

**THE CLWYD-POWYS ARCHAEOLOGICAL TRUST**

**Proposed Windfarm at Graig Farm,  
nr Llansadwrn, Carmarthenshire**

**ARCHAEOLOGICAL ASSESSMENT**

**CPAT Report No 508**

# **Proposed Windfarm at Graig Farm, nr Llansadwrn, Carmarthenshire**

## **ARCHAEOLOGICAL ASSESSMENT**

**R. J. Silvester**  
February 2003

**Report for Mr J Lewis**

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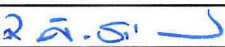


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## CPAT Report Record

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## 9.1 INTRODUCTION

- 9.1.1 In June 2002 the Contracts Section of the Clwyd-Powys Archaeological Trust was invited by Dulas Ltd (of Dyfi Eco Park, Machynlleth), on behalf of Mr J Lewis of Upper Walcot Farm, Drakes Broughton, near Pershore (Worcs), to undertake an archaeological assessment of a site within the Windworks programme. The proposed windfarm lies on land on the edge of Mynydd Llansadwrn to the north of Llansadwrn village and the Towy Valley.
- 9.1.2 The purpose of this archaeological assessment was to establish the nature of the archaeological resource within the boundary of the proposed windfarm, and also to assess the impact of the proposal both on archaeological sites in its vicinity and on the historic landscape. A further purpose was to recommend mitigation measures where the proposed development was likely to have an impact, whether direct or indirect, on the archaeological resource.

## 9.2 GEOGRAPHICAL BACKGROUND

- 9.2.1 The proposed windfarm, comprising a group of three turbines, falls within a defined area (henceforward termed the proposal area) of 0.27km<sup>2</sup>. It is centred at SN 69103470, 8 to 9km west of Llandovery in northern Carmarthenshire.
- 9.2.2 The proposal area, in a landscape of prominent rounded hills and deep valleys to the north of the Towy Valley, is set immediately below the crest of one of the higher hills, known as Mynydd Llansadwrn. The highest point on the hill as shown by the triangulation station to the north-east of Pant-y-bedol (now Abertegan) is 345m above sea level, and the proposal area reaches towards this at a maximum height of around 340m OD, but also on its steep south-eastern side drops down to around 230m OD. With the exception of the three fields that incorporate this steep south-eastern slope, the ground is relatively level.
- 9.2.3 Mynydd Llansadwrn is divided up into pasture fields by earthen banks, now usually reinforced by wire and post fences, creating a pattern of rectilinear, but sometimes more irregular enclosures. Some of these fields have witnessed less improvement than others and this is reflected in the vegetation and probably too in the continuing survival of some man-made features.
- 9.2.4 The soils on the hill appear to fall within the Manod Association of well-drained, but sometimes shallow, fine loamy or silty soils over mudstone and sandstone (Soil Survey of England and Wales map and legend; Rudeforth *et al*, 1984, 183).

## 9.3 METHODOLOGY

- 9.3.1 The proposal area, and thus the area of the assessment, was initially identified by National Wind Power in conjunction with Mr J Lewis as a block of land defined almost entirely by existing land boundaries. Its extent is depicted on the accompanying plan (Map 9.1).



- 9.3.2 The methodology adopted for the assessment consisted of an initial desk-top study of readily available, primary and secondary sources. The main basis for the study was the data held in the regional Sites and Monuments Record (SMR) which is maintained by Cambria Archaeology (otherwise known as the Dyfed Archaeological Trust) in Llandeilo, Carmarthenshire, and equivalent material held in the National Monument Record (NMR), a department of the Royal Commission on Ancient and Historical Monuments in Wales (RCAHMW) in Aberystwyth. Information from the former was derived from a postal enquiry, while the latter was searched by the writer, the RCAHMW also providing access to vertical aerial photography held by themselves and by the Central Register of Air Photography for Wales, a section of the Welsh Assembly in Cardiff. The National Library of Wales (NLW), also in Aberystwyth, was searched for relevant material, both documentary and cartographic, but particularly the latter. The material sources that proved to be relevant to the study are detailed in Section 9.10, below, as are the printed works that were consulted.
- 9.3.3 The search for information was restricted to those repositories listed above, as these were considered to be the primary sources of information likely to be relevant to the study, and the available resources did not permit a comprehensive examination of documentation in other, smaller archives which may contain potentially useful material.
- 9.3.4 A second element of the assessment was a field survey. This allowed both a review of those sites and features already known to exist, and also a record to be prepared of any new sites encountered during the walkover survey. However, the field examination of known sites of archaeological and historic landscape interest beyond the boundaries of the proposal area was not comprehensive, and the records of these given in Appendix 1, part 2 are derived in part from the information held in the regional SMR and the NMR.
- 9.3.5 A visual search was also made for areas which might contain deposits of palaeoenvironmental potential. In places the thin, humic soils and extensive improvement of the land within the proposal area militate against the survival of extensive deposits that might have such a potential, but there are probably deeper deposits to the north-east of Bryn-mawr farm and perhaps locally elsewhere.
- 9.3.6 The survey was carried out on foot and consisted of an examination of the area in a systematic manner. Wherever possible, regular transects were walked, and the field pattern was such that the ground could be covered in this way in as an efficient a manner as possible. The sites of archaeological and historic landscape interest which were discovered during the survey were located with reasonable accuracy by establishing the relative positions of the sites to mapped boundaries and where necessary by the use of hand-held Global Positioning System (GPS) equipment.
- 9.3.7 All of the sites recorded by the desk-top and field survey assessments were entered into a Foxpro database and, where appropriate, mapped in relation to the proposal area using the Mapinfo software package. It should be noted that if there are any important archaeological sites identified within the proposal area these are defined by zones of archaeological sensitivity on Map 9.1. This treatment has,



however, not been extended to comparable sites outside the proposal area as it has to be assumed that there is no likelihood of any disturbance to these sites under the current proposals. Other archaeological sites are distinguished by a single dot which gives no guide as to the overall size of the site that it denotes, while linear features, if present, are indicated by lines.

9.3.8 Only those archaeological sites which are within, or near to, the proposal area have been mapped on Map 9.1. An extract of the information within the database is included in this report as Appendix 1. Part 1 of this appendix refers to sites within the proposal area, and Part 2 to sites around the proposal including some that fall beyond the limits of Map 9.1. A simple numbering system, based on existing Primary Record Numbers (PRNs) allocated by Cambria Archaeology, has been adopted. Newly identified features have been given new PRNs, courtesy of Cambria Archaeology.

9.3.9 The importance attributed to each site which has been identified in the proposal area and its locality is given in Appendix 1. Sites have been graded in importance from A to E, adopting the following criteria which are based on those used in the Department of Transport's 1994 *Design Manual for Roads and Bridges* (Volume 11, Section 3, Part 2).

*Category A* - Sites which are statutorily designated as being of national importance under the *Ancient Monuments and Archaeological Areas Act* of 1979, or those considered by us during the current work to merit such a designation.

*Category B* - Sites of regional importance; these are not of sufficient importance to merit a statutory designation but are nevertheless of particular relevance to the understanding of the archaeological resource of the region.

*Category C* - Sites of local importance; these are considered to be of lesser merit but are nevertheless useful in understanding the archaeological resource of the local area.

*Category D* - Damaged or minor sites which are of interest but which, due to their condition or nature, are unlikely to provide much significant information on the archaeological resource of the area.

*Category E* - Sites which could not properly be evaluated from the information revealed by this assessment. Some form of further assessment may be required to ensure that these sites can be properly assessed; otherwise, specific mitigation which takes into account the uncertainty of the results of the evaluation should be considered.

## 9.4 RESULTS OF THE ASSESSMENT: THE ARCHAEOLOGY

9.4.1 Archaeologically, Mynydd Llansadwrn is a particularly interesting area. Nine sites had previously been registered in the regional Sites and Monuments Record and in the National Monuments Record, with a significant number of others in the vicinity. Fieldwork identified more than a dozen more features, some of more interest than



others, but again some of these were just beyond the boundaries of the proposal area.

- 9.4.2 While there are no obvious traces of prehistoric settlement within or close to the proposal area, there are a significant number of sites of funerary or ritual origin on and around Mynydd Llansadwrn which are likely to date to the Bronze Age, or conceivably the later stages of the preceding Neolithic. To the two known structured cairns, one on a rock ridge (PRN 10449), the other on gently sloping ground below the hill-crest (PRN 1904) and just on the outer margin of the proposal area, can be added a small but quite well-defined cairn of simple form on an east-facing spur (PRN 46330), a possible cairn or barrow supporting a stony platform and now used as a base for a feed hopper (PRN 46320) and two rather small ring banks which might be ring cairns (PRNs 46327 and 46328), although other functions (and dates) are feasible (see below).
- 9.4.3 The absence of any visible settlement traces on the hill should not be taken as an indicator that prehistoric communities avoided the ground. The presence of prehistoric groups nearby can be inferred from the burial cairns, and the only question is whether there was settlement on the hill itself or whether it was restricted to the possibly more attractive reaches in the valleys below. Earthwork traces of such settlements are infrequently encountered and it is more likely that their presence will be detected through scatters of finds, particularly tools and waste materials, during ground disturbance.
- 9.4.4 Evidence of activity later in the prehistoric period and throughout the first millennium AD is absent. Even for the medieval centuries there is little obvious visible evidence of activity, except perhaps for the long huts and platforms established on the natural shelves that occur on the steep south-eastern slope of the hill (PRNs 37876, 37877, 37878, 40391, 40392 and 46333). These could well be of this date, revealing seasonal usage of the higher ground in the summer months, for the lack of associated enclosures and fields implies that these were not elements of permanently established farms. These long huts, however, represent an archaeological site type which had a relatively long life and some of the examples here could have originated in the post-medieval centuries.
- 9.4.5 During the medieval centuries it is highly likely that much of Mynydd Llansadwrn was open 'waste', used for hill grazing but not for cultivation and certainly not enclosed. This situation probably continued in later centuries, and the presence of a possible shelter (PRN 46329) in the lee of a rock outcrop could also reveal seasonal activity for a shepherd or the like. From the nearness of the two small ring banks (PRNs 46327 and 46328) to this shelter it might be inferred that there was an association and that the former represent something like small animal pens.
- 9.4.6 Certainly by the 18<sup>th</sup> century, and perhaps before, the open land was subject to encroachment and enclosure. Fields bounded by earth and stone banks, trackways edged by similar banks, and small cottages that gradually developed into farmsteadings were all part of this intake of the open hill. And stone for building purposes would have been exploited, wherever available, as the small quarries testify (PRNs 46323 and 46325). Two abandoned farms, Bryn-mawr (PRN 6952) and Gwar-y-graig (PRN 40390) lie within the proposal area and a third, Pant-y-bedol (PRN 37757; though now apparently called Abertegan) lies just to the west of



it. Around these farmsteads the holdings' fields and enclosures would have gradually been extended, some with irregular boundaries that perhaps reflect the irregularities of the natural ground surface, others with truly straight sides.

- 9.4.7 During the 20<sup>th</sup> century or perhaps the last years of the 19<sup>th</sup> century the two steadings were abandoned, and gradually some fields have been amalgamated but the earthen banks have been left intact as relict landscape features.

## 9.5 RESULTS OF THE ASSESSMENT: THE HISTORIC LANDSCAPE

- 9.5.1 The landscape of Mynydd Llansadwrn is largely a creation of the post-medieval centuries, but notwithstanding this late development it is a fine example of an encroachment landscape with its field boundaries largely undisturbed, even though abandoned, and its embanked track leading to one of the two farms immediately below the hill top. Limited ground improvement over at least part of the hill has helped to preserve this landscape quality.
- 9.5.2 Much earlier are the funerary monuments, certainly prehistoric in date and probably of the Bronze Age. Of the landscape in which they were established, little can be said in the absence of any palaeoenvironmental analyses, although it might be assumed that it was relatively open for it is easier to conceptualise the burial cairns being erected in such an environment where they were visible from a distance. There is no way of knowing on present evidence whether there was contemporary settlement on the hill.

## 9.6 PREDICTED IMPACTS

- 9.6.1 A significant number of archaeological sites lie within the proposal area, and the predicted impacts range from visual intrusion on the settings of monuments to the possibility of physical impacts by elements of the site infrastructure, including the turbines themselves. In the absence of full details of the infrastructure associated with the proposed windfarm (e.g. road lines, service trenches etc), the impact on all of the archaeology cannot be fully established at this stage.
- 9.6.2 Each site and any potential impacts will be dealt with in site PRN number order, below. A limited consideration of the impact of the proposal on the historic landscape setting has also been attempted.
- 9.6.3 **PRN 3392** *Bryn Mawr earthwork. Category E.* This site could not be satisfactorily identified during fieldwork and the NGR provided is too imprecise to assist. No impact from the turbines can be envisaged.
- 9.6.4 **PRN 6952.** *Bryn-mawr cottage. Category C.* This site remains as an obvious landscape feature, and there is no indication that it is in any way threatened by the proposed development.



- 9.6.5 **PRN 10449.** *Pant-y-bedol cairn. Category A.* One turbine is planned for the vicinity of this monument, but at a distance from it. There will also, of course, be a visual impact.
- 9.6.6 **PRN 37876.** *Craig Beynon platform Category C (but group of huts and platforms rank as B).* This platform, although within the proposal area as originally defined, is below the lip of the hill and is very unlikely to be directly affected by the construction works, nor indeed is there likely to be a visual impact.
- 9.6.7 **PRN 37877.** *Craig Beynon platform Category C (but group of huts and platforms rank as B).* This platform, although within the proposal area as originally defined, is below the lip of the hill and is very unlikely to be directly affected by the construction works, nor indeed is there likely to be a visual impact.
- 9.6.8 **PRN 37878.** *Craig Beynon platform Category C (but group of huts and platforms rank as B).* This platform, although within the proposal area as originally defined, is below the lip of the hill and is very unlikely to be directly affected by the construction works, nor indeed is there likely to be a visual impact.
- 9.6.9 **PRN 37879.** *Craig Beynon platform Category C (but group of huts and platforms rank as B).* This platform, although within the proposal area as originally defined, is below the lip of the hill and is very unlikely to be directly affected by the construction works, nor indeed is there likely to be a visual impact.
- 9.6.10 **PRN 40390.** *Gwar-y-graig Category C.* A turbine lies close to this small farmstead but will not impact on it, although the infrastructure serving it might do so. There will be a visual impact.
- 9.6.11 **PRN 40391.** *Tirygraig long hut Category C (but group of huts and platforms rank as B).* This building, although within the proposal area as originally defined, is below the lip of the hill and is very unlikely to be directly affected by the construction works, nor indeed is there likely to be a visual impact.
- 9.6.12 **PRN 40392.** *Tirygraig long hut Category C (but group of huts and platforms rank as B).* This building, although within the proposal area as originally defined, is below the lip of the hill and is very unlikely to be directly affected by the construction works, nor indeed is there likely to be a visual impact.
- 9.6.13 **PRN 44918.** *Pant-y-bedol standing stone. Category E.* Although at a distance from the turbines, the access road for the works passes close to this stone. There will also be a visual impact.
- 9.6.14 **PRN 46320.** *Bryn-pribwll mound. Category A.* Although at a distance from the turbines, the access road for the works passes close to this earthwork. There will also be a visual impact.
- 9.6.15 **PRN 46322.** *Bryn-mawr cottage trackway. Category C.* In the initial scheme of works, this trackway was earmarked as an access route for the windfarm construction works (but see para 9.7.15).



- 9.6.16 **PRN 46324.** *Bryn-mawr clearance cairn. Category D.* This cairn is not obviously threatened by either a turbine or the infrastructure that supports them.
- 9.6.17 **PRN 46325.** *Bryn-mawr quarry. Category D.* A turbine will be located close to this feature but because of the form of the quarry it is unlikely that there will be any direct physical impact.
- 9.6.18 **PRN 46327.** *Bryn-mawr ring bank I. Category E.* One turbine is sited within 150m of this feature but it is anticipated that there will not be any direct impact from it or from the infrastructure supporting it. There will be a visual impact.
- 9.6.19 **PRN 46328.** *Bryn-mawr ring bank II. Category E.* One turbine is sited within 150m of this feature but it is anticipated that there will not be any direct impact from it or from the infrastructure supporting it. There will be a visual impact.
- 9.6.20 **PRN 46329.** *Bryn-mawr shelter. Category D.* One turbine is sited within 200m of this feature but it is anticipated that there will not be any direct impact from it or from the infrastructure supporting it. There will be a visual impact.
- 9.6.21 **PRN 46330.** *Gwar-y-graig cairn. Category A.* A turbine is planned to be sited within 200m of this feature, but this distance should ensure that there is no physical impact. There will be a visual impact.
- 9.6.22 **PRN 46331.** *Gwar-y-graig clearance cairn. Category D.* No turbines are sited close to this relatively modern feature.
- 9.6.23 **PRN 46333.** *Tirygraig long hut Category C (but group of huts and platforms rank as B).* This building, although within the proposal area as originally defined, is below the lip of the hill and is very unlikely to be directly affected by the construction works, nor indeed is there likely to be a visual impact.
- 9.6.24 The impact of the proposal on this landscape should also take account of the view both from and to monuments in the immediate environs of the proposal area. Particular emphasis must be placed on any monuments that are statutorily protected through scheduling and those which are considered to be of similar significance even though (for whatever reason) they are not statutorily protected. There are several monuments in the vicinity of the proposal area which might fall within this category, including the cairn PRN 1904 and its near neighbour, PRN 1905.

## 9.7 PROPOSED MITIGATION MEASURES

- 9.7.1 A range of mitigation measures for the significant number of sites identified in the last section is proposed to reduce or negate the impacts which have been predicted in the previous section. These range from a proposal for a watching brief to the careful control of any ground works and are dealt with in site number order, below, in the same way as the previous section. There are also impacts which are not specific to any single site, and suitable methods of mitigation for these are

considered briefly in paragraph 9.7.24, after the mitigation responses for site specific impacts.

- 9.7.2 It is assumed that all turbine construction works will be limited to those areas defined in the proposal. Any subsequent alterations to the turbine positions and the determination of the infrastructure that links them will inevitably necessitate a reconsideration of the impacts and mitigations proposed here.
- 9.7.3 **PRN 3392** *Bryn Mawr earthwork*. In the absence of any specific data on the location of the burnt mound, no detailed mitigation measures can be proposed.
- 9.7.4 **PRN 6952**. *Bryn-mawr cottage*. No direct physical impact is envisaged on this structure, but the contractors should be advised to avoid it in all circumstances during all on-site works.
- 9.7.5 **PRN 10449**. *Pant-y-bedol cairn*. No turbine or any associated works should be permitted within a minimum of 50m of this cairn, so the 100m-exclusion area which has been proposed by the developer adequately meets this requirement. No obvious mitigation strategy can be identified which would lessen the visual impact.
- 9.7.6 **PRN 37876**. *Craig Beynon platform*. No direct physical impact is envisaged on this feature.
- 9.7.7 **PRN 37877**. *Craig Beynon platform*. No direct physical impact is envisaged on this feature.
- 9.7.8 **PRN 37878**. *Craig Beynon platform*. No direct physical impact is envisaged on this feature.
- 9.7.9 **PRN 37879**. *Craig Beynon platform*. No direct physical impact is envisaged on this feature.
- 9.7.10 **PRN 40390**. *Gwar-y-graig*. No direct physical impact is envisaged on this structure, but the contractors should be advised to avoid it in all circumstances during all on-site works.
- 9.7.11 **PRN 40391**. *Tirygraig long hut*. No direct physical impact is envisaged on this feature.
- 9.7.12 **PRN 40392**. *Tirygraig long hut*. No direct physical impact is envisaged on this feature.
- 9.7.13 **PRN 44918**. *Pant-y-bedol standing stone*. Although uncertainties exist about the origins of this standing stone, it would be best avoided during the construction phase so no turbine or any associated works should be permitted within at least 30m of it.
- 9.7.14 **PRN 46320**. *Bryn-pribwll mound*. No turbine or any associated works should be permitted within 50m of this cairn. Although all the proposed turbines are a considerable distance away, at least one will be visible; no obvious mitigation strategy can be identified which would lessen this visual impact.



- 9.7.15 **PRN 46322.** *Bryn-mawr cottage trackway.* This trackway is a good example of its kind, and its proposed use as an access route for the windfarm construction works would have some detrimental effect on its physical form as well as leading traffic towards Bryn-mawr cottage (PRN 6952). The developer's decision to adopt an alternative site access is to be welcomed.
- 9.7.16 **PRN 46324.** *Bryn-mawr clearance cairn.* No direct physical impact is envisaged on this feature and no mitigation strategy is required
- 9.7.17 **PRN 46325.** *Bryn-mawr quarry.* No direct physical impact is envisaged on this feature and no mitigation strategy is required.
- 9.7.18 **PRN 46327.** *Bryn-mawr ring bank I.* No direct physical impact is envisaged on this feature, but the contractors must be advised to avoid it in all circumstances during the on-site works, and barrier netting should be placed around it to ensure compliance.
- 9.7.19 **PRN 46328.** *Bryn-mawr ring bank II.* No direct physical impact is envisaged on this feature, but the contractors must be advised to avoid it in all circumstances during the on-site works, and barrier netting should be placed around it to ensure compliance.
- 9.7.20 **PRN 46329.** *Bryn-mawr shelter.* No direct physical impact is envisaged on this feature, but the contractors must be advised to avoid it in all circumstances during the on-site works.
- 9.7.21 **PRN 46330.** *Gwar-y-graig cairn.* No turbine or any associated works should be permitted within 100m of this cairn. No obvious mitigation strategy can be identified which would lessen the visual impact.
- 9.7.22 **PRN 46331.** *Gwar-y-graig clearance cairn.* No direct physical impact is envisaged on this feature and no mitigation strategy is required.
- 9.7.23 **PRN 46333.** *Tirygraig long hut.* No direct physical impact is envisaged on this feature.
- 9.7.24 There is a possibility that sites which have only sub-surface traces, and have not therefore been revealed by this assessment, are present within the area of the proposal. If any such site is present, there is a potential that elements of the site might be disturbed during the initial ground works which precede construction. In order to provide some mitigation for this potential impact, a watching brief should be carried out during ground works, with the aim of properly recording any archaeological features which are revealed. The watching brief should also be extended to the banks of the field system, some of which will inevitably be breached during the construction works for the access road. The opportunity should then be taken to observe and, where appropriate, record the exposed sections through the banks. The archaeologist carrying out the watching brief must be allowed a reasonable time to carry out all necessary archaeological recording.

## **9.8 CONCLUSIONS**

9.8.1 As a result of the archaeological assessment the following conclusions can be drawn:

- there are a significant number of archaeological sites and historic landscape features within the proposal area and more in the immediate vicinity;
- a few of the archaeological sites within and adjacent to the proposal area are potentially of national significance although none is currently scheduled.
- the proposed turbines will have a visual impact on many monuments, of both national and local significance. The effects might be marginally reduced by radical re-siting of the turbines but are unlikely to be removed;
- the proposal lies in a landscape area of considerable historical interest, where there is a mix of prehistoric and 18<sup>th</sup> to 19<sup>th</sup>-century features, the latter predominating;
- not all the details of the infrastructure associated with the windfarm were available at the time that this study was undertaken, and it is therefore impossible to assess their impact on the known archaeology; and
- an appropriate archaeological response to the proposal is, in the view of the writer, the careful design of the windfarm layout which prevents physical disturbance to any of the monuments, necessitates minimal disturbance to the existing historic landscape, possibly some shift in turbine locations as appropriate, and a watching brief during construction works.

## **9.9 ACKNOWLEDGEMENTS**

9.9.1 The writer would like to thank the staff of the following repositories for their help and assistance:

The Regional Sites and Monuments Record held by Cambria Archaeology (the Dyfed Archaeological Trust at Llandeilo;

The National Monument Record administered by the Royal Commission on Ancient and Historical Monuments in Aberystwyth;

The National Library of Wales in Aberystwyth.



## 9.10 REFERENCES

### Published sources

Rudeforth, C C, Hartnup, R, Lea, J W, Thompson, T R E, and Wright, P C, 1984, *Soils and their use in Wales*, Bulletin No 11, Harpenden: Soil Survey of England and Wales.

### Cartographic sources

1763 Estate Map. NLW 134/1/24. Map 7201)

1811/28 Ordnance Surveyors' Drawing No 189

1817 Estate Map. NLW 134/1/24. Map 7212.

1839 Tithe survey: Llansadwrn, Carmarthenshire

1888 First edition Ordnance Survey 1:2,500 map (Carmarthenshire 17.14)

1891 First edition Ordnance Survey 1:10,560 (Carmarthenshire 17SW)

1907 Second edition Ordnance Survey 1:10,560 (Carmarthenshire 17SW)

1983 Soil Survey of England and Wales map and legend (Sheet 2 - Wales, at 1:250,000 scale)

1994 British Geological Survey map of Wales (Solid edition, at 1:250,000 scale)

### Aerial photographic sources

RAF Vertical APs: 106/G/UK/1471/1199-1200, dated 04-051946

## **Appendix 1 (Part 1): Archaeological sites within the proposed windfarm area**

**PRN:** 03392                      Bryn Mawr earthwork                      **NGR:** SN691347  
**Site type:** Bank (earthwork)                      **Category :** E

Earthwork bank of unknown significance (RPS October 2001). Not identified in 2003.

**PRN:** 06952                      Bryn-mawr cottage                      **NGR:** SN68983466  
**Site type:** Cottage                      **Category :** C

Four-cell building with attached ancillary structures, occupied in 1888. Gable ends to 6m in height and still standing. Some window apertures and a fireplace still visible. At a higher level immediately behind the house is a broad platform with nothing on it. Its significance is unclear but it is reasonable to assume that it is contemporary. A green lane passes in front of the house.

**PRN:** 10449                      Pant-y-bedol cairn                      **NGR:** SN68803459  
**Site type:** Round barrow (cairn)                      **Category :** A

Fine flat topped cairn with a raised rim, perhaps a ring cairn, on the spine of ridge and perhaps occupying a local outcrop. Some disturbance in centre and particularly in the SW quadrant. Hint of kerb stones in N quadrant. 13m WSW/ENE x 14m x 0.7m high.

**PRN:** 37876                      Craig Beynon platform                      **NGR:** SN69233466  
**Site type:** Platform                      **Category :** C

On a rocky, scree strewn slope. Platform measures 7m SW-NE x 12m. No structure evident on platform; the SE end may be stone revetted. To NW of platform is a very denuded earth bank, which runs downslope and turns to west, merging with the modern track

**PRN:** 37877                      Craig Beynon platform                      **NGR:** SN69363467  
**Site type:** Platform                      **Category :** C

Platform in the form of a very rough terrace, 7m x 7m. On a scree strewn slope. RPS 2000

**PRN:** 37878                      Craig Beynon platform                      **NGR:** SN69363467  
**Site type:** Platform                      **Category :** C

10m to south of PRN37877 are the low wall bases of this small D-shaped structure and a levelled terrace occupying an area of c.5m squared, with an apparent entrance in its downslope facing side. Walls are denuded and spread to 1.5m wide. RPS 2000

**PRN:** 37879                      Craig Beynon platform                      **NGR:** SN69393466  
**Site type:** Platform                      **Category :** C

Near PRN37878 is this irregular platform c.7m NE-SW x 5m levelled out of a very stony area of ground. RPS 2000



**PRN:** 40390                      Gwar-y-graig                      **NGR:** SN69273493  
**Site type:** Farmstead                      **Category :** C

Farmstead complex. Not shown on the parish tithe survey and probably dating to the mid 19th century in origin for certainly occupied in 1888. The complex includes the foundations of a 4-celled dwelling/byre, on a east-west axis, measuring 22m x 6m overall, with mortared rubble walls. To the SW is a square garden area which includes what might be a grave with unmarked headstone.

**PRN:** 40391                      Tirygraig long hut                      **NGR:** SN69203467  
**Site type:** Long hut                      **Category :** C

Long hut which is now only identifiable by low earth and stone wall bases, up to 0.3m high, defining a structure 11m NNW-SSE x 4m. The SSE end is badly damaged and indistinct. Located on natural terrace on otherwise steeply sloping ground. RPS March 2000

**PRN:** 40392                      Tirygraig long hut                      **NGR:** SN69283473  
**Site type:** Long hut                      **Category :** C

Single cell long hut which is defined by low earth and stone wall bases. The structure measures 11m east-west x 5m. No internal features apparent on the surface. On natural terrace on top of steep slope. RPS March 2000 RPS 2000

**PRN:** 44918                      Pant-y-bedol standing stone                      **NGR:** SN6887834369  
**Site type:** Standing stone                      **Category :** E

Large stone located in the same field as mound PRN 46320. At its base the stone measures 0.8m in length, with a maximum height of 0.55m. Possibly a standing stone, although it could also be due to agricultural clearance, the stone being shifted to the edge of the field.

**PRN:** 46320                      Bryn-pribwll mound                      **NGR:** SN68853434  
**Site type:** Mound                      **Category :** E

Mound, probably sub-circular, but perhaps incorporating natural knoll, about 10.5m NNW/SSE by 11m x 0.5m high. On the top of this is a squarish platform of stone, about 5m on both sides and about 0.3m/0.4m high. What is visible from poaching - for a feeding rack is on top - is clearly of packed stone. Of uncertain function. Its position is quite prominent on a spur and it has excellent views over the valley below. It could conceivably be a prehistoric cairn.

**PRN:** 46322                      Bryn-mawr cottage trackway                      **NGR:** SN68923452  
**Site type:** Trackway                      **Category :** C

Good example of a embanked trackway leading to Bryn-mawr.

**PRN:** 46324                      Bryn-mawr clearance cairn I                      **NGR:** SN68993478  
**Site type:** Cairn                      **Category :** D

Modern (?) clearance cairn heaped up like a walkers' cairn.

**PRN:** 46325                      Bryn-mawr quarry                      **NGR:** SN69113490  
**Site type:** Quarry                      **Category :** D

Rocky outcrop has been quarried to a flattish and irregular platform, partially covered in gorse bushes. Around this the ground surface undulates. Stone might have been used for farm buildings but also for nearby boundary banks.

**PRN:** 46327                      Bryn-mawr ring bank I                      **NGR:** SN69143499  
**Site type:** Bank (earthwork)                      **Category :** E

Small raised ring bank with slightly hollowed interior breaking through bank on the SE. 3m N/S by 2.75m x 0.2m high; the bank is up to 0.6m wide and stone is encountered just below the surface vegetation. On a flat shelf with the ground rising gently to the S.

**PRN:** 46328                      Bryn-mawr ring bank II                      **NGR:** SN69153499  
**Site type:** Bank (earthwork)                      **Category :** E

Small raised ring bank, 14m from PRN 46327, with slightly hollowed interior breaking through bank on the N. 3.5m N/S by 3.25m x 0.2m high; the bank is up to 0.6m wide and stone is encountered just below the surface vegetation. On a flat shelf with the ground rising gently to the S.

**PRN:** 46329                      Bryn-mawr shelter                      **NGR:** SN69163498  
**Site type:** Shelter                      **Category :** D

Low, embanked area against rock outcrop, seemingly sub-rectangular with a hollowed interior. 6m NNW/SSE x 6m WSW/ENE x 0.4m high. Possibly a roughly constructed shelter.

**PRN:** 46330                      Gwar-y-graig cairn                      **NGR:** SN69433495  
**Site type:** Cairn                      **Category :** A

A low cairn, 5m E/W x 4m N/S x 0.4m high max. Three or four medium sized stones around the perimeter, some others in the centre, but much of the monument grassed over. One displaced on the NE. On a gentle spur projecting eastwards, though back from its lip. Fine views over valleys to E. Possibly clearance but a funerary origin seems more likely.

**PRN:** 46331                      Gwar-y-graig clearance cairn                      **NGR:** SN69273483  
**Site type:** Clearance cairn                      **Category :** D

Clearance cairn, probably of no great age.

**PRN:** 46333

Tirygraig long hut

**NGR:** SN69163466

**Site type:** Long hut

**Category :** C

Long hut, 11m+ NW/SE x 4m wide, the rubble masonry foundations standing to a maximum of 0.7m; occasional orthostatic facing slabs. In reasonable condition, on a shelf above steep slope.



## Appendix 1 (Part 2): Archaeological sites in the vicinity of the proposed windfarm area

**PRN:** 01904                      Mynydd Llansadwrn barrow I                      **NGR:** SN68933499  
**Site type:** Round barrow (cairn)                      **Category :** A

Fine cairn showing as raised ring bank of grassed-over stone with interior showing some stone in places, and other traces of disturbance. Some material has spread to the SE. Maximum dimensions 11m SW/NE by 12m SE/NW and 0.6m. A relict field bank runs past the cairn immediately to the S.

**PRN:** 01905                      Mynydd Llansadwrn barrow II                      **NGR:** SN689349  
**Site type:** Round barrow (cairn)                      **Category :** E

Much reduced cairn, visible almost as a sunken feature, but with lichen-covered stones at its centre; the cairn measures c.7m in diameter, with its bank c.0.2m high.

**PRN:** 06949                      Tir-y-graig                      **NGR:** SN69933480  
**Site type:** Cottage                      **Category :** C

?18th-century A-type cottage, site downhill. Single-storey with attic. Empty in 1972 (NMR). This farm was visited by DAT in 1999. No evidence of a thatched cottage was seen at that time, although a very derelict cottage near the house may correspond to this record. RPS October 2001

**PRN:** 06956                      Craig Beynon                      **NGR:** SN69433450  
**Site type:** Longhouse ?                      **Category :** C

Possible longhouse type farmhouse. Ruined when recorded by RCAHMW in 1972. House and byre homestead; 2-storeyed house, with 19th-century collar beam trusses; dep fireplace. Virtually rebuilt in the 19th century (NMR)

**PRN:** 18608                      Unnamed quarry                      **NGR:** SN69863412  
**Site type:** Quarry                      **Category :** D

**PRN:** 18741                      Ffynnon-las                      **NGR:** SN68323501  
**Site type:** Well                      **Category :** E

**PRN:** 18752                      Capel Dewi-Sant                      **NGR:** SN69883549  
**Site type:** Chapel                      **Category :** E

**PRN:** 18754                      Pont Cwym-cynwal                      **NGR:** SN69893563  
**Site type:** Bridge                      **Category :** E

**PRN:** 22492  
**Site type:** Trial mine

Unnamed trial mine  
**Category :** E

**NGR:** SN6836

**PRN:** 22493  
**Site type:** Farmstead

Pant y Maen  
**Category :** E

**NGR:** SN68683492

Deserted settlement of probable late 18th or early 19th century origin. Located on the former common of Mynydd Llansadwrn, which was enclosed during the second decade of the 19th century. Unoccupied building in 1888.

**PRN:** 22496  
**Site type:** Farmstead

Godre-y--mynydd  
**Category :** E

**NGR:** SN68233414

There are now no surface traces of this farmstead complex, which has apparently been cleared since the 1960s. RPS 2000

**PRN:** 37757  
**Site type:** Cottage

Abertegan  
**Category :** E

**NGR:** SN68083465

Two cottages shown here on parish tithe map, but a single occupied dwelling is now present. Not possible to determine if this in any way includes elements of one or both of the original cottages. RPS 2000

**PRN:** 37759  
**Site type:** Cottage

Unknown cottage  
**Category :** E

**NGR:** SN68283492

On the tithe map, a cottage is shown in the corner of the field. Nothing survives on the surface to indicate that a building has been here. RPS 2000

**PRN:** 37760  
**Site type:** Cottage

Unknown cottage  
**Category :** E

**NGR:** SN68153425

Appears to have been a two-roomed building, measuring 11m NEE-SWW x 6m. The outline of a split-level terrace survives, with the remaining stone having all been pushed to the south side of the terrace. No walling survives on the north, east or west sides.

**PRN:** 37761  
**Site type:** Cottage

Unknown cottage  
**Category :** E

**NGR:** SN68213418

The only indication of a building having been here is a slight mound at the site and a quantity of good building stone pushed to the edge of the field - presumably stone from the demolished cottage. RPS 2000

**PRN:** 37762                      Unknown cottage                      **NGR:** SN68263421  
**Site type:**Cottage                      **Category :** E

No structural evidence survives on surface. Pasture field, levellish area inside hedgebank. A few stones scattered around. RPS 2000

**PRN:** 37763                      Unknown cottage                      **NGR:** SN68263418  
**Site type:**Cottage                      **Category :** E

No structural evidence survives on surface. Pasture field, levellish area inside hedge bank. A few stones scattered around. RPS 2000

**PRN:** 37764                      Unknown cottage                      **NGR:** SN68393427  
**Site type:**Cottage                      **Category :** E

Access not gained, but the area was viewed from within 200m and no evidence of a standing building was seen. RPS 2000

**PRN:** 37765                      Unknown cottage                      **NGR:** SN68353423  
**Site type:**Cottage                      **Category :** E

Access not gained, but the area was viewed from within 200m and no evidence of a standing building was seen. RPS 2000

**PRN:** 37766                      Cwmdu                      **NGR:** SN69203423  
**Site type:**Cottage                      **Category :** E

Not located due to thick vegetation. RPS 2000

**PRN:** 37767                      Unknown cottage                      **NGR:** SN69663450  
**Site type:**Cottage                      **Category :** E

Site located in improved pasture field. Building presumed to have been cleared. RPS 2000

**PRN:** 37874                      Bryn Pribwal                      **NGR:** SN69063428  
**Site type:**Cottage                      **Category :** E

Deserted cottage, still fairly complete with a zinc roof. Stands on a terrace cut into a moderate slope. Internally, two rooms survive and a wooden staircase (at east gable end) leads to a croglofft. Hearths and chimney breasts survive in both gable walls.



**PRN:** 37875                      Blaen Cwm Marchon                      **NGR:** SN69093443  
**Site type:** Platform                      **Category :** E

Oval platform, c.8m x 12m north-south. Fall of c. 0.5m east-west across platform. Overlooks valley, on a moderate-steep slope. An old trackway seems to pass just above to west. RPS 2000

**PRN:** 40388                      Tirygraig                      **NGR:** SN69803515  
**Site type:** Platform                      **Category :** C

A platform terraced into a steep north-facing slope. Measures 8m N/S x 5.5m. The stone foundations of rectangular structure protrude through the grass cover, some of which are edge set slabs. Stones are also scattered across the site.

**PRN:** 40389                      Tirygraig                      **NGR:** SN69723501  
**Site type:** Long hut                      **Category :** C

Two-celled long hut located in improved pasture field. Overall dimensions are 11m east-west x 5m; the western cell is 6m long, the eastern 5m. The structure stands on a slight platform, cut into a gentle slope at the western end of the long hut.

**PRN:** 43505                      Tir-y-craig barn                      **NGR:** SN6976234753  
**Site type:** Barn                      **Category :** E

Rectilinear Post Med barn, under conversion to dwelling, photo record requested as part of Planning consent (RJ 2001)

**PRN:** 46321                      Bryn-pribwll clearance cairn                      **NGR:** SN68873437  
**Site type:** Clearance cairn                      **Category :** E

Small mound, perhaps 4m in diameter and over 0.5m high. Probably, but not certainly a clearance heap.

**PRN:** 46323                      Abertegan quarry I                      **NGR:** SN68863471  
**Site type:** Quarry                      **Category :** D

Small surface quarry cut into stony knoll.

**PRN:** 46326                      Bryn-mawr clearance cairn II                      **NGR:** SN69013503  
**Site type:** Clearance cairn                      **Category :** D

Small, clearance cairn, grassed over.

**PRN:** 46334                      Pant-y-maen quarry                      **NGR:** SN68823484  
**Site type:** Quarry                      **Category :** D

Old quarry shown on 1888 map and still in evidence now.

**PRN:** 46335                      Bryn-mawr                      **NGR:** SN69983466  
**Site type:** Cottage                      **Category :** C

Ruinous cottage with outbuildings in the same range, probably 18-19th century; flat stone arches to openings with keystones; wicker partitions; ladder stair to attic. Original ladder-stair to attic (NMR)

**PRN:** 46336                      Coed-y-graig sheepfold                      **NGR:** SN69563481  
**Site type:** Sheepfold                      **Category :** D

Sheepfold marked in 1888 but no building or structure.

**PRN:** 46337                      Abertegan                      **NGR:** SN68633462  
**Site type:** House                      **Category :** E

House which in 1888 was called Pant y bedol.

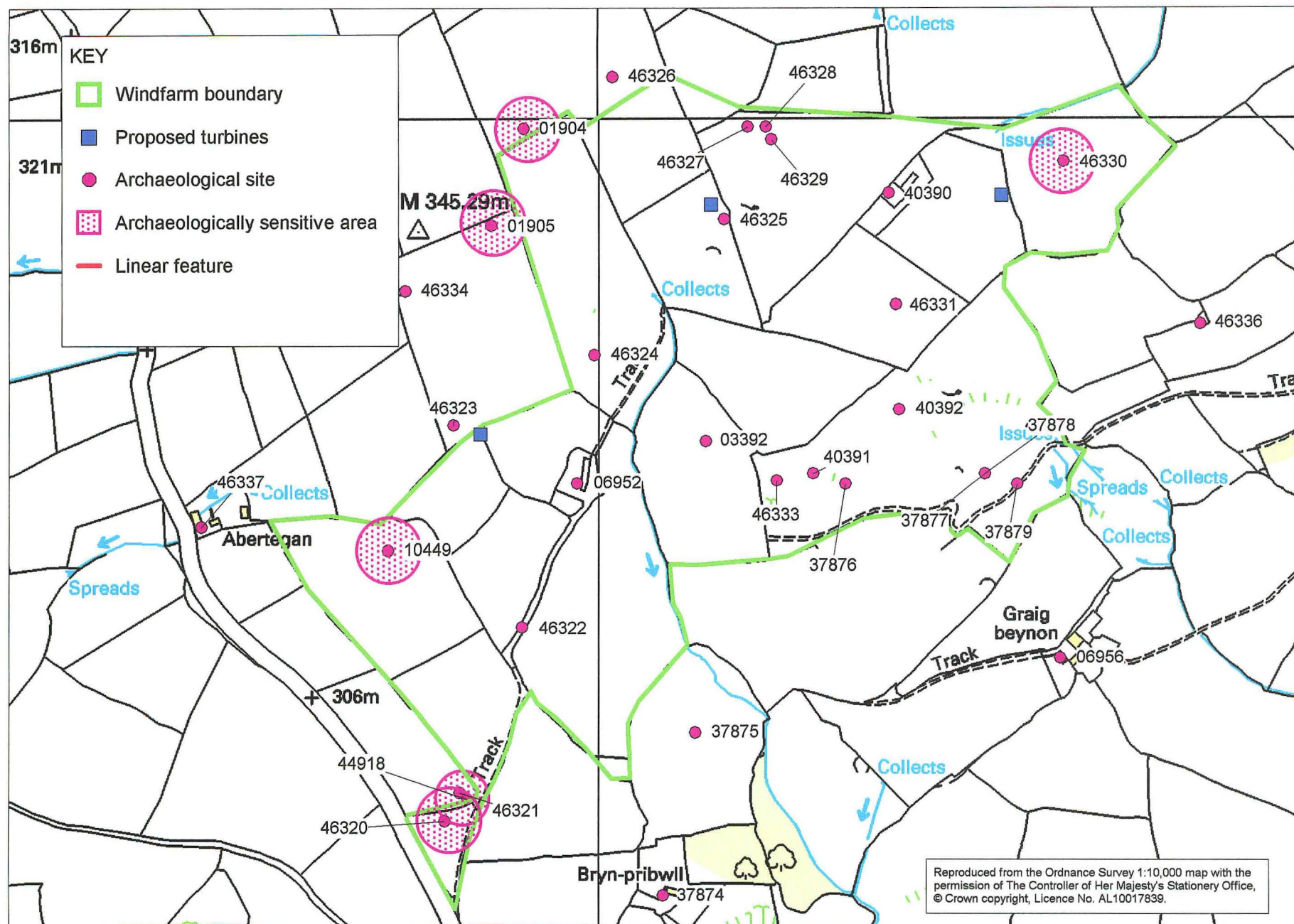


Fig 9.1 Graig Farm Windfarm proposal area. Scale 1:5,000