

PENCAU LANDS, LLWYNGWYN FARM, FELINGWM, CARMARTHENSHIRE: HISTORIC ENVIRONMENT DESK-BASED ASSESSMENT



Prepared by DAT Archaeological Services
For: Rees Richards



DYFED ARCHAEOLOGICAL TRUST

REPORT NO. 2020-57
PROJECT NO. 125598

November 2020

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By

Philip Poucher MCIfA



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Ymddiriedolaeth Archaeolegol Dyfed Cyf
Corner House, 6 Stryd Caerfyrddin, Llandeilo, Sir
Gaerfyrddin SA19 6AE
Ffon: Ymholiadau Cyffredinol 01558 823121
Adran Rheoli Treftadaeth 01558 823131
Eboost: info@dyfedarchaeology.org.uk

Dyfed Archaeological Trust Limited
Corner House, 6 Carmarthen Street, Llandeilo,
Carmarthenshire SA19 6AE
Tel: General Enquiries 01558 823121
Heritage Management Section 01558 823131
Email: info@dyfedarchaeology.org.uk

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HISTORIC ENVIRONMENT DESK BASED ASSESSMENT

Client	Rees Richards
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Event Record No 125598

Report No	2020-57
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Project Code FS20-039

Report Prepared By	Philip Poucher
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Site-visit Undertaken By Philip Poucher

Illustrated By	Philip Poucher
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Report Approved By Fran Murphy

Rev Number	Description	Undertaken	Approved	Date
1	Draft V1	PP	FM	02/12/2020

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HISTORIC ENVIRONMENT DESK-BASED ASSESSMENT**

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CARMARTHENSIRE**

HISTORIC ENVIRONMENT DESK-BASED ASSESSMENT

EXECUTIVE SUMMARY

DAT Archaeological Services were commissioned to undertake a Historic Environment Desk Based Assessment of a proposed wind turbine development at Pencau Lands, near Llwyngwyn Farm, Felingwm, Carmarthenshire. A potential Slight to Large direct impact upon three heritage assets of low archaeological importance, and an area of archaeological potential, was highlighted, along with a Slight indirect impact upon two Scheduled Monuments. Archaeological mitigation, in the form of an archaeological watching brief during groundworks, is recommended.

CRYNODEB GWEITHREDOL

Comisiynwyd Gwasanaethau Archeolegol YAD i gynnal Asesiad Ddesg yr Amgylchedd Hanesyddol o ddatblygiad tyrbin gwynt arfaethedig yn Nhiroedd Pencau, ger Fferm Llwyngwyn, Felingwm, Sir Gaerfyrddin. Amlygwyd effaith uniongyrchol bosibl Bach i Fawr ar dri ased treftadaeth o bwysigrwydd archeolegol isel, ac ardal o botensial archeolegol, ynghyd ag effaith anuniongyrchol Fach ar ddwy Heneb Gofrestredig. Argymhellir lliniaru archeolegol, ar ffurf briff gwyllo archeolegol yn ystod gwaith daear.

INTRODUCTION

1.1 Project Proposals and Commission

- 1.1.1 DAT Archaeological Services were commissioned by Asbri Planning Ltd, on behalf of their clients, to prepare an Historic Environment Desk-Based Assessment on the proposed installation of a single 100kw wind turbine up to 47m to the tip, along with subsidiary infrastructure, at Pencau Lands, near Llwyngwyn Farm, Felingwm, Carmarthenshire (SN 49634 26463).
- 1.1.2 The site lies in an upland landscape with numerous historic assets recorded within a 2-3km radius of the location of this installation, including Crug-Y-Burgail Bronze Age barrows (PRN 665) to the northeast and the scheduled Parc Y Gaer Iron Age promontory fort (PRN 1,747, CM382) to the southwest. As a result Dyfed Archaeological Trust – Development Management (DAT-DM), in their capacity as archaeological advisors to the local planning authority (Carmarthenshire County Council), have requested that a desk-based assessment be carried to determine the potential impact of the development upon the historic environment. This work is being undertaken as part of the planning application for the development, planning application number E/32703.
- 1.1.3 This Historic Environment Desk-Based Assessment provides an indication of the archaeological potential of the development area and highlights possible issues in relation to the impact of the development on the historic environment.
- 1.1.4 The assessment has been a primarily desk-based study of the site area, identifying any known archaeological or historical sites within the site and its environs, identifying potential setting impacts on designated archaeological assets in the vicinity, identifying any historic landscape areas that may be affected by the proposals and assessing the potential for hitherto unknown archaeological remains to be present within the development area. Due to current restrictions related to the Covid-19 outbreak some archive sources have not been consulted, although sufficient information has been gained to provide a comprehensive assessment of the site.

1.2 Scope of the Project and Methodology

- 1.2.1 The scope of the assessment follows the Standard And Guidance For Historic Environment Desk-Based Assessment as laid down by the Chartered Institute for Archaeologists (CIfA 2014). The standard is stated by CIfA as:

Desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of Conduct and other relevant regulations of CIfA. In a development context desk-based assessment will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so), and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.

- 1.2.2 A desk-based assessment is defined by CIfA as:

.....a programme of study of the historic environment within a specified area or site on land, the inter-tidal zone or underwater that addresses

agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely historic assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of historic assets and, in England, the nature, extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate.

- 1.2.3 The desk-based study of the area identifies known archaeological sites within the site and its environs, and assesses the potential for hitherto unknown remains to be present within the proposed development area. This will help inform future decision making, design solutions and potential mitigations strategies, including the potential for further archaeological works.
- 1.2.4 The scope of the report also includes an assessment of the impact on the settings of surrounding designated heritage assets, including scheduled monuments, listed buildings, historic landscape character areas, registered parks and gardens and conservation areas. This utilises the best practice guidance in *Setting of Historic Assets in Wales* (2017). This guidance sets out a four stage approach. Stage 1 being the identification of the historic assets that may be affected by development. Stage 2 defines and analyses the setting of the assets. Stage 3 evaluates the potential impact of the development upon the setting. Stage 4 considers mitigation options.
- 1.2.5 The report presents relevant information from a number of sources including:
- Dyfed Archaeological Trust Historic Environment Record data;
 - Map regression exercise using earlier cartographic sources;
 - Available and relevant reports on any archaeological work undertaken in the area that affects the site or its setting;
 - Archive records held at the County Archive, the National Library of Wales (NLW) and the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMS);
 - Aerial photography, satellite imagery and Lidar data;
 - Relevant records held by the developer;
 - Identification of any Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Registered Historic Landscapes, Historic Landscape Character Areas or Conservation Areas within or in the vicinity of the site area (Cadw, DAT, NRW);
- 1.2.6 After initial consultation with DAT-DM, in their capacity as archaeological advisors to the local planning authority, a search area of 2km from the boundary of the development area has been used to examine designated and non-designated heritage assets. Given the area and height of the development a search area of 5km has been used to examine potential visual impacts upon designated assets in the surrounding landscape, following the criteria suggested within the *Setting of Historic Assets in Wales* (Cadw 2017).
- 1.2.7 For the purposes of planning policy in Wales, the historic environment is defined as:
- All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of*

past human activity, whether visible, buried or submerged, and deliberately planted or managed (Welsh Government 2017).

A heritage asset is:

An identifiable component of the historic environment. It may consist or be a combination of an archaeological site, a historic building or area, historic park and garden or a parcel of historic landscape. Nationally important historic assets will normally be designated (ibid).

- 1.2.8 This report contains information about the historic environment and heritage assets in the vicinity of the proposed development site, which will assist the archaeological advisors to the planning authority in their decision about what, if any, archaeological mitigation will be required. Further guidance on how the planning system considers the historic environment and heritage assets during development plan preparation and decision making on planning applications can be found in *Planning Policy Wales: Technical Advice Note 24: The Historic Environment* (Welsh Government 2017; available online).

1.3 Abbreviations

- 1.3.1 All 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 Monument (SM). Listed Buildings (LB). Altitude is expressed to a height above Ordnance Datum (aOD). 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.

1.4 Illustrations

- 1.4.1 Printed map extracts are not necessarily reproduced to their original scale. North is towards the top of the page unless otherwise indicated.

1.5 Timeline

- 1.5.1 The following timeline gives date ranges for the various archaeological periods that may be mentioned within this report.

Table 1: Archaeological and Historical Timeline for Wales

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 ¹ –	1536 – 1750	
Industrial Period –	1750 – 1899	
Modern –	20th century onwards	

¹ 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

2. NATIONAL POLICIES AND GUIDANCE

2.1 The Historic Environment (Wales) Act

2.1.1 The Ancient Monuments and Archaeological Areas Act 1979 was previously the primary legislation for protecting archaeological remains and scheduled monuments. This has more recently been amended by The Historic Environment (Wales) Act 2016 which has three main aims as defined by Cadw:

- to give more effective protection to listed buildings and scheduled monuments;
- to improve the sustainable management of the historic environment; and
- to introduce greater transparency and accountability into decisions taken on the historic environment.

2.1.2 The new Act amends the Ancient Monuments and Archaeological Areas Act 1979 and also the Planning (Listed Buildings and Conservation Areas) Act 1990. It is supported by a number of planning guidance documents. The Act most specifically provides better safeguards for the protection of scheduled monuments, listed buildings and historic parks and gardens. It also includes further guidance on place names.

2.2 Planning Policy Wales

2.2.1 Planning Policy Wales sets out the Welsh Government's land use planning policies. Its primary objective is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation.

2.2.2 Chapter 6, 'Distinctive and Natural Places', explains how planning systems must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. It also sets out the planning policies for the sustainable management of specific categories of historic environment assets.

2.3 Technical Advice Note 24: The Historic Environment

2.3.1 This technical advice note provides guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and Listed Building consent applications. It also provides specific guidance on how the following historic environment assets should be considered:

- scheduled monuments
- archaeological remains
- listed buildings
- conservation areas
- historic parks and gardens
- historic landscapes
- historic assets of special local interest
- World Heritage Sites

2.3.2 The technical advice note usefully gathers together the selection criteria employed in the designation of scheduled monuments and listed buildings and the registration of historic parks and gardens and historic landscapes.

- 2.3.3. Advice and decisions on planning applications affecting nationally significant historic environment features (or designated historic environment assets) is provided by Cadw acting on behalf of Welsh Government.
- 2.3.4 This report will also make reference to other guidance documents published by Cadw, namely: Conservation Principles (March 2011); Heritage Impact Assessment in Wales (May 2017); Managing Historic Character in Wales (May 2017); and Setting of Historic Assets in Wales (May 2017).

3. LOCAL PLANNING POLICIES

3.1 Local Development Plan

- 3.1.1 The Carmarthenshire Local Development Plan (LDP) was adopted in December 2014, and sets out the planning development strategy for the area. The LDP policies are set out in line with national policy and guidance outlined above, but applies a rational and consistent basis for decision making at local level.
- 3.1.2 Of particular relevance for this project are two specific policies. Policy RE2 relates to 'local, community and small wind farms'. A number of criteria are listed with regards to acceptable development, including:

Turbines and their associated structures will not be sited in, or impact upon archaeological resources, the setting and integrity of Conservation Areas, Listed Buildings of other areas of historical value.
- 3.1.3 Policy SP13 also addresses the protection and enhancement of the built and historic environment. It states that proposals relating to historic/culturally important sites and features, such as listed buildings, conservation areas and Scheduled Ancient Monuments (SM), will be considered in line with national guidance and legislation.

4 LOCATION, TOPOGRAPHY AND GEOLOGY

- 4.1 The development site lies within an area of enclosed farmland, comprising two fields separated by a defunct hedge, centred on NGR SN 49634 26463. The fields are mainly bordered by defunct hedgerows on earth banks, containing semi-improved neutral grassland, currently managed for hay or silage. The total area of the proposed development is 0.131 hectares.
- 4.2 The site lies within an upland landscape, largely comprising enclosed and managed farmland, predominantly pasture. The ground undulates, with patches of open moorland on some higher areas, including a short distance to the east of the site, woodland along small stream valleys with more extensive areas of coniferous woodland (part of Brechfa Forest) approximately 1km to the northwest.
- 4.3 The settlement pattern is largely one of dispersed farmsteads. The site lies approximately 561m from the nearest property, Pengoiallt to the southeast, the next nearest being Brynmelyn approximately 652m to the northwest. Ffos-y-gaseg lies approximately 675m to the north, and Esgerholiw 850m to the south. The landscape is traversed by minor roads accessing farms and farmland, with a narrow track running north – south on the east side of the development area. The B4310 provides the main access through the area, running north – south, approximately 1.5km to the east, running between Nantgaredig 5km to the south and Brechfa

5km to the north. The county town of Carmarthen lies 10km to the southwest.

- 4.4 The underlying geology of the area comprises a mix of sedimentary silty mudstone, with a band of slumped siltstone and sandstone running northeast – southwest, all of the Allt Formation. An area of peat has also been identified overlying the bedrock in this general area (BGS Viewer – accessed 17/11/2020).

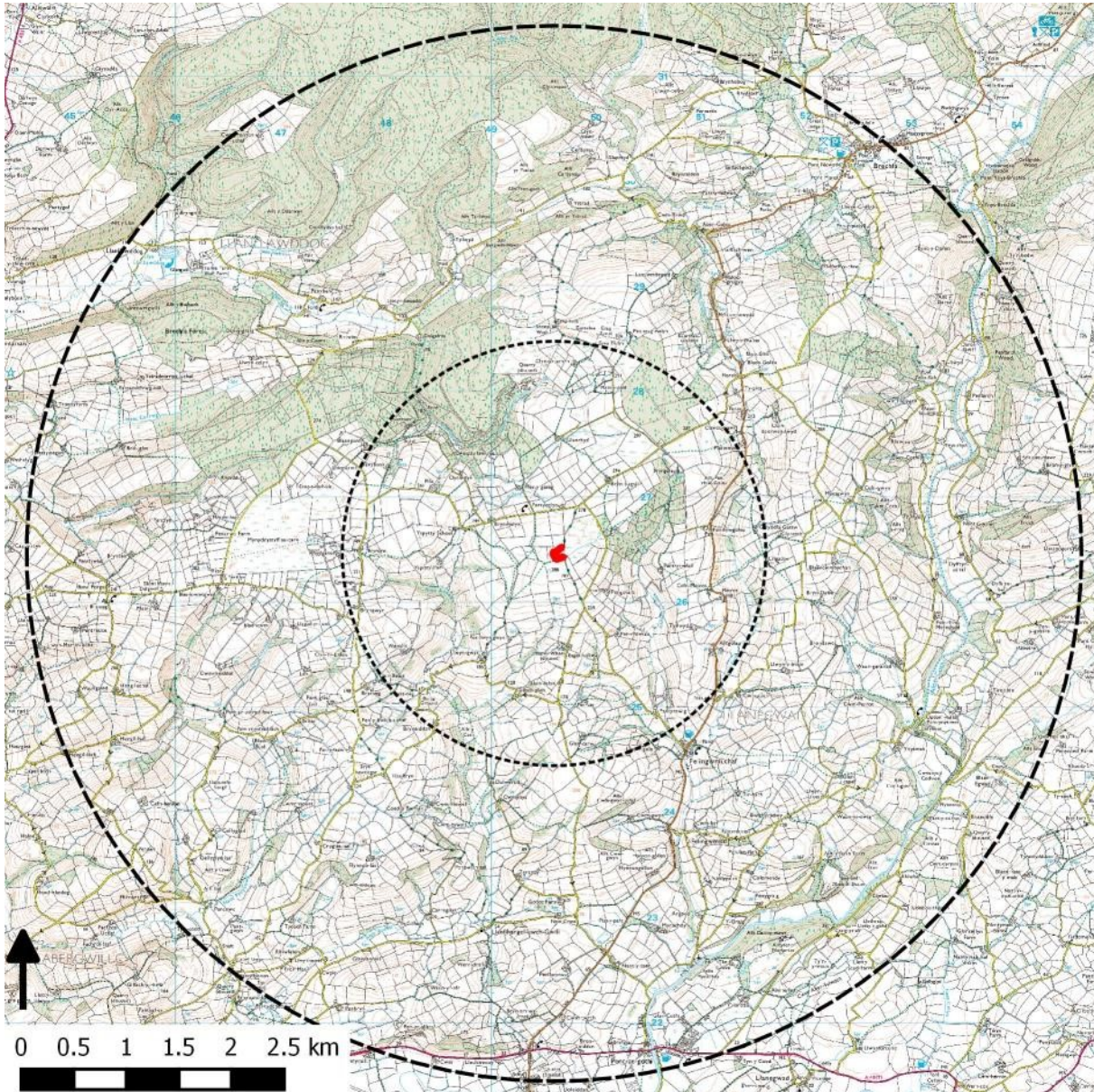


Figure 1: Location of development area (red), showing the proposed development site and the 2km (inner circle) and 5km (outer circle) study areas.

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5 DESIGNATED HERITAGE ASSETS (Table 2 and Figure 2)

5.1 General

- 5.1.1 A search of data held on several databases was made of heritage assets within a 2km search area to fully understand the potential archaeological resources of the development area. This included both designated and non-designated assets. Due to the height of the proposed development,

and therefore as stated within the criteria for Cadw consultation laid out in the *Settings Guidance* (Cadw 2017), the search area to assess potential impact on designated assets was extended to 5km.

5.2 Scheduled Monuments

- 5.2.1 There are six Scheduled Monuments within the 5km search area surrounding the proposed development site. These monuments fall into two broad categories, prehistoric funerary and ritual sites of likely Bronze Age date, and prehistoric defended enclosures of likely Iron Age date.
- 5.2.2 Of the former just over 2km to the north of the proposed development site lies **CM201 Crugiau Round Barrows**, an important group of five stone built cairns, some showing signs of antiquarian disturbance with a central cist visible in one, and an Ordnance Survey trig point built over another. To the east (2.6km northeast of the proposed development site) lies **CM043 Llech Ciste Standing Stone**, a standing stone of white quartz standing near springs at the head of the Golau Valley. **CM319 Crug-y-rhud-hir Round Barrow** lies 2.27km to the west of the proposed development site, comprising a large earth and stone covered barrow on the summit of a large plateau.
- 5.2.3 Of the Iron Age sites the closest is **CM382, a defended enclosure near Pant-glas**, which lies 2.8km to the southwest of the proposed development site. This triangular enclosure is formed by natural slopes and a bank and ditch, lying on a narrow southwest-facing inland promontory above the confluence of two streams. **CM157 Allt-y-Ferin** lies 4km to the southeast and comprises an Iron Age hillfort on the north side of the Cothi Valley, which was modified for use as a motte and bailey castle during the medieval period. **CM156 Dyffryn Camp** lies 4.4km to the east of the proposed development site, and comprises a hillfort lying on a promontory ridge that runs westwards towards the Cothi Valley, with wide views north and south. The site is defended by a single bank and ditch around an oval enclosure.

5.3 Listed Buildings

- 5.3.1 There are 22 listed buildings within the 5km search area surrounding the proposed development site. Three of these are Grade II* listed, these include Capel Panteg (Ref.22268), a mid-19th century chapel and vestry 1.8km to the southwest, Gilfach y Berthog (Ref.9738), a 17th century house with medieval origins 3.8km to the southwest, and the 19th century Church of the Holy Trinity (Ref.25162) 4.1km to the southeast. The remaining listed buildings are all Grade II listed.
- 5.3.2 The closest listed building to the site is Capel Panteg mentioned above, along with the adjacent Panteg House (Ref.81933). The remaining sites are all over 2km from the proposed development site, dotted largely along the Cothi and Annell valleys to the south, and around the village of Brechfa to the northeast, with a small number of outlying dispersed buildings.

5.4 Registered Historic Landscapes

- 5.4.1 Just under 4km to the south lies the Tywi Valley Landscape of Outstanding Historic Interest (HLW (D) 5). This landscape follows the Tywi Valley from its headwaters near the Llyn Brianne reservoir all the way down to its estuary. The principal significance of the valley is stated

as its setting for a unique group of planned parks and gardens, and its historic artistic associations with the Picturesque. The valley contains many important houses and mansions of 18th and 19th century gentry families, and was the heartland the medieval territory of Ystrad Twyi, leaving behind many castle sites and planted medieval boroughs. The river is a particularly active one, and its changing course has affected the pattern of Roman, medieval and modern routeways along the valley. The valley floor is rich grazing land, with areas of ancient woodland surviving on the valley sides that would once have been more dominant. A pattern of large infrequent Iron Age hillforts also occupy high ground overlooking the valley.

- 5.4.2 In order to better characterise the historic environment of the Historic Landscape it has been sub-divided into a number of Historic Landscape Character Areas (HLCA). These areas do not necessarily confine themselves to the illustrated limits of the registered Historic Landscape. Two such HLCAs lie within the 5km search area.
- 5.4.3 HLCA 191 Nantgaredig – Derwen Fawr covers much of the northern side of the valley and extends beyond the boundaries of the Registered Landscape to incorporate associated features in the lower Cothi Valley and the landscape between the two valleys. This area consists of large dispersed farms in a landscape of small- to medium-sized fields. Modern linear and nucleated development is concentrated along the A40 road which passes through the area.
- 5.4.4 HLCA 183 Abergwili – Llanegwad Parish covers a large area on the northern side of the River Tywi and essentially consists of small irregular fields of improved pasture, deciduous woodland on steep valley sides and dispersed stone-built farms. The majority of this area lies outside the Registered Landscape, and the northern boundary to the area actually runs along the field boundary that defines the southern part of the proposed development area, the proposed development therefore lying outside this HLCA.

5.5 Registered Historic Parks & Gardens

- 5.5.1 There are no registered historic parks and gardens within 5km of the proposed development.

5.6 Conservation Areas

- 5.6.1 There are no conservation areas within 5km of the proposed development.

Table 2: Designated heritage assets within a 5km radius study area

Site/Building Name	Cadw Ref.	NGR	Designation
Llech Ciste Standing Stone	CM043	SN 51428 28335	Scheduled Monument
Dyffryn Camp	CM156	SN 54075 26562	Scheduled Monument
Allt-y-Ferin Mound and Bailey Castle	CM157	SN 52192 23279	Scheduled Monument
Crugiau Round Barrows	CM201	SN 50098 28512	Scheduled Monument
Crug-y-rhud-hir round barrow	CM319	SN 47420 27143	Scheduled Monument
Defended Enclosure 300m W of Pant-glas	CM382	SN 47215 25001	Scheduled Monument
Church of St Michael	9386	SN 4892 2288	Listed Building II
Gilfach y Berthog	9738	SN 4814 2295	Listed Building II*
Stables at Gilfach y Berthog, including attached gate piers	9739	SN 4812 2294	Listed Building II
Barn to SE of Gilfach y Berthog	9746	SN 4818 2293	Listed Building II
Brechfa House	11182	SN 5230 2994	Listed Building II
Stables and coach house at Brechfa House	11183	SN 5227 2992	Listed Building II
Capel Panteg and attached vestry to left	22268	SN 4833 2517	Listed Building II*
Capel Sittim	22275	SN 5086 2376	Listed Building II
Pont-ar-Gothi	22708	SN 5055 2174	Listed Building II
Church of the Holy Trinity	25162	SN 5099 2260	Listed Building II*
Pound in churchyard wall of Church of St Llawddog	26936	SN 4581 2938	Listed Building II
Y Dderwyn	26937	SN 4676 2947	Listed Building II
Ty Mawr Country Hotel	26939	SN 5249 3032	Listed Building II
Brynamlwg	81011	SN 5070 2380	Listed Building II
Castle Green	81012	SN 5238 3018	Listed Building II

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Cresselly Arms	81013	SN 5058 2176	Listed Building II
Plas Alltyferin	81015	SN 5223 2351	Listed Building II
Stable, coach house & granary at Plas Alltyferin	81017	SN 5222 2353	Listed Building II
Ynyswen	81021	SN 5284 2461	Listed Building II
Former secondary dwelling at Lan Farm	81929	SN 4723 2538	Listed Building II
Panteg House	81933	SN 4834 2518	Listed Building II
Whitehall	87627	SN 5253 3032	Listed Building II
Tywi Valley	HLW (D) 5	-	Landscape of Outstanding Historic Interest

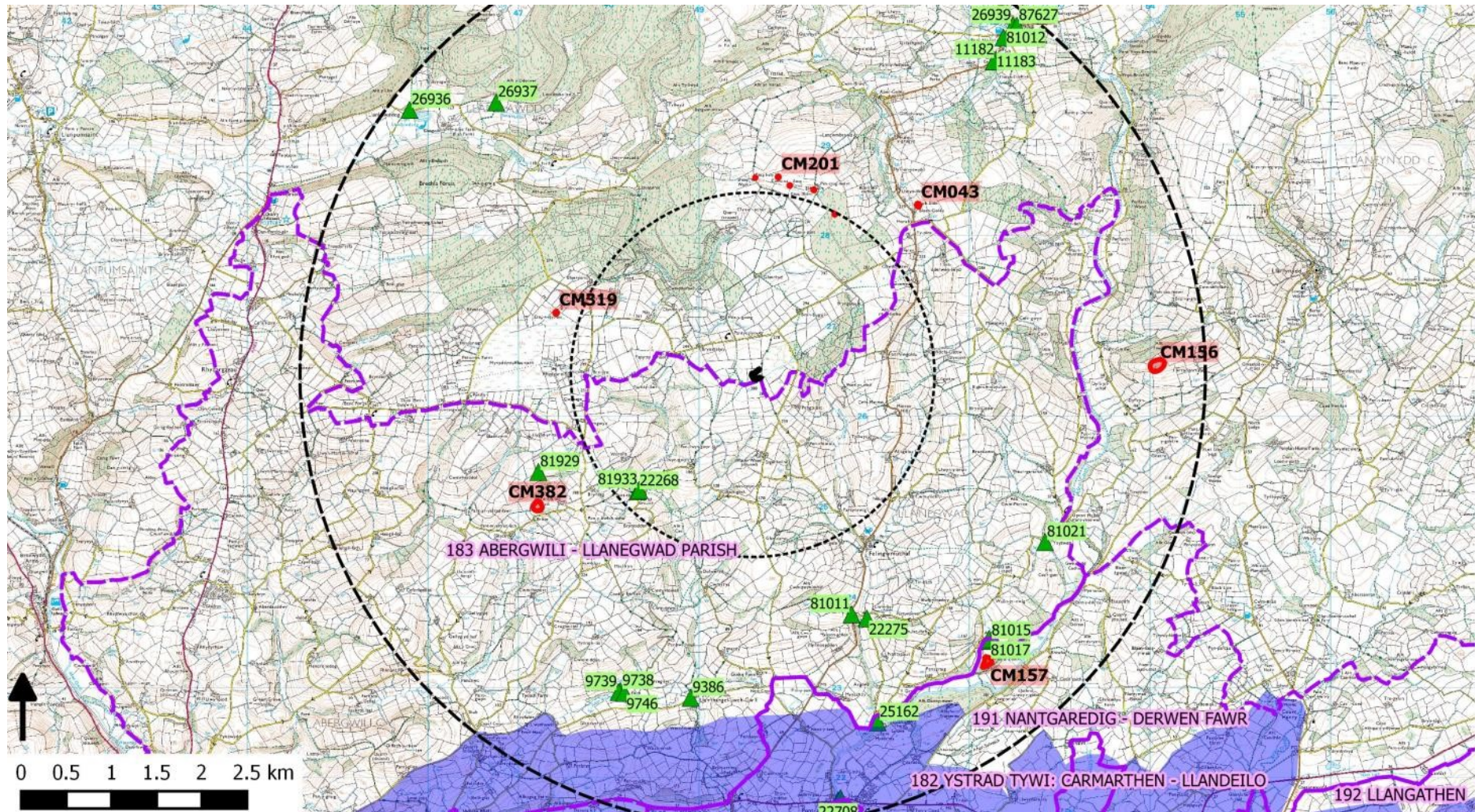


Figure 2: Map showing designated heritage assets within 5km of the proposed turbine. Scheduled monuments are shown in red, listed buildings in green, the Tywi Valley registered historic landscape (HLW(D)5) is shaded blue, with HLCAs outlined in purple.

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6 NON-DESIGNATED HERITAGE ASSETS (Table 3 and Figure 3)

6.1 General

- 6.1.1 A search of data held by the Dyfed Archaeological Trust Historic Environment Record (HER) and other available databases was made within a 2km radius area around the proposed development.
- 6.1.2 The HER records 118 assets within the 2km search area. Two assets are recorded within the development site itself, comprising PRNs 21191 and 21192, both 19th century cottages, but now gone.
- 6.1.3 The following information is laid out chronologically to provide a brief archaeological and historical background for the development area and its environs for each period, along with the relevant HER entries.

6.2 Palaeolithic & Mesolithic

- 6.2.1 There are no known sites of these periods recorded within the search area. Evidence of such activity in the wider landscape also appears sparse.

6.3 Neolithic and Bronze Age

- 6.3.1 There are no known Neolithic sites recorded within the search area. Outlying evidence of Neolithic burials is recorded beyond Brechfa and Llanfynydd to the northeast, but these are some distance from the site.
- 6.3.2 There is greater evidence of Bronze Age activity across the landscape, largely in the form of burial mounds and standing stones, with one Bronze Age stone axe also recorded to the east (PRN 656). Two round barrows (PRNs 665 & 8874) lie to the north, representing burial and ritual sites, the latter also being an outlying element of Scheduled Monument CM201, a range of burial mounds across the ridge top to the northwest. Such monuments are predominantly found in such upland locations, and it is thought visibility is an important factor in their siting (Cook et al 2003/Davey 2002). There is a noted spread of such monuments across prominent summits that extend from Banc Forge to the west, through the Crugiaiu cairns to the north, to the hills overlooking Brechfa to the northeast. The Crug-y-Bugail barrow (PRN 665) 900m to the northeast is situated on slightly less prominent ground, similar in setting to the proposed development site, which suggests the possibility of a wider spread of such activity throughout the area.
- 6.3.3 In contrast, the standing stones within the search area (PRNs 11041, 11059, 11066 & 104129) are all concentrated to the south, although further afield they are more widespread, and one further possibility is noted to the east (PRN 51392). The provenance of such stones can be uncertain and they can have a broad date range, however, they have been found to represent marker stones and be associated with more widespread ritual activity in the Bronze Age. In this area they often appear in close association with water sources, although at least two of the sites to the south (PRN11041 & 11059) are uncertain, and may refer to natural features.
- 6.3.4 Just over 1km to the west three small circular cropmarks (PRN 11322) have been identified from aerial photographs. These features could potentially represent further prehistoric activity, which given the surrounding archaeology would appear to have potential for being Bronze Age in date.

6.4 Iron Age

- 6.4.1 There are no known sites of this period within the search area. Within the wider landscape a number of defended enclosures and hillforts are recorded, although largely concentrated along the edges of the Cothi Valley to the east and the Tywi Valley to the south.

6.5 Roman Period

- 6.5.1 There are no known sites of this period recorded within search area, with evidence in the wider landscape largely confined to Roman roads, the closest being close to the line of the current A485 to the west.

6.6 Early Medieval & Medieval Period

- 6.6.1 There is little recorded evidence of Early Medieval activity in the search area, however there is clear evidence the landscape was settled and was being divided up by the medieval period. There are 11 such sites within the study area. Five of which relate to chapel sites (PRNs 4738, 4740, 4741, 5368 & 5381), although these largely come from documentary references and the precise locations of any structural remains are unknown. The closest site is PRN 5368, just over 1.1km to the west, which relates to a place name reference only.
- 6.6.2 Bryngwyn Farm almost 2km to the west (PRN 10780) is recorded to have potential medieval origins, and it is possible more farmsteads across the area have their origins in the medieval period. The remaining medieval sites on the HER refer to areas of common land that are also likely to have their origins in the medieval period. The area of open land on Mynydd Crugmelyn (PRN 13741) immediately to the northeast of the development area is one such area, and it is likely to have been more extensive during the medieval period. The areas would have been largely undeveloped land used for grazing.

6.7 Post Medieval & Modern Period

- 6.7.1 The vast majority (99) of sites recorded on the HER are Post Medieval in date, and illustrate the spread of agricultural settlement and activity across the area, with many of these sites recorded on mid to late 19th century mapping.
- 6.7.2 38 of these sites record farmsteads, spread relatively evenly throughout the landscape, and typically little more than 500m from their neighbours. The farmsteads are generally relatively small sites, with only two larger country houses recorded at Meiros Hill (PRN 25383) on the B4310 to the east and Esgerholiw (PRN 21236) to the south. These farmsteads are largely recorded from 19th and early 20th century map sources, although some (Esgerholiw being a particular example) may have relatively early origins. The semi-regular nature of the field enclosures across the landscape would suggest a later post-medieval enclosure, suggesting the spread of farmsteads and enclosure of the landscape in the 18th and 19th centuries.
- 6.7.3 Alongside these agricultural centres 27 cottages are also recorded, likely to be of a similar date, with many housing the agricultural labourers that worked the land. These cottages are a particular feature of the proposed development area. Two cottages are recorded within the development field (PRNs 21191 & 21192), with a further cottage nearby to the north (PRN

21108) and west (PRN 21244). As with many such sites these small dwellings were likely abandoned by the 20th century as farming became more mechanised and populations more centralised.

- 6.7.4 These dispersed rural populations were served by chapels (PRNs 16510 & 17076), schools (PRNs 16508 & 16511), smithies (PRN 16509), mills (PRNs 21240 & 22147) and other features that now appear relatively isolated following the decline of the rural populations and concentrations in regional urban centres.

6.8 Unclassified/Unknown

- 6.8.1 Three sites fall into this category within the search area. These include a road (PRN 11042) of uncertain date, a placename Caebank (PRN 11058) of unknown significance, and a pond (PRN 1724) that was initially mis-identified as a prehistoric feature.

Table 3: Sites recorded on the HER within a 2km radius study area

PRN	Site Name	Type	Period	NGR
656	Gwyddfa-Gattw;Rwyddfagatw	Findspot	Neolithic, Bronze Age	SN51532673
665	Crug-Y-Bugail	Round Barrow	Bronze Age	SN50172719
1724	Plas	Pond	Unknown	SN48430269 24
1725	Llanllawddog	Earthwork	Medieval	
4738	Cae Capel	Chapel	Medieval	SN5025
4740	Gwyddfa Gatw	Chapel, Cemetery	Early Medieval	SN515267
4741	Meiros	Chapel	Medieval	SN512260
5368	Cae Capel;Yspitty Evan	Hospice, Chapel	Medieval	SN48452637
5381	Lecheyde;Dol Wyrdd	Chapel	Medieval	SN493245
8874	Crugiau Barrows "A"	Round Barrow	Bronze Age	SN50502824
10448	Spitty-Evan	Sheep Fold	Post Medieval	
10780	Bryn Gwyn;Bryn-Gwyn	Settlement, Farmstead	Medieval	SN47722595
11041	Caecareg	Standing Stone	Bronze Age	SN50052515
11042	Caepensarn	Road	Unknown	SN50152505
11058	Caebank	Unknown	Unknown	SN49352500
11059	Caergareg;Caemain	Standing Stone	Bronze Age	SN49552525
11066	Lancerigllwyd;Cae'rywen	Standing Stone	Bronze Age	SN490249
11067	Bankmawr	Natural Feature	Not Applicable	SN490247
11322	Spitty Evan	Cropmark	Prehistoric	SN48453265 38
13728	Mynydd Bryn Bugail	Common Land	Post Medieval,	SN503275

Pencau Lands, Llwyngwyn Farm, Felingwm, Carmarthenshire:
Historic Environment Desk-Based Assessment

			Medieval	
13735	Mynydd Bryngolau	Common Land	Post Medieval, Medieval	SN506274
13739	Mynydd Crugmelyn	Common Land	Post Medieval, Medieval	SN496284
13741	Mynydd Crugmelyn	Common Land	Post Medieval, Medieval	SN499267
16502		Quarry	Post Medieval	
16508	Yspytty School	School	Post Medieval	
16509	Pant-Teg	Blacksmiths Workshop	Post Medieval	
16510		Chapel	Post Medieval	SN48332519
16511		School	Post Medieval	SN48322515
17072	Pant Yr Efail	Farmstead	Post Medieval	SN50612632
17076	St John's Church	Church	Post Medieval	
21046		Cottage	Post Medieval	SN493272
21047	Cwm-Ddol-Fawr	Farmstead	Post Medieval	SN490274
21048		Cottage	Post Medieval	
21088	Cae Llan	Church Land	Post Medieval	SN497253
21089	Llain Delyn	Farmstead	Post Medieval	SN49652524
21092	Bryn Goleu	Cottage	Post Medieval	SN50652737
21108		Cottage	Post Medieval	SN49697266 58
21128	Newfoundland	Cottage	Post Medieval	SN494284
21129	Cwmcerrigynadd	Cottage	Post Medieval	SN494281
21182	Alltgoleu	Dwelling	Post Medieval	SN51079255 21
21183	Parkcornel	Cottage	Post Medieval	SN510257
21187	Cilgattwg	Cottage	Post Medieval	SN516264
21191	Penycae	Cottage	Post Medieval	SN49652650
21192	Penycae	Cottage	Post Medieval	SN496264
21196	Cwmlhamarch	Farmstead	Post	

Pencau Lands, Llwyngwyn Farm, Felingwm, Carmarthenshire:
Historic Environment Desk-Based Assessment

			Medieval	
21202	Cefnmyros	Farmstead	Post Medieval	SN5107526097
21212	Caeskybor	Barn	Post Medieval	SN49952500
21232	Llethercae Quarry	Quarry	Post Medieval	SN49852452
21234	Troedrhiwfelda; Caeskybor	Barn	Post Medieval	SN50322512
21235	Caefynon	Well	Post Medieval	SN50282485
21236	Esgerholiw; Tythynyskeyr Heylyn; Escaer Olwyn; Esgair-Hoeliw	Farmstead, Country House	Post Medieval	SN49552556
21237	Caefynon	Well	Post Medieval	
21238	Caerodin	Kiln	Post Medieval	
21239	Gilfach Goch	Farmstead	Post Medieval	
21240	Mill Land; Mill	Mill	Post Medieval	SN487257
21241	Penllwyngwyn	Farmstead	Post Medieval	SN49182565
21242	Penygoyallt	Farmstead	Post Medieval	SN50122612
21243	Pant Yr Efail	Road	Post Medieval	SN508264
21244	Llanllwyngwyn	Cottage	Post Medieval	SN49372650
21249	Penrhiwar	Farmstead	Post Medieval	
21250	Goyalltfach	Farmstead	Post Medieval	SN5014526643
21251	Brynybigail; Glanrhyd	Farmstead	Post Medieval	SN49622753
21252	Penrhiwgolen;	Farmstead	Post Medieval	
21253	Penrhiwgolen	Cottage	Post Medieval	SN5061327499
21254	Gwyddfagattw	Cottage	Post Medieval	SN51452673
21259	Brynmelin	Farmstead	Post Medieval	SN49002681
21320		Cottage	Post Medieval	SN49812697
21349	Caerodin	Kiln	Post Medieval	SN503258
21350	Common Field	Common Land	Post Medieval	SN503275
21353	Bankycwm	Homestead	Post Medieval	SN50062821

Pencau Lands, Llwyngwyn Farm, Felingwm, Carmarthenshire:
Historic Environment Desk-Based Assessment

21358	Troed Rhiw Felda	Cottage	Post Medieval	
21359	Caepant Cottages	Cottage	Post Medieval	SN508255
21360	Pantmelin	Cottage	Post Medieval	SN499283
21526	Pencaebyrn	Cottage	Post Medieval	SN50322725
21716	Llain-Bwl	Cottage	Post Medieval	SN49662482
22147	Melin-Llwyn Gwyn	Mill	Post Medieval	SN48382535
23233	Brechfa Ironworks	Findspot	Post Medieval	SN5025
23995	Gwar-Cwm	Cottage	Post Medieval	
25383	Meiros Hill	Country House	Post Medieval	SN51202600
25416	Pant Yr Ewig	Farmstead	Post Medieval	SN50582495
25658	Spyty Ifan	Dwelling	Post Medieval	SN48502637
30278	Troed-Y-Rhiw	Cottage	Post Medieval	SN49218280 30
30284	Nant-Saer	Dwelling	Post Medieval	SN48212766
30285		Cottage	Post Medieval	SN50392648
30286	Cwm-Cerig House Site 1	Farmstead	Post Medieval	SN49152793
36469	Cwm-Cerig	Cottage	Post Medieval	SN49171279 80
43421		Trackway	Post Medieval	SN50631258 19
43479	Tyllwyd	Farmstead	Post Medieval	SN50692257 78
51392		Stone	Not Known	SN51082673
51393		Cottage	Post Medieval	SN51102679
51394		Ford	Post Medieval	SN51482701
55302	Clynrychen;Clyn-Yr-Ychain	Farmstead	Post Medieval	SN49789282 64
55303		Structure	Post Medieval	SN49786280 01
56815	Glan-Ddol-Fawr;Cwmddol Fawr	Farmstead	Post Medieval	SN49011273 87
61597	Panteg House	Unknown	Post Medieval	
94114	Brynbugail	Farmstead	Post Medieval	SN50092718
104129		Standing	Post	SN48672495

Pencau Lands, Llwyngwyn Farm, Felingwm, Carmarthenshire:
Historic Environment Desk-Based Assessment

		Stone, Rubbing Stone	Medieval, Bronze Age	
104135	Pantau-Gleision	Cottage	Post Medieval	SN48422760
104136	Pant-Y-Fer	Cottage	Post Medieval	SN49302804
104885	Graig-Fach	Cottage	Post Medieval	SN49732547
115190	Plas	Farmstead	Post Medieval	SN48472270 84
115191	Dan-Y-Banc	Farmstead	Post Medieval	SN48016272 76
115194	Bryn-Aru	Farmstead	Post Medieval	SN47772265 09
115200	Wenallt	Farmstead	Post Medieval	
115278	Bryn-Bugail	Farmstead	Post Medieval	SN50110271 74
115279	Pant-Y-Pinswrn	Farmstead	Post Medieval	SN49675268 98
115280	Clyn-Melyn	Farmstead	Post Medieval	SN48716272 18
115281	Ffos-Y-Gaseg	Farmstead	Post Medieval	SN49266270 95
115282	Clyn-Yr-Uchain	Farmstead	Post Medieval	SN49791282 62
115283	Maes-Y-Pant	Farmstead	Post Medieval	SN49989280 09
115285	Yspytty-Evan	Farmstead	Post Medieval	SN48519263 81
115286	Llwyn-Gwyn	Farmstead	Post Medieval	SN48923254 52
115287	Pen-Cae	Farmstead	Post Medieval	SN49894250 41
115288	Glan-Carw	Farmstead	Post Medieval	SN49874247 20
115433	Gwyddfa-Gattw	Farmstead	Post Medieval	SN51512266 38
115439	Ty-Llwyd	Farmstead	Post Medieval	SN50909257 51
115440	Meiros Hill	Farmstead	Post Medieval	SN51199260 27
116755	Cruglas	Farmstead	Post Medieval	SN48476248 35

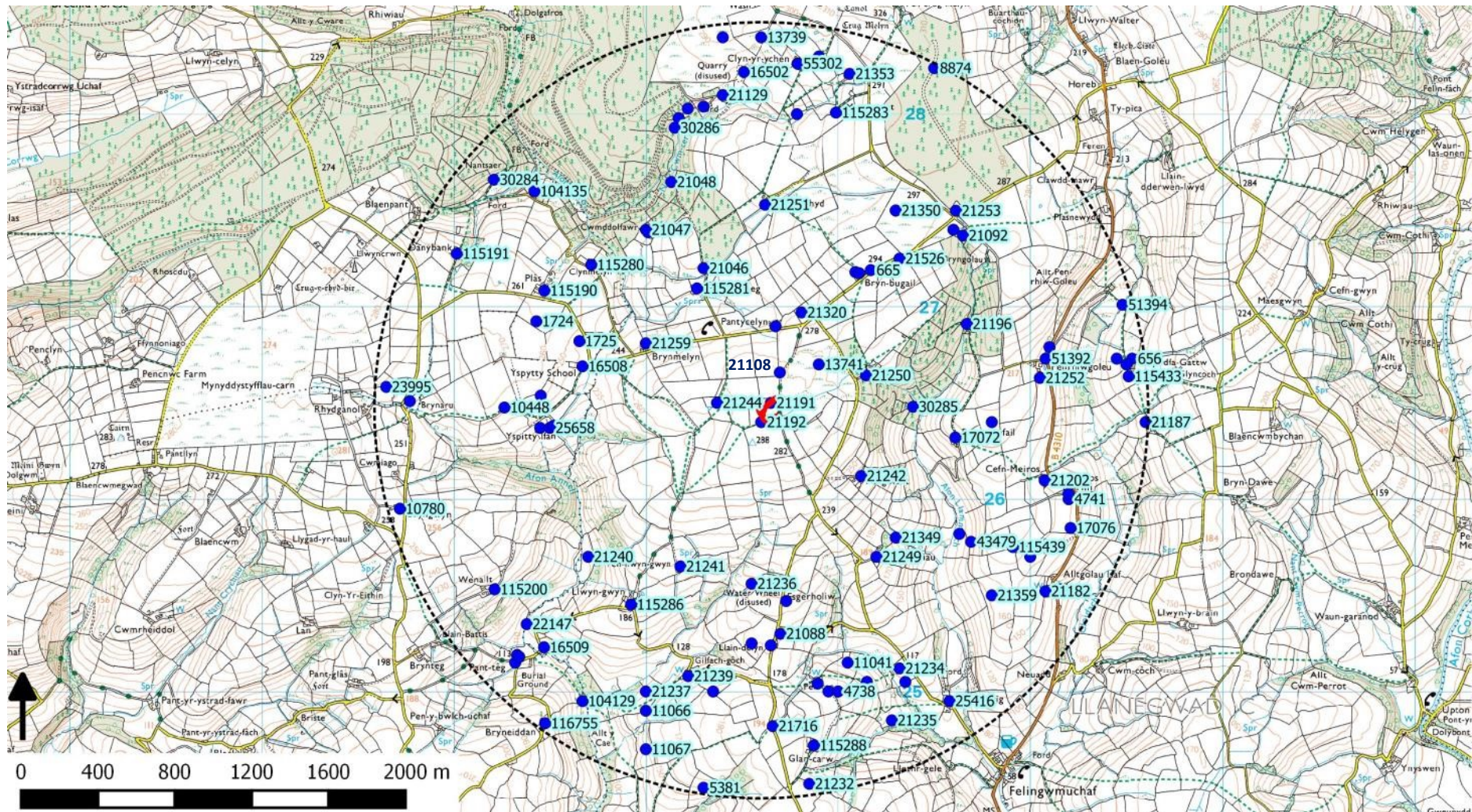


Figure 3: Map showing the undesignated heritage assets recorded on the HER within 2km of the proposed turbine.

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7 ASSESSMENT OF EVIDENCE

7.1 Previous Archaeological Work

- 7.1.1 There have been no previous archaeological investigations within the proposed development area.
- 7.1.2 Within the wider 2km search area a number of site visits have been undertaken by Cambria Archaeology (the former trading name of Dyfed Archaeological Trust). These include visits to Brechfa Forest in 2002-3 as part of a project for Forest Enterprise, which included the woodland to the northwest beyond the Afon Gafros (Hall, Hughes & Murphy 2003). During a similar period a number of brief archaeological assessments of surrounding farmland was made as part of the Tir Gofal agri-environmental scheme. These assessments largely involved a brief assessment of existing desk-based information, but a site survey was also carried out on farmland at the southwest edge of the study area (Steele 2004). The records made during these surveys have since been incorporated into the HER, as discussed in Section 6.
- 7.1.3 A historic landscape survey has been undertaken on land to the south of the proposed development area, as part of the creation of the Historic Landscape Character Areas associated with the registered Historic Landscape, as discussed in Section 5.5.

7.2 Historic Mapping

Ordnance Survey original surveyors map (T.Budgen) – Llannon 1813 & Newcastle Emlyn (1811)

- 7.2.1 These Ordnance Survey maps from the early 19th century provide some of the earliest informative mapped evidence of the area. The maps demonstrate that enclosed farmland, with its associated farmsteads and cottages, had spread across the landscape to the south of the development area, and partially into the landscape to the north as far as the local road to the north of the development area. Between the two areas of farmland lay the large open common land of Crugmelyn Common. This is currently confined to an area to the northeast of the proposed development area but in the early 19th century this incorporated the development area and extended further west, as well as to the north, incorporating the area of the Crugiau barrows.
- 7.2.2 As part of the common the proposed development area is shown as undeveloped open land, the southern field boundary forming the southern edge of the common. The local east – west road to the north had been established by this time, and within the wider common the occasional dwelling with surrounding fields is shown, likely representing 18th and early 19th century squatter settlements encroaching onto common land.

Llanegwad Parish tithe map 1841 (Fig. 4)

- 7.2.3 The current field enclosure pattern was laid out in the early to mid-19th century, as it was visible in its current form on this tithe map of 1841. At this time the development area was under the ownership of Mary Howells, who owned only a small number of fields in this area. The land was being farmed by Daniel Davies, who appears to have lived in a new cottage built along the southern boundary to the development area (PRN 21192) called 'Penycae', that presumably was both dwelling and agricultural building(s). A second small cottage, for which Daniel Davies was also listed as the

occupier, lay in the northeast corner of the same field (PRN 21191). The house of Llanllwyn Gwyn (PRN 21244) had also been established in the corner of a field to the northeast, adjoining the proposed development area. The 'llan' part of the name being an intriguing element, and potentially a reference to a religious site. Daniel Davies also appears as the occupier of another new cottage nearby (PRN 21108), belonging to the neighbouring farm of 'Panty Pynchw' (now Pantycelyn) to the north.

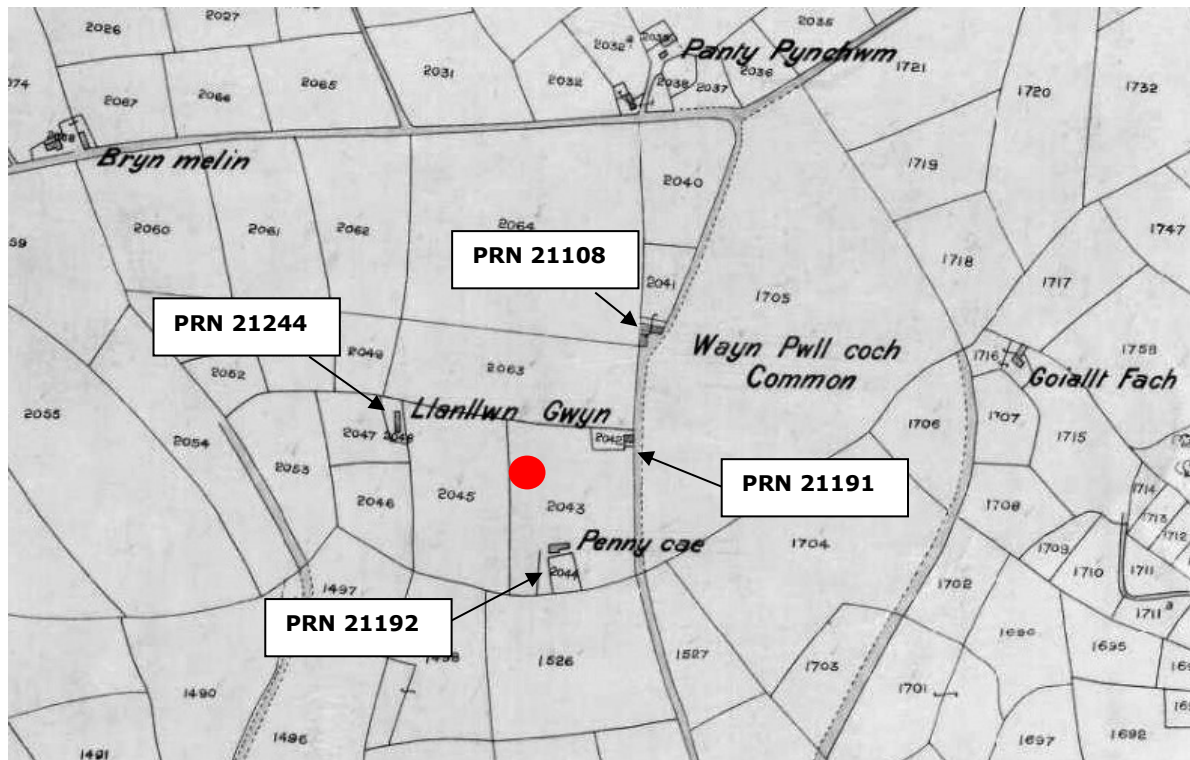


Figure 4: Extract of the 1841 tithe map. Approximate location of proposed turbine site in red, along with cottage sites.

Ordnance Survey 1:2500 map 1889 (Fig. 5)

7.2.4 The 1st edition Ordnance Survey map published in 1889 suggests that the cottages established in this area were generally short lived, with neither of the two sites within the development area surviving into the late 19th century. There was no marked remains of the northernmost (PRN 21191), and only a partial boundary or ruined wall marked the site of the southernmost cottage (PRN 21192). The cottage to the northeast (PRN 21108) was still shown and presumably therefore still standing at this time, although this too appears abandoned. The house to the west (PRN 21244) is still occupied, although now going by the simplified name of 'Pen-lan'. The track, or footpath, along the southern edge of the field is marked clearly for the first time, providing access to Pen-lan, but little other change or indication of archaeological features are marked on the map.

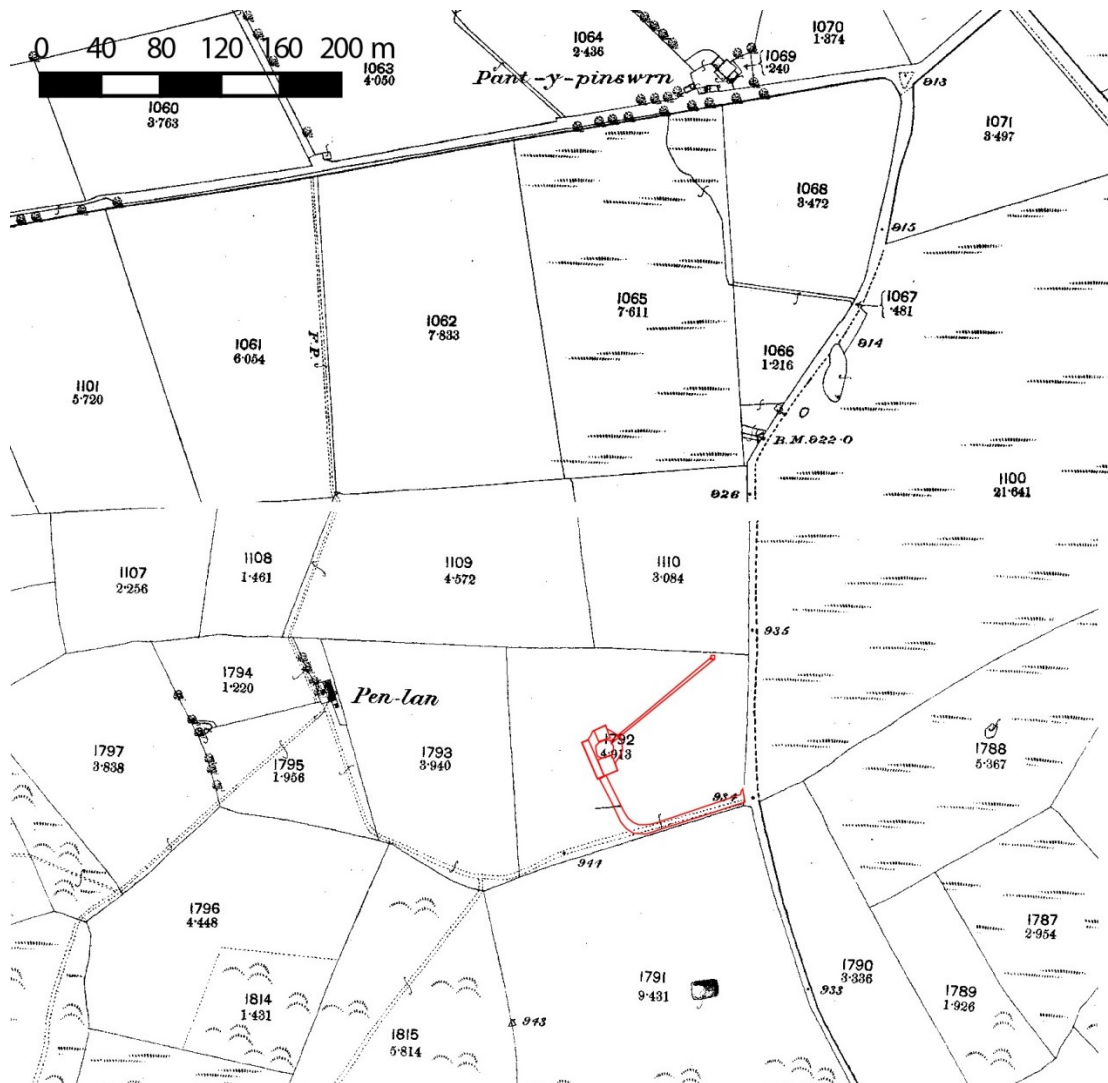


Figure 5: The Ordnance Survey map published in 1889 showing the proposed development site outlined in red.

Ordnance Survey 1:2500 map 1906

7.2.5 No obvious change is noted on the subsequent Ordnance Survey map of 1906, although the general ground within the development area is marked as relatively rough ground, which would suggest it was used as rough grazing rather than managed arable land. Pen-lan would appear to be the main farm in this area, with more intensively managed land lying to the northwest. This would suggest there was a gradual consolidation of land ownership in the later 19th and early 20th century, from the small parcels farmed from the dispersed cottages suggested on the earlier tithe map.

Ordnance Survey 1:10,560 map, 1952

7.2.6 The mid-20th century maps are not recorded in as great detail, but they mark little change in the area. Pen-lan however does appear to have been abandoned by this time, the development area presumably subsumed into a larger farm as part of the ongoing process of land ownership consolidation.

7.3 Aerial & Historic Photography

- 7.7.1 A search was made of available historic aerial photographs and modern aerial photographs. This area is not well covered by historic aerial photographs, but images from 1946 do exist (Photo 1). These images show the development area in its current configuration, hedgerows are visible bounding the fields, faint striations indicate ploughing for improved pasture had already taken place, and livestock appear to be grazing the land. There is no indication of the cottages sites (PRNs 21191 & 21192) within the development area, and no indication of any other potential archaeological remains. The quality of the images is reasonably good, and features such as building remains and Bronze Age cairns can be picked out in the wider landscape.
- 7.7.2 Modern satellite imagery from 2005, 2006, 2009, 2018 and 2020 is also available, but no further evidence of archaeological features within the proposed development area are visible.



Photo 1: RAF aerial photograph from 1946 (106.G/UK 1625/3135), proposed turbine site marked in red.

7.4 LiDAR

- 7.4.1 This area has not been included on the available Lidar surveys.

7.5 Site Visit (Photos 2 - 15)

- 7.5.1 A site visit was undertaken on 26th November 2020, weather conditions were sunny and clear, with persistent fog in the valley basins, but visibility from the site and surrounding designated assets was good.
- 7.5.2 The main development site comprises a field of improved pasture, relatively level, bounded by post and wire fencing and hedgerows (Photos 2-3). The access to the field is via a farm gate in the southeast corner,

from a single-track access. The ground slopes away gradually to the west, north and east, and rises slightly into the neighbouring field to the south, before dropping away again. A public footpath is marked on mapping along the southern edge of the field, but this appears little used.

- 7.5.3 The HER records two sites within the development, both mid-19th century cottages. PRN 21191 lies in the northeast corner of the field (Photo 4), there are no visible remains of this site, either in terms of visible structural remains or surface earthworks. PRN 21192 was located along the southern edge of the field (Photo 5), with the cottage standing further towards the centre of the field, and an associated enclosure against the southern field boundary. There are no visible structural remains of this feature, however low and somewhat amorphous earthworks extend from the southern boundary, and likely mark below-ground remains. No clear shape or form to the earthwork could be discerned, which appear rather spread and little more than 0.1m high.
- 7.5.4 Two further cottage sites are recorded close to the development area. To the west lies PRN 21244, which appears to have been a longer-lived dwelling. The enclosure within which the dwelling stood is still visible as an embanked boundary. No structural remains of the dwelling survive, although some loose stonework is visible amongst the covering turf. To the north a further cottage PRN 21108 lay alongside the trackway (Photo 6). No structural remains are visible, although the enclosure within which it was located is still apparent, and very overgrown. An area of common land to the east is also recorded on the HER (PRN 13741), which remains intact as an area of undeveloped moorland.
- 7.5.5 A detailed walkover of the proposed development site could not identify any other potential archaeological remains.
- 7.5.6 In terms of viewpoints the proposed development site offers extensive views of the upland areas of the surrounding landscape. At ground level views south were limited, but likely to be extensive from turbine height (see Photo 13). To the north the Brechfa Forest West windfarm is clearly visible on the horizon (Photo 7), to the northeast a single turbine (Rhosfach) near Llain-dderwen-lwyd is visible beyond a stand of woodland (Photo 11), and to the west a tower at Llwynyrwyn (adjacent to CM319) is also clearly visible (Photo 9).
- 7.5.7 In terms of views to and from Scheduled Monuments, both CM201 to the north (Photos 7 & 8) and CM319 to the west (Photos 9 & 10) are visible from the development site, and vice versa. Both sites represent Bronze Age burial sites occupying prominent high ground with extensive all round views, and both sites are inter-visible with each other (Photo 15). The proposed development does not interfere with this inter-visibility, or inter-visibility with any other similar identified site in the landscape. Standing Stone CM043 to the northeast is not visible from the development site (Photo 11), and views from CM043 towards the site are blocked by rising ground to the northwest (the ridge containing CM201) which rises to an elevation up to 70m higher than the CM043. CM156 lies some distance to the east, and the sites were indistinguishable at ground level (Photo 12). CM157 lies to the southeast, but views between this site and the proposed development are blocked by high ground to the northwest of CM157. CM382 lies to the southwest in a prominent location, but on southwest facing slopes with views away from the proposed development site, and rising topography preventing views of the development (Photo 13).
- 7.5.8 There are a large number of listed buildings within the 5km search area, however the vast majority of these are located on lower valley slopes in

excess of 2km from the site, with no views of the proposed development area. There are some Listed Buildings in more upland areas to the northwest and west (LBs 26936, 26937, 81929), but views towards the development site are blocked by topography and forestry. LB 22268 and 81933 in Pant-teg to the southwest are the only listed building within 2km of the proposed development. The proposed development site is however hidden by rising ground to the northeast of the listed buildings. LB 9386 at Llanfihangel-uwch-gwili lies within a zone of theoretical visibility, but it was not possible to assess this viewpoint during the site visit due to distance and fog covering.

- 7.5.9 The boundary of the Tywi Valley Historic Landscape lies within the search area to the south. However, this part of the registered landscape incorporates the northern part of the valley which largely comprises views southward over the valley, and away from the proposed development site. Although not discernible at ground level, the Tywi Valley would be visible from the higher parts of the turbine, but in excess of 5km (see Photo 13).



Photo 2: View north along eastern edge of proposed development area.



Photo 3: View west along southern edge of proposed development area, including turbine location.



Photo 4: View northeast of the northeast corner of the field containing the proposed development, showing the location of former cottage site PRN 21191, marked by the upright 1m scale. No visible traces of this site remain.



Photo 5: View southwest within the proposed development area of the location of the former cottage PRN 21192. The location of the building is marked by the upright 1m scale, an associated enclosure extended towards the hedgeline. Note the undulations within the field marking the site of potential remains.



Photo 6: View south down the main access track to the site from the public road, with the location of the former cottage site PRN 21108 in the trees on the right.



Photo 7: View north from the turbine position towards CM201, the cairns visible as slight earthworks on the ridgeline. Brechfa Forest West windfarm also visible to the left.



Photo 8: As photo 7, zoomed in to view the ridgeline containing CM201.



Photo 9: View west from the turbine position towards CM319, lying on the crest of the hill in the centre of the shot, just to the left of the tower.



Photo 10: As photo 9, zoomed in with CM319 occupying the ridgetop in the centre of the shot.



Photo 11: View northeast from the turbine position looking towards CM043 (hidden by the topography), with the Rhosfach single turbine just visible above the treeline on the right.



Photo 12: View east across the area of common adjacent, towards CM156, not visible at ground level beyond the horizon.



Photo 13: View southwest toward CM382 (not visible beyond hill crest to the right) with the Tywi Valley beyond, shrouded in mist at the time of the visit.



Photo 14: View south from the easternmost cairn forming part of CM201, looking towards the proposed development site (approximate location represented by arrow).



Photo 15: View southwest from CM201, looking towards CM319 lying on the crest of the hill in the centre, adjacent to the tower.

8 ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL, IMPORTANCE AND SETTINGS

Table 4: Site potential definitions

Archaeological Potential	Definition
High	Known archaeological remains of the period within the site area, or an abundance of remains of the period within the near vicinity
Medium	A number of archaeological remains of the period are present in the vicinity or wider area, and/or the topography or location of the site would be typical for remains of that period
Low	Few sites of a specific period are known in the wider area, or where the topography of the site is unlikely to contain remains of that period. Or where no archaeological records of a certain period are present, but the location of the site is one that would be considered suitable or typical for remains of that period to exist
Negligible	Where there is no evidence for archaeological remains of a certain period to be present and the location/topography is most unlikely to contain remains of that period, or where a site area has already been totally disturbed

Table 5: Site importance definitions

Site Importance (SI)	Definition of Site Category
High	Features of national importance - Scheduled Monuments, Listed buildings Grade I and II*, well preserved historic landscapes, registered parks and gardens and historic battlefields
Medium	Non-scheduled sites of regional or county importance. Listed Buildings Grade II, reasonably preserved historic landscapes
Medium / Low	Features of district or local importance but generally common features at a national or regional level
Low	Minor sites or sites so badly damaged that too little now remains to justify their inclusion in a higher grade
Uncertain	Features about which insufficient is known to attribute them to a higher rank, or which cannot be sufficiently accurately located to justify their consideration
Negligible	Where a site area has already been totally disturbed by previous development or natural processes

8.1 Potential

8.1.1 Two sites have been recorded within the proposed development area, PRN 21191 and 21192, with two further sites nearby PRNs 21108 and 21244.

All four relate to cottages, built in the early to mid-19th century, and all appear to have been abandoned within 50-100 years of their construction. No above ground remains of these sites exist, although diffuse earthworks suggest that below-ground remains of PRN 21192 may exist within the development area. There is therefore a high potential for buried remains of associated activity to exist within the development area. Such remains would be considered to be of **local/low** archaeological importance.

- 8.1.2 Bronze Age archaeological sites are recorded in prominent locations in the surrounding landscape, and as the proposed development occupies an elevated location in this landscape there is the potential for contemporary features. The topography of the site is not as prominent as the scheduled remains of burial mounds CM201 and CM319, but it shares a similar setting to a burial mound PRN 665 to the north. However, no features have been positively identified from the assessment within the proposed development area. Therefore there is considered to be a **medium to low** potential for Bronze Age archaeological remains, but due to their comparative rarity any such remains would be considered to be of **high** importance.

8.2 **Setting**

- 8.2.1 The *Setting of Historic Assets in Wales* (Cadw 2017) offers guidance on defining and analysing the setting of designated heritage assets to allow the impact of development to be appropriately assessed. The setting of such monuments includes “the surroundings in which it is understood, experienced and appreciated, embracing present and past relationships to the surrounding landscape. Its extent is not fixed and may change as the asset and its surroundings evolve’ (Cadw 2017). As such it often extends beyond the physical boundaries of the monument itself. This may include physical elements in its surroundings, such as boundaries and other monuments, relationships with other historic assets and natural features, or associated agricultural, industrial or other surroundings. Less tangible elements are also included, such as function, sensory perceptions, and historical, artistic, literary and scenic associations.
- 8.2.2 A full and detailed analysis of the setting of all designated heritage assets within the 5km search area is beyond the scope of this assessment, but some general conclusions can be drawn.
- 8.2.3 The Bronze Age monuments in the landscape (CM043, CM201 & CM319) are likely to share similarities in their setting, and all lie within an extensive Bronze Age funerary and ritual landscape that spreads across these upland areas, identified contemporary remains will therefore be factors within their setting. The burial mounds in particular (CM201 and CM319) occupy prominent ridges, offering extensive views in all directions, and also creating a prominent profile on the skyline from specific viewpoints. Extensive views will therefore be part of their setting, as will views of the monuments from significant viewpoints, such as contemporary archaeological remains and well-used routeways through the landscape. The standing stone (CM043) does not appear as visually prominent over greater distances, but adjacent watercourses and routeways may be significant elements of its setting.
- 8.2.4 The Iron Age hillforts (CM156, CM157 & CM382) similarly occupy prominent locations, and views to and from these monuments will be important elements of their setting, as will any links to contemporary settlement sites in the region. The locations of each of these sites overlook valleys, concentrating on the Tywi and Cothi valleys, themselves

containing further Iron Age hillforts. Views between such monuments may therefore be important, as well as links to contemporary archaeological remains and routeways along these valley corridors.

- 8.2.5 The listed buildings throughout the area are likely to have a range of factors associated with their individual settings, including links to associated farmland and access to resources, their position on communication routes through this upland landscape, their locations within individual settlements, and occasionally an appreciation of views to and from some of these buildings. The proposed development site however has not been identified as a factor in any of these settings.
- 8.2.6 No further historic, artistic, literary or scenic associations, intellectual relationships or non-visual factors forming part of the settings of any of the surrounding designated assets have been identified.

9 IMPACT ASSESSMENT

9.1 Impact assessment criteria

- 9.1.1 The criteria for the assessment of impacts, both direct and indirect, on heritage assets is based on The Department for Transport 'Transport Analysis Guidance' (TAG), Unit A3 'Environmental Impact Appraisal: Section 8 Impacts on the Historic Environment', of May 2019, with additional information based on professional judgement. In addition however, the guidance offered in the Setting of Historic Assets in Wales (Cadw 2017) has been utilised.
- 9.1.2 The TAG criteria divides the impacts into seven categories, ranging from large adverse (negative), moderate adverse (negative), slight adverse (negative), to neutral, and then on to slight beneficial (positive), moderate beneficial (positive) and large beneficial (positive).

9.2 Development details

- 9.2.1 The proposed development will comprise a three bladed horizontal axis wind turbine, approximately 48m to its tip when fully extended. The turbine hub height is 36m, and the rotor diameter is 24m. The foundation will typically be 7.6m in diameter and nominally 1.5m deep. The turbine will be connected to the grid via cabling to a new H pole approximately 400m to the north. Infrastructure requirements will include the creation of an access track, typically 3.5m wide, including widening of the entrance from the public road, and a storage area, working platform and crane hardstanding around the turbine foundations. The surrounding features will be returned to pasture after installation.

9.3 Direct impacts upon the heritage assets

- 9.3.1 Two specific assets have been identified within the proposed development area, with a third adjacent to the main access to the development area. A fourth asset to the west (PRN 21244) likely lies beyond an area of potential disturbance.
- 9.3.2 PRN 21192 lies against the southern edge of the proposed development area, extending into the field. This comprises the site of a 19th century cottage and enclosure. No above ground remains exists, but there is potential for below ground evidence to remain. The site lies in close proximity, and potentially on the line of, the main turbine access track, and close to the area around the turbine location itself. It is likely that groundworks associated with these works will have the potential to expose, damage or destroy any remains, should they be present. This is considered to be a **large adverse** impact.
- 9.3.3 PRN 21191 lies in the northeast corner of the proposed development area. This also comprises the site of a 19th century cottage and enclosure. No above ground remains exists, and unlike the previous site there are also no surface earthworks to indicate the presence of below-ground remains, however, the potential for below-ground evidence of this site still exists. The site lies in close proximity to the cabling route from the turbine, and location of the connection to the main grid. There is the potential therefore that trench excavation, or foundation excavations for a connection cabinet and new H-pole, may potential expose or damage associated remains. Given the lack of obvious remains, and its location away from the main area of likely groundworks, this is considered to be a **slight adverse** impact.

- 9.3.4 PRN 21108 lies to the north of the proposed development area, but adjacent to the main trackway access to the site from the public road to the north. This too comprises the site of a 19th century cottage and enclosure, of which no above ground remains exists. There remains the potential for below ground remains to exist however. There is the potential that works associated with access improvement could encroach upon this site, and thereby expose and damage associated archaeological remains. This is considered to be a **slight adverse** impact.
- 9.3.5 The assessment has highlighted the potential for Bronze Age archaeological remains to exist within the general area, although no specific evidence of such remains have been identified within the proposed development area. However, the groundworks associated with the development have the potential to expose, damage or destroy any such remains should they be present. Given the lack of positive evidence of such remains this is currently considered to be a **slight adverse** impact.

9.4 Impacts to the Settings of Surrounding Designated Assets

- 9.4.1 The proposed development will not have a direct impact upon any designated heritage asset. A number of such sites lie in the surrounding landscape (see Section 5), and potential indirect impacts upon the settings of these assets are assessed. In association with the development proposals visual impact assessments have been undertaken, and a Zone of Theoretical Visibility (ZTV) has been produced with maps and photomontages provided for the purposes of this assessment (Dulas 2015).
- 9.4.2 This assessment, along with ZTV analysis, has identified five designated assets from which the proposed development will be visible, and may therefore potentially have an indirect impact upon the settings of these monuments. These impacts also take into account the potential cumulative impact of the proposed development along with similar sized single wind turbines at Rhosfach 2.8km to the northeast, and Bryn Bugail (permitted, but not yet built) approximately 1km to the northeast. No further non-visual indirect impacts upon designated assets in the search area have been identified.
- 9.4.3 Scheduled Monuments CM201 to the north and CM319 to the west are similar in form, being Bronze Age burial mounds on prominent ground, and therefore share similar potential impacts. Both sites have extensive all round views, which would include the entire turbine and all three turbines (although Rhosfach is not visible from all the cairns that form CM201). However, although being part of the view from these monuments it does not block these views or form the dominant element in the landscape, and it does not interfere with prominent viewpoints of the monuments from main routeways through the landscape, commonly accessible viewpoints or from any identified contemporary archaeological features. The development does not interrupt inter-visibility between these assets or other contemporary features, and does not form a significant element of the inter-visible backdrop to these assets. The impact is therefore considered to be **slight adverse**.
- 9.4.4 To the east lies CM156, an Iron Age hillfort with extensive views westward. These views theoretically include a partial view of the proposed development, including at least the rotor sweep, and from parts of the hillfort all three turbines will be visible. These views are theoretical as at a distance of approximately 4.5km the turbine will be a relatively indistinct feature and could easily be obscured in places through intervening

vegetation. From this distance the cumulative impact is also minimal. This is therefore considered to be a **neutral** impact.

- 9.4.5 The proposed development will have no visual impact upon the remaining Scheduled Monuments in the search area.
- 9.4.6 To the south lies the edge of the registered Historic Landscape of the Tywi Valley. ZTV analysis has identified that there will be some locations on the edge of the 5km search area from which the turbine will be visible, most notably near Llanfihangel-uwch-Gwili and Pontargothi. Photomontage recreations demonstrate however that the turbine will be a relatively indistinct feature, and the cumulative impact will be even more indistinct. Given these views are also away from the main area of the Historic Landscape which lies along the valleys to the south, and therefore do not reflect the main characteristics of this landscape, the impact is considered to be **neutral**.
- 9.4.7 Within Llanfihangel-uwch-Gwili lies the Grade II listed Church of St Michael (Ref.9386). ZTV analysis suggests there are views northward from the church, up a minor stream valley, which will incorporate partial views (including the rotor sweep) of the proposed development, the other turbines in the area will not be visible. At a distance of 3.6km, and given vegetation lining the road opposite the church, the proposed development is unlikely to be a distinctive element in this viewpoint and the impact is therefore considered to be **neutral**.
- 9.4.8 The proposed development will have no visual impact upon the remaining Listed Buildings in the search area.

10 CONCLUSIONS

10.1 Archaeological potential and impact assessment

Table 6: Assessment of impacts

Site Name	Ref. No.	Value	Site status	Direct impact	Indirect impact
(19 th century cottage)	PRN 21191	Low	None	Slight Adverse	-
Penycae (19 th century cottage)	PRN 21192	Low	None	Large Adverse	-
(19 th century cottage)	PRN 21108	Low	None	Slight Adverse	
(Archaeological Potential – Bronze Age)	-	High	None	Slight Adverse	
Crugiau Round Barrows (Bronze Age burial mounds)	CM201	High	Scheduled Monument	-	Slight Adverse
Crug-y-rhud-hir Round Barrow (Bronze Age burial mound)	CM319	High	Scheduled Monument	-	Slight Adverse

10.1.1 The assessment has identified a potential direct impact upon four heritage assets. Within the proposed development area lie the sites of two former 19th century cottages (PRN 21191 & 21192), with another 19th century cottage site (PRN 21108) lying adjacent to the site access. All three sites are of low archaeological importance. PRN 21192 lies within an area of likely groundworks with a potential **large adverse** direct impact, PRN 21191 in an area of less significant groundworks, and therefore with a potential **slight adverse** direct impact and PRN 21108 adjacent to an area of potential access improvements, therefore with a potential **slight adverse** direct impact.

10.1.2 A medium to low potential for Bronze Age archaeological remains has been identified in the area, which if present would be of high archaeological importance. Groundworks have the potential for a **slight adverse** direct impact.

10.1.3 The assessment has identified a potential indirect (visual) impact upon the setting of two designated heritage assets, CM201 and CM319 that are both Bronze Age burial mounds of high archaeological importance. The proposed development will be visible from each site, but this is considered to be a **slight adverse** indirect impact.

10.2 Mitigation

10.2.1 Given the potential direct impact of the proposed development upon two known assets (PRNs 21191 and 21192), and the potential for Bronze Age archaeological remains in the area, it is recommended that archaeological mitigation will be required during the groundwork phase of the

development. The known assets are both 19th century cottage sites of low archaeological importance, with no visible above-surface remains. It is therefore suggested that an archaeological watching brief during groundworks could be an appropriate method to record any associated archaeological remains should they be encountered during groundworks. Such a method would also allow the opportunity to deal with any potential Bronze Age archaeological remains encountered during groundworks.

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