

**Land adjacent to Pantgwyn Bach,
Llanfyrnach, Pembrokeshire
Watching Brief
Planning Application
11/0328/PA**



Report by: Trysor

**For: Mr N Jackson
Greystone Technical Ltd.**

October 2011



**Land adjacent to Pantgwyn Bach,
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Watching Brief
Planning Application 11/0328/PA**

By

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Trysor Project No. 2011/223

For: N. Jackson
Greystone Technical Ltd.

October 2011



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Cover photograph: Topsoil stripping the eastern side of the turbine foundation

Land Adjacent to Pantgwyn Bach, Llanfyrnach, Pembrokeshire

RHIF YR ADRODDIAD - REPORT NUMBER: Trysor 2011/223

DYDDIAD 28th October 2011

DATE 28th October 2011

Paratowyd yr adroddiad hwn gan bartneriad Trysor. Mae wedi ei gael yn gywir ac yn derbyn ein sêl bendith.

This report was prepared by the Trysor partners. It has been checked and received our approval.

JENNY HALL MifA _____ Jenny Hall _____

PAUL SAMBROOK MifA _____ Paul Sambrook _____

DYDDIAD / DATE _____ 28th October 2011 _____

Croesawn unrhyw sylwadau ar gynnwys neu strwythur yr adroddiad hwn.

We welcome any comments on the content or structure of this report.

enquiries@trysor.net

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1. Summary

In October 2011, Trysor undertook a watching brief in two fields at SN24993209, on land adjacent to Pantgwyn Bach, Llanfyrnach, Pembrokeshire, SA35 0AE. Whilst being observed by Trysor, the area of a foundation pit for a wind turbine in the southern field was stripped of topsoil down to natural subsoil, a depth of 0.20m. Trysor also watched a spit of the cable trench topsoil stripped to a depth of 0.15m, just above the subsoil, and then the cable trench itself excavated into the subsoil for a further 0.60m, in the two fields. No archaeological contexts were encountered.

2. Copyright

Trysor hold the copyright of this report and of the paper and digital archive. Further paper copies may be made of this report without gaining permission to reproduce but it must be noted that Figure 3 & 4 include other copyright material and should not be copied.

3. Introduction

Mr N Jackson of Greystone Technical Ltd, Consulting Structural Engineers Garreglwyd, Llanfyrnach, Pems, SA35 0AQ, commissioned Trysor heritage consultants to provide a Written Scheme of Investigation on groundworks for a single wind turbine and its cable trench relating to planning application number: 11/0328/PA.

The proposed location of the turbine lay in an improved pasture field, 222m above Ordnance Datum at SN24993209, on land adjacent to Pantgwyn Bach, Llanfyrnach, Pembrokeshire.

4. The development

The proposed development consisted of a single wind turbine and its cable trench. The turbine required a foundation hole, 7m by 7m, and up to at least 1.6m deep into the subsoil with a top soil strip around that 7m diameter foundation hole of a further 2 metres giving a square of 11m in diameter in total. The cable trench extended roughly northwards from the turbine foundation through two fields to an extant electricity pole. The cable trench was 0.3m wide and at least 0.60m deep with a top soil strip up to 2m wide.

5. Conditions on the consent

In granting approval for the application, the Local Planning Authority imposed conditions on the consent; one condition specifies the actions necessary to mitigate the impact of the development on the potential archaeological resource.

“No development shall take place until there has been submitted to and approved by the Local Planning Authority a programme of archaeological investigation for the site. Thereafter the approved programme shall be implemented in all respects unless the Local Planning Authority agrees in writing to any variation. Reason: To ensure the recording of any items of archaeological interest to comply with Policy 84 of the JUDP for Pembrokeshire”

6. Specification

Trysor prepared a written scheme of investigation which proposed a watching brief on the work to be undertaken. This was submitted to the LPA and was approved on 10th October 2011, see Appendix A for approved written scheme which includes the definition of a watching brief.

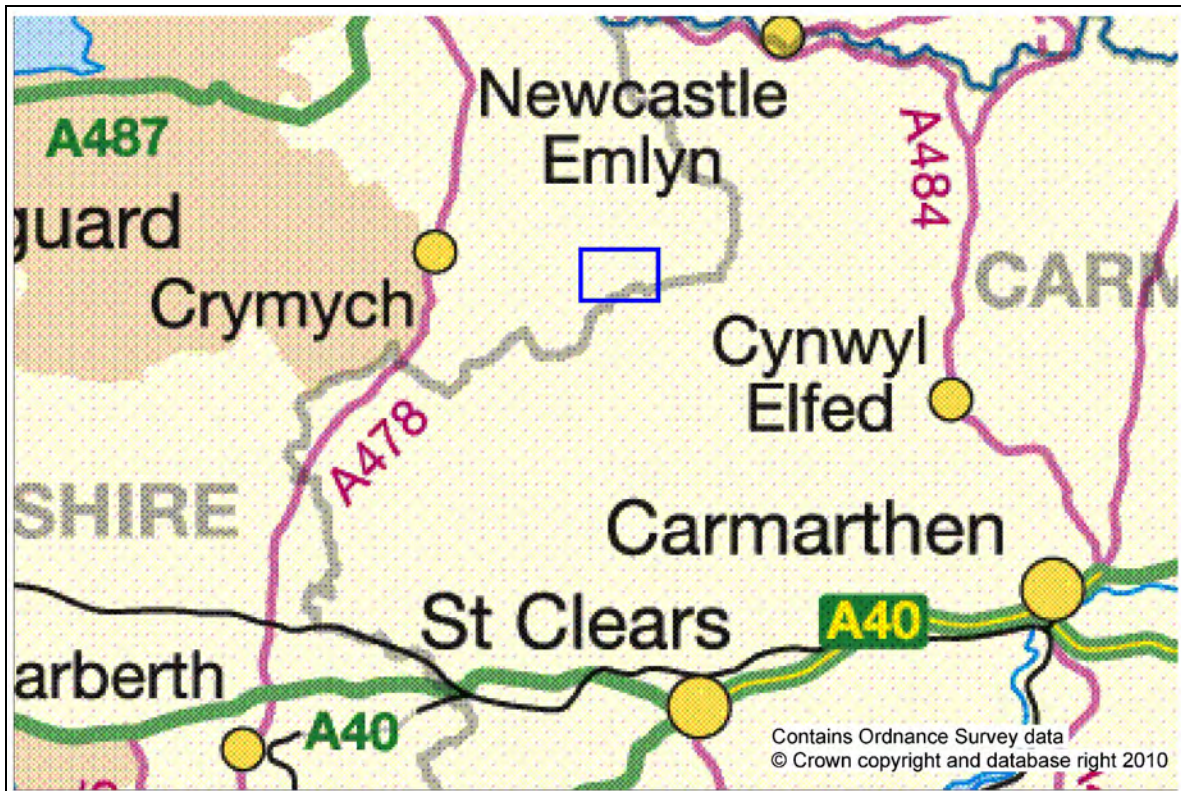


Figure 1: Location of Pantgwyn Bach in southwest Wales

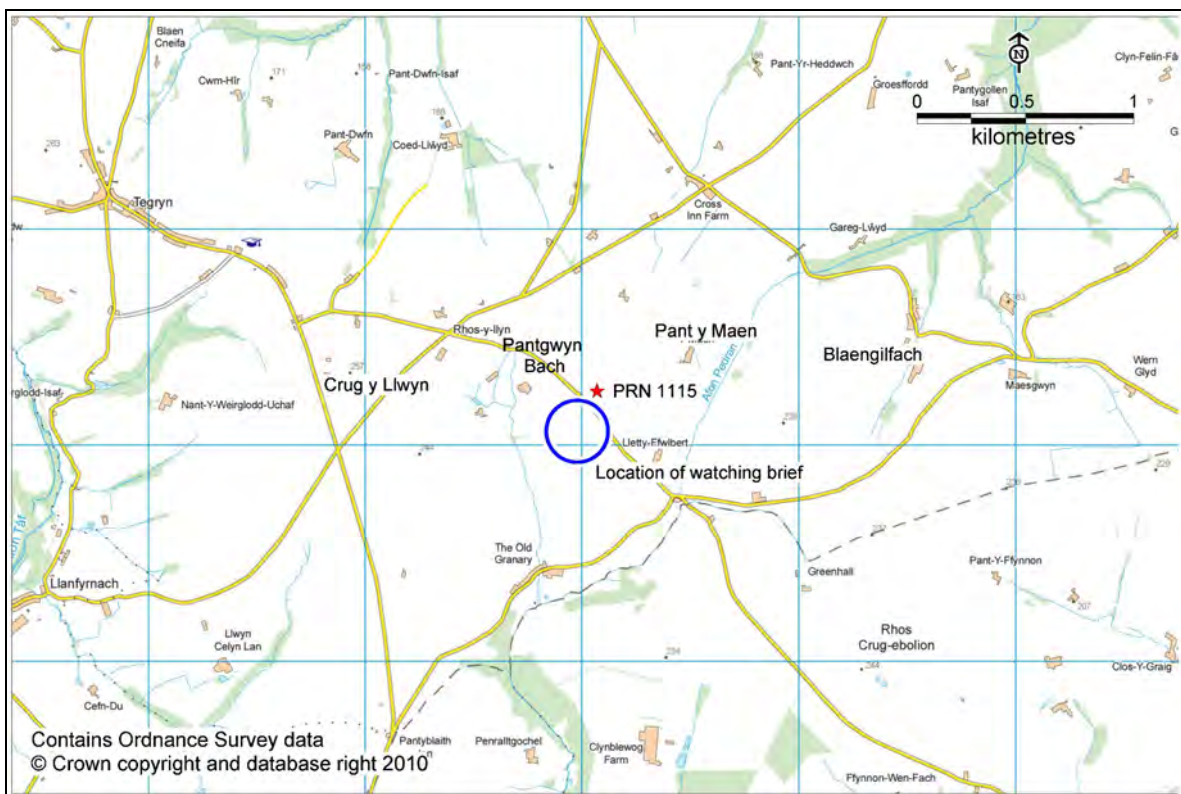


Figure 2: Location of the turbine below Pantgwyn Bach

7. Historical and Archaeological Overview

A Bronze Age round barrow, PRN 1115, Scheduled Ancient Monument PE 206, 170m north northeast of the turbine foundation, appears to be the only extant round barrow in the area, see figure 2, but there are numerous references to other Bronze Age monuments within the locality.

In 1864 Rev E L Barnwell wrote that there were “frequent discoveries of sepulchral urns at Pantgwyn” (Barnwell, 1864), PRN 5099. In 1908 Laws and Owen noted that there had been a tumulus at Crug y Llyn, PRN 1103, and the former site is noted on the 1st edition Ordnance Survey map of 1891. At Pantymaen a round barrow, PRN 1117, is said to have been levelled in the mid 19th century (Griffiths, J. 1893) and a hoard of metalwork was found in the mid 1800s by a stream between Pantymaen Farm and Blaengilfach Farm.

Where a PRN is quoted above this refers to the unique number given to the site in the regional Historic Environment Record held by Dyfed Archaeological Trust, Llandeilo

8. Methodology

On Friday 14th October 2011, the 7m x 7m foundation trench for the wind turbine, and a buffer area of approximately 2m around that, was stripped of topsoil down to subsoil using a mechanical excavator and a flat bucket. This process was observed by Trysor after discussion on the best way to proceed.

A 2m-wide strip along the cable trench, running north northeast from the turbine area, was also stripped of topsoil down to a depth of 0.15m, just above the subsoil, and then a 0.30m trench along the centre of the linear strip was excavated deeper using a toothed bucket. Again the best way to proceed had been discussed and the stripping and excavation watched by Trysor.

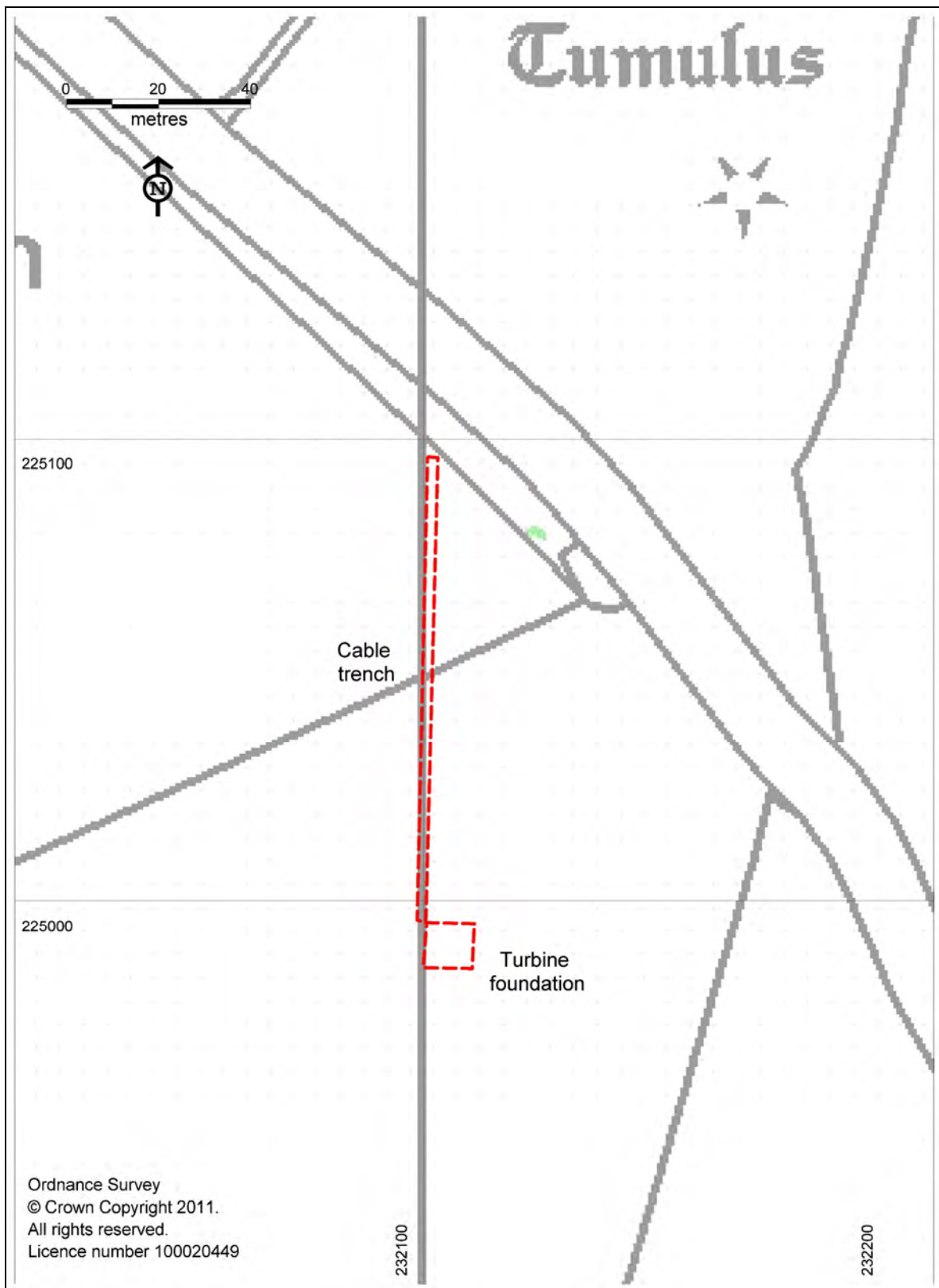


Figure 3: Location of the turbine foundation and cable trench that were topsoil stripped, based on GPS plots and crosschecked with clients plans.

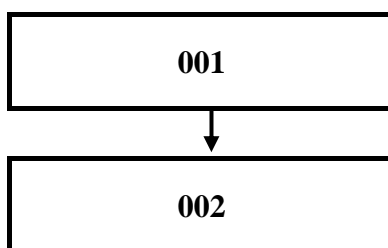
9. Site Stratigraphy

The watching brief was carried out in accordance with the Institute for Archaeologists' *Standard and Guidance for an Archaeological Watching Brief*. The mechanical topsoil strip of two areas was watched by Trydor and the stratigraphy of the site recorded.

9.1 Context Catalogue

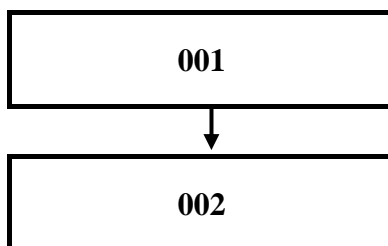
Area 1 – Turbine Foundation

Context Number	Depth	Description	Interpretation
001	0.20m	10Y3/2, Dark brown, loam	Improved topsoil
002	-	Colouring varying between yellow to orange, gravel content	Natural subsoil



Area 2: Cable Trench

Context Number	Depth	Description	Interpretation
001	0.20m	10Y3/2, Dark brown, loam	Improved topsoil
002	-	Colouring varying between yellow to orange, gravel content	Natural subsoil



10. Photographs

Colour digital photographs were taken of topsoil stripping using a 14M pixel camera. The following table describes the content of each photograph included in the project archive and their locations are provided in the following map, see Figure 4. The photographs are included in Appendix B at the end of the report.

Photo Number	Description	Date Taken	Direction
PGB_001	Topsoil stripped off the western side of the turbine foundation area	14/10/2011	Looking southeast
PGB_002	Topsoil stripped off the eastern side of the turbine foundation area	14/10/2011	Looking southwest
PGB_003	Partial topsoil strip along cable trench	14/10/2011	Looking south
PGB_004	Marked out cable trench in field to the north	14/10/2011	Looking north
PGB_005	Excavated cable trench	14/10/2011	Looking north northwest
PGB_006	Excavated cable trench	14/10/2011	Looking north

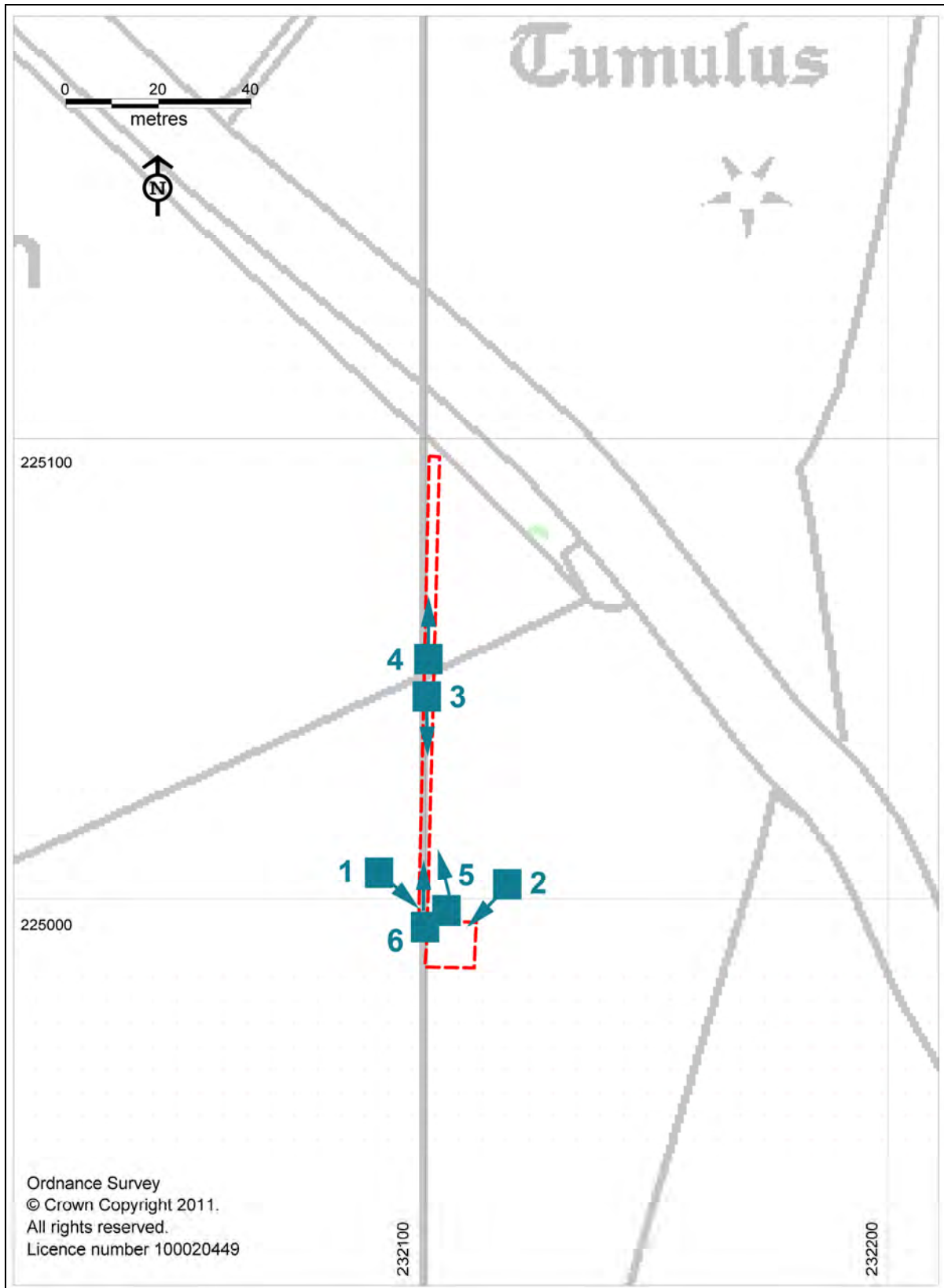


Figure 4: Location of photographs

11. Conclusion

No features were identified nor artefacts recovered. The development had no impact on the archaeological resource.

12. Archive

There is no paper archive other than the written report and photographs. A copy of the report and photographs will be deposited with the National Monuments Record, Aberystwyth. Photographs are in TIFF format, following the standard required by the RCAHMW.

Further copies of the report have also been supplied to Mr Jackson, and the Historic Environment Record at Dyfed Archaeological Trust, Llandeilo.

13. Sources

13.1 Map evidence

Budgen, T, 1810, Original Surveyors Drawings 2" to a mile
Ordnance Survey, 1831, 1" to 1 mile
Ordnance Survey, 1891, 1:10560

13.2 Published sources

Barnwell, Rev E L, Archaeologia Cambrensis, 1864, p.221
Laws and Owen, 1908, Pembrokeshire Archaeological Survey
Royal Commission on Ancient Monuments in Wales and Monmouthshire, 1925, Parish of Clydai, pp 73-80

13.3 IfA Standard and Guidance

Institute for Archaeologists, 2008 (revised), Standard and Guidance for an Archaeological Watching Brief, available online from the IfA website, www.archaeologists.net

APPENDIX A – Written Scheme of Investigation submitted to the LPA and approved on 10th October 2011**LAND ADJACENT TO PANTGWYN BACH
WRITTEN SCHEME OF INVESTIGATION****1. Introduction**

Mr N Jackson of Greystone Technical Ltd, Consulting Structural Engineers Garreglwyd, Llanfyrnach, Pembro, SA35 0AQ has commissioned Trysor heritage consultants write a Written Scheme of Investigation on groundworks for a single wind turbine and its cable trench relating to planning application number: 11/0328/PA

The proposed location of the turbine lies in an improved field at SN24993209.

2. The development

The development consists of a single wind turbine and its cable trenches. The turbine will require a foundation hole 7m by 7m and up to 1.6m deep into the subsoil with a top soil strip around the foundation hole. The cable trench itself will be 300mm wide and 1000mm deep with a top soil strip up to 3m wide.

3. Conditions on the consent

In granting approval for the application, the Local Planning Authority imposed conditions on the consent; one condition specifies the actions necessary to mitigate the impact of the development on the archaeological resource.

“No development shall take place until there has been submitted to and approved by the Local Planning Authority a programme of archaeological investigation for the site. Thereafter the approved programme shall be implemented in all respects unless the Local Planning Authority agrees in writing to any variation. Reason: To ensure the recording of any items of archaeological interest to comply with Policy 84 of the JUDP for Pembrokeshire”

4. Nature of the archaeological resource

Further to the condition imposed by the Local Planning Authority (LPA), a letter from Dyfed Archaeological Trust, the LPA’s archaeological advisers, gives further detail: “the site in question lies within close proximity to the nationally important, scheduled, Bronze Age round barrow of Crug Bach (PRN 1115; PE 206). Funerary monuments such as these, though often found in isolation, frequently make up part of a group or cemetery.”

The scheduled round barrow PRN 1115, PE 206 appears to be the only extant round barrow left in the area but there are numerous references to other Bronze Age monuments within the vicinity. In 1864 Rev E L Barnwell wrote that there were “frequent discoveries of sepulchral urns at Pantgwyn” (Barnwell, 1864), PRN 5099. In 1908 Laws and Owen noted that there had been a tumulus at Crug y Llyn, PRN 1103, and the former site is noted on the 1st edition Ordnance Survey map of 1891. At Pantymaen a round barrow, PRN 1117 is said to have been levelled in the mid 19th century (Griffiths, J. 1893) and a hoard of metalwork was found in the mid 1800s by a brook between Pantymaen Farm and Blaengilfach Farm.

Where a PRN is quoted above this refers to the unique number given to the site in the regional Historic Environment Record held by Dyfed Archaeological Trust, Llandeilo.

5. Sources

Barnwell, Rev E L, *Archaeologia Cambrensis*, 1864, p.221

Laws and Owen, 1908, *Pembrokeshire Archaeological Survey*

Royal Commission on Ancient Monuments in Wales and Monmouthshire, 1925, *Parish of Clydai*, pp 73-80

Ordnance Survey maps

Budgen, T, 1810, *Original Surveyors Drawings* 2" to a mile

Ordnance Survey, 1831, 1" to 1 mile

Ordnance Survey, 1891, 1:10560

6. Effect of development on the archaeological resource

The development lies within a single field parcel, the boundaries of which appear to have remained unchanged since the last quarter of the 19th century. On the Original Surveyors drawings of the early 19th century the field is shown as part of the enclosed lands with much of the area to the northeast, north and northwest being unenclosed common.

Although there are currently no recorded archaeological features in the field parcel, the possibility remains that unrecorded, buried features may occur in the area affected by groundworks. The density of Bronze Age features in the locality and the finding of artefacts

7. Proposed archaeological intervention

There is no archaeological resource currently recorded within the field parcel and the closest known monument is Crug Bach round barrow approximately 180 metres north northeast of the centre of the wind turbine foundation but there is an underlying history of Bronze Age features and artefacts within the wider area particularly on the higher ground to the north and northeast.

According to the Institute of Field Archaeologists' *Standard and Guidance for an Archaeological 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.”

Trysor propose that whilst the foundations for the wind turbine are excavated that Trysor will be present and watching the process until such time that excavation is complete or subsoil has been reached to the point where archaeological features would no longer be present. The top soil strip along the line of the cable trench will be observed after the soil is removed and the trench will be observed after excavation.

8. Field methodology

The watching brief will be carried out in accordance with Institute of Field Archaeologists' *Standard and Guidance for an Archaeological Watching Brief*.

A two-person team will examine the exposed stratigraphy of the groundworks undertaken in association with the development. All trenches will be examined and features of archaeological interest recorded. Excavation of any features will be limited to that necessary to establish their extent and character, unless their excavation is required to allow the development to proceed.

9. Contingency arrangements if archaeological features are discovered

In the event that archaeological remains are encountered, where appropriate investigation falls outside the scope of this watching brief specification, a meeting between Trysor, the applicant, Dyfed Archaeological Trust Heritage Management Section and the Local Planning Authority case officer will be convened in order to agree a course of action. The applicant will be responsible for paying for any further work necessary.

10. Health & Safety

Trysor will undertake a risk assessment in accordance with their health and safety policy.

11. Recording

A plan of the groundworks, and representative sections of the trenches, will be drawn, at an appropriate scale, recording all features of archaeological interest. The plan will be based on the applicants' survey drawings of the development area.

A written record of all activity will be kept in a project specific notebook. If archaeological contexts are encountered they will be recorded following the *Central Excavation Unit Manual: Part 2: Recording*, 1986, using a consecutive numbering system.

Any artefacts will be dealt with in accordance with the guidance provided in the Institute of Field Archaeologists *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials*. Any artefacts will be retained, cleaned and stored. Following reporting they will be returned to the applicant.

Should any human remains be encountered, the Coroner and Regional Archaeological Trust will be immediately informed and the remains left *in situ*.

Colour digital photographs will be taken, as appropriate, using a 14M pixel camera. A written record will be made on site of the photographs taken. Appropriate photographic scales will be used.

12. Reporting

A report on the watching brief will be prepared according to the requirements of Annexe 1 of the Institute of Field Archaeologists' *Standard and Guidance for an Archaeological Watching Brief* following the completion of the work. Copies of the report will be provided to the client, the Regional Historic Environment Record and the National Monuments Record.

13. Dissemination

A summary of the work undertaken and its findings will be submitted to Archaeology in Wales.

14. Archive

The paper archive will be deposited with the National Monuments Record, including a copy of the final report. This archive will include all written, drawn and photographic records relating directly to the investigations undertaken. Photographs will be supplied in TIFF format in a file size greater than 11MB, following the standard required by the RCAHMW.

15. Resources to be used

Two members of staff will undertake the watching brief. They will be equipped with standard field equipment, including digital cameras, GPS and first aid kits.

Trysor have access to the computer hardware and software required to deliver the completed final report and archive to a professional standard.

16. Qualification of personnel

Jenny Hall (BSc Joint Hons., Geology and Archaeology, MifA) has 12 years excavation experience, which included undertaking watching briefs. She also has 10 years experience as a Sites and Monuments Record Manager for a Welsh Archaeological Trust. She has been an independent archaeologist since 2004 undertaking a variety of work that includes upland survey, desktop assessments and watching briefs.

Paul Sambrook (BA Joint Hons., Archaeology and Welsh, MifA, PGCE) has extensive experience as a fieldworker in Wales. He was involved with Cadw's pan-Wales Deserted Rural Settlements Project for 7 years. He has also undertaken Tir Gofal field survey work and watching briefs. He has been an independent archaeologist since 2004 undertaking a variety of work that includes upland survey, desktop assessments and watching briefs.

17. Insurance & Professional indemnity

Trysor has Public Liability and Professional Indemnity Insurance.

18. Project identification

The project has been designated Trysor Project No. 2011/223.

Jenny Hall & Paul Sambrook
Trysor
October 2011

APPENDIX B



Plate 1: PGB_001, topsoil strip of western side of turbine foundation, looking southeast.



Plate 2: PGB_002, topsoil strip of eastern side of turbine foundation, looking southwest.



Plate 3: Partial topsoil strip along cable trench, looking south



Plate 4: Marked-out cable trench in the northern field



Plate 5: Excavated cable trench, looking north northwest.



Plate 6: Excavated cable trench, looking north