

TREMOILET FARM TURBINE, PENDINE, CARMARTHENSHIRE ARCHAEOLOGICAL WATCHING BRIEF (SN 2287 0973)



Prepared by Dyfed Archaeological Trust
For: Dorrell Renewables Ltd /
Mr D Tremellen



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TREMOILET FARM WIND TURBINE, PENDINE, CARMARTHENSHIRE ARCHAEOLOGICAL WATCHING BRIEF

Gan / By

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SUMMARY

Dyfed Archaeological Trust Field Services were commissioned by Dorrell Renewables Ltd, acting behalf of their client Mr D Tremellen, to undertake an archaeological watching brief during groundworks associated with the erection of a wind turbine at Tremoilet Farm, Pendine, Carmarthenshire. The proposed development site lies within close proximity to Bignen Iron Age hillfort and other sites of prehistoric date. Due to the potential for archaeological remains within this archaeologically sensitive area being exposed, damaged or destroyed by the proposed development, a requirement for an archaeological watching brief had been placed as a condition on the planning permission.

The watching brief revealed no archaeological features or deposits of any period. This could suggest that any remains that may have been present have been destroyed by ploughing or other agricultural activities at the site. It is also possible that the area did not contain any remains. The extent of disturbance from the turbine base and cable trench was quite limited and it is possible that archaeological remains are still present in their vicinity. The trench revealed a relatively thin ploughsoil overlying natural geological deposits of shattered old red sandstone bedrock.

Whilst no features or deposits were revealed during the course of the archaeological watching brief the potential for significant archaeological remains to be present in the vicinity of the area remains.

1. INTRODUCTION

1.1 Project Commission

1.1.1 A planning application was submitted by Mr D Tremellen to Carmarthenshire County Council (Planning ref W/25754) for the erection of a wind turbine on land at Tremoilet Farm, Pendine (NGR SN 2287 0973).

1.1.2 The application area lies in close proximity to the site of Bignen Iron Age hillfort (PRN 3831; NGR SN 2300 0980). It is considered that cut features associated with the hillfort, and its immediate vicinity, may extend into the application area and survive below ground. A number of further prehistoric sites also lie within the landscape surrounding the application site suggesting relatively high activity within the area. Dyfed Archaeological Trust Planning Services, in their capacity as archaeological advisors to the planning authority, recommended that given the archaeological and historic significance of the area, an archaeological condition should be attached to planning permission for the development by the planning authority. The attached condition stated:

'No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority.'

1.1.4 To comply with the planning condition Dyfed Archaeological Trust Field Services (DAT-FS) were commissioned by Dorrell Renewables Ltd on behalf of Mr D Tremellen, to undertake the archaeological watching brief during the groundworks associated with the proposed wind turbine

1.1.5 A written scheme of investigation was prepared by DAT-FS and approved by the local planning authority prior to groundworks commencing, as required by the planning condition.

1.2 Scope of the Project

1.2.1 The written scheme of investigation (WSI) prepared by DAT-FS, stated that the project objectives were:

- Provision of a written scheme of investigation to outline the methodology by which Dyfed Archaeological Trust Field Services will address the archaeological planning condition placed on the proposed development;
- To monitor groundworks in order to identify the presence/absence of any archaeological deposits;
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks;
- To appropriately investigate and record any archaeological deposits to be affected by the groundworks; and
- To produce an archive and report of any results.

1.2.2 The overall objective was defined as: *Archaeological attendance and recording during groundworks associated with the erection of a wind turbine at Tremoilet Farm, Pendine, Carmarthenshire. The groundworks will include the excavation of the turbine base and installation of associated cabling, all of which may expose, damage or destroy any underlying archaeological remains, if present.*

1.3 Report Outline

1.3.1 This report describes the location of the site along with its archaeological background, and provides a summary and discussion of the results of the watching brief.

1.4 Abbreviations

1.4.1 Sites recorded on the Regional Historic Environment Record¹ (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Written Scheme of Investigation – WSI.

1.5 Illustrations

1.5.1 Photographic images are to be found at the back of the report. Printed map extracts are not necessarily reproduced to their original scale.

1.6 Timeline

1.6.1 The following timeline is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text (Table 1).

| Period | Approximate date | |
|--------------------------------------|-----------------------|-------------|
| Palaeolithic – | c.450,000 – 10,000 BC | Prehistoric |
| Mesolithic – | c. 10,000 – 4400 BC | |
| Neolithic – | c.4400 – 2300 BC | |
| Bronze Age – | c.2300 – 700 BC | |
| Iron Age – | c.700 BC – AD 43 | |
| Roman (Romano-British) Period – | AD 43 – c. AD 410 | Historic |
| Post-Roman / Early Medieval Period – | c. AD 410 – AD 1086 | |
| Medieval Period – | 1086 – 1536 | |
| Post-Medieval Period ² – | 1536 – 1750 | |
| Industrial Period – | 1750 – 1899 | |
| Modern – | 20th century onwards | |

Table 1: Archaeological and Historical Timeline for Wales

¹ Held and managed by Dyfed Archaeological Trust

² The post-medieval and industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust



Figure 1: Location map based on the Ordnance Survey

Reproduced from the 2003 Ordnance Survey 1:50,000 scale Landranger Map with the permission of The Controller of Her Majesty's Stationery Office,
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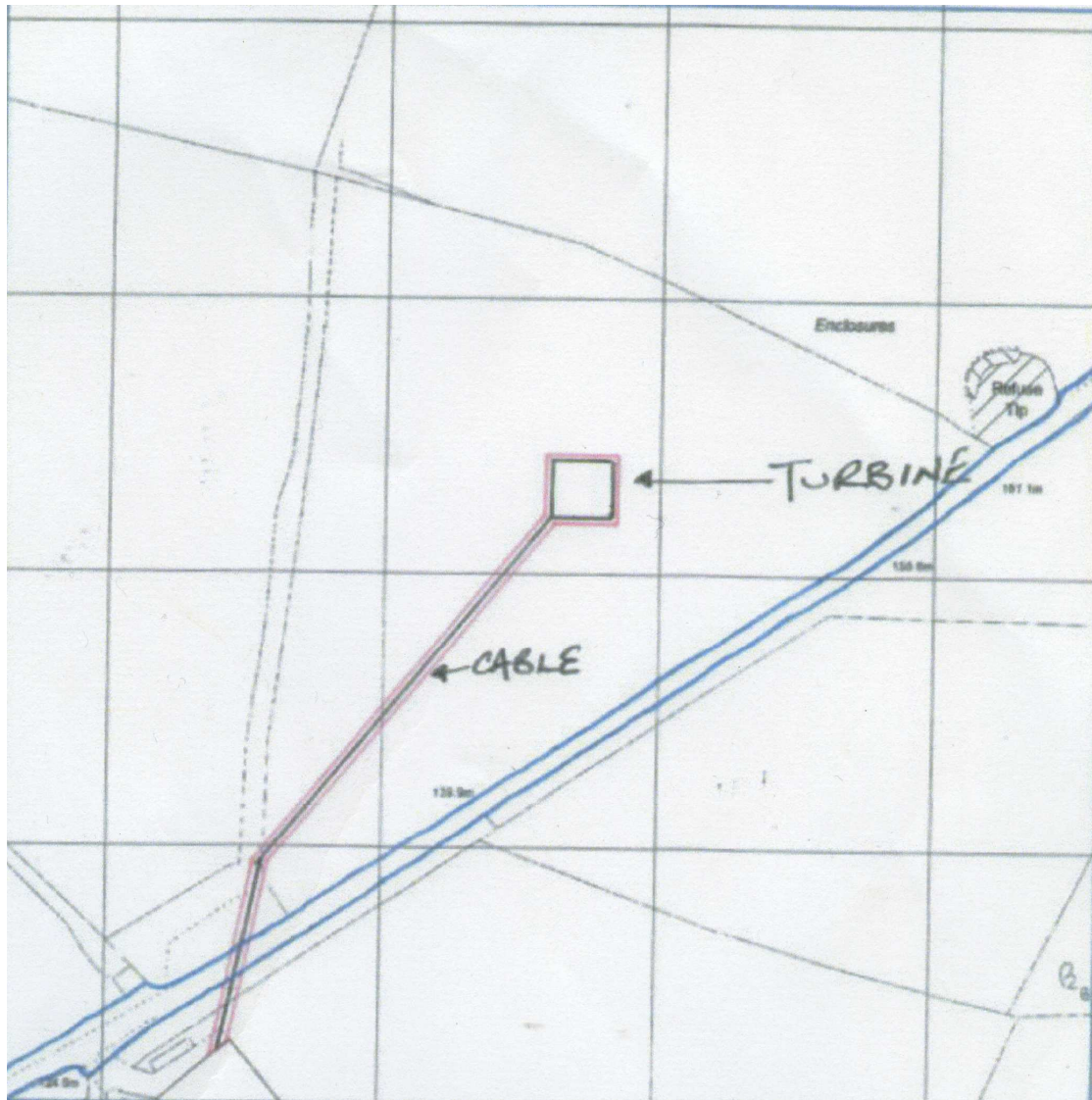


Figure 2: Plan of proposed development as supplied by Dorrell Renewables as part of the planning application.

2. THE SITE

2.1 Location

2.1.1 The application area lies on a south sloping hillside to the northeast of Tremoilet Farm near Pendine, Carmarthenshire (NGR 2287 0973).

2.1.2 The application area lies within agricultural land currently used for pasture. The field in which the area lies is bounded by mature hedgerows and is crossed by a farm trackway. To the east lies an unclassified road.

2.2 Archaeological and Historical Background

2.2.1 A search of the Regional Historic Environment Record (HER) indicates that there are 13 known sites of archaeological or historical interest within an 800m radius search area centred on the proposed wind turbine (Table 2). These predominantly date from the post medieval period, but also include a number of sites ranging in date from the Bronze Age to Medieval periods. Whilst these sites would not be directly affected by the groundworks they indicate a long period of occupation within the area.

2.2.2 The application area lies in close proximity to the site of Bignen Iron Age defended enclosure (PRN 3831) which lies 140m to the northeast. The earthworks of the enclosure consist of two sections of bank that may be fragments of a once continuous earthwork. The remains of the enclosure are situated on a south facing hillside at 170m above sea level. It has been damaged by quarrying at its northern end. In addition to the visible remains there is further potential for cut features relating to activities within the enclosure and its immediate area to survive below ground, and potentially extend to within the area affected by the groundworks.

2.2.3 Other prehistoric sites recorded on the HER within the search area include a Bronze Age burial mound known as the Cadno Tumulus (PRN 3840) located 680m to the southeast and a further probable Bronze Age cist recorded at Tremoilet School (PRN 3838) located 770m to the southwest of the wind turbine site.

2.2.4 The settlement area located around 800m to the southwest of the site (recorded as Tremoilet settlement) comprises the upper part of Pendine and has probable medieval origins (PRN 9692). Further research indicates that a manor house potentially existed here during the 14th century when it was described as a knight's fee. The first named owner was Margaret Malros who was granted '*Tremoilet*' and other lands in the area by her son Richard Howel in 1403-04 (Jones, 1997, 187). Parts of the manor house were demolished c.1820-30 and the remainder was finally demolished in 1875 to make way for Tremoilet School (Curtis, 1880, 307; Figure 3).

2.2.5 Three farmsteads of archaeological interest also lie within the study area, all date from the post medieval period and, include Barriets (PRN 21647) located 440m to the northeast, East Pool (PRN 21695) located 740m to the west and Tremoilet (PRN 21702) located 490m to the southwest of the turbine site.

2.2.6 Other post-medieval sites include Tremoilet School (PRN 15011) located 770m to the southwest within the upper part of Pendine, Tremoilet Cottage (PRN 21703) 150m to the east, an area of glebe land (PRN 21646) located 740m to the northeast, Church Cottage (PRN 21644) located 780m to the north and White Well Park, a well place-name (PRN 21697) located 790m to the west. The final site recorded on the HER within the study area is Eglwys Cwmmin School (PRN 23256) which is indicated as lying 280m to the northeast of the proposed turbine site, although this is considered to be a mis-located entry on the HER.

2.2.7 Map sources show the application area has been undeveloped land since at least the latter part of the 19th century (Figure 4).

| PRN | Site Name | Description | Grid Reference | Period |
|-------|-----------------------|---|----------------|---------------|
| 3831 | Bignen | Hillfort earthwork | SN 2300 0980 | Iron Age |
| 3838 | Tremoilet School Cist | Cist recorded in documents | SN 2263 0901 | Bronze Age |
| 3840 | Cadno Tumulus | Round barrow | SN 2352 0954 | Medieval |
| 9692 | Tremoilet Settlement | Settlement and Manor house | SN 226 090 | Post-medieval |
| 15011 | Tremoilet School | Restored school building | SN 2262 0900 | Post-medieval |
| 21644 | Church Cottage | Cottage and garden shown on parish tithe map | SN 2281 1050 | Post-medieval |
| 21646 | Glebe Land | Glebe land | SN 232 104 | Post-medieval |
| 21647 | Barriets | Possible farmstead complex shown on parish tithe map. Appears to be shown on 1974 OS Landranger Map | SN 2319 1003 | Post-medieval |
| 21695 | East Pool | Farmstead complex shown on parish tithe map. Appears on 1974 OS Landranger Map | SN 2213 0970 | Post-medieval |
| 21697 | White Well Park | Well place name | SN 221 096 | Post-medieval |
| 21702 | Tremoilet | Farmstead complex shown on parish tithe map. Appears on 1974 OS Landranger Map | SN 2246 0948 | Post-medieval |
| 21703 | Tremoilet Cottage | Cottage and garden shown on parish tithe map. Does not appear to be shown on 1974 OS Landranger Map | SN 2303 0972 | Post-medieval |
| 23256 | Eglwys Cwmimin School | School - presumably mis located on the HER | SN 23 10 | Post-medieval |

Table 2: Archaeological and historical sites recorded on Regional HER within an 800m radius of the wind turbine site

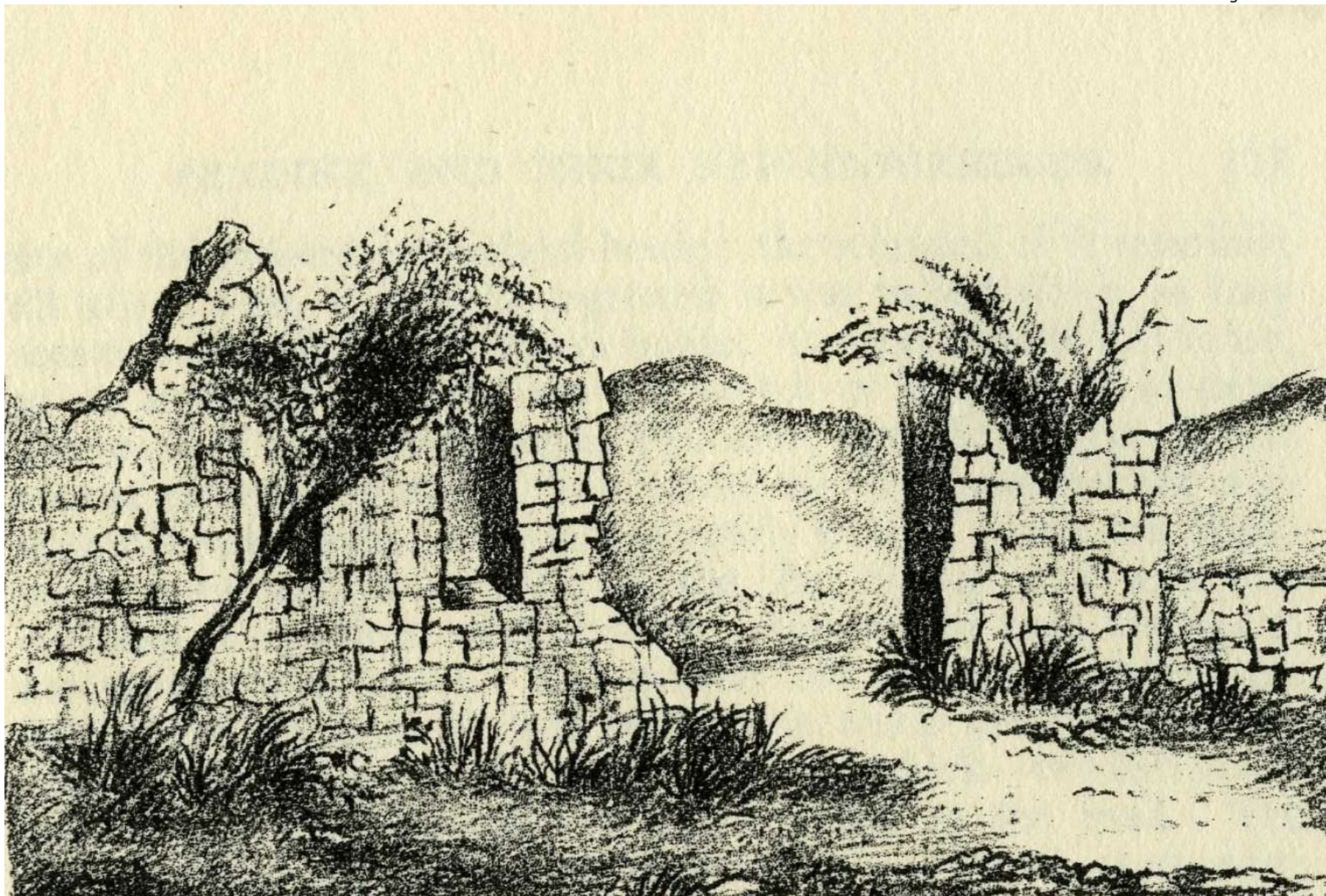


Figure 3: Remains of Tremoilet manor house prior to demolition in 1875 (Curtis 1880)

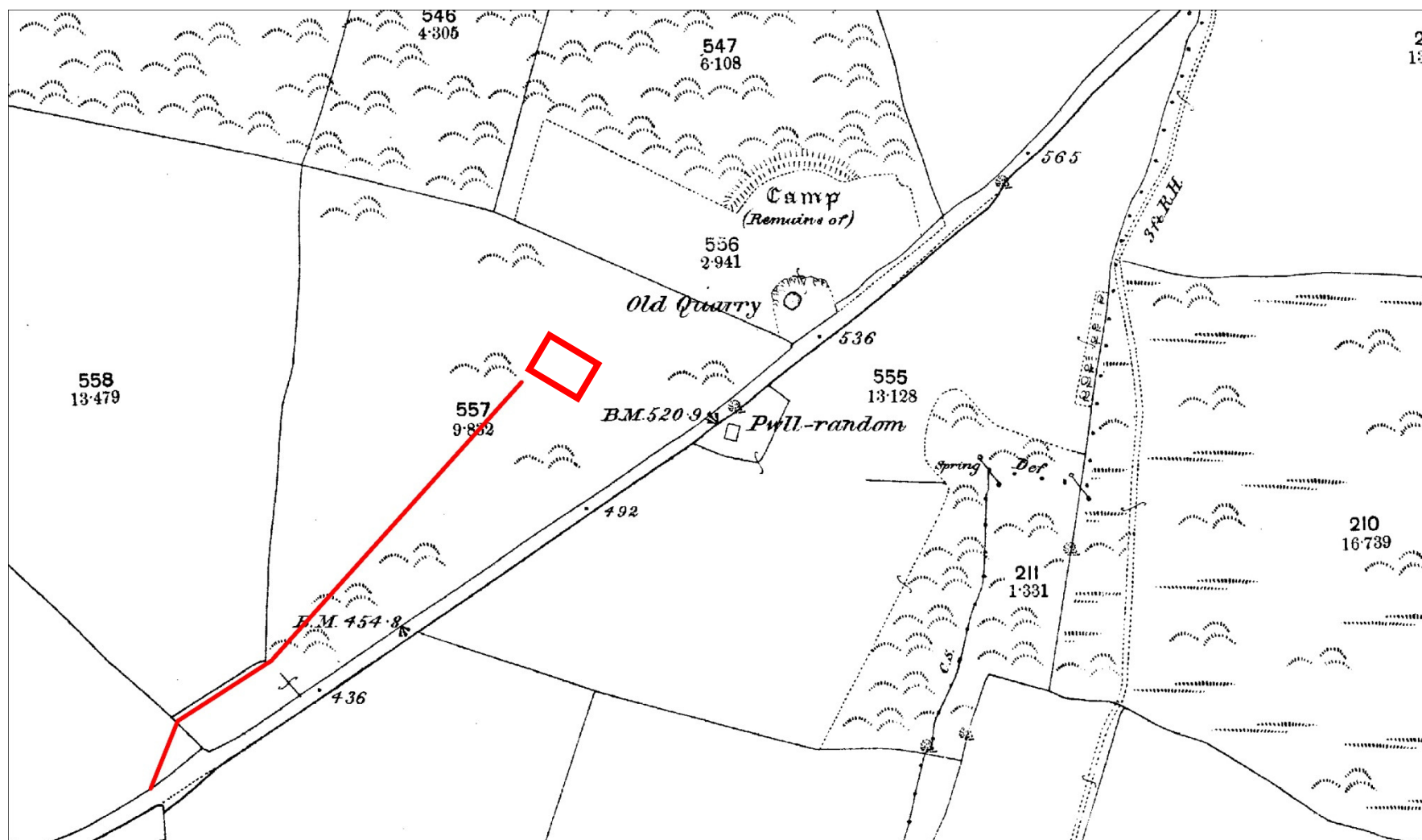


Figure 4: Extract of 1889 1:2500 OS map with the location of wind turbine and connecting cables shown in red

3 WATCHING BRIEF METHODOLOGY

The detailed methodology for the watching brief was laid out within the WSI. The relevant methodology can be summarised as follows.

3.1 Fieldwork

3.1.1 A 'watching brief' was undertaken during ground level reduction works at the site which had the potential to expose, damage or destroy underlying archaeological remains.

3.1.2 All archaeological deposits revealed during the groundworks were examined and recorded to an appropriate level.

3.1.3 Recording of all archaeological features or deposits conformed to best current professional practice and was carried out in accordance with the Recording Manual³ used by Dyfed Archaeological Trust Field Services.

3.2 Post-Fieldwork Reporting and Archiving

3.2.1 All data recovered during the fieldwork will be collated into a site archive structured in accordance with the specifications in *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2007), and the procedures recommended by the National Monuments Record, Aberystwyth.

3.2.2 The results of the fieldwork have been assessed in local, regional and wider contexts.

3.2.3 This report is fully representative of the results of the fieldwork.

3.3 Timetabling of Fieldwork

3.3.1 The watching brief methodology involved monitoring of the turbine base and associated cable trench excavations, on Monday 16th July and Friday 20th July 2012.

³ Dyfed Archaeological Trust Field Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available on-site for inspection if required.

4. RESULTS AND DISCUSSION

4.1 A site visit was undertaken on Monday 16th July to monitor the excavation of the turbine base. Excavations were undertaken using a 360° tracked excavator with the resulting spoil stockpiled along the sides of the excavated areas.

4.2 The turbine base measured 6.6m x 6.6m and was excavated to a depth of 1.2m. The area was excavated through a stratigraphic sequence of a 0.28m depth of a dark red-brown clay silt ploughsoil overlying a 0.08m mid orange-brown sandy clay subsoil. This lay directly upon shattered old red sandstone bedrock. A depth of 0.84m was excavated through the bedrock (Photos 1 & 2).

4.3 A second site visit was undertaken on Friday 20th July 2012 to monitor the excavation of the associated cable trench.

4.4 The cable trench was excavated from the southern side of the turbine base and ran for a distance of 300m to the southwest. The trench was 0.4m wide with an average depth of 0.74m. The cable trench excavations revealed the same stratigraphic sequence of ploughsoil overlying natural subsoil and shattered old red sandstone bedrock that was revealed during the turbine base excavations (Photos 3 & 4).

4.5 No archaeological finds, features or deposits of any period were revealed during the groundworks associated with the erection of the wind turbine.

5. CONCLUSIONS

5.1 The archaeological watching brief undertaken during the course groundworks associated with the erection of the new wind turbine identified no archaeological features and deposits.

5.2 This lack of archaeological remains could indicate that if any remains had existed they had been removed through previous episodes of ploughing or other agricultural practices. It may also be that no such remains were ever present within the area of the turbine base and cable trench. As the areas affected by the construction works were small, it is still very possible that archaeological remains in the near vicinity, but were missed by the excavations.

5.3 The narrow width of the cable trench is such that it would be difficult to identify archaeological remains within its sides. The area of the turbine was larger and would have been perfectly suited for identifying remains, if they had been present.

5.4 The excavations revealed a depth of ploughsoil and thin subsoil overlying shattered old red sandstone bedrock.

5.5 Given the limited nature of the groundworks the potential for unrecorded archaeological features and deposits associated with the nearby Bignen Iron Age hillfort, or other prehistoric or later activity within the area, remains.

6 BIBLIOGRAPHY

6.1 Cartographic

Ordnance Survey 1876 1:2500 Glamorganshire Sheet XXIII.7

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6.2 Published

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PHOTOGRAPHS



Photo 1: South facing representative section of turbine base



Photo 2: Post excavation view of turbine base.



Photo 3: East facing representative section of cable trench



Photo 4: South facing view of excavated cable trench

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

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