

PEN YR ARDD WIND TURBINE, LLANDISSILIO, PEMBROKESHIRE: ARCHAEOLOGICAL WATCHING BRIEF

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PEMBROKESHIRE:
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SUMMARY

A planning application (08/0975/PA) was submitted by Mrs Erica Evans to erect a wind turbine on land at Pen Yr Ardd farm, Llandissilio, Pembrokeshire at NGR SN 1102 2068. The wind turbine site lies in close proximity to the site of a Bronze Age round barrow. Such sites are considered to be of high archaeological importance and often form part of a wider cemetery complex, consequently there is a strong possibility that associated features or deposits may be revealed and destroyed during the groundworks for the wind turbine foundations and cable trench.

Given the potential for the presence of buried archaeological deposits on the site, planning permission was granted with a condition that an archaeological watching brief be undertaken during all groundworks at the site that had the potential to expose, damage or destroy archaeological remains. The aim of the watching brief was to identify and record any such archaeological deposits.

In order to comply with the planning condition Mrs Evans commissioned Dyfed Archaeological Trust Field Services to carry out the watching brief in March 2009.

No archaeologically significant features or deposits were encountered during the groundworks for the development, although it should be noted that the groundworks comprised three very small areas: a cable trench of c.100m length and 0.25m in width; the 3m x 3m main foundation trench for the turbine; and a smaller anchor point foundation trench of 1.2m x 1.2m size. These results do not preclude the possibility that prehistoric, or later, archaeological features lie buried elsewhere in the vicinity of the groundworks associated with the turbine at Pen Yr Ardd farm.

INTRODUCTION

Project Background

A planning application (08/0975/PA) was submitted by Mrs Erica Evans to erect an electricity generating wind turbine at Pen yr Ardd Farm, Llandissilio, Pembrokeshire at NGR¹ SN 1102 2068 (Figure 1). The wind turbine site lies in close proximity to the site of a Bronze Age round barrow (PRN² 917 at NGR SN 10963 20558). Human burial sites such as these are considered to be of high archaeological importance and often form part of a wider cemetery complex, consequently there was a strong possibility that associated features or deposits may be exposed, damaged or destroyed during the groundworks for the wind turbine's foundations.

Given the potential for the presence of buried archaeological deposits on the site Dyfed Archaeological Trust Heritage Management, as archaeological advisors to the Local Planning Authority³ (LPA), recommended that an archaeological watching brief be carried out in order to protect the archaeological interests. In granting planning consent, an obligation to undertake an archaeological watching brief was placed on the application by the LPA.

In order to comply with the planning condition, Erica Evans commissioned Dyfed Archaeological Trust Field Services to undertake the watching brief in March 2009.

The watching brief methodology and scope of the report

The watching brief comprised the attendance on site of an archaeologist during the machine excavation of two platform foundation trenches and the inspection of an open cable trench.

Records were made of all excavated deposits and digital photographs were taken.

This report summarises the archaeological background to the site and discusses the results of the watching brief.

Any archaeological sites mentioned in the text that are recorded in the Regional Historic Environment Record (HER) are identified, for reference and location, by their Primary Record Number (PRN), National Grid Reference (NGR), and Scheduled Ancient Monument (SAM) number where appropriate. The HER is housed with Dyfed Archaeological Trust at its offices in Llandeilo, Carmarthenshire.

Printed map extracts included in this report are for illustrative purposes only and are not necessarily reproduced to their original scale.

¹ National Grid Reference

² Primary Record Number

³ Pembrokeshire County Council Planning Department

SITE LOCATION AND BRIEF ARCHAEOLOGICAL BACKGROUND

Pen yr Ardd farm is located 1.2km southwest of the village of Llandissilio (Figure 1) on the edge of a local summit at 80m above Ordnance Datum (OD). The farm supports pasture and the cultivation of silage. Topographically the local summit is relatively flat and rises to just over 81m OD at the proposed location of the wind turbine, some 100m to the northwest of Pen yr Ardd farmhouse. The site is fairly exposed and affords good long views all around, especially to the north and west.



Figure 1. Location map.

Reproduced from the 1995 Ordnance Survey 1:50,000 scale Landranger Map with the permission of The Controller of Her Majesty's Stationery Office, © Crown Copyright Dyfed Archaeological Trust Ltd., The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No AL51842A

The solid geology of the area is represented by Ordovician shales of the Llanvirn series, which are overlain by glacial drift deposits of sand and boulder clay in discrete locations (British Geological Survey 1994). The soils are typical brown earths of the Rheidol association (Soil Survey of England & Wales 1983).

The development site lies in a field under pasture c.100m to the northeast of a Bronze Age round barrow (PRN 917) which is situated close to the western side of a hedge in the adjacent field. The Bronze Age, as it occurred in Britain, is the period of prehistory from c.2000 BC to c.600 BC. Characteristic of this period was the evolution of new style pottery 'beakers', the first use of metalwork (copper and bronze), the erection of standing stones, and the building of a wide variety of small circular monuments used for both ritual and funerary purposes. Few early Bronze Age settlement sites have been discovered in west Wales but the presence of 'burnt mound' sites (possible cooking places) comprising heat affected

shattered stones and scorched earth, usually situated close to a water supply, are the most common indicator of Bronze Age activity. Later Bronze Age settlement throughout Wales is represented in the landscape by hillforts and promontory forts, the construction of which became more common in the succeeding Iron Age after c.600BC.

Pen yr Ardd round barrow (PRN 917) is a typical Bronze Age human burial site. Today the grass covered circular mound measures c.20m in diameter by 0.5m high. It was excavated in 1913 to a depth of 1.2m. Beneath the topsoil a layer of small stones was revealed overlying a capstone supported by two side slabs (a cist chamber) and contained within were the ashes of a cremation, a pottery urn and several flint tools (Grimes, 1951).

There are no other known archaeological sites in the immediate vicinity of the development area, although there are two round barrows (PRN 926 and PRN 927, SAM No. Cm309) at the southern edge of Llandissilio c.1.3km due east of Pen yr Ardd (Figure 1, marked as *Tumuli*).

WATCHING BRIEF RESULTS

Prior to the attendance of an archaeologist on the development site it was agreed between Dyfed Archaeological Trust Heritage Management and Erica Evans (the client) that the cable trench for the wind turbine could be excavated and left open to enable inspection by the watching archaeologist from DAT Field Services immediately ahead of the remaining groundworks.

The cable trench (Figure 2, T1; Photo 1) was c.100m long by 0.25 wide and was excavated by a mini digger to a depth of 0.55m. The ploughsoil comprised a homogeneous friable orange-brown silty sandy clay containing less than 5% small angular stone fragments, with an average depth of 0.35m along the length of the trench. For the first 30m or so at the southerly end of the trench, the ploughsoil was underlain by a natural drift deposit of orange-yellow sand to the bottom of the excavation. Beyond the 30m mark to the northern end of the trench the ploughsoil overlay a natural deposit of orange brown silty sandy clay containing 80% small and medim size angular stones. This deposit appeared to be fluvioglacial or glacial in origin. No archaeological features or deposits were encountered within the cable trench.

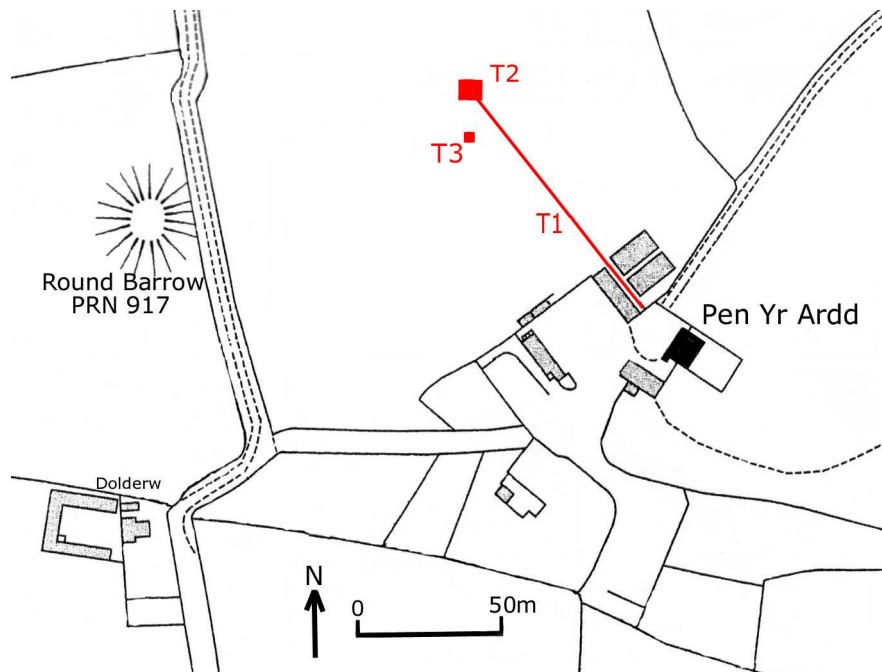


Figure 2. Plan of the site, based on Ordnance Survey 25" map. Groundwork trenches are shown in red.

The main foundation trench for the wind turbine platform (Figure 2, T2; Photo 2) measured 3m by 3m and was machine excavated, by a mini digger, to a depth of 1.2m. The 0.4m deep ploughsoil comprised a homogeneous friable orange-brown silty sandy clay containing less than 5% small angular stone fragments. Removal of the ploughsoil revealed a compact light orange-brown silty clay natural soil containing 60% small rounded and angular stones. No archaeological features or deposits were revealed in the trench.

Some 15m south of T2 a 1.2m by 1.2m foundation trench (Figure 2, T3; Photo 3) for a maintenance winch anchor point was machine excavated to a depth of 1.2m. The removed ploughsoil was identical to that excavated for T2 and this was underlain by a compact light orange-brown silty clay natural soil containing 65% small rounded and angular stones. No archaeological features or deposits were revealed in the trench.

CONCLUSION

The proposed site of the wind turbine lay close to the location of a known Bronze Age round barrow, considered to be of high archaeological importance. The proposed development site was therefore considered to have the potential to contain associated archaeological remains.

The archaeological watching brief was required, by way of a condition on the planning permission, in order to create a record of any archaeological remains that may have been exposed, damaged or destroyed by the proposed works.

Despite the potential for the presence of important archaeological deposits associated with the Bronze Age round barrow to be located within the development site, only natural deposits were revealed on the site by the groundworks.

The archaeological watching brief has demonstrated that no archaeological remains were impacted upon by the development proposals, although these only comprised three very small areas: a cable trench of c.100m length and 0.25m in width; the 3m x 3m main foundation trench for the turbine; and a smaller anchor point foundation trench of 1.2m x 1.2m size. These results do not preclude the possibility that prehistoric, or later, archaeological features lie buried elsewhere in the vicinity of the groundworks associated with the turbine at Pen yr Ardd farm.

Photographs



Photo 1: View of cable trench looking SE towards Pen yr Ardd farmhouse.



Photo 2: View of T2 during excavation, looking east. Scale measures 1m.



Photo 3: View of maintenance winch platform trench T3, looking east. Scale 1m.



Photo 4: View of Pen yr Ardd round barrow, PRN 917, looking south.

SOURCES CONSULTED

Database

The Regional Historic Environment Record, housed with Dyfed Archaeological Trust

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