

**PROPOSED WIND TURBINE ON LAND AT  
MAENHIR, LOGIN, WHITLAND,  
CARMARTHENSHIRE,  
ARCHAEOLOGICAL WATCHING BRIEF  
(SN 15236 25613)**



Prepared by DAT Archaeological Services  
For: Constantine Wind Energy Ltd



**DYFED ARCHAEOLOGICAL TRUST**

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WHITLAND, CARMARTHENSHIRE  
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Gan / By

Menna Bell

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**TABLE OF CONTENTS**

<b>SUMMARY</b>	1
<b>1. INTRODUCTION</b>	2
1.1 Project Proposals and Commission	2
1.2 Scope of the Project	2
1.3 Report Outline	3
1.4 Abbreviations	3
1.5 Illustrations	3
1.6 Timeline	3
<b>2. THE SITE</b>	5
2.1 Site location and topography	5
<b>3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND</b>	6
3.1 The Historic Landscape	6
3.2 Cartographic evidence	11
<b>4. WATCHING BRIEF METHODOLOGY</b>	13
4.1 Fieldwork	13
4.2 Timetabling of Fieldwork	13
<b>5. RESULTS AND DISCUSSION</b>	14
<b>6. CONCLUSIONS</b>	17
<b>7. ACKNOWLEDGMENTS</b>	17
<b>8. SOURCES</b>	18
<b>APPENDIX 1:</b>	19

## FIGURES

<b>Figure 1:</b>	Location map showing the location the turbine site, located in the red circle	4
<b>Figure 2:</b>	The location of the turbine site and its access track to the south-west of Maenhir farm are shown in pink	5
<b>Figure 3:</b>	Location map based on the 1:2500 Ordnance Survey showing the proximity of the turbine site (outlined in red) to the Glandy Cross Historic Landscape Character Area (HLC 265)	9
<b>Figure 4:</b>	Known archaeological sites recorded on the HER (red stars) and also Scheduled Ancient Monuments (orange) within the 1km of the turbine site and access track (out lined in red)	10
<b>Figure 5:</b>	The 1842 Cilmaenllwyd tithe map showing the turbine field and the site of the turbine circled in red	12
<b>Figure 6:</b>	The 1907 2 <sup>nd</sup> edition 1:2500" Ordnance Survey map showing the turbine field and the site of the turbine outlined in red	12

## TABLES

<b>Table 1:</b>	Archaeological and historical timeline for Wales	3
<b>Table 2:</b>	Known archaeological and historic sites recorded within 1km of the proposed wind turbine at Maenhir recorded on the Dyfed Historic Environment Record	11

## PHOTOGRAPHS

<b>Photo 1:</b>	The section of earth bank field boundary removed at the southern end of the access track. (DAT Photo 109361-3738)	14
<b>Photo 2:</b>	General overview of the stripped area facing south, from the top of the turbine base pad. (DAT Photo 109361-3732)	14
<b>Photo 3:</b>	The stripped area of the turbine base showing the sterile clay-silt subsoil. (DAT Photo 109361-3725)	15
<b>Photo 4:</b>	The stripped area of the turbine pad revealing the subsoil and traces of parallel linears orientated roughly northwest-southeast. (DAT Photo 109361-3731)	15
<b>Photo 5:</b>	The east facing section of the earth bank field boundary. (DAT Photo 109361 -3735)	16

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**ARCHAEOLOGICAL WATCHING BRIEF**

**SUMMARY**

*DAT Archaeological Services were commissioned by Constantine Wind Energy Ltd to undertake an archaeological watching brief during groundworks associated with the construction of a single turbine on land at Maenhir Farm near Login in Carmarthenshire (SN 15236 25613). The scheme of works included the construction of a turbine base and a 45m long access trackway running northwards from an unnamed road leading north-west from Login towards Glandy Cross.*

*A Historic Environment Assessment was prepared for the site by Armour Heritage in February 2015. This desk-based assessment identified no overriding cultural heritage constraints, direct or indirect, which should prohibit development. This notwithstanding, the assessment did establish that though there was high potential for post-medieval and later agricultural activity to be represented within the development area, there was also some potential for buried archaeological remains associated with prehistoric activity to survive within the same area.*

*Therefore the archaeological advisors to the planning authority, Dyfed Archaeological Trust Planning Services, advised that an archaeological watching brief be carried out during groundworks.*

*The watching brief monitored the topsoil stripping for the access track and base pad for the proposed single turbine. The inclement weather conditions and the water logged condition of the topsoil made it difficult to maintain a clean strip but traces of narrow, parallel linear features orientated northwest-southeast across the stripped area were recorded. These features most likely represent post-medieval ploughing activity.*

*Despite the proximity to known archaeological sites within the area no other evidence of significant archaeological deposits or features was revealed during the watching brief.*

## **1. INTRODUCTION**

### **1.1 Project Proposals and Commission**

1.1.1 DAT Archaeological Services were commissioned by Constantine Energy Ltd to undertake an archaeological watching brief during groundworks associated with the construction of a single turbine on land at Maenhir Farm near Login in Carmarthenshire (SN 15236 25613) (Figure 1). The scheme of works included the construction of a turbine base and a 45m long access trackway running northwards from an unnamed road leading north-west from Login towards Glandy Cross.

1.1.2 The planning permission granted for the development included a condition relating to archaeological works to be carried out during the development. The condition states:

*"The developer shall ensure that a professionally qualified archaeologist is present during the undertaking of any ground works, so that an archaeological watching brief can be carried out. The archaeological watching brief will be undertaken to the standards laid down by the Chartered Institute for Archaeologists. The Planning Authority will be informed, in writing at least two weeks prior to the commencement of the development, of the name of the said archaeologist."*

1.1.3 The requirement for the watching brief had been placed on the development as a condition on planning permission (application ref: W/29487) following advice from Dyfed Archaeological Trust Planning Services in their capacity as archaeological advisor's to the local planning authority.

### **1.2 Scope of the Project**

1.2.1 A written scheme of investigation (WSI) for a watching brief was prepared by DAT Archaeological Services prior to the commencement of the works which was approved by Dyfed Archaeological Trust Planning Services in their capacity as advisors to the local authority, prior to the commencement of the works (Appendix 1). The project objectives were:

- Provision of a written scheme of investigation to outline the methodology by which DAT Archaeological Services will undertake the watching brief.
- 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.
- To produce an archive and report of any results.

1.2.2 The overall work was summarised as:

*"Archaeological attendance during ground works associated with the construction of a wind turbine at Maenhir, Login, Carmarthenshire which are likely to expose, damage or destroy archaeological remains. This would include the turbine base, crane pad, access road and any service cables. Appropriate investigation and recording of any such remains will be undertaken if revealed. A report and archive of the results of the works will be prepared"*.

### 1.3 Report Outline

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

### 1.4 Abbreviations

- 1.4.1 Sites recorded on the regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Sites recorded on the National Monument Record (NMR) held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) are identified by their National Primary Record Number (NPRN). Scheduled Ancient Monument (SAM). Altitude is expressed to Ordnance Datum (OD). References to cartographic and documentary evidence and published sources will be given in brackets throughout the text, with full details listed in the sources section at the rear of the report.

### 1.5 Illustrations

- 1.5.1 Photographic images are to be found within the report. Printed map extracts are not necessarily reproduced to their original scale.

### 1.6 Timeline

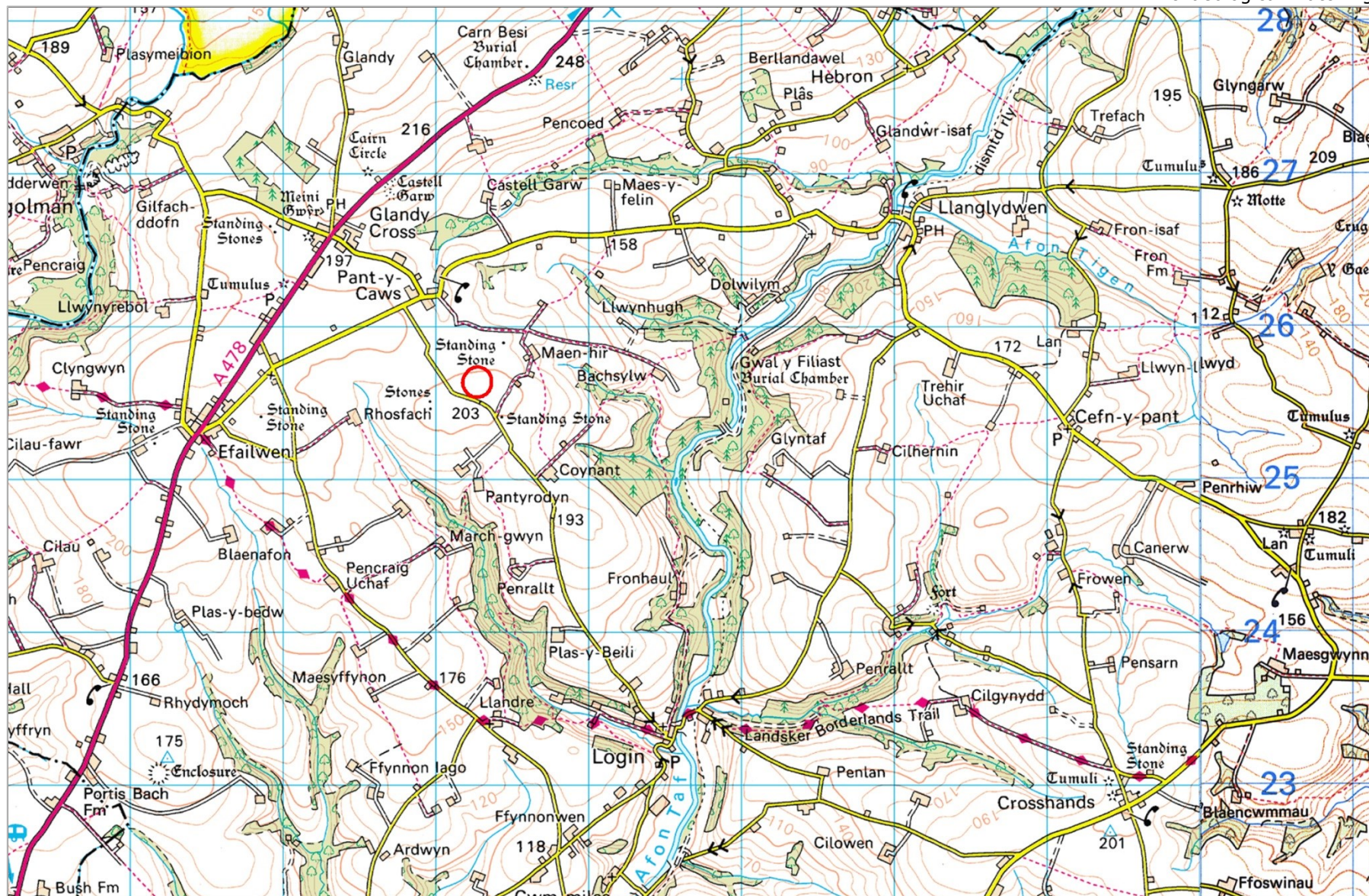
- 1.6.1 The following timeline is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text.

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 <sup>1</sup> –	1536 – 1750	
Industrial Period –	1750 – 1899	
modern –	20 <sup>th</sup> century onwards	

**Table 1:** Archaeological and historical timeline for Wales

<sup>1</sup> 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:** Map showing the location of the development area (within red circle).

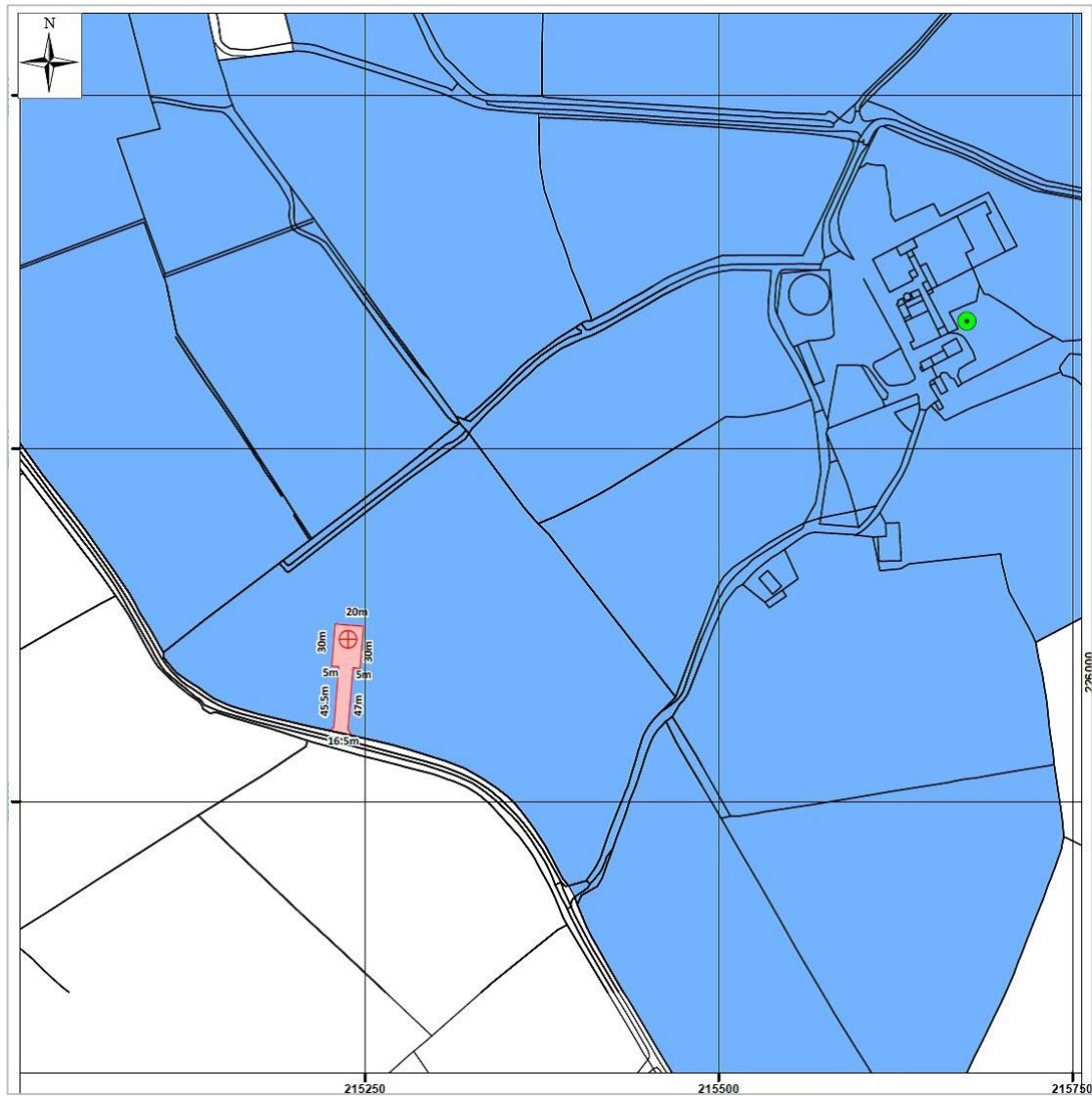
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## 2 THE SITE

### 2.1 Site location and topography

- 2.1.1 The development area is situated on land belonging to Maenhir Farm, some 2.5km north-west of the village of Login approximately 7.7km north-west of Whitland, Carmarthenshire. The proposed site for the turbine is located in a pasture field south-west of the farm and adjacent to the minor road which leads from Login to Glandy Cross (Figure. 2).



© Renewables Unlimited LLP

**Figure 2:** Plan showing the proposed location of the turbine and its access track (outlined in red); situated to the south-west of Maenhir farm.

- 2.1.2 The development area is located on the broad summit of a hill, at approximately 200m above sea level. The underlying geology is Ordovician Mudstones, Siltstones and Sandstones.

### **3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

#### **3.1 The Historic Landscape**

- 3.1.1 The development area is located approximately 60m south-east of the border of the Preseli Historic Landscape Character Area (HLC) recorded on the Register of Landscapes of Outstanding Historic Interest in Wales (Cadw 1998) (Figure 3), and just falls outside of the boundary of the Glandy Cross Historic Landscape Character Area (HLC 265).
- 3.1.2 The following extract, taken from the Carmarthenshire Historic Landscape Characterisation report (Murphy, 2000) provides a comprehensive description of this HLC area:

#### **GLANDY CROSS**

GRID REFERENCE: SN147267  
AREA IN HECTARES: 575.3

#### ***Historic Background***

*Glandy Cross is a large character area in modern Carmarthenshire on the southeast edge of Mynydd Preseli. It lay within the medieval Cwmwd Amgoed, a commote of Cantref Gwarthaf which had been re-organised as the Anglo-Norman Lordship of St Clears by 1130. However, the area continued to be held under Welsh systems of tenure throughout and into the post-medieval period, and by the later middle ages was divided into three blocks of dispersed holdings called Trayn Morgan, Trayn Clinton, and Trayn March. Glandy Cross character area contains portions of the former two holdings. Much of the Glandy Cross character area belonged to Llwyn-yr-ebol, a grange of Whitland Abbey which was granted to the Cistercians by Maelgwn ap Rhys, son of Rhys ap Gruffudd, between 1197 and 1231. It is unlikely that the area was enclosed during the medieval or early post-medieval periods. Sixteenth-century leases of Whitland's Carmarthenshire estates make it clear that tenants were practising common pasturage and the survival of arian y mynydd or 'mountain silver', a payment for grazing rights, with a diversity of rents, in both cash, kind and service, suggests that they correspond with earlier villein obligations, when most of the tenants were also bound to do boon work for the monastery. The post-medieval landscape history of this area is complex. A late 17th-century description by Edward Lhuyd in the Gibson edition of Camden's Britannia of the Meini Gwyr stone circle at Glandy Cross indicates that the landscape was still open moorland. It would appear that the area was largely enclosed between the late 17th-century and the early 19th-century when farms and other buildings were established. However, enclosure was not completed in the north-eastern part of the character area until after the tithe surveys of the 1840s; a 1751 estate map of Castell Garw shows a field pattern similar to that of today to the east of the A478 road, but suggests open land to the west. On tithe maps, fields close to Glandy Cross cross roads are shown much as today, but are not named as they are elsewhere in the parish, which is usually an indication that they were recent creations. In contrast, a study of the field system between Efailwen and Glandy Cross indicates that it pre-dates the long, straight section of the A478 road. The road is marked on the Rees map as a medieval route but achieved its present line between 1791 and 1809 when it was turnpiked under the Whitland Turnpike Trust. The present road line is shown on Ordnance Survey sketch maps of 1809, on which no settlements*

are shown between Efailwen and Glandy Cross, but by the tithe surveys of the 1840s Maen-Gwyn, Llain, Capel Nebo and several cottages had been constructed. Efailwen is celebrated in the annals of Welsh 'direct action' as it was here that the first assault on a turnpike toll gate occurred on the night of May 18 1839. Goodwin's Row cottages alongside the A478 were built in 1866 to house quarry workers. Following the construction of Goodwin's Row, very little new building occurred until the last quarter of the 20th century when piecemeal, linear housing and other development took place on the roads which meet at Glandy Cross and on the roads that meet at Efailwen. Development is continuing at these two locations.

### **Description and essential historic landscape components**

Glandy Cross historic landscape character area lies across a low rounded ridge, the summit crest of which climbs from a height of approximately 200m at its southern end at Efailwen to over 250m at its northern end at Iet-y-Bwlch. Although the flanks of the ridge descend gently into the valley of the Eastern Cleddau to the west and the valley of the Afon Taf to the east, this area occupies the ridge top only, down to a low point of about 190m. The entire ridge is enclosed into small- and medium-sized regular fields. The smaller enclosures are concentrated towards the south with the larger enclosures confined to higher ground to the north. Boundaries consist of earth banks which have an increasing stony content towards the north. Hedges on these banks are in good condition alongside roads and tracks and in the southern portion of the area, but become increasingly more neglected and derelict towards higher ground. At the highest points hedges are no longer present. Wire fences on the boundary banks provide stock-proof boundaries. Apart from small trees that grow out of neglected hedges and a couple of small 20th century coniferous plantations, this landscape is not characterised by woodland. Agricultural land-use is predominately improved pasture with a little arable, though there are pockets of unimproved grazing and rushy ground. The old established settlement pattern is of dispersed farms, houses and cottages with a concentration towards the southern end of the area and on the ridge's flanks. Dwellings are almost entirely 19th century, in the vernacular style, and are generally stone-built with slate roofs, one, one-and-a-half or two storeys, and three-bays, cement rendered and/or bare stone. Examples of stone and earth-built (clom) late 18th- or 19th-century single storey cottages are also present, as are late 19th-century two storey stone-built and rendered 'villa' houses in a more polite tradition. The chapel at Nebo is a substantial stone-built structure dating to 1860, and has a graveyard associated with it. The more recent - late 20th-century - settlement pattern is mostly linear development and loose clustering at Efailwen and Glandy Cross. There is a modern school at Efailwen, and a public house and garage/shop at Glandy Cross, and at both locations are numerous late 20th-century houses and bungalows in a variety of styles and materials. Agricultural buildings are small, reflecting the size of the holdings. Most common styles are: a single small, stone-built 19th century range; small early 20th-century brick built ranges, corrugated-iron barns and other structures; and several small late 20th-century steel-, concrete- and asbestos-built structures. There are no listed buildings within the character area. The main transport element of the landscape is the A478 which runs along the crest of the ridge and along which modern development is concentrated. Other roads consist of straight and winding lanes and tracks enclosed by boundary banks.

The Glandy Cross landscape is recognised as of considerable importance for its complex of Neolithic and Bronze Age ritual and funerary monuments

*which include Meini Gwyr stone circle, standing stones, round barrows, ring cairns and other upstanding sites, many of which are Scheduled Ancient Monuments. Also within this area is a Neolithic axe factory, and at least two iron age hillforts.*

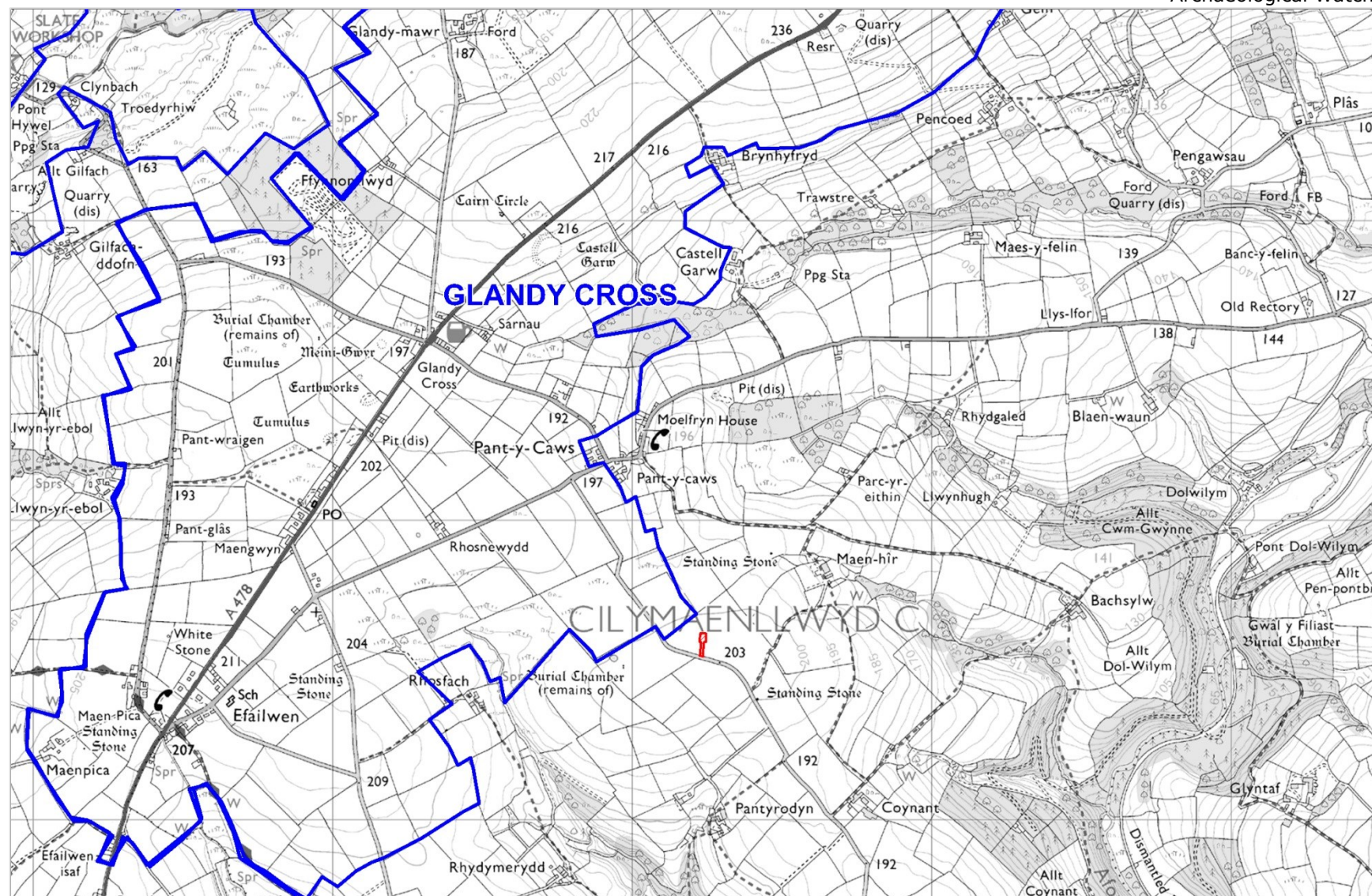
*Although Glandy Cross is a distinctive historic landscape character area, its boundaries are not easy to define as it is surrounded by enclosed farmland which superficially has similar characteristics. Therefore all the borders of this area should be considered as zones of change, rather than as hard-edge boundaries.*

- 3.1.3 The Dyfed Historic Environment Record (HER) was searched for known archaeological sites within 1km of the proposed turbine location sites recorded by their Primary Record Number (PRN), (Table 2, Figure 4). The recorded sites included 2 scheduled ancient monuments (CM185; PRN1158 and CM186; PRN1077). A third scheduled monument, Bronze Age round barrow (CM311; PRN 9770), lies some 980m to the northwest. Further prehistoric sites include 2 possible Neolithic or Bronze Age henge sites (PRNs 9769 & 13036); a further Bronze Age round barrow site (PRN1154); a Neolithic chambered tomb (PRN1137); and finds recovered of Bronze Age date (PRN1128). The other sites recorded are of post-medieval date and include a school site (PRN 19642), a clay pit (PRN23181) and a cottage (PRN23215).

### 3.2 Previous Archaeological Work

- 3.2.1 A Historic Environment Desk Based Assessment was prepared for the site by Armour Heritage in February 2015. This concluded that the assessment had *'identified no overriding cultural heritage constraints, direct or indirect, which should prohibit development. This notwithstanding, the assessment has established that there is a limited archaeological interest within the Site, defined as the potential for the presence of buried archaeological remains, possibly representing prehistoric activity, but most likely representative of post-medieval and later agricultural activity. Whilst a lower potential for features and finds relating to the prehistoric and later archaeological periods has been assessed, the potential is nonetheless recognised. Any sites or features relating to these archaeological periods are likely to be buried at some depth and thus relatively well-preserved.'*
- 3.2.2 It was therefore considered that there was potential for archaeological remains associated with the Neolithic or Bronze Age periods to be present within the development area. This prehistoric activity could survive in the form of earth cut features such as ditches, postholes or pits, or in the form of artefacts such as worked flint or pottery.

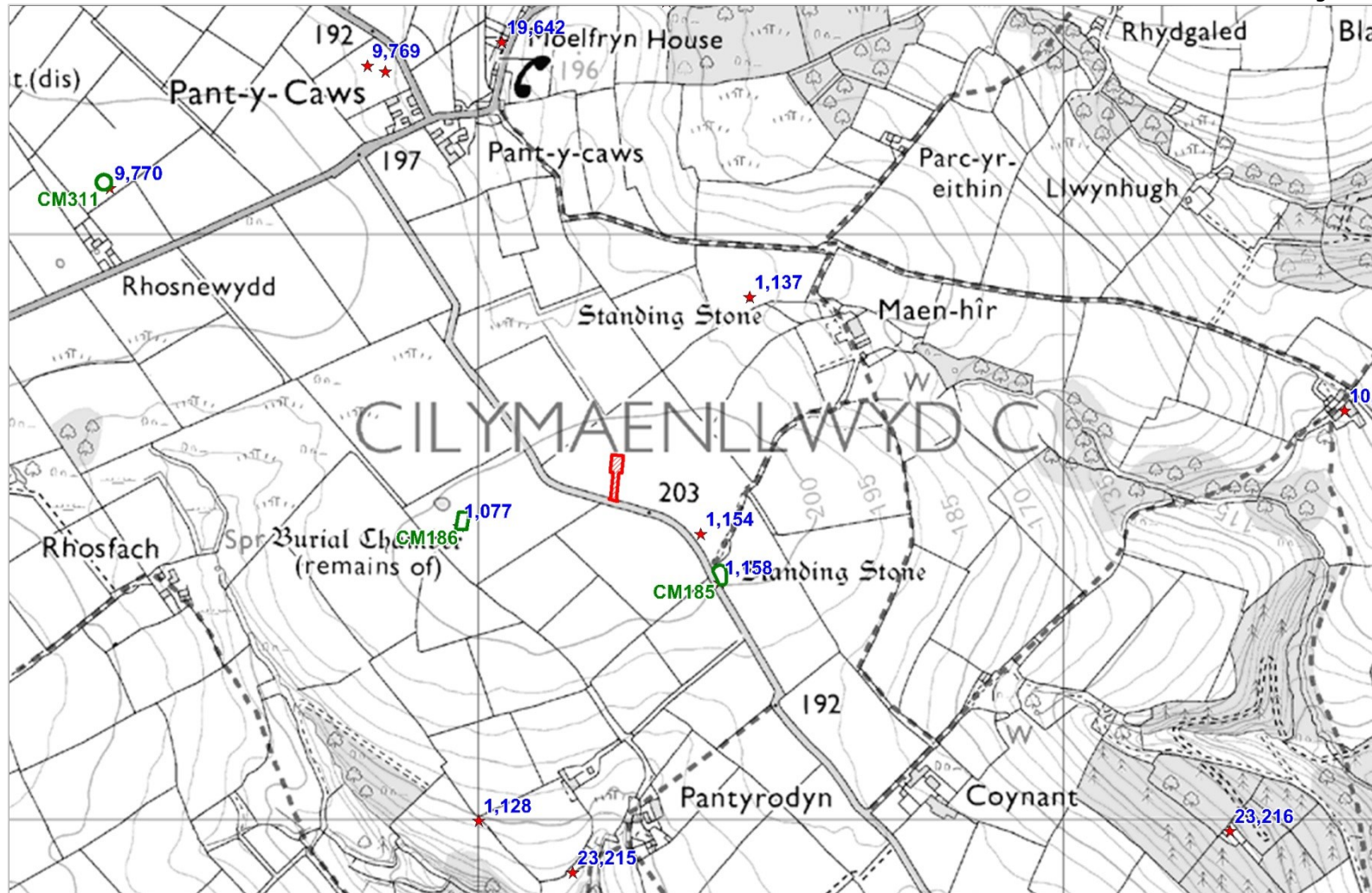




**Figure 3:** Location map based on the 1:2500 Ordnance Survey showing the proximity of the development area (outlined in red) to the Glandy Cross Historic Landscape Character Area (HLC 265).

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**Figure 4:** Undesignated archaeological sites recorded on the HER (red stars) and Scheduled Ancient Monuments (outlined in green) within the 1km of the development area (out lined in red).

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PRN	Site Name and Summary	Period	Grid reference	Distance from site of turbine (km)
1077	<b>Pant-Yr-Odin Meini Hirion; Parc Y Maen; Parc-Yr-Odin</b> Standing Stone Pair, one stone fallen, in flat pasture field. Scheduled ancient monument CM186	Neolithic, Bronze Age	SN 14967 25503	0.26
1128	<b>Mynydd Yetwen Findspot</b>	Bronze Age	SN 15 25	0.59
1137	<b>Maen Hir Chambered Tomb</b>	Neolithic	SN 15463 25895	0.35
1154	<b>Rhos Coynant Round Barrow</b> No archaeological traces of a monument exists in the area indicated by the grid reference, nor in the immediately surrounding area. Site destroyed.	Bronze Age	SN 1538 2549	0.15
1158	<b>Coynant Maenhir Standing Stone</b> Scheduled ancient monument CM185	Bronze Age	SN 15412 25407	0.22
9769	<b>Pantymenyn Settlement, Henge</b>	Neolithic; Bronze Age	SN 1481 2629	0.78
9770	<b>Pantymenyn Round Barrow</b> Scheduled ancient monument CM311	Bronze Age	SN 14369 26081	0.97
13036	<b>Pantymenyn Settlement, Henge</b>	Neolithic; Bronze Age	SN 1484 2628	0.76
19642	<b>School</b>	Post-Medieval	SN 1504 2633	0.73
23181	<b>Moelfryn Clay Pit</b>	Post-Medieval	SN 1532 2640	0.78
23215	<b>Clyn-Bach Cottage</b> Cottage shown on 1907 6" OS map. Present condition unknown.	Post-Medieval	SN 15161 24911	0.64

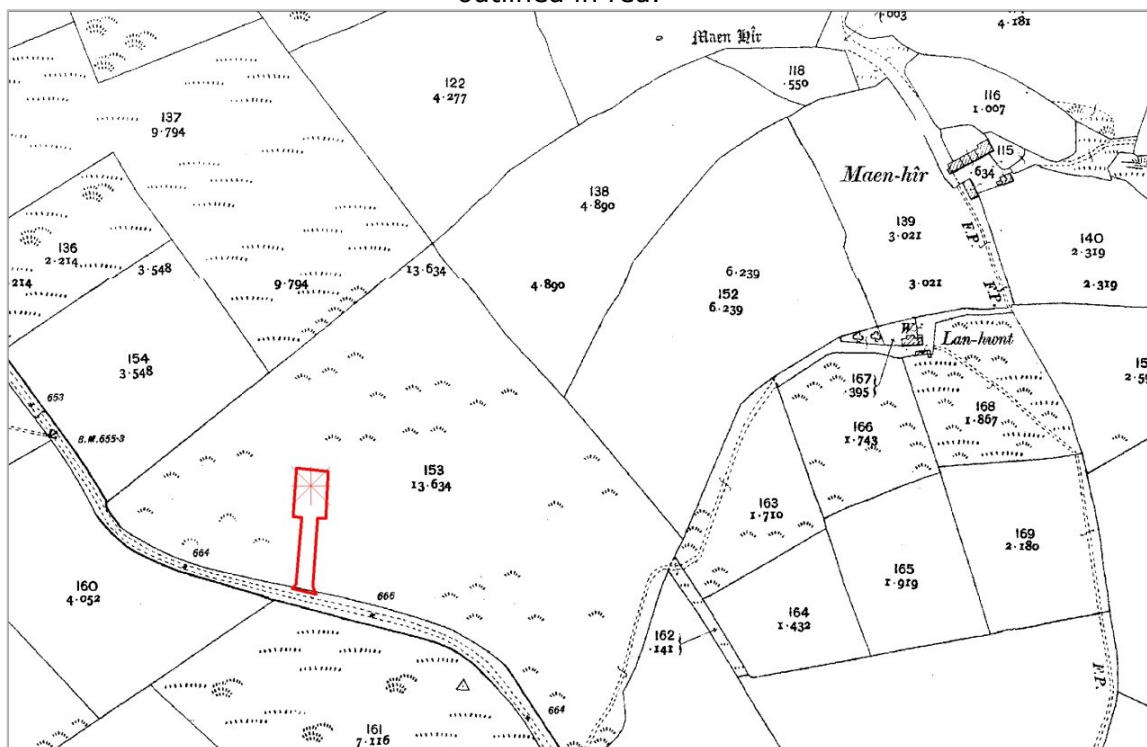
**Table 2:** Known archaeological and historic sites recorded within 1km of the proposed wind turbine at Maenhir recorded on the Dyfed Historic Environment Record (Figure 4).

### 3.3 Cartographic evidence

- 3.3.1 The historic mapping indicates that the field boundaries have not altered greatly over the years. The 1842 Cilmaenllwyd tithe map (Figure 5), the 1<sup>st</sup> edition Ordnance Survey map of 1889 and 2<sup>nd</sup> edition Ordnance Survey map of 1907 all show the field within which the development area lies as unchanged from what it is at present; a pasture field devoid of any structures or features (Figure 6).



**Figure 5** Extract of the 1842 Cilmaenllwyd tithe map. The development area is outlined in red.



**Figure 6** Extract of the 1907 2<sup>nd</sup> edition 1:2500" Ordnance Survey map. The development area is outlined in red.



## **4. WATCHING BRIEF METHODOLOGY**

### **4.1 Fieldwork**

- 4.1.1 This watching brief was undertaken in accordance with the Chartered Institute of Archaeologists' (CIfA) Standard and Guidance for an Archaeological Watching Brief (2014). The Written scheme of investigation, detailing the archaeological works proposed, was approved by Dyfed Archaeological Trust Planning Services in their capacity as advisors to the local authority.
- 4.1.2 Recording of all archaeological features or deposits conformed to best current professional practice and was carried out in accordance with the Recording Manual<sup>2</sup> used by DAT Archaeological Services.
- 4.1.3 A written, drawn and photographic record was maintained throughout this watching brief, a summary of which is presented in Appendix 1. All contexts encountered during this watching brief were recorded and assigned a unique context number. These numbers are enclosed in brackets in the following text.

### **4.2 Timetabling of Fieldwork**

- 4.2.1 The watching brief was conducted and completed on the 29<sup>th</sup> of March 2016 with the timing of the visit being determined by the contractor's programme of work.

### **4.3 Post-Fieldwork Reporting and Archiving**

- 4.3.1 All data recovered during the fieldwork will be collated into a site archive structured in accordance with specifications in *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2011), and the procedures recommended by the National Monuments Record, Aberystwyth.
- 4.3.2 The results of the fieldwork have been assessed in local, regional and wider contexts. The report includes a desk-based research element to ensure that the site is placed within its wider archaeological context.
- 4.3.3 A report fully representative of the results of the fieldwork has been prepared.

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<sup>2</sup> DAT Archaeological Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology.

## 5. RESULTS AND DISCUSSION

- 5.1. The watching brief monitored the mechanical topsoil stripping of the access track and base pad for the proposed wind turbine. Weather conditions were wet and windy and the topsoil was waterlogged with pools of standing water in places. A short section of the earth bank field boundary measuring approximately 5m long was removed to allow entrance from the road onto the access track (Photo 1). The access track measured approximately 45m long and 3.5m wide and was orientated roughly north/south. The area stripped for the base of the turbine was located at the northern end of the access track and measured approximately 12m wide and 15m long (Photo 2).



**Photo 1:** The section of earth bank field boundary removed at the southern end of the access track. (DAT Photo 109361-3738)

- 5.2 During the topsoil strip up to 350mm of dark brown, rich loamy topsoil was removed to reveal a mottled yellowish-brown, clay-silt subsoil with frequent shattered mudstone and quartz pebbles (Photo 2). The topsoil was devoid of any archaeological finds. Evident in the yellowish-brown clay silt were a series of parallel linear features visible as narrow lines of darker soil. They were orientated northwest/southeast and are most likely post-medieval plough marks (see Photos 2 and Photo 3-3731).



**Photo 2:** General overview of the stripped area facing south, taken from north of the turbine base. (DAT Photo 109361-3732)



**Photo 3:** The stripped area of the turbine base showing the sterile clay-silt subsoil. (DAT Photo 109361-3725)





**Photo 4:** The stripped area of the turbine base revealing the subsoil and traces of parallel linear features running northwest-southeast. (DAT Photo 109361-3731)

- 5.3 No other archaeological features or deposits were identified during the topsoil stripping. However, the section through the earth bank field boundary presented an opportunity to examine its fabric. It was found to comprise dark brown silty loam and quartz rich gravel (Photo 5).



**Photo 5:** The east facing section of the earth bank field boundary. (DAT Photo 109361 -3735)



## **6. CONCLUSIONS**

- 6.1 The watching brief monitored the topsoil stripping prior to the construction of an access track and base pad for a proposed single wind turbine. The inclement weather conditions and the water logged condition of the topsoil made it difficult to maintain a clean strip but it was possible to identify traces within the light coloured subsoil of narrow, parallel lines of darker soil orientated northwest-southeast that are most likely representative of post-medieval ploughing activity. Despite the proximity to known archaeological sites within the area no evidence of any other significant archaeological features or deposits was revealed during the watching brief
- 6.2 No further evidence of other archaeological structures was identified during the course of the watching brief, but this does not negate the potential for archaeological remains to exist in the wider area.

## **7. ACKNOWLEDGMENTS**

- 7.1. Fieldwork was undertaken by Menna Bell of DAT Archaeological Services with grateful assistance and co-operation from the onsite contractors.

## **8. SOURCES**

Cadw 1998. Register of Landscapes of Outstanding Historic Interest in Wales.

Murphy, K,. 2000. *Carmarthenshire Landscape Characterisation*.  
Dyfed Archaeological Trust.

### **Database**

Dyfed Archaeological Trust Historic Environment Record, housed with Dyfed Archaeological Trust in The Corner House, 6 Carmarthen Street, Llandeilo, Carmarthenshire, SA19 6AE

### **Websites**

British Geological Survey mapping portal. Available at:  
**<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>** [Accessed 07/Apr/2016]

The Tithe Maps of Wales; Cynefin Project. Available at:  
**<http://cynefin.archiveswales.org.uk/>**

Dyfed Historic Landscape Categorisation. Available at:  
**<http://www.dyfedarchaeology.org.uk/>** [Accessed 07Apr/2016]

### **Cartographic**

Ordnance Survey 1<sup>st</sup> edition 1889 1:2500" map of Carmarthenshire

Ordnance Survey 2nd edition 1907 1:2500" map of Carmarthenshire

## APPENDIX 1:

**PROPOSED WIND TURBINE ON LAND AT MAENHIR, LOGIN, WHITLAND,  
CARMARTHENSHIRE, SA34 0XE  
PLANNING APPLICATION NO: W/29487  
ARCHAEOLOGICAL WATCHING BRIEF  
WRITTEN SCHEME OF INVESTIGATION**

### INTRODUCTION

This written scheme of investigation (WSI) has been prepared by DAT Archaeological Services in response to a request from Constantine Energy Ltd to provide an archaeological scheme of works for a watching brief at the proposed site of a new wind turbine at Maenhir, Login, Carmarthenshire (SN 15236 25613; Figures 1 & 2).

The proposed works include the construction of the turbine base and associated works, including a roughly 45 m long trackway accessing the turbine site running north from an unnamed road leading north from Login towards Glandy Cross. The planning permission granted for the development includes a condition relating to archaeological works to be carried out during the development. The condition states:

***The developer shall ensure that a professionally qualified archaeologist is present during the undertaking of any ground works, so that an archaeological watching brief can be carried out. The archaeological watching brief will be undertaken to the standards laid down by the Chartered Institute for Archaeologists. The Planning Authority will be informed, in writing at least two weeks prior to the commencement of the development, of the name of the said archaeologist.***

The site lies within an area with a number of nationally significant prehistoric sites, including two standing stones designated as scheduled ancient monuments: CM185 260m to the southeast and CM186 lying 280m to the west-southwest. A Historic Environment Desk Based Assessment was prepared for the site by Armour Heritage in February 2015. This concluded that the assessment had 'identified no overriding cultural heritage constraints, direct or indirect, which should prohibit development.' 'This notwithstanding, the assessment has established that there is a limited archaeological interest within the Site, defined as the potential for the presence of buried archaeological remains, possibly representing prehistoric activity, but most likely representative of post-medieval and later agricultural activity. Whilst a lower potential for features and finds relating to the prehistoric and later archaeological periods has been assessed, the potential is nonetheless recognised. Any sites or features relating to these archaeological periods are likely to be buried at some depth and thus relatively well-preserved.'

The Dyfed Historic Environment Record (HER) was searched for known archaeological sites within 1km of the proposed turbine location (Table 1, sites recorded by their Primary Record Number (PRN); Figure 3). The sites recorded include the two scheduled monuments mentioned above (CM185; PRN1158 and CM186; PRN1077). A third SAM lies some 980m to the northwest, a Bronze Age round barrow (CM311; PRN 9770). Further prehistoric sites include two possible Neolithic or Bronze Age henge sites (PRNs 9769 & 13036); a further round barrow site (PRN1154); a Neolithic chambered tomb (PRN1137); and finds recovered of Bronze Age date (PRN1128). The other sites recorded are of post-medieval date and include a school site (PRN 19642), a clay pit (PRN23181) and a cottage (23215).

There is considered to be archaeological potential for remains associated with the Neolithic of Bronze Age period to be present within the site area. These could be in the form of earth cut features such as ditches, postholes or pits, or in the form of artefacts such as worked flint or less likely pottery.

PRN	Site Name and Summary	Period	Grid reference
<b>1077</b>	<b>Pant-Yr-Odin Meini Hirion; Parc Y Maen; Parc-Yr-Odin</b> Standing Stone Pair, one stone fallen, in flat pasture field. Scheduled ancient monument CM186	Neolithic, Bronze Age	SN 14967 25503
<b>1128</b>	<b>Mynydd Yetwen Findspot</b>	Bronze Age	SN 15 25
<b>1137</b>	<b>Maen Hir Chambered Tomb</b>	Neolithic	SN 15463 25895
<b>1154</b>	<b>Rhos Coynant Round Barrow</b> No archaeological traces of a monument exists in the area indicated by the grid reference, nor in the immediately surrounding area. Site destroyed.	Bronze Age	SN 1538 2549
<b>1158</b>	<b>Coynant Maenhir Standing Stone</b> Scheduled ancient monument CM185	Bronze Age	SN 15412 25407
<b>9769</b>	<b>Pantymenyn Settlement, Henge</b>	Neolithic; Bronze Age	SN 1481 2629
<b>9770</b>	<b>Pantymenyn Round Barrow</b> Scheduled ancient monument CM311	Bronze Age	SN 14369 26081
<b>13036</b>	<b>Pantymenyn Settlement, Henge</b>	Neolithic; Bronze Age	SN 1484 2628
<b>19642</b>	<b>School</b>	Post-Medieval	SN 1504 2633
<b>23181</b>	<b>Moelfryn Clay Pit</b>	Post-Medieval	SN 1532 2640
<b>23215</b>	<b>Clyn-Bach Cottage</b> Cottage show on 1907 6" OS map. Present condition unknown.	Post-Medieval	SN 15161 24911

**Table 1:** Known archaeological and historic sites recorded within 1km of the proposed wind turbine at Maenhir recorded on the Dyfed Historic Environment Record (Figure 3)

This written scheme of investigation outlines the methodology through which DAT Archaeological Services would undertake an archaeological watching brief during ground works at the site, which have the potential to expose, damage or destroy archaeological remains. This document has been prepared for the client and is specifically prepared for DAT Archaeological Services to undertake the required archaeological works. The WSI cannot be used by any third party.

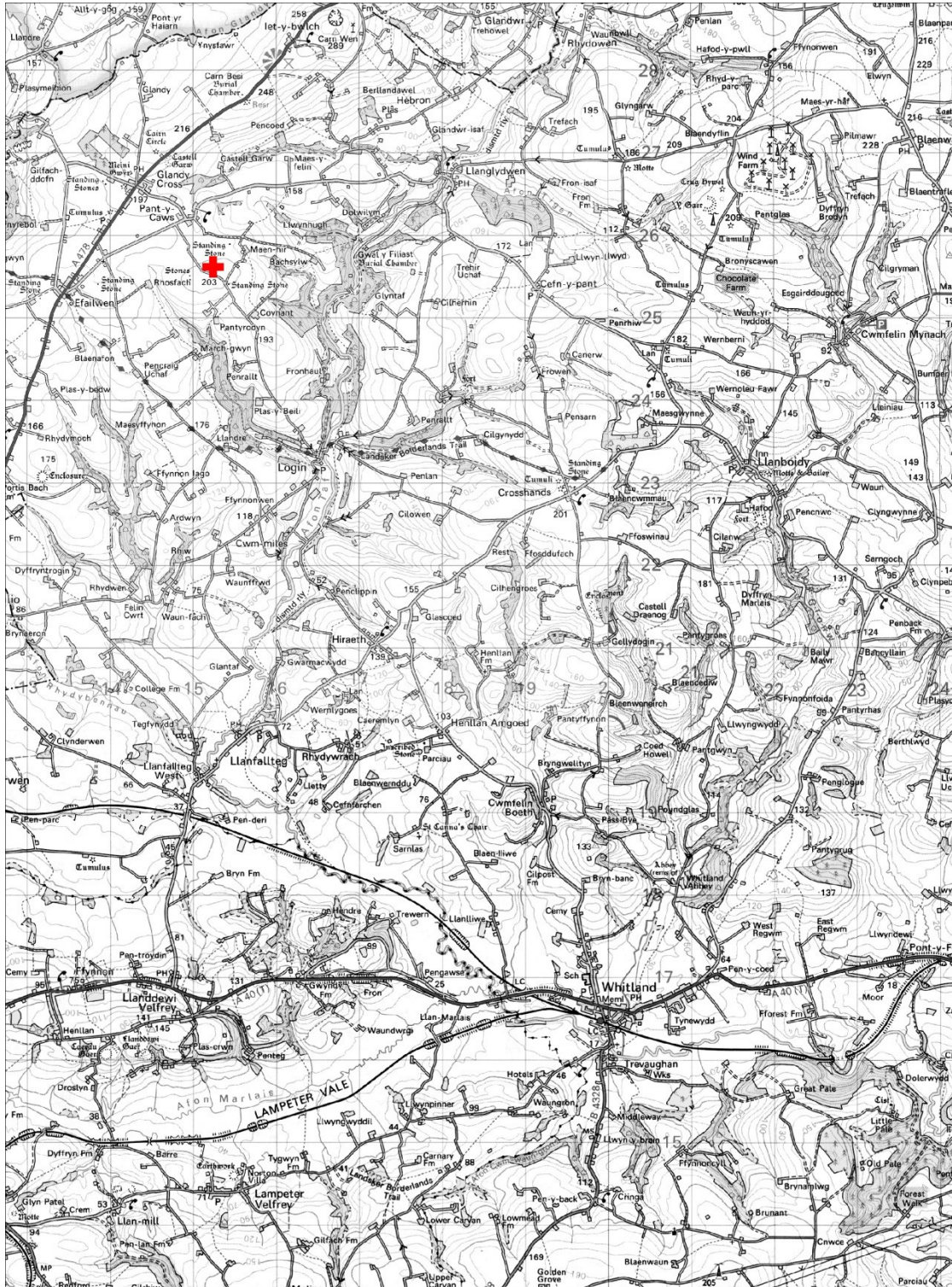
The written scheme of investigation is in accordance with the *Standard and Guidance for Archaeological Watching Briefs* (Chartered Institute for Archaeologists (CIfA), 2014).

DAT Archaeological Services has considerable experience of this type of project and always operates to best professional practice. DAT Archaeological Services is the contractual arm of Dyfed Archaeological Trust that has its own Health and



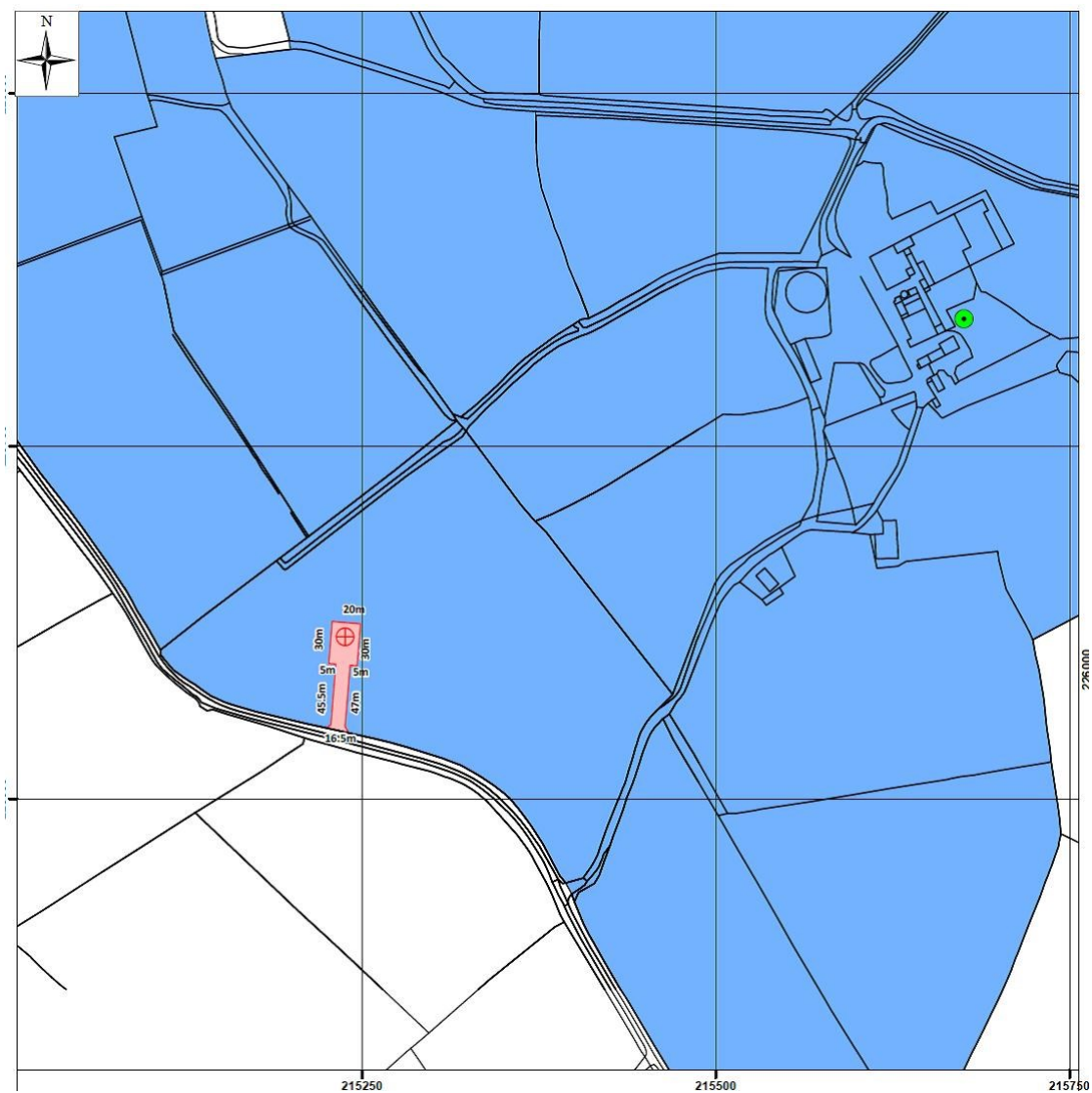
Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.

**Dyfed Archaeological Trust is a CIfA Registered Organisation and all permanent staff are CSCS registered.**



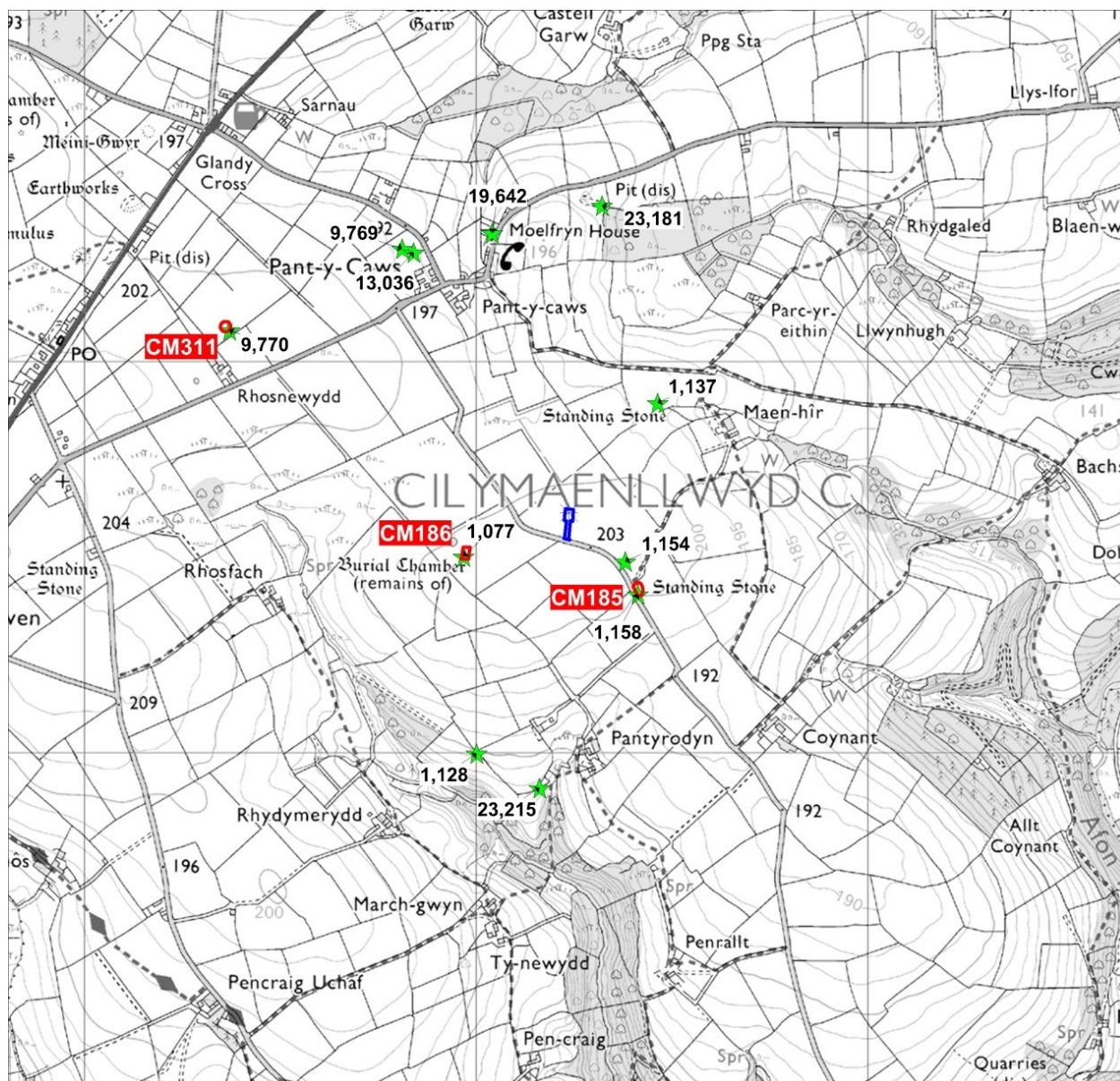
**Figure 1:** Location plan of the proposed wind turbine at Maenhir, Login near Whitland, Carmarthenshire

Reproduced from the Ordnance Survey 1:50,000 scale Map with the permission of The Controller of Her Majesty's Stationery Office, © Crown Copyright Dyfed Archaeological Trust, The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No 100020930



**Figure 2:** Proposed development area outlined in red (plan supplied by Renewables Unlimited LLP).





**Figure 3:** Known archaeological sites recorded on the Dyfed HER (green stars) and also Scheduled Ancient Monuments (red) within 1km of the proposed wind turbine and access track (blue)

## **1. Watching Brief**

- 1.1 The definition of archaeological watching brief, taken from the Chartered Institute for Archaeologists Standards and Guidance: for Archaeological Watching Briefs (CIfA S&G: AWB 2014) 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.

- 1.2 The purpose of a watching brief, as laid down in the CIfA S&G AWB 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.*

- 1.3 This document provides a scheme of works for: **Archaeological attendance during ground works associated with the construction of a wind turbine at Maenhir, Login, Carmarthenshire which are likely to expose, damage or destroy archaeological remains. This would include the turbine base, crane pad, access road and any service cables. Appropriate investigation and recording of any such remains will be undertaken if revealed. A report and archive of the results of the works will be prepared.**

## **2. Project objectives**

- 2.1 Provision of a written scheme of investigation to outline the methodology by which DAT Archaeological Services will undertake the archaeological watching brief.
- 2.2 To monitor ground works in order to identify the presence/absence of any archaeological deposits.
- 2.3 To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works.
- 2.4 To appropriately investigate and record any archaeological deposits to be affected by the ground works.
- 2.5 To produce an archive and report of any results.

## **3. Fieldwork**

- 3.1 The watching brief would entail an archaeologist being present during all ground works where there is a potential for archaeological remains to be exposed, damaged or destroyed. This will be carried out during groundworks associated with the construction of a proposed wind turbine at Maenhir, Login, Carmarthenshire, to include any works which could

expose, damage or destroy underlying archaeological remains. This could include topsoil stripping for the turbine base, crane pad and access roads as well as excavations for service trenches.

- 3.2 It is essential coordination between the site contractor and archaeologist is established at the outset to avoid any potential disturbance to archaeology without an archaeologist being present, or unnecessary visits to the site when works are being carried out that do not require the presence of an archaeologist.
- 3.3 Adequate time must be made available to the visiting archaeologist to ensure that appropriate recording can be undertaken of any archaeological features or deposits exposed during ground works.
- 3.4 Recording of all archaeological features or deposits will conform to best current professional practice and be carried out in accordance with the Recording Manual<sup>3</sup> used by DAT Archaeological Services. Significant archaeological features or deposits will be drawn at a suitable scale (no less than 1:20) and photographed in an appropriate format.
- 3.5 All archaeologically significant finds will be retained and, where possible, related to the contexts from which they derived. Finds will be temporarily stored by DAT Archaeological Services in stable conditions. All finds, except those deemed to be Treasure, will remain the property of the landowner.
- 3.6 Under the 1996 Treasure Act, "treasure" can be summarised as:
  - Any object other than a coin containing at least 10% gold or silver and at least 300 years old;
  - Any prehistoric assemblage of base metal;
  - Coins found together which contain 10% gold or silver (but no single coins) and groups of at least 10 coins of other metals, provided they are at least 300 years old;
  - Any object found associated with treasure except unworked natural objects; and
  - Any object which would have been Treasure Trove before the 1996 Act but not covered above.
- 3.7 In the event that unforeseen archaeological discoveries are made during the development, or that archaeological remains of high significance are exposed, DAT Archaeological Services shall have the power to halt any ground works and shall inform the site agent/project manager and the curatorial officer, and prepare a written statement with plan detailing the archaeological evidence. Following assessment of the archaeological remains by the curatorial officer, DAT Archaeological Services shall, if required, implement on behalf of the Client a contingency scheme for salvage excavation of affected archaeological features. In these instances it would be necessary to employ extra resources to record such features to an appropriate standard.

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<sup>3</sup> DAT Archaeological Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available on-site for inspection if required.



- 3.8 In the very unlikely event that human remains are encountered, the District Coroner's Office and the Police will be notified immediately. All human remains will, where possible, be left *in situ*. If preservation *in situ* is not possible all statutory permissions will be obtained in writing before removal begins.

#### **4. Post-fieldwork reporting and archiving**

- 4.1 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 2011), and the procedures recommended by the National Monuments Record, Aberystwyth.
- 4.2 The results of the fieldwork will be assessed in local, regional and wider contexts. The report will include a desk-based research element to ensure that the site is placed within its wider archaeological context. A report that is fully representative of the results of the fieldwork will be prepared and digital and hard copies will be sent to the client for dissemination to all relevant parties.
- 4.3 A summary of the project results, excluding any confidential information, may be prepared for wider dissemination (e.g. Archaeology in Wales and special interest and period-specific journals).
- 4.4 The project archive, including all artefacts and ecofacts (excepting those which may be deemed to be Treasure) will be deposited with an appropriate body following agreement with the landowner.
- 4.5 A copy of the final report will be deposited with the regional HER within six months of the completion of the project.

#### **5. Staff**

- 5.1 This project will be managed by James Meek, Head of DAT Archaeological Services.
- 5.2 Archaeological attendance during the watching brief will be undertaken by staff drawn from the team of archaeologists employed by DAT Archaeological Services.

#### **6. Monitoring**

- 6.1 The fieldwork may need to be monitored by the archaeological advisors to the planning authority and the Head of DAT Archaeological Services, who should be provided access to the site at any time during the watching brief works.

#### **7. Health & Safety**

- 7.1 All DAT Archaeological Services staff are CSCS<sup>4</sup> registered.
- 7.2 DAT Archaeological Services will carry out a health and safety risk assessment to ensure that all potential risks are minimised.

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<sup>4</sup> Construction Skills Certification Scheme (Health and Safety Tested)

- 7.3 All relevant health and safety regulations must be followed.
- 7.4 All site inductions, H&S procedures and site rules of the site contractor will be made known to DAT Archaeological Services staff prior to them commencing work on-site.
- 7.5 Safety helmets, safety boots and high visibility vests are to be used by all site personnel as necessary. The site contractors will make all archaeological staff aware of any other PPE<sup>5</sup> that may be required and provide them. Archaeological staff must not enter any area where there is a considered to be a health and safety risk that has not or is not being appropriately mitigated against.
- 7.6 DAT Archaeological Services staff must ensure that their presence on site is communicated to all relevant site staff, especially machine operators.

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<sup>5</sup> *Personal Protection Equipment*

**PROPOSED WIND TURBINE ON LAND AT MAENHIR, LOGIN,  
CARMARTHENSHIRE  
(SN 15236 25613)**

**ARCHAEOLOGICAL WATCHING BRIEF**

**DYFED ARCHAEOLOGICAL TRUST**

RHIF YR ADRODDIAD / REPORT NO. 2016/30  
RHIF Y DIGWYLLIAD / EVENT RECORD NO.109361

Ebrill 2016  
April 2016

Paratowyd yr adroddiad hwn gan / This report has been prepared by:

**Menna Bell**

Swydd / Position: **Archaeologist DAT Archaeological Services**



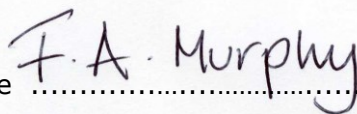
Llofnod / Signature ..... Date:15/04/2016

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith  
This report has been checked and approved by

**Fran Murphy**

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.  
on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position: **Project Manager DAT Archaeological Services**



Llofnod / Signature ..... Date: 27/04/2016

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

*As part of our desire to provide a quality service we would welcome any  
comments you may have on the content or presentation of this report*

