

Wind Turbine at Castellmarch, Abersoch, Gwynedd

Archaeological Watching Brief



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Wind Turbine at Castellmarch, Abersoch, Gwynedd

Archaeological Watching Brief

Project No. G2287

Report No. 1094

Prepared for: Hywel Jones

November 2012

Written by: Robert Evans

Cyhoeddwyd gan Ymddiriedolaeth Archaeolegol Gwynedd
Ymddiriedolaeth Archaeolegol Gwynedd
Craig Beuno, Ffordd y Garth,
Bangor, Gwynedd, LL57 2RT

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Cadeiryddes/Chair - Yr Athro/Professor Nancy Edwards, B.A., PhD, F.S.A.
Prif Archaeolegydd/Chief Archaeologist - Andrew Davidson, B.A., M.I.F.A.

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WIND TURBINE AT CASTELLMARCH, ABERSOCH

ARCHAEOLOGICAL WATCHING BRIEF

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Fig.1 Site Location. Base map taken from OS 1:10 000 series sheet SH 32 and SH 33

Fig. 2 Location of wind turbine (blue), access track (black), cable route (pink) and sites noted on the Gwynedd HER (red), shown on the 1st edition 25 inch Ordnance Survey map of 1889. Caernarfonshire sheet XLV.6

PLATES

Plate 1: View of the turbine pad post-excavation from the south-east. Scale 1m

Plate 2: General view of south running length of access track. St Tudwals Islands can be seen in the background

Plate 3: View of access track from near to the telecommunications mast

Plate 4: View of access track excavation looking north. Scale 1m

SUMMARY

An archaeological watching brief has been carried out on land at Castellmarch, Abersoch, in advance of the construction of a wind turbine and temporary access track. The excavation of the turbine pad and access track was observed, down to its interface with natural subsoils. Approximately 0.33m of topsoil was noted to overlie glacial clays, gravels and bedrock at its deepest point.

Although no archaeological deposits were encountered during the watching brief, the location of wind turbine on a mid slope location above the bay at Abersoch, and good surrounding land for exploitation would make it a good area for settlement. There is evidence for possible late prehistoric settlement in the field to the west, and the field is located above the house of and probable medieval township of Castellmarch. This is suggestive of a long continuity of human activity within the area, although no archaeological evidence was observed during the watching brief itself.

1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) were commissioned by *Mr. Hywel Jones* to undertake an archaeological watching brief during groundworks associated with a wind turbine installation at Castellmarch, Abersoch (centred on NGR **SH311162970**).

The proposed turbine measured 24.0 m to hub height with two blades c.8.0m each in length (9.0m to centre of hub) in thus the maximum blade tip height will be 32m, the rotor diameter 18.0m and a power output of 80 kW at 13m/s. An associated cable trench, two temporary crane pads and a c.140.0m long temporary access track, will also be completed as part of the works. According to the client produced design and access statement, "All topsoil removed during the excavation of the foundation will be retained and replaced around the foundation on completion. Any remaining topsoil will be used to form new hedge banks or repair existing ones. Displaced shale will be used to form access tracks to reduce the need to import material from off site. On completion of construction the field will be returned to agricultural activity" (Horizon Renewables and Greystone Technical Ltd Renewables Engineers, 2011: 07)

1.1 Acknowledgements

Jenny Emmett of Gwynedd Archaeological Planning Service (GAPS) is thanked for her advice and assistance. Mr and Mrs Jones of Castellmarch are also thanked for their help and co-operation with access to the site and during the carrying out of the groundworks.

2 SPECIFICATION AND PROJECT DESIGN

A brief for the archaeological work, dated 9th July 2012, was provided by Gwynedd Archaeological Planning Service (GAPS; ref. D1624 reproduced as [Appendix II](#)), which included a requirement for a comprehensive archaeological watching brief during the main groundworks (D1624: 02).

The watching brief was attached as a condition attached to Planning Application **C11/1026/39/LL**.

Gwynedd Archaeological Trust's proposals for fulfilling these requirements were:

- Watching Brief
- Report

3 METHODS AND TECHNIQUES

3.1 Introduction

An archaeological watching brief was carried out during the non-archaeological topsoil and subsoil stripping of the turbine pad and the crane access track at Castellmarch, Abersoch. The archaeological watching brief was carried out on 1st October 2012, when the turbine pad was stripped to the natural glacial deposits, and the access track stripped.

The cable trench was subsequently excavated by the use of a cable plough, which was not examined archaeologically as there was no prospect of recovering archaeological information, as agreed with GAPS (Emmett, *pers, comm.*)

This report conforms to the guidelines and definitions specified in *Standard and Guidance for Archaeological Watching brief* (Institute for Archaeologists, 1994, rev. 2001 & 2008).

3.2 Methodology

The watching brief supervised the removal of all topsoil/subsoil horizons and foundation level construction within the defined area (Fig. 1), as far as the glacial horizon and/or limit of excavation depth (whichever was reached sooner).

Each archaeological layer observed was given its own unique identifying number, which is noted in brackets in the text. Information about each layer was recorded and described on individual *pro formas*, with measurements taken.

A photographic record was maintained, using a digital SLR camera set to maximum resolution.

4 TOPOGRAPHY AND GEOLOGY

The field in which the turbine is located slopes gently north west- south east, west of the 17th century and earlier house at Castellmarch, close to the village of Abersoch, at a height of approximately 56m OD (NGR **SH311162970**). The solid geology consists of Ordovician Shales (Smith and George 1961), overlain by brown earths of the Denbigh 1 Association (BGS 1983).

The turbine location is 330m west of Castellmarch farmhouse, on raised ground towards the western side of an improved pasture field (Fig. 1). A *clawdd* style field boundary, up to 1.1m high, is located adjacent to and to the south-west of the crane access trackway (Plates 2 and 4), and a similar one is located along the southern edge of the field (Plate 3). Beyond the south boundary edge of the field is a field access track, which now serves as access to a telecommunications mast (Plate 3).

The field currently consists of improved grassland. It was last ploughed and used as a potato field in 1977 (Hywel Jones, *pers. comm.*)

5 ARCHAEOLOGICAL BACKGROUND

The wind turbine site is located c.320m west of Castellmarch Farm (Grade II* Listed Building **4215**; **PRIMARY RECORD NUMBER (PRN) 12000**; NGR **SH31442972**), which is also listed on the regional Historic Environment Record (HER) as the location of Catellmarch Medieval Township (**PRN 6549**). The manor house of Castellmarch was built in 1628 by Sir William Jones, Chief Justice of Ireland. It is a two storey building with an attic, and has an east wing and south cross wing, forming an 'L' plan (Haslam *et al.* 2009, 236). The house and outbuildings are shown on Fig. 2 (1st edition 25 inch Ordnance Survey (OS) map of 1889). There is a pedimented porch on Doric columns approached by steps, with a shield with a 1628 date in the pediment. Some of the windows in the wing have been blocked up, probably to avoid the payment of window tax in the early to mid 18th century.

The field systems are currently broadly similar to those shown on the 1st edition O S map of 1889 (Fig. 2). However a significant number of field divisions have been removed subsequently to the 1889 map, particularly to the north and west of the wind turbine field. Some enclosure pens, possibly sheepfolds, are also shown on the 1889 map located within a small enclosure to the south east of the southern boundary *clawdd*. This is now an area of waste ground. To the south of this, and during the 20th century, some field improvement has taken place, resulting in less marshy ground being present today.

A cropmark location is also listed within the HER, c.200.0m west of the wind turbine site (**PRN 1248**; NGR **SH30902970**). It is of unknown date and type, having been identified on aerial photographs, but may be evidence of late prehistoric settlement.

6 RESULTS OF THE WATCHING BRIEF

6.1 Introduction

A 7m square turbine pad, centred on NGR **SH311162970**, was excavated to the natural glacial subsoil depth, on 2nd October 2012. An access track was created, 2.6m wide, to provide a route for the construction crane to access the site, which leads WSW from the turbine pad to a *clawdd* type field boundary, and then turns and heads SSE to the current field track (Fig. 1). This track, which is currently in place, runs from a telecommunications mast WNW towards Castellmarch (Plate 3).

The connecting power cable, which runs from the turbine eastwards to Castellmarch, was cut by a cable plough, with no open cut excavation. This process was not watched archaeologically, as was agreed in consultation with GAPS (Emmett, *pers. comm.*)

6.2 Archaeological Results

The turf and topsoil over the turbine pad (101), a mid greyish brown sandy silt, was removed, and was noted to extend for a depth of 0.33m (Plate 1). It overlay directly a gravel and mid orange brown clay matrix, with shale bedrock protrusions (102). This was interpreted to be a glacial deposit, and no evidence of any archaeological activity was noted. Some hints of a mid orangy brown clay silt subsoil (103), below (101), was noted on the trackway adjacent to the western *clawdd*. This is interpreted as the relict survival of a subsoil not disturbed by recent ploughing as it lay adjacent to the boundary of the field.

The track was excavated to a depth of 0.2m, which resulted in the exposure of subsoil in some places on the site but in some areas the topsoil was not completely removed (Plates 2-4).

The topsoil and subsoil appears to be reasonably consistent across the field, but is a little bit deeper at the southern end of the access track (Plate 3). The interface with the natural glacial gravels is at a relatively consistent depth across the excavated areas. This is consistent with an improved field that has been ploughed in the recent past.

7 CONCLUSION

Although no archaeological deposits were encountered, the location of wind turbine on a mid slope location above the bay at Abersoch, and good surrounding land for exploitation would make it a good area for settlement. There is evidence for possible late prehistoric settlement in the field to the west, and the field is located above the house and probable medieval township of Castellmarch. This is suggestive of a long continuity of human activity within the area, although none was observed during the watching brief itself.

8 ARCHIVE

The archive consists of four sheets of notes and records and 25 digital photographs. These are currently held at GAT under the project code **G2287**

A digital copy of the report will be sent to the client, along with a bound copy of the report on request. A copy will be sent to GAPS, and a further copy sent to the HER Archaeologist at the curatorial division of Gwynedd Archaeological Trust, Bangor, for deposition in the Regional HER. A copy of the report will also be provided to the National Monument Record, Royal Commission on the Ancient and Historic Monuments of Wales, Aberystwyth.

9 SOURCES CONSULTED

BGS 1983 *Soil Map of England and Wales*

Haslam, R., Orbach, J. and Voelker, A. 2009 *Gwynedd* (Pevsner Buildings of Wales Architectural Series)

Horizon Renewables *et al.* 2011 *Design and Access Statement and Planning Statement for Proposed WES 18 Wind Turbine and Ancillary Equipment at Castellmarch*. Unpublished Report

Institute for Archaeologists (1994, rev. 2001 & 2008). *Standard and Guidance for an archaeological Watching Brief*

RCAHMW 1964 *An Inventory of the Ancient and Historical Monuments of Wales. Vol. III West* (London)

Smith, B. and George, T.N. 1961 *British Regional Geology- North Wales*

Smith, G.H. 1999 'Survey of Prehistoric and Romano-British Settlement in North-West Wales', *Arch. Camb.* CXLVIII. 22-53

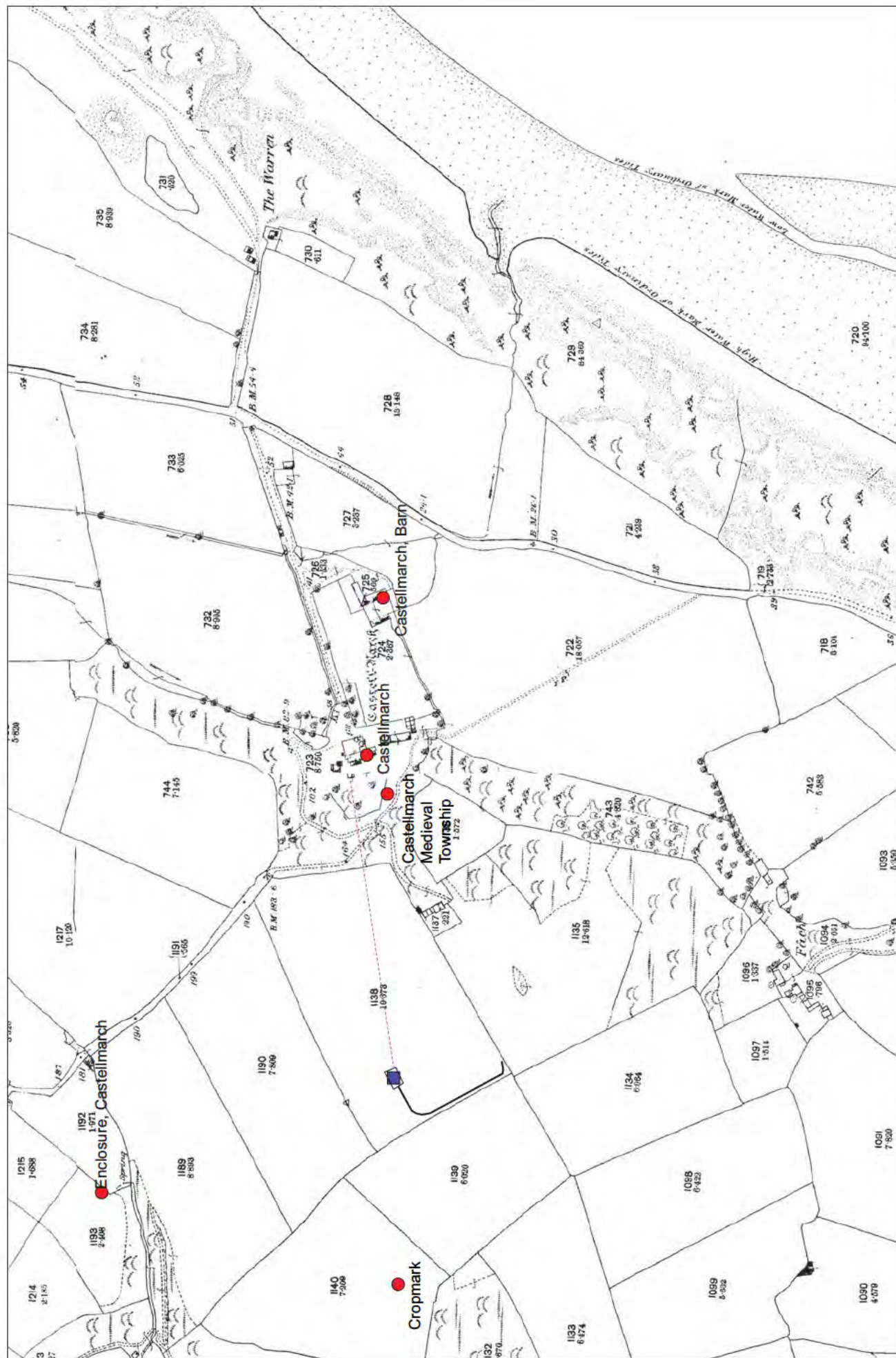




Plate 01: View of the turbine pad post-excavation from the south-east. Scale 1m



Plate 02: General view of south running length of access track. St Tudwals Islands can be seen in the background



Plate 03: View of access track from near to the telecommunications mast



Plate 04: View of access track excavation looking north. Scale 1m

APPENDIX I

**Reproduction of Gwynedd Archaeological Trust Project Design
(November 2012)**

WES 18 TURBINE, CASTELLMARCH,
ABERSOCH
YNYS MÔN

PROJECT DESIGN FOR ARCHAEOLOGICAL
WATCHING BRIEF (G2287)

Prepared for

Mr. Hywel Jones

November 2012

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

WES 18 TURBINE, CASTELLMARCH, ABERSOCHYNYS MÔN

PROJECT DESIGN FOR ARCHAEOLOGICAL WATCHING BRIEF (G2287)

Prepared for *Mr. Hywel Jones*, November 2012

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1.0 INTRODUCTION

Gwynedd Archaeological Trust (GAT) has been asked by *Mr. Hywel Jones* to provide a cost and project design for completing an archaeological watching brief during groundworks associated with a wind turbine installation at Castellmarch, Abersoch (centred on NGR **SH311162970**).

The proposed turbine is 24.0 m to hub height with 2 blades some 8.0 m each (9.0m to centre of hub) in thus the maximum blade tip height will be 32m, the rotor diameter 18.0m and a power output of 80 kW at 13m/s. An associated cable trench, 2No temporary crane pads and a c.140.0m long temporary access track, will be completed as part of the works. The crane pads and access track will involve. According to the client produced design and access statement, "All topsoil removed during the excavation of the foundation will be retained and replaced around the foundation on completion. Any remaining topsoil will be used to form new hedge banks or repair existing ones. Displaced shale will be used to form access tracks to reduce the need to import material from off site. On completion of construction the field will be returned to agricultural activity" (Horizon Renewables and Greystone Technical Ltd Renewables Engineers, 2011: 07)

The watching brief as a condition attached to Planning Application **C11/1026/39/LL**.

1.1 Specifications

This design will conform to the guidelines specified in *Standard and Guidance for Archaeological Watching Brief* (Institute for Archaeologists, 1994, rev. 2001, 2008).

A mitigation brief has been prepared for this scheme by Gwynedd Archaeological Planning Services (GAPS), ref: **D1624**. GAPS have requested a **comprehensive watching brief** during groundworks, "including excavation of cable trench, turbine foundations, and if applicable, topsoil stripping for access tracks and temporary compounds/construction areas (e.g. crane pads) (**D1624**: 03).

2.0 ARCHAEOLOGICAL BACKGROUND

The wind turbine site is located c.320m west of Castellmarch Farm (Grade II* Listed Building 4215; PRN 12000; NGR SH31442972), which is also listed on the regional Historic Environment Record (HER) as the location of Catellmarch Medieval Township (PRN 6549). A cropmark location is also listed within the HER, c.200.0m west of the wind turbine site (PRN 1248; NGR SH30902970).

3.0 METHOD STATEMENT

3.1 Introduction

The **watching brief** will consist of the following:

- Supervision of non-archaeological excavation works.
- A drawn, written and photographic record of any archaeological structures and deposits that may be revealed.
- Preparation of full archive report.

The watching brief will monitor:

- Client groundworks associated with the access track, crane pads, cable route.

The monitoring of works is to be undertaken in a manner that allows for the immediate cessation of groundworks for the recording of archaeological evidence, if identified.

The subsequent report should include:

1. A copy of the agreed specification (GAT project design);
2. A location plan;
3. A drawn, written and photographic record of any archaeological structures and deposits that may be revealed, including full dimensional and descriptive detail;
4. Discussion of the archaeological significance and research potential of any findings;
5. A full bibliography of sources consulted.

3.2 Definition of an archaeological watching brief

(Reproduced from *Institute for Archaeologists 2008 Standard and Guidance for an archaeological watching brief*)

The definition of an archaeological watching brief is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.

This definition and *Standard* do not cover chance observations, which should lead to an appropriate archaeological project being designed and implemented, nor do they apply to monitoring for preservation of remains *in situ*.

An archaeological watching brief is divided into four categories according to the IFA. 2008. *Institute for Archaeologists 2001& 2008 Standard and Guidance for an archaeological watching brief*:

- comprehensive (present during all ground disturbance)
- intensive (present during sensitive ground disturbance)
- intermittent (viewing the trenches after machining)
- partial (as and when seems appropriate).

A **comprehensive** watching brief has been requested by GAPS.

3.3 Purpose of a watching brief

The purpose of a watching brief is:

- to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works
- to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard
- A watching brief is not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The objective of a watching brief is:

- to establish and make available information about the archaeological resource existing on a site.

3.4 Occurrence

A watching brief may arise:

- in response to a development which threatens the archaeological resource
- as part of the planning process (within the framework of appropriate national planning policy guidance notes) and/or development plan policy
- as part of an Environmental Impact Assessment (EIA)
- outside the planning process (e.g. ecclesiastical development, coastal erosion, agriculture, forestry and countryside management, works by public utilities and statutory undertakers) A watching brief may therefore be instigated or commissioned by a number of different individuals or organisations, including local planning authorities, national advisory bodies, government agencies, private landowners, developers or their agents.

3.5 Methodology

3.5.1. Archaeological Watching Brief

- The watching brief is to be undertaken in a manner that allows for the immediate cessation of the groundworks for the recording of archaeological evidence. This will involve close liaison between the archaeologist and the site agent.
- If significant archaeological deposits are identified they will be manually cleaned, excavated and recorded to determine extent, function, date and relationship to adjacent features.
- Any subsurface remains will be recorded photographically, with detailed notations and a measured survey. The photographic record will be maintained, using a digital SLR camera set to maximum resolution. Photographic identification boards should also be used.
- The archive will then be held by GAT under an appropriate project number (**G2287**).

4.0 FURTHER ARCHAEOLOGICAL WORKS

This design does not include a methodology or cost for examination of, conservation of, or archiving of finds discovered during the watching brief, nor of any radiocarbon dates required, nor of examination of palaeoenvironmental samples. The need for these will be identified in the post-fieldwork programme (if required), and a new design will be issued for approval by the GAPS Archaeologist.

5.0 ENVIRONMENTAL SAMPLES

If necessary, relevant archaeological deposits will be sampled by taking bulk samples (a minimum of 10.0 litres and maximum of 30.0 litres) for flotation of charred plant remains. Bulk samples will be taken from waterlogged deposits for macroscopic plant remains. Other bulk samples, for example from middens, may be taken for small animal bones and small artefacts.

6.0 HUMAN REMAINS

Any finds of human remains will be left *in-situ*, covered and protected, and both the coroner and the GAPS Archaeologist informed. If removal is necessary it will take place under appropriate regulations and with due regard for health and safety issues. In order to excavate human remains, a licence is required under Section 25 of the Burials Act 1857 for the removal of any body or remains of any body from any place of burial. This will be applied for should human remains need to be investigated or moved.

7.0 SMALL FINDS

The vast majority of finds recovered from archaeological excavations comprise pottery fragments, bone, environmental and charcoal samples, and non-valuable metal items such as nails. Often many of these finds become unstable (i.e. they begin to disintegrate) when removed from the ground. All finds are the property of the landowner, however, it is Trust policy to recommend that all finds are donated to an appropriate museum where they can receive specialist treatment and study. Access to finds must be granted to the Trust for a reasonable period to allow for analysis and for study and publication as necessary. All finds would be treated according to advice provided within *First Aid for Finds* (Rescue 1999). Trust staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants used by the Trust, including National Museums and Galleries of Wales at Cardiff, ARCUS at Sheffield and BAE at Birmingham.

8.0 PROCESSING DATA, ILLUSTRATION, REPORT AND ARCHIVING

Following completion of the watching brief as outlined above, a report will be produced incorporating the following:

- Non-technical summary
- Introduction
- Methods and techniques
- Archaeological Background
- Description of the results of the watching brief
- Summary and conclusions
- Bibliography of sources consulted.

Illustrations, including plans and photographs, will be incorporated within the report.

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled and cross-referenced, and lodged in an appropriate place (to be decided in consultation with the regional Historic Environment Record) within six months of the completion of the project. All digital data will be written to CD-ROM and stored with the paper archive.

- one or more copies (as required) will be sent to the client
- one or more electronic copies (as required) will be sent to GAPS
- one or more electronic copies (as required) sent to the regional Historic Environment Record (Gwynedd Archaeological Trust, Craig Beuno, Ffordd y Garth, Bangor, Gwynedd LL57 2RT);
- copies of all key digital files on optical media should be provided to GAPS and the Regional HER, including report, photographs, scans of maps etc.
- a copy of the report and/or digital files on optical media should be provided to the National Monument Record (Royal Commission on the Ancient and Historic Monuments of Wales, Aberystwyth, SY23 1NJ) dependant upon their requirements.

9.0 STAFF

The project will be supervised by a Senior Archaeologist within the Gwynedd Archaeological Trust Contracts Section. The work will be carried out by fully trained Project Archaeologists who are experienced in conducting watching briefs and working with contractors and earth moving machinery. (Full CV's are available upon request).

10.0 HEALTH & SAFETY

The Trust subscribes to the SCAUM (Standing Conference of Archaeological Unit Managers) Health and Safety Policy as defined in **Health and Safety in Field Archaeology** (1999).

11.0 INSURANCE

Liability Insurance - Aviva Policy 24765101CHC/00045

- Employers' Liability: Limit of Indemnity £10m in any one occurrence
- Public Liability: Limit of Indemnity £5m in any one occurrence
- Hire-in Plant Insurance: £50,000.00 any one item;
£250,000.00 any one claim

The current period expires 21/06/13

Professional Indemnity Insurance – RSA Insurance Plc P8531NAECE/1028

- Limit of Indemnity £5,000,000 any one claim

The current period expires 22/07/13

12.0 SOURCES CONSULTED

Gwynedd Archaeological Planning Services mitigation brief **D1624**

Historic Environment Record **Gwynedd Archaeological Trust**, Craig Beuno, Ffordd y Garth, Bangor, Gwynedd LL57 2RT

Horizon Renewables and Greystone Technical Ltd Renewables Engineers, 2011.
Design and Access Statement and Planning Statement for Proposed WES 18 Wind Turbines and Ancillary Equipment

Planning Application **C11/1026/39/LL**

Standard and Guidance for Archaeological Watching Brief (Institute for Archaeologists, 1994, rev. 2001 & 2008)

APPENDIX II

**Reproduction of Gwynedd Archaeological Planning Services
Mitigation Brief D1624 (July 2012)**

DESIGN BRIEF FOR ARCHAEOLOGICAL MITIGATION

Site: Castellmarch, Abersoch

Date: 9th July 2012

National Grid Reference: 231116, 329700

Planning reference: C11/1026/39/LL

Applicant: Mr H Jones

This design brief is only valid for six months after the above date. After this period Gwynedd Archaeological Planning Service should be contacted.

It is recommended that the contractor appointed to carry out the archaeological work visits the site of the proposed development and consults the regional Historic Environment Record (HER) for north-west Wales before completing their specification. Gwynedd Archaeological Planning Service cannot guarantee the inclusion of all relevant information in the design brief.

Key elements specific to this design brief have been highlighted.

1.0 Site Location and Description

- 1.1 For the purposes of this brief the site comprises a plot of land to the west of the farm known as Castellmarch, near Abersoch. Abersoch is a coastal settlement on the southern coast of the Llŷn peninsula in Gwynedd, north Wales.
- 1.2 The plot is currently grassland used for grazing, enclosed by managed hedgerow. The development area comprises the footprint of a new wind turbine and ancillary works including controls housing, access and cabling, which have no existing physical boundary.
- 1.3 The application site is set at approximately 65m OD, overlooking Cardigan Bay.

2.0 Archaeological Background

- 2.1 The present farm at Castellmarch was established in the early 17th century and is Grade II* listed (Cadw ref. 4215). Documentary sources suggest that settlement in this area may have its origins in the medieval period (PRN 6549).
- 2.2 A group of cropmarks, representing a late prehistoric or Roman period hut circle settlement with associated enclosures, is recorded adjacent to the application site (PRN 1248). The features have not been subject to evaluation and their extent, condition, date and significance are unknown.
- 2.3 A telecommunications development implemented adjacent to the site in c.2004 was not subject to archaeological intervention and it is not known whether any archaeological features were affected.
- 2.4 The proposed development has a comparatively small footprint but has the potential to encounter buried archaeological deposits associated with the identified features. A programme of archaeological work has therefore been required to secure the recording, interpretation and dissemination of any information revealed.

2.5 The following documentation must be consulted in relation to this brief:

Royal Commission on the Ancient and Historical Monuments of Wales, 1964.
Caernarfonshire Inventory Vol. III (p.64).

3.0 The nature of the development and archaeological requirements

3.1 Planning consent has been granted for the construction of a 32m to tip wind turbine with a minor ancillary structure and a connecting underground cable of approximately 295m length.

3.2 This is a *design brief* for a programme of archaeological works to mitigate the impact of the development, to be undertaken following planning consent, in accordance with guidelines set out in *Planning Policy Wales 2011* and Welsh Office Circular 60/96 (*Planning and the Historic Environment: Archaeology*). The programme of works will comprise an **archaeological watching brief**.

3.3 The object of this programme of archaeological works is to ensure the recording of archaeological remains that will be destroyed or otherwise compromised by the proposed development.

3.4 Any additional stages of work further to the work described by this brief will require prior approval of a new detailed specification by Gwynedd Archaeological Planning Service.

3.5 This *design brief* should be used by the archaeological contractor as the basis for the preparation of a detailed written archaeological *specification*. The specification must be submitted to the Gwynedd Archaeological Planning Service for approval before the work commences.

3.6 The *specification* should contain, as a minimum, the following elements:

- non-technical summary
- details of the proposed works as precisely as is reasonably possible, indicating clearly on a plan their location and extent
- a research design which sets out the site-specific objectives of the archaeological works
- field methodology
- methods of recording, including the collection and disposal strategy for artefacts and ecofacts
- arrangement for immediate conservation of artefacts
- post-fieldwork methodology (watching brief element)
- the level and grade of all key project staff
- details of external specialists
- a timetable for the proposed works, including contingency if appropriate
- the intended method of publication
- archive deposition
- reference to relevant legislation
- health and safety considerations

- monitoring procedures

4.0 Mitigation detail

4.1 The programme of archaeological works to **mitigate** the impact of the development will consist of an archaeological watching brief.

4.2 The **watching brief** will include:

- observation on a **comprehensive** basis, of all ground disturbing work, including excavation of cable trench, turbine foundations, and if applicable, topsoil stripping for access tracks and temporary compounds/construction areas (e.g. crane pads)
- a full drawn, written and photographic record of any significant archaeological features, structures and deposits that may be revealed
- preparation of a full archive report

4.3 The monitoring of works is to be undertaken in a manner that allows for the immediate cessation of development for the recording of archaeological evidence. Agreement must be reached between the archaeologist and developer in order that this is achieved.

4.4 Recording methodology should be in accordance with Institute for Archaeologists guidance (see general requirements below).

4.5 The archaeological contractor will ensure that sufficient resource is made available for a post-excavation programme to result in an archive report.

4.6 The final report should specifically include the following:

- a) a copy of the design brief and agreed specification
- b) a location plan
- c) all identified features and significant finds plotted on an appropriately scaled site plan
- d) full dimensional and descriptive detail of all identified finds and features
- e) a full bibliography of sources consulted
- f) an archive compact disc

4.7 Any relevant desk-based sources included for the purposes of interpretation and analysis must be fully referenced, and related to both the archaeological mitigation work and the development proposals.

5.0 General requirements

5.1 The results must be presented in a report and should be detailed and laid out in such a way that data and supporting text are readily cross-referenced. **The HER Officer should be contacted to ensure that any sites or monuments not previously recorded in the HER are given a Primary Record Number (PRN) and that data structure is compatible with the HER.**

5.2 The archaeological watching brief must be undertaken by an appropriately qualified individual or organisation, fully experienced in work of this character.

- 5.3 Details, including the name, qualifications and experience of the project director and all other key project personnel (including specialist staff) should be communicated to the Gwynedd Archaeological Planning Service and all written work attributed to an author(s).
- 5.4 Contractors and subcontractors are expected to conform to standard professional guidelines. The following are of particular relevance to this project:
- English Heritage, 1991. *Management of Archaeological Projects (MAP2)*
 - English Heritage, 2006. *Management Of Research Projects in the Historic Environment (MORPHE)*
 - Brown D. H., 2007. *Archaeological Archives A guide to best practice in creation, compilation, Transfer and curation*. Archaeological Archives Forum
 - Richards, J. & Robinson, D., 2000. *Digital Archives from Excavation and Fieldwork: Guide to Good Practice* (Second Edition). The Archaeology Data Service Guide to Good Practice: Oxbow Books
<http://ads.ahds.ac.uk/project/goodguides/excavation/>
 - The Institute for Archaeologists, 1985 (revised 2010). *Code of Conduct*
 - The Institute for Archaeologists, 1990 (revised 2008). *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*
 - The Institute for Archaeologists, 1994 (revised 2009) *Standard and Guidance for Archaeological Desk-Based Assessment*
 - The Institute for Archaeologists 1994 (revised 2008) *Standard and Guidance for an Archaeological Watching Brief*
 - The Institute for Archaeologists 1994 (revised 2008) *Standard and Guidance for Archaeological Field Evaluation*
 - The Institute for Archaeologists 1995 (revised 2008) *Standard and Guidance for Archaeological Excavation*
 - The Institute for Archaeologists, 2001 (revised 2008). *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*
 - The Institute for Archaeologists, 2008. *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*
- 5.5 Many people in North Wales speak Welsh as their first language, and many of the archive and documentary references are in Welsh. Contractors should therefore give due consideration to their ability to understand and converse in Welsh.
- 5.6 The archaeological contractor must satisfy themselves that all constraints to groundworks have been identified, including the siting of live services, Tree Preservation Orders and public footpaths. Gwynedd Archaeological Planning Service bears no responsibility for the inclusion or exclusion of such information within this brief.
- 5.7 Any changes to the specifications that the archaeological contractor may wish to make after approval by this office should be communicated to Gwynedd Archaeological Planning Service and approved before implementation.

- 5.8 Care must be taken in dealing with human remains and the appropriate environmental health regulations followed. Gwynedd Archaeological Planning Service and the local Coroner must be informed immediately human remains are discovered.
- 5.9 Arrangements for the long-term storage and deposition of all artefacts must be agreed with the landowner and Gwynedd Archaeological Planning Service before the commencement of investigation.
- 5.10 The involvement of Gwynedd Archaeological Planning Service should be acknowledged in any report or publication generated by this project.
- 5.11 A full archive including plans, photographs, written material and any other material resulting from the project should be prepared in accordance with standard guidance. All plans, photographs and descriptions should be labelled, cross-referenced and lodged in an appropriate place (to be agreed with Gwynedd Archaeological Planning Service) within six months of the completion of the project.
- 5.12 Two copies of the bound report must be sent to the address below, one copy marked for the attention of the Development Control Archaeologist, the other for attention of the HER Officer, who will deposit the copy in the HER.

6.0 Curatorial monitoring

- 6.1 The project will be monitored by Gwynedd Archaeological Planning Service to ensure the fulfilment of the brief and specifications. The Development Control Archaeologist will normally review the progress of reports and archive preparation. The archaeological contractor must inform Gwynedd Archaeological Planning Service in writing of the proposed start dates for the project and any subsequent phases of work.

7.0 Glossary of terms

- 7.1 *Archaeological Contractor*
A professionally qualified individual or an organisation containing professionally qualified archaeological staff, able to offer appropriate and satisfactory treatment of the archaeological resource, retained by the developer to carry out archaeological work either prior to the submission of a planning application or as a requirement of the planning process.
- 7.2 *Archaeological Curator*
A person, or organisation, responsible for the conservation and management of archaeological evidence by virtue of official or statutory duties. In north-west Wales the archaeological advisors to the Local Planning Authorities are the Gwynedd Archaeological Planning Service, who work to the Welsh Archaeological Trusts' *Curators' Code of Practice*.
- 7.3 *Archive*
An ordered collection of all documents and artefacts from an archaeological project, which at the conclusion of the work should be deposited at a public repository, such as the local museum.

7.4 *Brief*

The Association of Local Government Archaeological Officers (1993) defines a *brief* as an outline framework of the planning and archaeological situation which has to be addressed, together with an indication of the scope of works that will be required.

7.5 *Historic environment Record (HER)*

A documentary record of known sites in a given area. In north-west Wales the HER is curated by the curatorial division of the Gwynedd Archaeological Trust.

7.6 *Specification*

The Association of Local Government Archaeological Officers (1993) defines a *specification* as a schedule of works outlined in sufficient detail to be quantifiable, implemented and monitored.

7.7 *Watching brief*

A formal programme of observation during non-archaeological works in order to identify, investigate and record any archaeological remains which may be present.

8.0 Further information

8.1 This document outlines best practice expected for a programme of archaeological mitigation but cannot fully anticipate the conditions that will be encountered as work progresses. If requirements of the brief cannot be met they should only be excluded or altered after gaining written approval of the Gwynedd Archaeological Planning Service.

8.2 Further details or clarification of any aspects of the brief may be obtained from the Development Control Archaeologist at the address below.

Jenny Emmett

Archaeolegydd Rheoli Datblygiad - Development Control Archaeologist

Gwasanaeth Cynllunio Archaeolegol Gwynedd - Gwynedd Archaeological Planning Service
Craig Beuno, Ffordd Y Garth, Bangor, Gwynedd LL57 2RT

Ffôn/Tel: 01248 370926

Ffacs/Fax: 01248 370925

jenny.emmett@heneb.co.uk



Gwynedd Archaeological Trust
Ymddiriedolaeth Archaeolegol Gwynedd

Craig Beuno, Ffordd y Garth, Bangor, Gwynedd. LL57 2RT
Ffon: 01248 352535. Ffacs: 01248 370925. email: gat@heneb.co.uk

