hill is an isolated part.

Although at a distance from the rapid and extensive expansion of development that occurred in the valley bottoms in the region, the uplands were also affected by the population increase of the post-medieval period. Enclosure of the landscape which had started within the prehistoric period, increased as populations rose. Previously open moorland and common land, was enclosed and often cultivated, and new settlements were established on the fringes of marginal land.

The result of both of these trends can be seen within the project area. Where the vast majority of present field systems have their origins within the 19th century, and with the settlements of Waun-lwyd and Ffynnon-las.

The extensive coniferous plantation undertaken to the south and west of the project area since the mid 20th century represents the greatest change in the land-use of the area since the clearances of the prehistoric period. However, none of this encroaches on the project area itself.

## **8.6 Archaeological sites and their significance**

The archaeology of the proposal area is classified according to its perceived

significance (Table 8.1 below and Appendix 6). The categories, with the exception of Category E, are based on those given in the

Department of Environment, Transport and Regions' *Design Manual for Roads and Bridges* Volume 11 Section 3 Part 2 (1993).

*Category A* sites are those believed to be of primary significance, either potentially of national importance or already designated by CADW: Welsh Historic Monuments as being of scheduled ancient monument status. One site in this category (consisting of the group three barrows PRNs 2274-2276) has been identified in the proposal area. A third barrow (PRN 42510) has recently been identified as

part of this barrow group but at present this feature lies beyond the current scheduled area.

*Category B* sites are sites of regional importance. These sites are not of sufficient importance to justify scheduling, but are nevertheless important in aiding the understanding and interpretation of the archaeology of the region. One site in this category (PRN 39014) has been identified within the project area.

*Category C* sites are sites of local importance. These sites are of lesser importance, but are nevertheless useful in aiding the understanding and interpretation of the archaeology of the local area. Field boundaries within the project area that are likely to be impacted upon to some degree by the proposals, are included in this category.

*Category D* sites are either sites of minor importance or those which are so badly damaged that too little now remains to justify their inclusion in a higher grade. No sites in this category have been identified in the proposal area.

*Category E* sites are sites which have been identified, but whose importance cannot be assessed from fieldwork and desk-top study alone. An archaeological evaluation would be required to categorise such a site more accurately if the proposal was likely to affect it in any way. While no sites in this category have been identified in the project area, this does not preclude the possibility that such sites might exist within the project area.

Details of the sites that have been identified within the proposal area are provided in the table below, and are indicated on the map of the project area.

**Table 8.1: Archaeological sites within the proposal area and their categories of significance**

PRN	Name	Type	Period	NGR	Category
39014	Waun Lwyd	Dwelling	Post-medieval	SN32823590	B
2274	Crugiau Moelvre	Round Barrow	Bronze Age	SN32613612	A
2275	Crugiau Moelvre	Round Barrow	Bronze Age	SN32613611	A
2276	Crugiau Moelvre	Round Barrow	Bronze Age	SN32633609	A
42510	Crugiau Moelvre	Round Barrow	Bronze Age	SN32563610	A
		Field boundary	Post-medieval	SN32533634	C
		Field boundary	Post-medieval	SN32813633	C
		Field boundary	Post-medieval	SN32493599	C
		Field boundary	Post-medieval	SN32923607	C

## 8.7 Predicted Impacts to Archaeology

### Physical impacts

The following terms to define the significance of potential physical impact have been used in the following section. The significance of the impact is not related to the importance of the feature.

*Category A: (Major significance):*  
Fundamental change to an archaeological site.

*Category B: (Moderate significance):*  
Material but non-fundamental change to a location or archaeological site.

*Category C: (Minor significance):*  
Detectable but non-material change to a location or archaeological site.

*Category D: (Uncertain significance):*  
Unquantifiable or unqualifiable change to a location or archaeological site.

*Category E: (No significance):*

No physical impact at all upon a location or archaeological site.

As the proposal was initially presented, impacts on the archaeological resource would have included severe disturbance to or even total destruction of known archaeological features of national importance (Category A) during the construction phase of the wind farm.

Following on-site consultation with the contractors, a field visit to assess the potential impact of the scheme on the identified archaeological features, and consultation with Cadw, a revised proposal for the siting of the three turbines was presented, which addressed archaeological (and other) concerns.

The revised scheme has the turbines located further away from the SAMs, so that they (and associated access tracks) will not impact physically upon the scheduled areas surrounding the barrows.

**Table 8.2: The significance of physical impacts on the known Archaeological Resource**

Site No	Type	Category of archaeological significance	Category of significance of impact
39014	Dwelling	B	E
2274	Round barrow	A	E
2275	Round barrow	A	E
2276	Round barrow	A	E
42510	Round barrow	A	E
	Field boundary	C	B
	Field boundary	C	B
	Field boundary	C	B
	Field boundary	C	B

The deserted dwelling Waun Lwyd (PRN39014) allotted Category B significance, is unlikely to be impacted upon assuming that access trackways and other associated groundworks are routed at a suitable distance from the feature.

Field boundaries (of Category C) will inevitably be impacted upon, but the impact will not detract from their archaeological significance.

During the field visit no additional archaeological features were identified, and no surface traces to suggest potential for unrecorded buried archaeological sites and features in the proposal area were observed.

While the potential for physical impact to known archaeological features has been addressed in the revised proposals, there remains a potential physical impact of *Major significance* on any as yet unknown archaeological features that might be encountered during groundworks. Any such features are likely to suffer total destruction.

## 8.8 Visual impacts

Significant visual impact upon the setting of the nationally important Bronze Age burial monuments will be inevitable. There are three aspects to this intrusion – disruption to the views from the site, disruption to views

towards the site from elsewhere, and disruption to the overall landscape.

### *Views from the site*

While the turbines do not totally obscure the views from Moelfre hill (see Photo 4), they do impede appreciation of intervisibility between Moelfre hill and other prehistoric sites.

The presence of the existing turbines, affects views in southerly directions (see Photos 1 and 2). The proposed additional turbines would effectively surround the hill, impeding views in northerly directions as well. The presence of the turbines may also be considered to detract from appreciation of the location generally (see Photo 3).

There is however, no public access to the site at present. If this situation is to continue throughout the design life of the proposal (an unspecified period), the significance of these issues is lessened.

### *Views towards the site*

The presence of the existing turbines on the site has already compromised the previously unimpeded views towards Moelfre hill from other locations. The construction of further turbines, especially if they disrupt the profile of the hill from other significant locations, can only worsen this impact.

Four wire frame images were produced to illustrate the impact of the additional turbines on views towards Moelfre hill from other archaeologically significant locations in the area (see figures 1 to 4).

Domen Seba is a medieval castle motte (PRN 2273) NGR SN3256037030, (SAM Cm 020) 1km to the north from the site. Although the additional turbines will have a considerable additional impact upon the view towards Moelfre hill, there is no public access to the site, so the specific concern is limited. Since Domen Seba is not a Bronze Age site, issues of intervisibility are also less significant.

Nant Sais round barrow (PRN 2295) NGR SN3435033970 (SAM Cm 106) is a significant Bronze Age burial mound in the area. The wire frame image shows the turbines visible from a distance, at which the barrows at Moelfre cannot be distinguished. The addition of more turbines does not greatly detract from the existing view. Furthermore, the view is at present entirely impeded by forestry plantation, making intervisibility less of an issue for the foreseeable future.

Tollen Lawddog medieval castle motte (PRN2281) NGR SN3598036250 (SAM Cm 022) is a significant feature in the center of the historic landscape area. The wire frame image shows the turbines visible from a distance, at which the barrows at Moelfre cannot be distinguished. From this view the addition of three turbines increases the impact of the wind farm on the landscape. The degree to which the view may be impeded by other factors is uncertain.

Trychrug-Crug Glas round barrow cemetery (PRN 42576) NGR SN29753143.(SAM Cm090) is a nearby Bronze Age barrow cemetery very similar in layout to the group on Moelfre hill. Issues of intervisibility between these two monuments are significant, but the wire frame image suggests the turbines are at some distance. Because the additional turbines are proposed to be below the brow of the hill on the northern slopes, the impact upon the view comes primarily from the existing

turbines. The extent to which intervisibility is disrupted by forestry is not certain.

#### *The overall landscape*

Because Moelfre hill is situated within a landscape of special historic interest, an ASIDOHL, may be required to fully assess the visual impact of the proposal. This issue is currently under consideration by Cadw. Because of this no attempt to quantify the significance of the visual impact of the proposed development, will be made at this stage.

## **8.9 Mitigation Measures**

A zone of 50m beyond the perimeter of each identified scheduled site has been taken, in this study, as the baseline for any potential physical disturbance during the construction phase of the proposal. Following on-site consultations, the proposals have been modified to ensure that neither the turbine foundations nor the access trackways fall within the scheduled area surrounding the barrows. The fourth, as yet un-scheduled barrow, is in the process of being scheduled, to ensure that it has the same statutory protection.

Although no appreciable impact upon known archaeological sites is envisaged within the proposal, it has been agreed that a watching brief will be undertaken on the site, if consent for the proposal is granted. This is to ensure that any unforeseen archaeological features that may be encountered during ground works, are adequately recorded.

In relation to the visual impact of the proposal, it is suggested that the visual impact of the access trackways is minimised by locating them, where possible, adjacent to existing field boundaries.



**Photo 1:** View of barrows on Moelfre hill, looking south-west.



**Photo 2:** View of barrows looking south west.



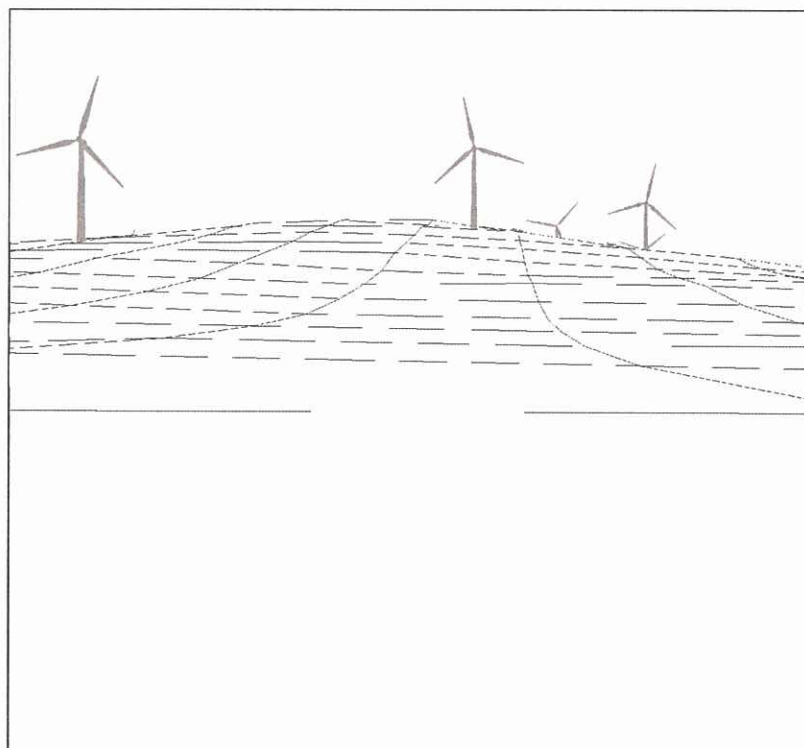
**Photo 3:** View of Moelfre hill looking north-westwards.



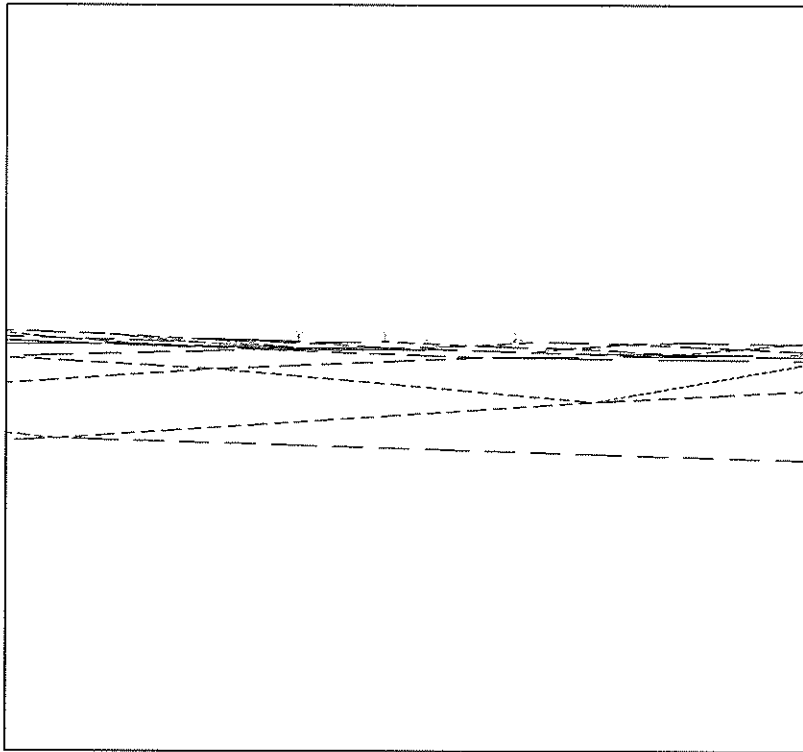
**Photo 4:** View to west from the SAMs on Moelfre hill.



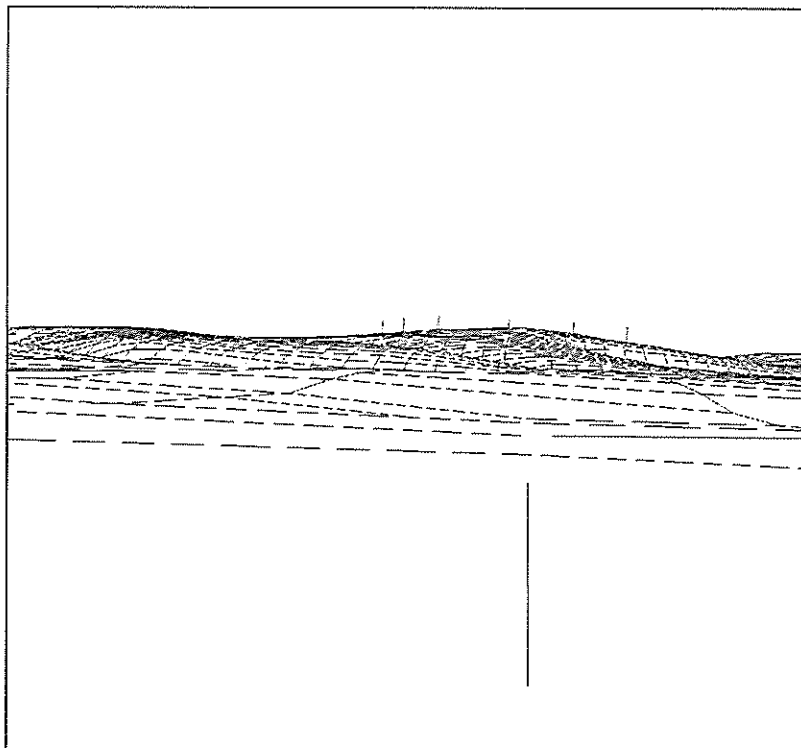
**Photo 5:** Aerial photograph looking westward, with Moelfre hill at top left.



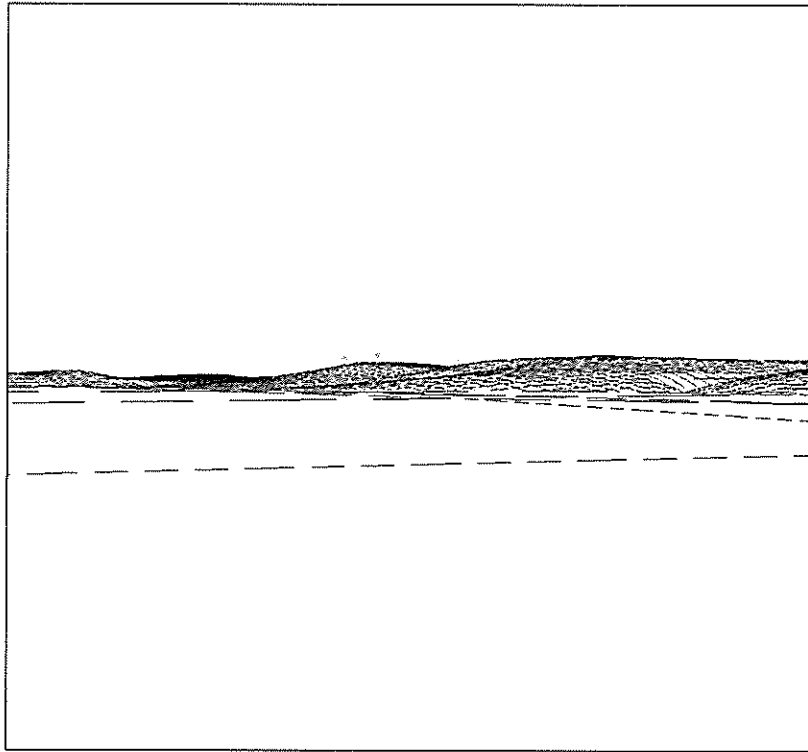
**Figure 1:** Wire frame image of view towards Moelfre hill from Domen Seba.



**Figure 2:** Wire frame image of view towards Moelfre hill from Nant Sais.



**Figure 3:** View towards Moelfre hill from Tollen Lawddog.



**Figure 4:** View towards Moelfre hill from Trychrug Crug Glas.

## **Appendix 1:**

### **DREFACH AND FELINDRE**

### **HISTORIC LANDSCAPE CHARACTER AREA: 388 RHOS PENBOYR**

**GRID REFERENCE:** SN333336  
**AREA IN HECTARES:** 1584

#### **Historic Background**

A large area within modern Carmarthenshire, comprising an extensive ridge of high ground separating the Teifi valley to the north from the Tywi valley to the south. It was open moorland, named 'Mynydd Castell Newydd' on Emmanuel Bowen's map of 1729 and was not enclosed until 1866. Historically, it presented a considerable barrier to travellers. Indeed its western end is named 'Fose y Gelin' by Bowen, with the warning 'A Dangerous Bogg which Strangers ought to be cautious of Crossing in ye Winter Season without Guides'. In common with similar landscapes elsewhere in southwest Wales, the main historic landscape component is represented by prehistoric monuments; including 15 Bronze Age round barrows, which were intentionally highly visible - and still are, especially the three on the summit of Mynydd Moelfre at the west end of the area - and give both visual character and time-depth to the area. No contemporary field systems have so far been recognised, although a massive linear defensive bank known as Clawdd-Mawr, crossing the eastern end of the ridge, which is early medieval, but could be much earlier.

During the historic period, the bulk of this area lay within the medieval Cantref Emlyn, in Emlyn Uwch-Cych commote which remained largely in Welsh hands until the 13<sup>th</sup> century. It was finally annexed by the English crown in 1283, and in 1536 formed part of the Hundred of Elvet in Carmarthenshire. The southern part of this character area is in Cantref Gwarthaf, Elfed commote. This was brought under Anglo-Norman control soon after the establishment of the royal castle at Carmarthen, in 1109-10, as part of the associated 'Honour of Carmarthen'. In 1284, it became the core of the newly-formed County

of Carmarthen. However, it represented the 'Welshry' of the lordship and county, and so a Welsh tenurial pattern persisted in both areas - with neither villis nor knight's fees. This is largely responsible for the dispersed settlement pattern throughout the region. Indeed little settlement appears to have occurred within the Rhos Penboyrr character area prior to the late 19<sup>th</sup> century. However, there is documentary evidence for lead and silver mining during the 16<sup>th</sup> and 17<sup>th</sup> centuries.

Mynydd Moelfre was formal common land during the medieval period, and the entire character area is shown as open common - essentially moorland - on tithe maps of c. 1840, although by this date its lower-lying fringes had been encroached upon by squatters, cottages had been built and fields laid out. The greater portion of common, including most of this character area, was enclosed by Act of Parliament in 1866. Regular, relatively large fields were laid out, and soon after farms and cottages built. Later intervention has been limited, although a second defensive line, the Rhos-Llangeler Stop Line, was built across the ridge west of Clawdd Mawr during World War 2. Since the war, coniferous forestry plantations have been established over some of the fields, which with three massive wind-turbines - constructed in the early 21<sup>st</sup> century on Mynydd Moelfre - are now the most prominent landscape features of the area.

#### **Description and essential historic landscape components**

Rhos Penboyrr is an east-west aligned ridge, lying between 210m and 330m above sea level, forming the watershed between the Afon Teifi to the north and the Afon Tywi to the south. It is an agricultural landscape overlain in places by coniferous forestry plantation. The large regular fields and straight lanes are typical of a landscape created by Act of Parliament, in this instance in 1866. It is exposed and windswept, and consequently hedges on the earth boundary banks are either straggling lines of low bushes or non-existent. Post and wire fences are the chief stock-proof barriers. Apart from large coniferous forestry plantations, which are a major characteristic of this landscape, it is treeless. Agricultural land-use is improved pasture with occasional fields of unimproved grazing and pockets of

heather/bracken moor. Farms are small and widely dispersed. Although most of the farms were established in the later 19<sup>th</sup> century, there are few buildings, either houses or farm outbuildings - that pre-date the second half of the 20<sup>th</sup> century. There are no listed buildings. Three massive turbines constructed in the early 21<sup>st</sup> century are prominent landscape features. Clawdd-Mawr defensive bank crosses the eastern end of the ridge. The World War 2 Rhos-Llangelier Stop Line is represented by anti tank cubes and pill boxes, and crosses the ridge further west. Other archaeological sites comprise over 15 Bronze Age round barrows, most of which are Scheduled Ancient Monuments, and the most prominent of which, on hilltops, are important historic landscape components and demonstrate pre-19<sup>th</sup> century use of the area.

This is a relatively well-defined historic landscape character area that essentially corresponds to the land enclosed by Act of Parliament in 1866. There has been some blurring of the boundaries since then, owing, in particular, to the establishment of coniferous plantations, but nevertheless the historic boundaries still hold good.

### **Conservation priorities**

This is a very dynamic historic landscape character area. It has altered over the past 150 years from open moorland, to fields and farms in the later 19<sup>th</sup> century and first half of the 20<sup>th</sup> century, to fields and farms, forestry plantations and power generation. Consideration of this landscape's future direction is required so that the historic elements can be effectively managed.

**Sources:** Bowen E, 1729 A Map of South Wales; Cadw – database of Building of Special Architectural or Historic Interest; Carmarthen Record Office c/v 5885 Newcastle Emlyn Estate – The Property of John Vaughan 1778, map 54, 56; Conwil parish tithe map 1840; Jones, D E, 1899, *Hanes Plwyfi Llangeler a Phenboy*, Llandysul; Lewis, S, 1833, *A Topographical Dictionary of Wales* 1 & 2, London; Llangeler parish tithe map 1839; Lloyd, J E, 1935, *A History of Carmarthenshire*, Volume I, Cardiff; National Library of Wales Ms Vol 84 (PE965) Plan of Llangeler, Penboy and Kilrhedin Inclosure 1866; Penboy parish tithe map 1840; Rees,

W, 1932, 'Map of South Wales and the Border in the XIV<sup>th</sup> century'; Rees, W, 1951, *An Historical Atlas of Wales*, London; Regional Sites and Monuments Record housed with Cambria Archaeology

# **BLAEN BOWI WIND FARM EXTENSION PROPOSAL**

## **AN ARCHAEOLOGICAL IMPACT ASSESSMENT**

**RHIF YR ADRODDIAD / REPORT NUMBER 2004/71**

**MEHEFIN 2004  
JUNE 2004**

Paratowyd yr adroddiad hwn gan / This report has been prepared by Duncan Schlee

Swydd / Position: Archaeologist

Llofnod / Signature ..... Dyddiad / Date 25/06/2004

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith  
This report has been checked and approved by

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ar ran Archaeoleg Cambria, Ymddiriedolaeth Archaeolegol Dyfed Cyf.  
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Swydd / Position: Principle Archaeologist (Field Operations)

Llofnod / Signature ..... Dyddiad / Date 25/06/2004

Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau sydd gennych ar  
gynnwys neu strwythur yr adroddiad hwn

As part of our desire to provide a quality service we would welcome any comments you may have  
on the content or presentation of this report

