

CHAPTER 5 – HISTORIC ENVIRONMENT

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5 HISTORIC ENVIRONMENT

Introduction

- 5.1 This chapter relating to the historic environment provides an assessment of the cultural heritage resources on the application Site and in the vicinity, and the potential for significant effects on the historic environment as a result of the Proposed Development on those resources.
- 5.2 The information in this chapter is supported by a Historic Environment Assessment (HEA) prepared by CgMs Consulting. This is provided at Appendix 5.1, dated November 2014. This HEA was prepared to support the planning application for two 100m turbines on the site (W/31728), which was subsequently approved. We consider that the conclusions remain relevant to this proposal.

Site Description

- 5.3 The Site consists of agricultural fields mostly used as rough pasture. It is located approximately 5.5km south-east of Llanybydder in Carmarthenshire.
- 5.4 The Site rises from the southern end, where Esgairliving Farm is situated, and climbs via a narrow steep-sided valley on the eastern side to a hill approximately 350m Above Ordnance Datum. The proposed turbine locations are on the higher ground at the northern end of the Application Site.

Scope

- 5.5 The baseline for archaeological interest was based on a consideration of evidence in the Dyfed Archaeological Trust Historic Environment Record (HER) and the National Monuments Record for Wales (NMR), for the Site and a zone 2km in extent around its boundary. Aerial photographs were also examined at the Central Register of Air Photography for Wales and historic maps were examined at the Dyfed Archaeological Trust HER.

- 5.6 A site walkover has been undertaken in order to prepare the HEA of the Site. Visits to specific heritage assets identified as sensitive to potential impacts from the development have also been undertaken.
- 5.7 Potential direct impacts on buried archaeological resources within the application Site have been assessed.
- 5.8 Potential indirect effects on the significance of all designated heritage assets were assessed for an area of 1km around the turbine locations. Beyond this distance, professional judgement is used to decide whether assets of lesser significance are assessed.
- 5.9 In order to define a reasonable limit for the search area, and in keeping with current industry practice, no assets beyond 5km from the development were assessed in the HEA as it is unlikely that any measurable direct or indirect effects would occur at this distance.
- 5.10 From within the wider 5km study area, assets requiring further assessment were identified using Zone of Theoretical Visibility (ZTV) studies for the proposed turbines. The ZTV used was based on a bare-earth model.
- 5.11 Designated assets within or close to the boundary of the predicted ZTV have been included in the detailed assessment of effects described below, as these have the potential to be visually affected by the proposal.
- 5.12 It should be noted that as part of a previous S73 Application for two 125m turbines on the Proposed Development Site, a revised ZTV (to the one included in the HEA (Appendix 5.1)) brought just one additional designated historic environment asset into consideration in terms of potential impacts (discussed further in the Consultation section below).
- 5.13 Designated historical assets falling outside the criteria above have been 'scoped out' from the detailed settings assessment, as it is not considered that these would experience any effects as a result of the development.

Consultation

- 5.14 As part of previous rounds of consultation for the Application Site, informal discussions were held with Mr Mike Ings, Planning Archaeologist at the Dyfed Archaeological Trust, with reference to the application Site, its

archaeological potential, and possible requirements for further investigations within the application site.

- 5.15 Mr Ings agreed with the basic scope of the assessment, in particular the limitation of the radius of assessment of settings impacts to within 5km of the Application Site. The Dyfed Archaeological Trust has produced draft guidelines for historic environment assessment, which have been followed.
- 5.16 During consultation of the S73 application in 2016, Cadw responded (dated 22/09/16) to the proposal for a maximum 125m turbine tip height by suggesting that for a number of designated historic environment assets (previously identified in the HEA for the 100m consented scheme) the impact on their settings would be altered as detailed in Table 5.1 below:

Table 5.1: Assessment comparison of setting impacts

Scheduled Monument	CgMs initial assessment of significance of impact on setting	Cadw revised assessment of significance of impact on setting
Three Round Cairns SE of Blaen Carreg (CM084)	Negligible	Slight
Pen Lan round barrow cemetery (CM313)	Negligible	Slight
Gelli Dewi Uchaf linear round barrow cemetery (CM 315)	Negligible	Slight
Pen y Gaer Hillfort (CM101)	No impact	Very Slight

- 5.17 This assessment of change to the significance of impacts on the settings of these assets is based on the assumption that the increased turbine height would result in an increase in the likelihood of intervisibility between the assets listed above and the turbine blades.
- 5.18 In addition, the revised ZTV using the new proposed turbine height of 125m as the baseline has brought just one additional designated historic asset into consideration in terms of potential impacts. This is the Caer Pencarreg Hillfort (CM173), approximately 3.5km north-east of the proposed turbine locations. This asset was outside of the original 100m ZTV and therefore it was considered that no impact could arise on its setting from the

proposed turbine due to lack of intervisibility. The revised 125m ZTV includes this asset at the fringe of potential visibility.

- 5.19 The significance of impact on the setting would change to at least a similar level as Pen y Gaer Hillfort, regarded now as Very Slight. The hillfort would be subject to the same scale of impact as the adjacent Gelli Dewi Uchaf linear round barrow cemetery, which is now considered to be subject to a Slight significance of impact.

- 5.20 This is expressed in the Table 5.2 below:

Table 5.2: Assessment comparison of additional setting impacts

Scheduled Monument	CgMs initial assessment of significance of impact on setting	Cadw revised assessment of significance of impact on setting
Caer Pencarreg Hillfort (CM173)	No impact	Very Slight to Slight

- 5.21 In response to Cadw assessment, CgMs (Heritage Consultant) stated (dated 13/10/16 – Appendix 5.2) that it was clear from Cadw's revised assessments and the examination of the new 125m ZTV extent, is that the potential impact on designated historic environment assets that could result from the proposed 125m maximum turbine height is not such that any significant additional harm could arise to the historic environment, compared to that of the consented 100m scheme. Furthermore that, the perceived level of harm, in CgMs opinion, remains at a level which would not preclude development on the grounds of adverse impact on the historic environment.
- 5.22 Cadw further concurred with CgMs assessment (dated 04/11/16). This information is particularly relevant to the Proposed Development as this previous S73 application was for two 125m turbines at the same location as the proposed development and essentially summarises the significance of setting impacts related to the proposed development, of which the highest significance is only slight.
- 5.23 Cadw were consulted at the pre-application stage as a Specialist Consultee for the Proposed Development. In a response letter (dated 01/03/21 – Appendix 5.2) Cadw confirmed that “there have been no

material changes to the historic environment since October 2016 and therefore the GCMS assessment that we agreed with, remains valid”.

Planning Policy Background

Local Development Plan

5.24 The local plan framework is provided by Carmarthenshire County Council, and the new Local Development Plan has been adopted on December 10th 2014, superseding the Carmarthenshire Unitary Development Plan (CUDP), which was adopted in July 2006.

5.25 The Carmarthenshire Local Development Plan has a strategic objective which relates specifically to the historic environment:

“O4: To ensure that the natural built and historic environment is safeguarded and enhanced and that habitats and species are protected.”

5.26 The emerging plan also contains one strategic policy and one specific policy relevant to this assessment:

“Policy SP13 – Protection and enhancement of the built and historic environment.

Development proposals should preserve and enhance the built and historic environment of the County, its cultural, townscape and landscape assets (outlined below), and, where appropriate, their setting. Proposals relating to the following will be considered in accordance with national guidance and legislation.

- A) Sites and features of recognised historical and cultural importance;*
- B) Listed buildings and their setting;*
- C) Conservation areas and their setting;*
- D) Scheduled ancient monuments and other sites of recognised archaeological importance.*

Proposals will be expected to promote the high quality design that reinforces local character and respects and enhances the local setting and the cultural and historic qualities of the plan area."

"Policy EQ1 – Protection of buildings, landscapes and features of historic importance.

Proposals for development affecting landscapes, townscapes, buildings and sites or features of historic or archaeological interest which by virtue of their historic importance, character or significance within a group of features make an important contribution to the local character and the interests of the area will only be permitted where the distinctiveness, integrity or setting of the feature, landscape, townscape or building are not adversely affected."

- 5.27 This assessment therefore seeks to establish whether evidence from the application Site or its vicinity suggests that the application Site contains significant elements of the historic environment, and falls within the scope of policies contained within PPW (see below), and the adopted Carmarthenshire Local Development Plan.

Legislation

- 5.28 The legislative framework for the historic environment in Wales was revised by the Historic Environment (Wales) Act 2016. The 2016 Act amended the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990. It extended the definition of scheduled monuments and enhanced their protection, as well as making changes to the process of scheduled monument consent. Changes were also made to the protection of listed buildings. The 2016 Act also provided for a statutory register of historic landscapes, a statutory list of place names, and imposed a statutory duty on Welsh Ministers to compile and maintain Historic Environment Records (HERs).

Planning Policy Wales

- 5.29 The Welsh Government has published Planning Policy Wales (PPW), currently updated to Version 10 from December 2018. This sets out the land

use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs). Procedural advice is given in circulars and policy clarification letters.

5.30 Chapter 6 'Distinctive and Natural Places' of the PPW, includes a subsection under 'Recognising the Special Characteristics of Places' entitled 'The Historic Environment', which provides policy for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. This section includes details of the Welsh Government's specific objectives for the historic environment, which seek to:

- protect the Outstanding Universal Value of the World Heritage Sites;
- conserve archaeological remains, both for their own sake and for their role in education, leisure and the economy;
- safeguard the character of historic buildings and manage change so that their special architectural and historic interest is preserved;
- preserve or enhance the character or appearance of conservation areas, whilst the same time helping them remain vibrant and prosperous;
- preserve the special interest of sites on the register of historic parks and gardens; and
- protect areas on the register of historic landscapes in Wales.

5.31 This section of PPW defines the historic environment as made up of individual historic features which are collectively known as historic assets. Examples of what can constitute an historic asset include:

- Listed buildings;
- Conservation areas;
- Historic assets of special local interest;
- Historic parks and gardens;
- Townscapes;
- Historic Landscapes;
- World Heritage Sites; and

- Archaeological remains (including scheduled monuments).

- 5.32 PPW also details that the ways in which historic assets are identified can vary. The most important historic assets often have statutory protection or are included in formal registers which identify them as being of special historic interest. Other assets yet to be formally identified could include buried archaeological remains.
- 5.33 PPW provides the national planning policy framework for the consideration of the historic environment and this is supplemented by guidance contained in Technical Advice Note 24 (TAN 24): The Historic Environment¹. TAN 24 is designed to assist local authorities with developing their local plans and for determination of planning applications or listed building consent in relation to historic assets.

Guidance

- 5.34 PPW is also supported by associated Cadw best practice guidance on the historic environment². This series of best-practice guidance publications complement the legislative framework and associated planning policy and advice and support the sustainable management of the Welsh historic environment. All are informed by Cadw's Conservation Principles for the Sustainable Management of the Historic Environment in Wales (2011).
- 5.35 The 'Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process, (Revised Edition 2007)' outlines Categories A – U which are used to place historic environment assets in order of relative importance. These terms are used in this report.

Assessment Methodology

¹ Technical Advice Note 24: The Historic Environment.

<https://gov.wales/sites/default/files/publications/2018-09/tan24-historic-environment.pdf>
(Last Accessed: 11/11/20)

² Cadw best-practice guidance on the historic environment.

https://cadw.gov.wales/sites/default/files/2019-11/Cadw_s%20recent%20best-practice%20guidance%20-%202019-11-12.pdf (Last accessed: 11/11/20)

- 5.36 Assessment of impact on cultural heritage resources of the Proposed Development has been conducted in line with the "Design Manual for Roads and Bridges Volume 11; Section 3; Part 2 'Cultural Heritage'" (DMRB) published by the Highways Agency in 2007, the Institute for Archaeologists Standard and Guidance for historic environment desk- based assessment (revised 2012) and "The Setting of Heritage Assets: English Heritage Guidance" published by English Heritage in 2011. These documents do not provide a prescriptive approach to assessment but identify principles and good practice that have been applied in the methodology for this assessment.
- 5.37 In order to inform the preparation of this chapter, a desk-based Historic Environment Assessment (HEA) was undertaken in September 2014, as well as supplementary comments in response to a Cadw assessment, provided by CgMs for the S73 Application (Appendix 5.2). As previously mentioned we consider this information relevant to support this assessment.
- 5.38 Baseline historic environment data was also recovered for an area within a 1 km radius of the application Site to ensure that, in addition to records of evidence within the application site, relevant records from the surrounding area could also be considered. The following data sources have been used in the compilation of baseline data:
- Dyfed archaeological Trust Historic Environment Record;
 - National Monuments Record Wales (RCHAMW);
 - Central Register of Air Photographs for Wales;
 - Register of Landscapes of Historic Interest in Wales;
 - Cadw;
 - Published and unpublished sources; and
 - Site walkover inspection and map regression exercise.

Significance criteria

- 5.39 The determination of magnitude of effect is based on the level of effect that the Proposed Development may have on cultural heritage resources,

together with the current state of survival/condition of the receptor, taking into account the nature of past development or management effects.

These effects could include temporary or permanent land take or excavation, ground disturbance and compaction.

5.40 Development effects can be characterised as to whether they would be:

- Direct or Indirect;
- Short, Medium or Long Term;
- Reversible or Irreversible; and/or
- Cumulative

5.41 The magnitude of effect is assessed by taking into consideration the extent/proportion of the application site/feature affected, its type, its survival/condition, its fragility/vulnerability and its potential amenity value. In considering the above factors the criteria for assessing the magnitude of predicted change on cultural heritage resources are given in Table 5.3. Both physical and setting effects are included as harm to significance can result through loss to or development within the setting of a heritage asset.

Table 5.3: Criteria for Appraisal of Magnitude of Change on Heritage Resources

Impact Significance	Definition
Major	• Total or substantial loss of the significance of a heritage asset. • Substantial harm to a heritage asset's setting, such that the significance of the asset would be totally lost or substantially reduced (e.g. the significance of a designated heritage asset would be reduced to such a degree that its designation would be questionable; the significance of an undesignated heritage asset would be reduced to such a degree that its categorisation as a heritage asset would be questionable).
Moderate	• Partial loss or alteration of the significance of a heritage asset. • Considerable harm to a heritage asset's setting, such that the asset's significance would be materially affected/considerably devalued, but not totally or substantially lost.
Minor	• Slight loss of the significance of a heritage asset. This could include the removal of fabric that forms part of the heritage asset, but that is not integral to its significance (e.g. the

Impact Significance	Definition
	demolition of later extensions/additions of little intrinsic value). • Some harm to the heritage asset's setting, but not to the degree that it would materially compromise the significance of the heritage asset. • Perceivable level of harm, but insubstantial relative to the overall interest of the heritage asset.
Negligible	• A very slight change to a heritage asset. This could include a change to a part of a heritage asset that does not materially contribute to its significance. • Very minor change to a heritage asset's setting such that there is a slight impact not materially affecting the heritage asset's significance.
No Impact	• No change to a heritage asset or its setting.

5.42 The sensitivity of a heritage asset depends on factors such as the condition of the asset and its perceived heritage value/importance. The sensitivity of the heritage asset is also defined by its importance in terms of national, regional or local statutory or non-statutory protection and designations.

5.43 The 'Guide to Good Practice on Using the Register of Landscapes of Historic Interest in Wales in the Planning and Development Process. (Revised Edition 2007, CCW/Cadw) provides a scale by which to measure the significance of heritage assets. This defines 5 categories of asset, A-D and U, detailed in Table 5.4 below.

Table 5.4: Criteria for assessing the sensitivity of receptors

Sensitivity	Category	Description
High	A, B	• World Heritage Sites • Scheduled Monuments and archaeological sites of demonstrable schedulable quality & importance; • Protected Wreck Sites • Registered Battlefields • Grade I and II* listed buildings • Grade I and II* registered parks and gardens • Grade II listed buildings; • Grade II registered parks and gardens • Registered Historic Landscapes • Conservation Areas
Medium	C	• Local Authority designated sites and their settings; • Undesignated sites of demonstrable regional importance
Low	C/D	• Sites with specific and substantial importance to local interest groups; • Sites whose importance is limited by poor preservation and poor survival of contextual associations.
No Importance	D	• Sites with no surviving archaeological or historical component.
Unknown	U	• Importance cannot be ascertained.

5.44 The sensitivity of the receiving environment, together with the magnitude of effect, defines the significance of the effect as set out in Table 5.5. The environmental effect outlined below represents the effect on the significance of the heritage assets without mitigation. A significance of effect of 'major' or 'moderate' would be considered to equate to significant impacts highlighted in the context of Environmental Impact Assessment (EIA) Regulations.

5.45 This process is not quantitative, but relies upon professional judgement at each step. However the factors considered in informing these judgments and in arriving at the various rankings of value and magnitudes of effect are observable facts (i.e. numbers of assets, spatial relationships, designations, impacts).

- 5.46 Designated heritage assets such as scheduled ancient monuments and higher graded listed buildings and their settings (Categories A & B) are all of high sensitivity and so even low levels of predicted magnitude of change to these features can be significant in EIA terms. Assessment of the effect of development on the setting of heritage assets follows the guidance issued by English Heritage in 2011.

Table 5.5: Criteria for assessing significance of effect

Sensitivity of Resource	Magnitude of Effect			
	Major	Moderate	Minor	Negligible
High	Major	Moderate	Minor	Negligible
Medium	Moderate	Minor	Negligible	Negligible
Low	Minor	Negligible	Negligible	Negligible
No Importance	Negligible	Negligible	Negligible	Negligible

- 5.47 Registered Parks and Gardens, Registered Battlefields, Shipwrecks, World Heritage Sites, Conservation Areas, and Locally Listed Buildings are not considered within this chapter because there are no assets of these types within the application Site, or within a 5km radius.
- 5.48 In Wales, some landscape areas have been included on the non-statutory Register of Landscapes of Historic Interest in Wales, which recognises the historic value of the landscape as a consideration within the planning process. No registered landscape areas lie within 5km of the Application Site, and are not considered in this chapter.

Baseline Conditions

- 5.49 This section provides an analysis of relevant designations, considerations and sources of information to establish the baseline conditions of the application Site.

Archaeological Heritage

- 5.50 Current evidence suggests a low to medium potential for Bronze Age remains with a low potential for all other periods. Any remains which may be present within the application Site are likely to be of local significance at best, apart from the Bronze Age, which have the potential to be of regional significance.
- 5.51 The HEA assessed the impact of the Proposed Development on the settings of designated archaeological assets (Scheduled Monuments) in the surrounding area. Three of these assets were situated outside of the HEA ZTV for the proposed turbine locations (Appendix 5.1). Given the lack of intervisibility indicated by the ZTV, it was considered that there would be no impact on their significance. However, as part of the revised ZTV for the 125m turbines one additional designated historic environment asset was brought into consideration in terms of potential impacts. This is the Caer Pencarreg Hillfort (CM173).
- 5.52 A further three assets were modelled as nominally being within the ZTV, but a site visit demonstrated that the degree of screening afforded by the local topography and vegetation effectively prevented intervisibility. Given the observed lack of intervisibility, it was considered that there would be no impact on their significance. However, following Cadw assessment for the S73 application, it was considered that the 125m turbines would have a very slight impact on Pen y Gaer Hillfort (CM101), opposed to no impact for the 100m turbines. The heritage consultant CgMs concurred.

- 5.53 As such, the following five Scheduled Monuments are considered to be potentially intervisible with the proposed development turbine locations:
- Pen Lan Round Barrow Cemetery (CM 313);
 - Three Round Cairns SE of Blaen Carreg (DM 084);
 - Gelli Dewi Uchaf linear round barrow cemetery (CM 315);
 - Pen y Gaer Hillfort (CM 101); and
 - Caer Pencarreg Hillfort (CM 173).
- 5.54 The impact to these assets was assessed by a combination of site visit, significance and setting. The assessment found that the Proposed Development would have a Negligible to slight impact on the significance of these assets (see 5.5 below).

Built Heritage

- 5.55 No direct impacts on any above ground heritage assets are predicted. The indirect impacts of the Proposed Development on the settings of designated assets in the surrounding area has been assessed within a 5km study area.
- 5.56 The majority of the built heritage assets within 5km of the application Site are outside of the ZTV (Appendix 5.1) and do not therefore require detailed assessment. Three listed buildings (all Grade II) were modelled by the ZTV as having potential intervisibility with the application Site, and were assessed in detail:
- Rhiw farmhouse;
 - Former cottage W of Beehive Cottage;
 - Capel Rhydybont;

- 5.57 The impact on these assets was assessed by means of a site visit to confirm the reliability of the ZTV model, and also by an assessment of the significance and settings for these assets. This assessment found that the Proposed Development would have a Negligible effect on the significance of one asset, Rhiw farmhouse, and no impact on the significance of the other two.

Potential Effects

- 5.58 This section provides a description of the potential effects that could arise from the Proposed Development during the construction and operational phases. Sources of impacts on cultural heritage receptors may include:
- Soil stripping and excavation of foundations for the turbine;
 - Cutting of new roads and associated services;
 - Increased traffic and construction noise during the construction phase; and
 - Indirect visual setting impacts.

Previous Impacts

- 5.59 Documentary and cartographic evidence illustrates that the application Site has been subject to no previous development, and very little disturbance, beyond evidence of late 19th century land enclosure, and recent forestry planting.

Construction Phase Effects

- 5.60 As discussed above, and in further detail in the HEA (Appendix 5.1) there is limited potential for significant buried archaeological remains at the application Site. Potentially significant effects on the historic environment are therefore primarily limited to indirect effects on the setting of designated heritage assets in the wider area surrounding the application Site during the operational phase. However, as a precautionary measure, effects resulting from construction activities have also been considered.

- 5.61 This section sets out an assessment of the effect of the Proposed Development on the significance of the identified heritage assets during the construction phase of the proposed development, using the methodology outlined above.
- 5.62 The heritage assets, their sensitivity and the magnitude of effect of the impact of the Proposed Development (and the significance of the impact) are described in Table 5.6 below.

Table 5.6: Construction Phase Effects of Proposed Development

Description	Sensitivity	Description of construction effect and Magnitude of Effect without mitigation	Significance of effect without mitigation
Pen Lan Barrow Cemetery (CM313)	Scheduled Monument - HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place 3.6km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the construction phase.	Negligible
Three round cairns SE of Blaen Carreg (CM084)	Scheduled Monument - HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place 3.4km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the	Negligible

		construction phase.	
Gelli Dewi Uchaf Linear Round Barrow Cemetery (CM315)	Scheduled Monument - HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place at least 3.5km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the construction phase.	Negligible
Pen y Gaer Hillfort (CM101)	Scheduled Monument - HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place at least 4.9km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the construction phase.	Negligible
Caer Pencarreg Hillfort (CM173)	Scheduled Monument - HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place at least 3.6km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the	Negligible

		construction phase.	
Rhiw Farmhouse (80706)	Listed Building – HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place 2.4km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the construction phase.	Negligible
Former Cottage W of Beehive Cottage (80703)	Listed Building – HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place 3.3km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the construction phase.	Negligible
Capel Rhydybont (22265)	Listed Building – HIGH	There would be no physical impacts to this asset. While there would be construction activity within the application Site, this would take place 4.4km from the asset. Given this distance from the application Site it is considered that the Proposed Development would have no impact on this asset during the	Negligible

		construction phase.	
Non-designated archaeological evidence: potential remains within the application Site	Currently unknown, but likely to be Low to Medium at most.	There is the potential for Major change to any buried archaeological remains.	Currently unknown, but with the potential to be Minor to Moderate adverse.

Operational Phase Effects

- 5.63 The heritage assets, and the Magnitude of effect of the impact of the Proposed Development (using criteria in **Error! Reference source not found.**) and the significance of the impact (using the criteria in **Error! Reference source not found.**) are described in Table 5.7, below. All designated assets are considered to be of similar high sensitivity for the purposes of this assessment. To note, detailed in the revised assessment by Cadw for the 125m turbines in 2016, 'slight' and 'very slight' significance ratings were used. For consistency, these ratings have been used where relevant in this report and should be considered to fall between negligible and low, while not adding any significant additional harm to the historic environment when compared to negligible significance.
- 5.64 The non-designated archaeological heritage assets considered in Table 5. would have already been removed and, where appropriate, mitigated prior to the operational phase, and so are not considered further.
- 5.65 In summary, no more than a slight effect on the significance of any designated asset has been identified within the study area.

Table 5.7: Assessment table of potential impacts on heritage assets

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
80706	Rhiw Farmhouse, LB II	2.4km S	Description: An early 19th century farmhouse. Built of rubble stone with a slate roof, 2-storey. Later 19th century extensions in the form of a cow house and other agricultural buildings have since been demolished. Setting: The house is on the southern side of a steep-sided valley at 260m AOD, but is enclosed within a tight ring of mature trees. Other woodland lies on the valley slope to the north. As a result of this enclosure, the wider setting with views over the landscape to the north (towards the application Site) is curtailed, and the significance of this aspect of the setting is correspondingly reduced. Summary of significance: HIGH -the house has significance as a rare early 19th century regional farmhouse retaining original character and detail. Its significance lies in the survival of original fabric, and not primarily in its setting.	The application Site lies within the wider setting of the asset, but these wider views are not an essential element of the asset's significance. The application Site would make a small contribution to the setting of the asset. It is therefore considered that Proposed Development would result in a Negligible magnitude of change to the setting of the house, resulting in a Negligible impact to the significance of the asset.	Negligible

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
			Assessment of application Site relationship to asset: The proposed turbine location lies within the wider setting of the house, but this wider setting is limited by enclosing trees. While the upper parts of the turbines might be visible from the asset, they would form a relatively small part of extensive views from the asset.		
80703	Former cottage W of Beehive Cottage, II	3.3km NW	Description: An early 19th century labourer's cottage, of limewashed rubble stone and corrugated iron roof, now partly ruinous. Single-storey. Setting: The cottage is within the village of Ty Mawr, and enclosed by other buildings and trees. The asset does not enjoy a wide setting. Summary of significance: HIGH - the house has significance as a rare surviving small labourer's cottage virtually unaltered since the 19th century. It has significance as a document of the local rural society of the 19th century. Assessment of Application Site relationship to asset: The Application Site potentially lies within the wider	The location of the cottage, and the surrounding buildings, trees, intervening topography and distance mean that the application Site could not form a part of the setting of the asset. It is therefore considered that Proposed Development would result in No	Negligible

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
			setting of the asset, but the surrounding buildings and trees, the intervening topography, and distance from the asset, mean that in practice the turbines would not form a part of the asset's setting.	Impact to the setting of the asset, resulting in No Impact to the significance of the asset.	
22265	Capel Rhydybont, II	4.4km NW	Description: Early 20th century independent chapel. Designed by W Beddoe Rees. Built in Gothic style with Forest of Dean stone dressings and a slate roof. It is plain rendered and 2 storeys high. It has a lofty interior with a gallery on four sides. Setting: The chapel lies on the north side of the B4337 at Rhyd-y-bont. Its façade is to the south-west, and not in the direction of the application Site. It lies in the south-east corner of its associated graveyard. Other buildings of the village lie immediately to the south-east, towards the application Site. The chapel has a setting focussed on the graveyard, with open agricultural land to the south-east forming the views from the main entrance. Summary of significance: HIGH - the	The location of the chapel, the orientation of its outlook, and the distance from the application Site indicate that the application Site would not form a major part of the setting of the asset. It is therefore considered that Proposed Development would result in a Negligible magnitude of change to the	Negligible

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
			house has significance as a scarce rural work by one of the leading Welsh chapel architects, with good Gothic detail externally and complete interior. The significance is vested in the survival of historic fabric, and associations with the local community. The wider setting and long-distance views are not part of the design of the chapel, and much of its significance is experienced within the interior of the building. The wider setting therefore makes a limited contribution to the significance of the asset. Assessment of application Site relationship to asset: The application Site is theoretically visible from the asset, but it would be from the blank south-eastern wall. The application Site would not be visible from the main entrance of the chapel, or from its interior where the heart of its significance lies.	setting of the asset, resulting in a Negligible impact to the significance of the asset.	
CM313, 416556	Pen Lan Round Barrow Cemetery,	3.6km NW	Description: A line of three round barrows, lying to the north of a wood, in agricultural land. The cairns are in a	While the application Site would lie within	Slight

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
	Scheduled Monument		poor state of survival, and are now low mounds up to 0.75m high. They are close to the top of a hill overlooking the Teifi valley to the north. Setting: The close setting is contained within the hedgerows and the field(s) in which the barrows lie. They have relatively open aspects to the north and north-east. They have a wide setting, which does include some views over the landscape to the south-east, towards the PTL. Summary of significance: The barrows have significance in their retention of material from their original date of construction, and as being representative of spiritual, religious and cultural practices in the Bronze Age. They also have a group significance, and a significance as long-lasting features in the wider landscape. The setting of the barrows is therefore a major contributor to their significance. Assessment of application Site relationship to asset: While the	the wider setting of the barrows, and that setting is a contributor to the significance of the asset, the turbines would form only a very small part of that setting, and would only make a slight significant change. It is therefore considered that the Proposed Development would result in a Slight magnitude of change to the setting of the Scheduled barrows, resulting in a Slight impact to the significance of the asset.	

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
			application Site does lie within the wider setting of the monument, any views of the turbines would be of the upper parts, beyond the high ground of Lwyndrissi hill, which partially masks the turbine location from view. The turbines would form only a very small part of an extensive wider setting.		
CM084 303865 303866 303867	Three Round Cairns SE of Blaen Carreg	3.4km NW	Description: A line of three round barrows, lying in agricultural land. The cairns are in a poor state of survival, and are now low mounds up to 0.80m high. They are on the north-western end of a ridge which slopes down towards the Teifi valley. Setting: The close setting is contained within the hedgerows and the field(s) in which the barrows lie. Hedgerows and overgrowth restrict views from the barrows to a large extent. They thus have only partial access to a wider setting, which does include some views over the landscape to the south-east, towards the application Site. Summary of significance: The barrows have significance in their	The setting is a contributor to the significance of the asset, although limited by surrounding vegetation. While the application Site would lie within the wider setting of the barrows, it would form only a very small part of that setting, and would only make a slight significant change.	Slight

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
			retention of material from their original date of construction, and as being representative of spiritual, religious and cultural practices in the Bronze Age. They also have a group significance, and a significance as long-lasting features in the wider landscape. The setting of the barrows is therefore a contributor to their significance, but of lesser significance than the Pen Lan barrows (for example) due to the masking effect of the surrounding hedgerows. Assessment of application Site relationship to asset: While the application Site does lie within the wider setting of the monument, any views of the turbines would be partial, and of the upper parts. This is due to the masking effects of the surrounding vegetation, and the high ground of Lwyndrissi hill, which partially masks the application Site from view. The turbines would form only a very small part of a limited wider setting.	It is therefore considered that Proposed Development would result in a Slight magnitude of change to the setting of the Scheduled barrows, resulting in a Slight impact to the significance of the asset.	

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
CM315	Gelli Dewi Uchaf linear round barrow cemetery	3.5km NE	Description: A line of 5 to 6 much mutilated and disturbed round barrows, lying on the western slope of a low ridge. The surrounding land is mainly enclosed upland pasture. The barrows are known from aerial photographs, and not all have been surveyed on the ground. The cairns are in a poor state of survival, and are now low mounds up to 0.80m high. Setting: The setting is quite open, without substantial hedgerows. The barrow cemetery has an extensive setting across a large area of countryside, including views south-west towards the PTL. Summary of significance: The barrows have significance in their retention of material from their original date of construction, and as being representative of spiritual, religious and cultural practices in the Bronze Age. They also have a group significance, and a significance as long-lasting feature in the landscape. The setting of the barrows is therefore a major contributor to their significance, as	The Application Site lies within the wider setting of the asset, but at a considerable distance (3.5km). While the setting is an important element of the asset's significance, the Application Site makes a very small contribution to the setting, and would only make a slight significant change. It is therefore considered that proposed development would result in a Slight magnitude of change to the setting of the	Slight

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
			they command wide views (to and from) across the countryside. Assessment of application Site relationship to asset: While the application Site does lie within the wider setting of the monument, any views of the turbines would be partial, and only of the upper parts. This is due to the masking effects of the surrounding topography, as the ground rises up considerably between the barrow cemetery and the application Site, which are at approximately the same elevation.	standing stone, resulting in a Slight impact to the significance of the asset.	
CM101	Pen y Gaer Hillfort	4.9km NW	Description: A strongly walled fort which crowns a hill at the east end of a long ridge descending from the Carneddau towards the Conway Valley: the defences are defined by three ramparts almost certainly incorporating the work of several periods. The entrance lies at the W end of the fort, at the point of easiest approach. Outside the outer rampart on the S and W are two areas set with pointed stones to form a chevaux-de-frise, local rocks 0.3m to 0.9m long but	The Proposed Development would result in a Very Slight magnitude of change to the setting of the Scheduled Monument, resulting in a Very Slight impact to the significance of the asset.	Very Slight

ID	Name and designation	Distance from nearest turbine	Description, significance, and setting	Impact Assessment	Significance of impact without mitigation
			mainly the shorter lengths. Inside and between the ramparts are 20 huts in one of which excavation revealed evidence for iron working.		
CM173	Caer Pencarreg Hillfort	3.6km NE	Description: A rather irregular sub-oval hillfort, a single trace of ramparts, possibly representing a degraded stone wall, encircling the generally level summit of a steep-sided, isolated hilltop, the enclosed area being some 100m north-east to south-west by 92m, showing an entrance on the south-east side, with possible a second facing north-west.	The Proposed Development would result in a Very Slight to Slight magnitude of change to the setting of the Scheduled Monument, resulting in a Very Slight to Slight impact to the significance of the asset.	Very Slight to Slight

Cumulative Effects

- 5.66 The potential for cumulative impacts of surrounding, committed and proposed developments is assessed below.

Table 5.8 Other developments to be considered for cumulative effects

Schemes	Carmarthenshire planning ref	Status	No. Turbines / distance	Tip height
Brechfa Forest West	W/30534	Operational	28, 14km SW	145m
Alltwallis		Operational	10, 16km SW	110m

- 5.67 The potential effects of the Proposed Development on the significance of designated heritage assets within 5km of the application Site has been assessed as **Slight** at most, or **No impact** has been recorded.
- 5.68 The only asset likely to be affected by the approved developments listed in Table 5. above, is the Grade II listed Rhiw farmhouse, 2.4km south of the application Site. Due to the limited effect of the Proposed Development on this asset, it is considered that it would not contribute significantly to cumulative effects on the significance of the asset.

Mitigation Measures

- 5.69 This section identifies any necessary mitigation measures in order to avoid, reduce or offset the potential for significant adverse effects on the historic environment.

Non-designated heritage assets

- 5.70 A minor to moderate adverse significance of effect is noted in relation to the loss of any potential buried non-designated remains within the application Site. If considered necessary a programme of archaeological works, such as archaeological monitoring of groundworks during construction could secure the archaeological interest of the application Site. This could be secured via a suitably worded condition to planning consent should this be granted.

Designated heritage assets

- 5.71 No significant effects have been identified in relation to designated heritage assets, with the only effects considered as Negligible. As such no form of mitigation is considered necessary to mitigate the effects of the Proposed Development to these assets.

Summary of Residual Effects

- 5.72 The implementation of a programme of archaeological works, such as a watching brief, would serve to reduce the significance of effect on any buried archaeological remains from minor/moderate adverse to **Negligible**.
- 5.73 Designated assets in the wider area would not experience any significant indirect effects as a result of impacts on their settings. These assets are screened from the application Site by existing topography and intervening landscape features, particularly the large woodland blocks in the wider area, or are located at such a distance that they would not be visually affected by the development.
- 5.74 The potential for cumulative effects from other developments in the wider area, both committed and planned, has also been assessed. None of these would result in more than a **Negligible** significance of effect on the identified heritage assets, which is not significant.

Table 5.9: Mitigation Measures

Description	Assessment of significance/sensitivity	Significance of impact without mitigation	Description of mitigation measures	Residual significance of impact
Construction Phase				
Rhiw Farmhouse	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Former Cottage to w of Beehive	High	No impact	No mitigation required	Residual effect is considered to be No

Cottage				impact
Capel Rhydybont	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Pen Lan Barrow Cemetery	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
3 Round Barrows SE of Blaen Carreg	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Gelli Dewi Uchaf Linear Barrow cemetery	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Pen y Gaer Hillfort	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Caer Pencarreg Hillfort	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Non-designated archaeological evidence: potential archaeological remains	Low to Medium	Minor to Moderate	A programme of archaeological investigation would serve to counter any partial loss of potential evidence. An appropriate level for this would be archaeological monitoring of any intrusive ground-works. This could be secured via a	Residual effect would be reduced to Negligible

			suitably worded planning condition.	
Operational Phase				
Rhiw Farmhouse	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Former Cottage to w of Beehive Cottage	High	No impact	No mitigation required	Residual effect is considered to be No impact
Capel Rhydybont	High	Negligible	No mitigation required	Residual effect is considered to be Negligible
Pen Lan Barrow Cemetery	High	Slight	No mitigation required	Residual effect is considered to be Slight
3 Round Barrows SE of Blaen Carreg	High	Slight	No mitigation required	Residual effect is considered to be Slight
Gelli Dewi Uchaf Linear Barrow cemetery	High	Slight	No mitigation required	Residual effect is considered to be Slight
Pen y Gaer Hillfort	High	Very Slight	No mitigation required	Residual effect is considered to be Very Slight
Caer Pencarreg Hillfort	High	Very Slight to Slight	No mitigation required	Residual effect is considered to be Very Slight to Slight

Non-designated archaeological evidence: potential archaeological remains	Low to Medium	No impact	Full mitigation would have already taken place, no further mitigation required.	Residual effect would be reduced to no impact
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Summary and Conclusions

- 5.75 The potential effects on the historic environment have been assessed. A range of possible effects, including direct physical impacts and indirect impacts on settings have been identified, which have the potential for adverse effects on the significance of heritage assets.

Non-designated archaeological assets

- 5.76 No known non-designated archaeological heritage assets have been identified as likely to suffer an impact from the Proposed Development.
- 5.77 A potential for as yet unknown archaeological remains to survive within the application Site has been identified. There is considered to be moderate potential for remains from the Bronze Age to be present within the site, which may be of regional significance at most, and thus of **Low to Medium** sensitivity to change at most.
- 5.78 A potential effect on the significance of these potential buried assets has been identified as of **major to moderate** magnitude, which would result in a **negligible to moderate** significance of effect.
- 5.79 This effect could be mitigated by a programme of archaeological works, for example a watching brief, implemented during the construction phase of the development. This would have the effect of reducing the significance of effect on any buried remains to **negligible**.

Designated heritage assets

- 5.80 Designated assets in the form of listed buildings and scheduled monuments have been identified which may be subject to potential

impacts. No direct physical impacts on any designated heritage assets would arise from the Proposed Development.

5.81 The potential for indirect impacts on the settings of designated assets has been assessed, and no more than a **Slight** effect on the significance of any designated heritage assets has been identified during either the construction or operational phases of the development, which is not significant.

5.82 No mitigation is required to reduce affects on designated assets.

All heritage assets

5.83 The residual effects on all heritage assets will be no more than of **Slight** significance.

5.84 Cadw concurred with the comments and assessment made by CgMs for the S73 Application for two turbines at 125m in the same location as the Proposed Development (letter dated 4th November 2016 and re-confirmed on 1st March 2021), in which it was concluded that the perceived level of harm is at a level which would not preclude development on the grounds of adverse impact on the historic environment.