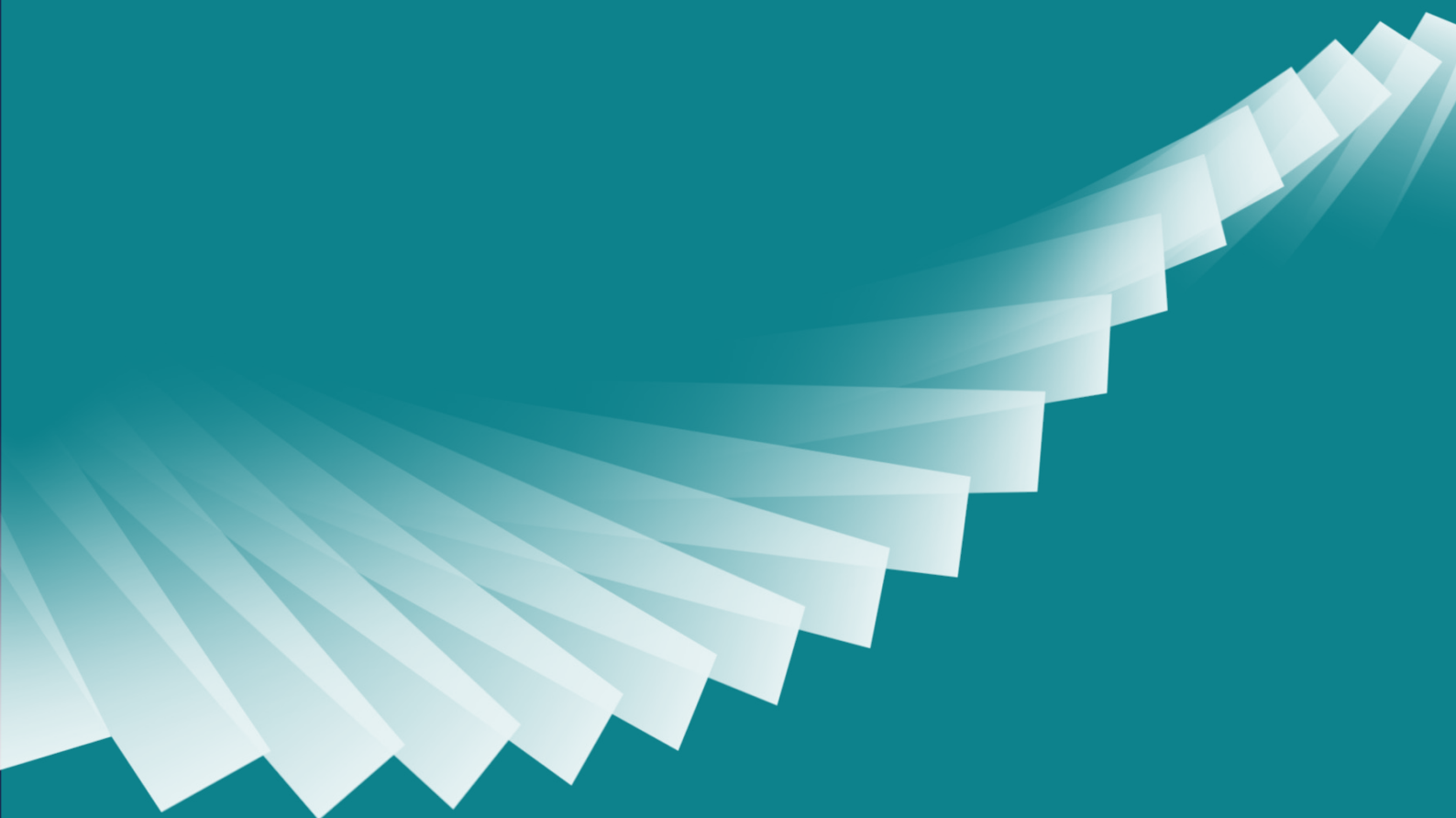




Bute Energy
Aberedw Energy Park

Environmental Statement

Chapter 6: Archaeology and Cultural Heritage



Chapter 6

Archaeology and Cultural Heritage

Introduction

6.1 This chapter presents the findings of the assessment of the likely significant effects of the Proposed Development on the historic environment. The historic environment is defined in Planning Policy Wales (PPW) Edition 12 (2024)¹ as comprising all surviving physical elements of past human activity, the individual elements of which constitute historic assets². These historic assets can include historic buildings, places, landscapes, as well as archaeological remains that provide physical evidence of past human activity and hold of sufficient value (i.e. heritage significance) to this and future generations to merit consideration in the planning system. This assessment therefore focuses on if, and how, the Proposed Development will change the heritage significance of historic assets within and around it.

6.2 Relevant historic assets are also discussed in the Landscape and Visual Impact Assessment (LVIA) presented in **Chapter 5: Landscape and Visual Amenity** of this ES. The LVIA process focuses on a development's visibility from a location, such as a historic asset, and the effect that visibility has on visitors to that location; in other words on visual amenity, with people and their perceptions as the receptor. In contrast, the historic environment assessment focuses on effects to the heritage significance of historic assets. Each assessment therefore considers different types of receptors (people vs. heritage significance) and effects and can come to differing conclusions on levels of effect relating to the same receptor.

6.3 The historic environment assessment was undertaken by LUC. The chapter has been authored by Cecilia Galleano, David Bull, and Steven Orr (see **Appendix 1.1: Statement of Expertise**).

¹ Welsh Government (2024) Planning Policy Wales (Edition 12).

² Historic assets are synonymous with 'heritage assets', 'cultural historic assets', 'sites' or 'monuments'.

6.4 This chapter is supported by figures which are referenced throughout the text, and which can be found in **Volume 2: Figures**:

- **Figure 6.1: Location of Historic Assets within the Site**
- **Figure 6.2: Location of Historic Assets within the Core Study Area**
- **Figure 6.3: Location of Designated Historic Assets within the Wider Study Area**
- **Figure 6.4: Location of Visualisations to Inform the Assessment of Setting Change**

6.5 This chapter is supported by **Appendix 6.1: Historic Environment Assessment** in **Volume 3: Technical Appendices** which is referred to throughout.

6.6 The viewpoint locations of visualisation prepared to support this chapter and accompanying **Appendix 6.1** are shown on **Figure 6.4: Location of Visualisations to Inform the Assessment of Setting Change** and can be found in **Volume 4: Visualisations**.

6.7 The following terminology is referred to throughout this chapter:

- **Designated historic asset:** Designation highlights a building, site, monument or area's special interest and value to this and future generations and gives it protection under law or policy. Such historic assets meet the relevant designation criteria provided in Annexes A-C of PPW: Technical Advice Note 24: The Historic Environment³ or, in the case of World Heritage Sites, are of outstanding universal value and meet one of the published criteria; their value (importance) has therefore been established through the designation process. Designated historic assets relevant to this assessment comprise:
 - **Scheduled monument:** A monument included on the schedule of monuments compiled under the Historic Environment (Wales) Act 2023. It is a criminal offence to undertake works affecting a scheduled monument without written consent from Cadw on behalf of Welsh Ministers.
 - **Listed building:** A building of special architectural or historic interest included in the statutory list compiled under the Historic Environment (Wales) Act 2023. Any building or structure or any part of a building, (or any building or structure falling within the curtilage

³ Welsh Government (2017) Planning Policy Wales – Technical Advice Note 24: The Historic Environment – Annex A, B and C.

of a listed building and dating prior to 1948) may be listed. Listed status protects a building against unauthorised demolition, alteration or extension. It ensures that its special interest is taken into account when proposals are put forward which affect its character or appearance.

- **Conservation area:** An area of special architectural or historic interest designated by local planning authorities under powers delegated by the Historic Environment (Wales) Act 2023, the character or appearance of which it is desirable to preserve or enhance.
- **Registered Historic Park and Garden (RHPG):** A designed landscape included in the Cadw Register of Landscapes Parks and Gardens of Special Historic Interest in Wales. Entry on the register recognises its national importance and is a material consideration in planning policy.

- **Non-designated historic asset:** These are buildings, monuments, sites, places, areas or landscapes identified as having a degree of significance meriting consideration in planning decisions because of their historic interest but which do not meet the criteria for designation.
- **Heritage significance:** The sum of the value(s) of receptors (historic assets) is referred to in historic environment policy as their 'significance'. To avoid confusion with the EIA concept of the 'Significance of Effect' upon receptors, the significance of historic assets will be termed their 'heritage significance'.
- **Setting:** Monuments, buildings, gardens and settlements were almost always placed and orientated deliberately, normally with reference to the surrounding topography, resources, landscape and other structures. PPW⁴ and Cadw's setting guidance⁵ define setting as the surroundings in which a historic asset is understood, appreciated and experienced – embracing present and past relationships to the surrounding landscape. The extent of setting is not fixed and may change as the historic asset and its surroundings evolve.
- **Zone of Theoretical Visibility (ZTV):** This is a computer-generated tool to identify the theoretical extent of visibility of a development. The elevation(s) of a development is tested

⁴ Welsh Government (2024) Planning Policy Wales (Edition 12).

⁵ Welsh Government (2017) Setting of Historic Assets in Wales.

against a bare earth 3D terrain model which does not feature buildings, vegetation or other boundaries which may influence the visibility of a development. In open terrain where there are few intervening features, a ZTV provides a reasonable representation of visibility. However, visibility from lowland rural areas is often affected by tree and hedgerow cover; whilst in developed areas, visibility is usually determined by intervening buildings. A ZTV therefore presents a maximum-case visibility scenario.

- **Sensitivity** is a measure of how likely the heritage significance of a historic asset is to be affected by a specific proposed change. This can relate to physical change (e.g. change/removal of historic fabric) or setting change (e.g. the introduction of a novel type of development or land use within the setting of a historic asset that affects the contribution setting makes to the heritage significance of an asset).
- **Susceptibility** is distinct from ‘sensitivity’ in that susceptibility is about inherent risk from setting change – i.e. historic assets where setting makes a high level of contribution to significance, independent of a specific threat.

Assessment Methodology

Legislation, Policy and Guidance

Legislation and Policy

6.8 This assessment is carried out in accordance with the principles contained within the following legislation:

- Historic Environment (Wales) Act 2023; and,
- Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.

6.9 Relevant planning policy is covered in **Appendix 6.1**.

Guidance

6.10 This assessment is carried out in accordance with the principles contained within the following documents:

- Code of Conduct: professional ethics in archaeology (Chartered Institute for Archaeologists (CIfA), 2022);⁶
- Standard and guidance for historic environment desk-based assessment (CIfA, 2020);⁷
- Conservation Principles for the sustainable management of the historic environment in Wales (Cadw, 2011) (hereafter ‘conservation principles’);⁸
- Setting of Historic Assets in Wales (Cadw, 2017) (hereafter ‘setting guidance’);⁹
- Heritage Impact Assessment in Wales (Cadw, 2017);¹⁰ and,
- Principles of Cultural Heritage Impact Assessment (PCHIA) in the UK (CIfA, Institute of Historic Building Conservation and Institute of Environmental Management and Assessment, 2021).¹¹

Consultation

6.11 In undertaking the assessment, consideration has been given to the Scoping responses and other consultation which has been undertaken as detailed in **Table 6.1**

⁶ Chartered Institute for Archaeologists (CIfA) (2014, updated 2022) Code of conduct: professional ethics in archaeology.

⁷ CIfA (2014, updated 2020) Standard and guidance for historic environment desk-based assessment.

⁸ Welsh Government (2019) Conservation Principles for the sustainable management of the historic environment in Wales.

⁹ Welsh Government (2017) Setting of Historic Assets in Wales.

¹⁰ Welsh Government (2017) Heritage Impact Assessment in Wales.

¹¹ CIfA, Institute of Historic Building Conservation (IHBC) and Institute of Environmental Management and Assessment (IEMA) (2021) Principles of Cultural Heritage Impact Assessment (PCHIA) in the UK.

Table 6.1 Consultation responses

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Heneb: Clwyd Powys Archaeology (hereafter 'HCPA') April 2024	EIA Scoping Direction (5 April 2024)	HCPA provides a list of guidance documents which should be referred to in the assessment.	The assessment has been undertaken in line with the principles contained within the recommended guidance identified in paragraph 6.2.3 of this chapter.
		HCPA states a detailed DBA and transect walkover of the whole site would be required unless otherwise agreed.	A desk-based assessment is presented as part of Appendix 6.1 , including the results of the walkover survey undertaken in June 2024.
		HCPA considers the approach to the assessment of effects appropriate.	Noted.
		HCPA highlights that the importance (value) of each asset and impacted (nature of change), must be clearly tabulated in the report against each named asset.	Please refer to Tables B1 and B2 in Appendix 6.1 .

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		HCPA recommends that they need to approve a written scheme of investigation (WSI) before any new assessment work or any additional geophysics and evaluation trenching is commenced	No non-intrusive or intrusive investigations have been undertaken to inform the assessment, such that no WSI was required.
		HCPA states that clear and specific mitigation must be proposed for all sites directly affected.	The Applicant proposes mitigation measures for historic assets directly affected by the Proposed Development. Mitigation for significant effects is presented in the Construction Effects section of this chapter. All mitigation is identified in Table 6.1 in Appendix 6.1.
		HCPA requests to see copies of cultural heritage assessment provided.	Significant effects are presented in the Construction Effects and Operational Effects sections of this chapter.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Cadw April 2024	EIA Scoping Direction (5 April 2024)		The full historic environment assessment is presented in Appendix 6.1 .
		HCPA highlights that it would be preferable to have photos of all the historic assets identified within the Site with a visible scale, to allow for verification of the interpretation and identification of the features.	A selection of photographs from the walkover survey and site visits are included in Appendix 6.1 . These are intended to support the assessment and are proportionate.
		Cadw draws the Applicant's attention to the Powys County Council (PCC) Archaeology and Historic Environment Supplementary Planning Guidance documents.	Please refer to Appendix A of Appendix 6.1 of the ES. PCC Archaeology and Historic Environment Supplementary Planning Guidance has been taken into consideration.
		Cadw considered the approach to the assessment of effects appropriate.	Noted.
		Cadw highlighted that the Historic Environment (Wales) Act 2023 will have been enacted before the EIA is completed and that many associated	Noted.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		documents, such as TAN 24, will be updated in accordance with the Act.	
		Cadw recommended that the assessment of impact of designated heritage assets located inside the core study area and ZTV, should be carried out in accordance with the Welsh Government guidance document “The Setting of Historic Assets in Wales”. Cadw would expect a stage 1 assessment to be carried out for all the listed designated heritage assets, which will determine whether stages 2 to 4 need to be carried out for specific heritage assets. The results of the stage 1 assessment should be included in the ES, possibly as an appendix.	Cadw’s Setting of Historic Assets in Wales (2017) guidance has been reviewed and applied to the assessment of direct effects due to setting change.
		Cadw and HCPA advise that the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) surveys were conducted in 2008 and	The Applicant has analysed LiDAR data gathered specifically for the Proposed Development at a

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Cadw and HCPA April 2024	EIA Scoping Direction (5 April 2024)	2012. Cadw notes that these surveys were done before the use of LiDAR technology and should be supplemented with data from the new National Wales 1-metre DTM and DSM LiDAR datasets. Any newly identified sites will require field visits for confirmation and recording. Both Cadw and HCPA highlight that areas not covered by the RCAHMW surveys must be fully assessed using LiDAR and walkover surveys. HCPA and Cadw highlight that any new sites located on the LiDAR must be verified on the ground by the archaeological team and mapped, described, photographed and interpreted with images, and an accompanying gazetteer of sites included in the report. All sites should be categorised for their importance and the significance of impact stated in the ES.	greater resolution than the publicly available LiDAR imagery identified by Cadw and HCPA. The results of the analyses are presented in Appendix 6.1. This resulted in improved location and extent data for 181 previously recorded historic assets, and the identification of 41 previously unrecorded historic assets. The Applicant has identified, through the same analysis an additional 41 historic assets. The walkover survey included ground truthing of the LiDAR analyses for assets identified within the footprint of the Proposed Development and the 50 m micro-siting allowance to confirm their type and form.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
			A proportionate level of information is presented in Appendix 6.1 to support the assessment of direct physical effects to historic assets.
		Cadw and HCPA will inform regarding the needs for geophysics surveys and targeted evaluation report through further consultation once the draft DBA and the walkover survey reports will be received.	Given the type, form and distribution of historic assets within the Site, the receiving environment i.e. largely open moorland, and the assessment of potential for previously unrecorded buried archaeological remains, the Applicant is content that non-intrusive or intrusive investigations were not required to inform the assessment of direct physical effects or to identify appropriate mitigation.
		Cadw and HCPA recommend that the turbine and infrastructure layout should avoid all peat deposits, but where significant peat deposits cannot be avoided a suitable scheme of sampling, analysis, dating and reporting will need to be completed	No deep peat deposits have been identified through Phase 1 and 2 surveys. within the Site and where present it has been avoided, therefore the assessment of the paleoenvironmental potential of the Site has been scoped out of the assessment.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		using appropriate sampling techniques advised by a paleoenvironmental/ geoarchaeological specialist.	Please refer to Chapter 9: Hydrology, Hydrogeology and Geology.
		PCC's Built Heritage Conservation Officer to be consulted.	No direct effects have been identified for listed buildings or conservation areas. This was confirmed at a meeting on 30 April 2025.
Planning and Environment Decisions Wales (PEDW) April 2024	Paleoenvironmental Potential	PEDW recommends the Applicant liaises directly with Cadw and HCPA to ensure the impact on peat deposits and paleoenvironmental evidence is appropriately addressed in the ES.	No deep peat deposits have been identified through Phase 1 and 2 surveys. within the Site and where present it has been avoided, therefore the assessment of the paleoenvironmental potential of the Site has been scoped out of the assessment. Please refer to Chapter 9.
Cadw (via letter 20 March 2025)	Email received 31 March 2025	Cadw stated that the viewpoint locations and visualisation types (wireline/photomontages) suggested by the Applicant were sufficient to inform	Noted.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		the assessment of direct effects due to setting change to scheduled monuments.	

Study Area

6.12 Physical effects to the heritage significance of historic assets are assessed within the Site only (redline boundary). Setting effects are assessed for historic assets within the Site, and using two study areas, which have been defined in response to the bare earth modelling of the Proposed Development's ZTV and an understanding of the distance over which significant effects arising from setting change are considered likely. The two study areas are the:

- **Core Study Area:** Consisting of the land beyond the Site to a distance of 5 km. All historic assets located within the Core Study Area have been considered for the potential for effects arising from setting change.
- **Wider Study Area:** Consisting of land between 5 km (Core Study Area) and 10 km. Designated historic assets lying within this area have been considered for the potential for effects due to setting change.

6.13 Consideration has also been given to the potential for setting change to designated historic assets within the ZTV beyond 10 km.¹²

Desk Based Research and Data Sources

6.14 The following data sources have informed the assessment:

- Cadw spatial data for designated historic assets comprising:
 - Scheduled monuments;
 - Listed buildings;
 - Conservation areas; and,
 - RHPG.
- RCAHMW National Monuments Record of Wales (NMRW), which is held online as Coflein;
- Heneb Clwyd-Powys Archaeology (HCPA) Historic Environment Records (HER) data (last received 25 February 2025);

¹² No historic assets beyond 10 km were identified that may experience setting change as a result of the operation of the Proposed Development.

- Available historic mapping, including relevant Tithe maps and Ordnance Survey (OS) mapping (principally First and Second Edition 25 inch and 6 inch to the mile mapping where available for the Site);
- Publicly available aerial photography (oblique and vertical);
- LiDAR data gathered for the Proposed Development;
- Available reports from recent archaeological work undertaken in the area ('grey literature');
- Visualisations and 3-D turbines modelled and viewed in relevant software;
- A ZTV; and,
- Findings of other relevant topics identified in ES **Chapter 5**, **Chapter 9** and **Chapter 10: Noise and Vibration** for the Proposed Development.

6.15 In addition to the sources above, the research framework for the archaeology of Wales¹³ was used to inform the assessment of the heritage significance and importance of those historic assets identified in the baseline.

Field Survey

6.16 The following field surveys were carried out to inform the assessment:

- A walkover survey of the Site allowing for the verification of known historic assets, confirming their interpretation, location, and likely sensitivity to change, and informed the assessment of potential effects on those assets.
- Site visits were also undertaken to selected historic assets in the Core and Wider Study Areas. The selection of historic assets beyond the Site was informed by the ZTV and professional judgement in relation to the likely sensitivity to setting change of historic assets with theoretical visibility or the potential for in-combination views that contribute to their heritage significance.

6.17 Field surveys were undertaken in May 2024 and June 2024 to inform the assessment. Weather conditions were good though overcast with overall good visibility.

¹³ IFA Wales/Cymru on behalf of the archaeological community of Wales (2008) A Research Framework of the Archaeology of Wales.

6.18 Selected photographs from the field surveys are included in **Appendix 6.1**.

Assessment Approach

6.19 The historic assets forming the baseline were subject to a high-level analysis to identify those that are sensitive to the Proposed Development and required detailed assessment. Those historic assets identified as being likely to experience effects have been subject to a full assessment undertaken in line with the six steps set out in PCHIA:

- 1.** Understanding historic assets:
 - a.** Describe the historic asset;
 - b.** Ascribe heritage significance; and,
 - c.** Attribute importance.
- 2.** Evaluating the consequences of change:
 - a.** Understand change;
 - b.** Assess impact; and,
 - c.** Weight the effect.

Description

6.20 All historic assets are described factually and, in a manner proportionate to their importance and susceptibility to change. The description includes sufficient detail to understand the potential effect of the Proposed Development on their heritage significance and, consequently, only information that is relevant to understanding how heritage significance might be affected by the Proposed Development has been included. Further information on historic assets identified in this chapter is presented in **Appendix 6.1**.

Ascribing Heritage Significance

6.21 This assessment seeks to identify the heritage significance of the historic assets within the historic environment baseline to assess the likely impact of the Proposed Development on the historic environment and the recommendations for any appropriate mitigation required to avoid, prevent, reduce or, if possible offset effects.

6.22 The heritage significance that makes historic assets important can be articulated in various ways. Annex A, B and C of TAN 24: Historic Environment¹⁴ set out how Wales' historic sites and places are assessed to determine whether their heritage significance is of national importance. One approach to assessing heritage significance in any circumstance (designated or non-designated) is to adjust these criteria to reflect the relative importance of the historic asset, from national to local. However, as each historic asset type (monument, historic building etc.) is assessed against different designation criteria, this approach is not consistent, which can make it difficult for the reader to follow.

6.23 A more consistent and easily understandable approach draws upon the heritage values referenced by Cadw's conservation principles and comprise:

- **Evidential value:** Every historic asset has a unique story to tell. The surviving historic fabric, physical remains including buried archaeological remains, helps us to understand when and how each historic asset was made, how it was used and how it has changed over time.
- **Historical value:** Historic assets may illuminate particular aspects of the past. They can help us to understand how people lived and worked, and the beliefs and values they cherished. They may be associated with notable people or events. Through evocation and association, historic assets can connect past people, aspects of life and events with the present.
- **Aesthetic value:** We may value historic assets for their visual qualities, whether they result from conscious design and craftsmanship, or from the fortuitous effect of change over time. Tastes alter and so do historic assets: earlier records and careful analysis of what survives may help in appreciating aesthetic value.
- **Communal value:** Historic assets may be cherished by the people and communities who relate to them, and they may play an important part in collective experience or memory. Historic assets can have economic as well as social value with the capacity to provide a valuable source of income or employment.

¹⁴ Welsh Government (2017) Planning Policy Wales – Technical Advice Note 24: The Historic Environment – Annex A, B and C.

The Contribution of Setting to Heritage Significance

6.24 Heritage values are a way of transparently and consistently articulating the heritage significance of any historic asset, including any contribution made by setting to that heritage significance. In line with PPW, the contribution that setting makes to a historic asset's heritage significance has been considered.

6.25 All historic assets have a setting, but the contribution that this makes to their heritage significance varies in line with the location, form, function and preservation of the asset and its surroundings. Setting can be integral to the heritage significance of a historic asset (contributing to one or more of its heritage values or their appreciation), therefore a change in an important element of an asset's setting can equate to a direct impact to its heritage significance. Equally, where setting does not contribute to a historic asset's heritage significance, no effect can result from setting change.

Ascribing Importance (Value)

6.26 Historic assets may derive their heritage significance from one or more of the above heritage values, but a lack of interest in one or more of these values does not indicate a lower level of importance, just that their interest lies elsewhere. The above heritage values help in understanding heritage significance of a historic asset, but do not determine the level of that significance (i.e. 'importance').

6.27 The heritage values expressed in Cadw's conservation principles can help explain a historic asset's heritage significance, but they do not explain how important (e.g. high, medium, low) the significance of the asset is. Establishing the importance of a historic asset is a key stage of the assessment process as it influences the way in which decisions are made during the development of a proposal as well as the weight to be given to it by the decision-maker. Importance is determined using professional judgement alongside an understanding of local, regional, and national historic environment research objectives and, where appropriate, the use

of the designation criteria for historic assets.¹⁵ The criteria used to inform the assessment of importance of historic assets are identified in **Table 6.2**.

Table 6.2 Historic asset importance criteria

Importance	Description
High	Historic assets of national significance. Comprising designated historic assets and non-designated historic assets of demonstrable equivalent importance.
Medium	Historic assets of regional importance. Identified with reference to regional priorities from the Research Framework for the Archaeology of Wales.
Low	Historic assets of local importance.

Evaluating the Consequences of Change

6.28 A historic asset's sensitivity to change does not automatically equate to its importance. It varies depending on the nature of a historic asset's heritage significance, the contribution that setting makes to that heritage significance, and the character of the Proposed Development and the way in which it interacts with that heritage significance.

6.29 Unless otherwise stated, all historic assets within the Site have been assumed to be of high sensitivity to direct physical change as their heritage significance is derived primarily from their evidential and historical value which will be diminished or lost if physically changed.

6.30 Sensitivity to setting change is variable and has been established based on an understanding of the contribution made by setting to a historic asset's heritage significance and the likely interaction of the Proposed Development with that contribution. Sensitivity to setting change has been articulated by describing the way a historic asset's setting contributes (or not) to its heritage significance (or understanding that significance), with reference to Cadw's setting guidance, and how that contribution may be changed by the Proposed Development.

¹⁵ Designation criteria are included in Welsh Government (2017) Planning Policy Wales – Technical Advice Note 24: The Historic Environment – Annex A, B and C.

6.31 In terms of the operation of the Proposed Development, the risk to the heritage significance of historic assets is one of setting change. Visibility is typically a key factor in setting change and the most far-reaching experiential quality. Therefore, historic assets sensitive to setting change have been identified via the creation of study areas informed by review of a bare earth ZTV and an understanding of the distance over which significant visual effects are considered likely. Historic assets within the Site and Core and Wider Study Areas that were identified as having theoretical visibility of the Proposed Development have been subject to a desk-based appraisal of their heritage significance (including the contribution made by setting) and their potential interaction with the Proposed Development (see **Appendix 6.1**). Designated historic assets lying outside the ZTV were also subject to review, to determine the risk of setting change from potential in-combination views. Historic assets deriving heritage significance from elements of their setting that could be changed by the Proposed Development have been assessed in detail.

6.32 All historic assets identified as being sensitive to the Proposed Development have been assessed in **Appendix 6.1**.

6.33 This chapter presents the findings of the assessment of likely significant effects of the construction and operation of the Proposed Development on those historic assets considered to have the potential to experience significant effects for the purposes of EIA.

Understanding Change

6.34 In line with the PCHIA guidance¹⁶ the way in which the Proposed Development may change the heritage significance of a historic asset, and whether that change is temporary or permanent, has been clearly articulated with explicit reference to the heritage value(s) affected.

Assessing Impact (Magnitude of Change)

6.35 Assessment of the impact to a historic asset's heritage significance as a result of the Proposed Development has been undertaken using professional judgement and an understanding of how the heritage values of that asset that contribute to its heritage significance

¹⁶ ClfA, Institute of Historic Building Conservation (IHBC) and Institute of Environmental Management and Assessment (IEMA) (2021) Principles of Cultural Heritage Impact Assessment (PCHIA) in the UK.

will be affected. It is not a measure of the reach or extent of the proposal or the importance of the historic asset. As per the PCHIA guidance, a simple scale is used for assessing an impact and, the criteria for this are set out below in **Table 6.3**.

Table 6.3 Level of impact/magnitude of change criteria

Magnitude of Change	Description
Large	Substantial, near total, or total loss of a historic asset's heritage significance either through physical and/or setting change. Substantial level of change to how that significance is understood, appreciated, or experienced.
Medium	Medium loss or alteration of a historic asset's heritage significance either through physical and/or setting change. Medium level of change to how that significance is understood, appreciated, or experienced.
Small	Slight loss or alteration of a historic asset's heritage significance either through physical and/or setting change. Small changes to how that significance is understood, appreciated, or experienced.
None	No change to the heritage significance of the historic asset, or how that significance is understood, appreciated, or experienced.

Level of Effect (Significance of Effect)¹⁷

6.36 The level of the effect has been determined using professional judgement to reflect the importance of the historic asset using the scaled criteria in **Table 6.4** below. The justification for

¹⁷ In EIA terms the level of effect is typically referred to as the significance of effect. This terminology has deliberately been avoided to prevent confusion with the discussion of heritage significance. Similarly, the PCHIA term of 'weighting the effect' has been avoided to remove any sense of conflation with weighing of effects in the planning balance – a matter solely for the decision-maker.

the significance of effect has been reported clearly. This approach accords with the guidelines for assessment set out in the PCHIA guidance (termed ‘weighting the effect’).

6.37 A clear statement has been made as to whether an effect is a significant effect in terms of the EIA Regulations based on professional judgement of the available evidence and guided by the description of significance of effect identified in **Table 6.4**. **Major** and **moderate** effects are considered significant in the context of the EIA Regulations.

Table 6.4 Significance of effect criteria

Significance of Effect	Description
Major	A large magnitude of change (e.g. total or near total loss) to the heritage significance of a historic asset of medium or high importance.
Moderate	A medium magnitude of change (e.g. substantial loss or alteration) to the heritage significance of a historic asset of medium or high importance; or a large magnitude of change (total or near total loss) to a historic asset of low importance.
Minor	A small magnitude of change (slight loss or alteration) to the heritage significance of a historic asset of medium or high importance; a medium or small (slight to substantial loss or alteration) to the heritage significance of a historic asset of low importance; or any change to a historic asset of very low importance.
Negligible	No change to the heritage significance of a historic asset.

Cumulative Effects

6.38 Impacts of a cumulative nature can relate to the physical fabric or setting of historic assets. This can be a result of impact interactions between different impacts of a development or in-combination with impacts of other schemes. Alternatively, they may be additive impacts from incremental changes caused by a development together with other operational schemes or those already in the planning system.

6.39 This assessment considers the potential effects to the heritage significance of historic assets against a baseline that includes existing or consented wind farms, in line with the schemes agreed for inclusion in the cumulative assessment. A full list of operational and consented developments considered in the cumulative effects assessment is provided in **Appendix 2.9: Cumulative Developments** and locations are shown on **Figure 2.2: Cumulative Developments: Wind Farms**.

6.40 Further information on cumulative effects is provided in **Appendix 6.1**.

Assessment Assumptions

6.41 The following assumptions have been made when undertaking the assessment of effects:

- The assessment has utilised a range of sources on the area's historic environment. Much of this is necessarily secondary information compiled from a variety of sources (e.g. HER data and grey literature reports). It has been assumed that this information is reasonably accurate unless otherwise stated.
- The potential for previously unrecorded buried archaeological remains has been considered in relation to the pattern and significance of known historic assets (drawn from relevant HER data, the results of previous archaeological surveys, a review of historic mapping and available digital aerial imagery, LiDAR data review and the results of the walkover survey), as well as the land use history and geology within the Site, to understand the archaeological potential.
- The results of the peat surveys reported in **Chapter 9** provide a detailed understanding of the presence of peat within the Site. These results are sufficient to scope the paleoenvironmental potential for the Site out of the assessment.

Assessment Limitations

6.42 Whilst some information gaps are inevitable, given the buried nature of archaeological remains, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on the historic environment. A precautionary approach has been applied, based on the available

information and the professional experience and judgment of the project team, to ensure that all likely significant effects have been assessed and reported. For the avoidance of doubt, when any historic asset is identified as being of 'uncertain' importance, a precautionary approach will be applied, and the effect reported as potentially significant. However, this has not been necessary in this assessment.

Existing Conditions

6.43 A summary of the existing conditions is presented below. Further information on the archaeological and historical context for the assessment and individual historic assets forming the baseline is presented in **Appendix 6.1**.

The Site

Designated Historic Assets

6.44 Four designated historic assets of **high** importance, all of which are scheduled monuments, are located within the Site. The location of these assets is shown on **Figure 6.1**.

6.45 The Aberedw Hill Round Barrows (Cadw Ref. RD074) comprise three Bronze Age barrows (western, central and eastern; northern group) aligned in a north-west/south-east orientation on the flat plateau of Aberedw Hill and a fourth barrow located approximately 1.2 km south-west on a ridge. All four barrows are similar in size and form, comprising circular earthen mounds with rounded profiles.

6.46 Aberedw is a broad hill range with steep escarpments/slopes and valleys on all sides. The southern half of Aberedw rises sharply to the east of the River Wye where the river valley narrows to the south-east of Builth Wells. To the south and east Aberedw is defined by the narrow valley of the River Edw. The River Edw joins the River Wye to the south-west, just to the west of Aberedw village. To the north are wider shallower valleys defined by two smaller watercourses, Cnithio Brook to the west and Colwyn Brook to the east. A north-west/south-east orientated valley formed by the Milo Brook cuts into the hill. To the east a narrower valley on the same orientation has been formed by the Cwmblaenerw Brook.

6.47 The high ground of Aberedw is characterised by undulating upland common. The highest point to the south (451 m AOB) is the main focus, Aberedw Hill. Given the steep escarpments/slopes, the easiest access to the hill, is via the slightly shallower slope to the south-west of the village of Hundred House. It is from here that the current access track follows the northern ridge flanking the high ground at Wylfre (410 m AOD) and Llan-Fraith Hill (386 m AOD) to the south. Turning south-west to pass above and looking down into the rounded horseshoe north-western end of the Milo Brook valley, south the access track drops west below the highest point that rises sharply from the ridge below. The highpoint is a distinct landform with a discrete flat plateau. The Aberedw Hill barrows (northern group) are located on this highest point in the landscape aligned across the northern side of the plateau.

6.48 It is likely that the location of the Aberedw Hill barrows was carefully chosen to take advantage of the topography and landform. Their siting on the highest point in the landscape enabled long views out and over the surrounding valleys, interacting with other high points in the broader landscape many of which have also been the focus of Bronze Age activity. The major river valleys to the west (River Wye) and north and east (River Edw) are defining natural divisions in the landscape. As they are today, they would have formed natural routeways through the landscape and attractive places for settlement and agriculture. The high narrow plateau may have provided a performative space for the communities who built and interacted with the barrows as part of their social and spiritual lives as a focus of ritual activity.

6.49 The barrows' location on the plateau also enables a sense of anticipation and reveal. The three barrows form a well-defined feature on the skyline when approaching from the north-east around the top of the horseshoe formed by the Milo Brook valley. Their placement on the northern side of the plateau influences how they are appreciated and experienced from the north looking south, and appears to have been deliberate. As the horseshoe turns south, the barrows disappear from view and do not become apparent again until reaching the edge of the plateau, when their monumental size and form is revealed to the visitor.¹⁸

¹⁸ In this context 'monumental' is a technical term, relating to the intention and outcome of Neolithic and Bronze Age ritual and funerary assets to serve as literal monuments in the landscape; physically altering the earth, and irrevocably linking the dead – and the living – with the territory, and serving as a permanent marker to the community and outsiders. This function continues to this day, even if specific meanings and associations are unclear.

6.50 The key elements of the Aberedw Hill barrows (northern group) setting and how they are appreciated and experienced comprise:

- The barrows' deliberate siting on the highest point of Aberedw Hill.
- The relationship with natural landscape barriers, routeways and attractive places for settlement and agriculture, including the valleys of the River Wye and River Edw.
- The views the barrows' siting on Aberedw Hill may have been intended to exploit, including those towards other highpoints where contemporary funerary and ritual activity may have taken place.
- The performative space created by the plateau.
- The sense of anticipation when traversing the natural approach along the northern ridge, enhanced by their sudden disappearance and subsequent reveal when reaching the plateau.

6.51 While the setting of the southern barrow, which lies approximately 1.2 km to the south-west, shares similar characteristics with the northern group, such as its siting on the highest point of the ridge (398 m AOD) above the confluence of the River Wye and River Edw, this barrow seems subordinate to the northern group. Although the four barrows have been grouped under one designation, the southern barrow appears to form part of a separate group with a number of smaller funerary monuments (HCPA Ref. PRN167237) along the ridge that extends southwards. There remains a spatial relationship between the southern and northern group, but the three barrows to the north are not visible from the southern barrow and vice versa. The southern barrow has a modern memorial in the form of a stone/rock placed at its centre.

6.52 The significance of these Bronze Age funerary assets is largely derived from the evidential (scientific) value and historical (illustrative) value of their physical remains, including any buried archaeological remains, which have the potential to enhance the knowledge of funerary and ritual practices during the Bronze Age. In addition, any paleoenvironmental information that may be preserved in soils beneath these barrows has the potential to inform the understanding of climate, local conditions and land cover when the barrows were constructed.

6.53 The arrangement and distribution of barrows within a landscape can provide valuable information about settlement patterns and ritual beliefs. Their positioning was strategic and

features in the landscape likely held wider spiritual significance to the surrounding communities, both at the time of construction and in periods succeeding it. The survival of these barrows to the present day, how topography and landform was exploited to enhance their dominance in the landscape and the natural routeways through the landscape that links them and the ability to appreciate and understand these key elements of their setting contributes to their heritage significance. How topography and landform was exploited to enhance their dominance in the landscape and the natural routeways through the landscape that links them and the ability to appreciate and understand these key elements of their setting contributes to their heritage significance.

6.54 Aberedw Hill Deserted Rural Settlement (Cadw Ref. RD166) comprises an elongated sub-rectangular enclosure formed by an earth and rubble bank with a wide outer ditch, with a single internal partition located within the south-west of the Site. This encloses the remains of a longhouse seen as the stone footings of a building. Five further building platforms, two of which have smaller associated enclosures, may represent the earliest phase of occupation. Further nearby non-designated historic assets - such as enclosures, longhouses, a corn drying kiln and evidence of cultivation - are associated to the use and the heritage significance of this asset.

6.55 Cwmblaenerw Enclosed Long Hut (Cadw Ref. RD169) comprises the remains of a rectangular building built on an artificial earth platform located within the north-east of the Site. The remains of the long hut are confined within a large earth banked enclosure with an outer ditch, within which is evidence of cultivation ridges. This asset may have been either a hafod (temporary summer dwelling), or a permanent agricultural unit on the edge of the open common.

6.56 The settings of the deserted settlement and enclosed long hut comprise their location on south-west and south-east facing slopes above a small unnamed watercourse on the edge of Aberedw Hill Common at c.410 m AOD, just beyond the enclosed pasture at Blaen-y-cwm and Blaen-wern respectively. Their setting contributes to the understanding and application of them a small agricultural settlement on the edge of marginal land exploiting the common either for summer grazing or permanent subsistence agricultural. Their south-west and south-east facing locations provide some level of protection from adverse weather, and the unnamed watercourses provide a source of water for people and livestock. The spatial relationship with

other assets that illustrate a general pattern of similar activity and settlement on the margins of Aberedw Hill Common also contributes to their heritage significance.

6.57 The heritage significance of these assets is primarily derived from the evidential (scientific) and historical (illustrative) values of their physical remains. These have the potential to enhance the knowledge of medieval or post-medieval settlement organisation, agricultural systems, economy and the exploitation of marginal upland resources.

6.58 Cwmblaenerw House Platforms (Cadw Ref. RD170) comprises the remains of two sub-rectangular building platforms approximately 180 m apart, built into the west-facing slope of a narrow valley formed by Cwmblaenerw Brook. The building platforms have the potential to be prehistoric or medieval in origin. The asset's setting is formed by the west facing slope of a sheltered valley next to a brook with access to the open hill. The setting contributes to the appearance and understanding of the asset as a small agricultural settlement, and the way it is experienced as such.

6.59 The heritage significance of this asset is primarily derived from the evidential (scientific) and historical (illustrative) value of its physical remains. These have the potential to enhance the knowledge of prehistoric or medieval settlement, including their date, construction techniques and function.

Non-designated Historic Assets

6.60 Three hundred and sixty non-designated historic assets are located within the Site. Of these 41 historic assets (LUC_01 to LUC_41) have been identified from LiDAR data. Non-designated historic assets within the Site are characterised by possible prehistoric funerary assets, evidence of medieval or post-medieval agricultural activity and over 100 recorded post-medieval quarries.

6.61 A number of earthen mounds within the Site have been interpreted as possible Bronze Age barrows. The most convincing is Cem-blaen-erw barrow (HCPA Ref. PRN344). Located on the south-eastern crest of Aberedw Hill, near Wylfre, its setting shares many of the characteristics of the known round barrows within the Site, including location on the crest of the north-west/south-east ridge. In consideration of its potential to contribute to our understanding

of the prehistoric funerary and ritual practice at a regional level, this historic asset has been assessed to be of **medium** importance.

6.62 The majority of the non-designated assets within the Site evidence medieval and post-medieval agricultural activity on Aberedw Hill common. These assets are characterised by building platforms and enclosures, the remains of cultivation represented by areas of narrow ridge and furrow, field boundary banks and pillow mounds (manmade or reformed natural earth mounds used to farm rabbits for both food and fur).

6.63 Abandoned and poorly preserved remains of medieval and post-medieval buildings and structures, their associated enclosures, field boundaries and evidence of cultivation, are common and widespread types of historic asset found on marginal and upland rural Wales. Their heritage significance is predominantly derived from their physical remains, including any buried archaeological remains, that have the potential to contribute to an understanding of their date, form and function, as well as farming practices and the rural economy prevalent at the time. In consideration of their contribution to the understanding of rural settlement patterns, farming practices and the rural economy at a local level, these historic assets have been assessed to be of **low** importance.

6.64 The remaining non-designated assets include small post-medieval and later quarries, ponds, triangulation points, a sheepfold, and traditional farm buildings. As common and well-understood historic assets of local interest these assets have been assessed to be of **low** importance.

6.65 The locations of designated and non-designated historic assets within the Site are shown on **Figure 6.1**.

Previously Unrecorded Historic Assets Including Buried Archaeological Remains

6.66 Previous field surveys covering much of the Site have been undertaken by HCPA and others. LiDAR data gathered for the Proposed Development has been reviewed. In addition, the construction footprint of the Proposed Development has been the subject of a walkover survey to inform the historic environment baseline, and to identify any potential direct physical effects to historic assets resulting from construction. The potential for further previously unrecorded

historic assets that manifest as aboveground physical remains within the construction footprint and micro-siting allowance has been assessed to be negligible.

6.67 There is the potential for previously unrecorded buried archaeological remains to be present within the construction footprint of the Proposed Development. Given the pattern of distribution of known historic assets within the Site, and their form and function, as well as the receiving environment i.e. largely open common, the potential for the presence of previously unrecorded buried archaeological remains within areas of the Site has been assessed to be low.

6.68 While it is acknowledged that there is potential for buried archaeological remains – such as secondary burials or evidence of ritual activity – associated with the Bronze Age funerary monuments within the Site to extend beyond their scheduled areas (where designated) and their visible physical remains, this potential diminishes with distance.

Paleoenvironmental Potential

6.69 Phase 1 and Phase 2 peat surveys within the Site identified small discrete patches at the margins of the Cwmblaenerw Brook and at the centre of the Site with a thickness of less than 30 cm (please refer to ES **Chapter 9** for details). The paleoenvironmental potential of the Site has therefore been assessed to be **negligible**.

Core Study Area

6.70 The location of historic assets identified within the Core Study Area are shown on **Figure 6.2**.

6.71 One hundred and eighty-six designated historic assets of **high** importance have been identified within the Core Study Area. These comprise:

- 58 scheduled monuments, characterised by prehistoric funerary and ritual assets, later-prehistoric hillforts and defended enclosures, medieval defensive structures including motte and bailey earthwork castles and deserted medieval settlements.
- 128 listed buildings including ecclesiastical buildings, bridges, mileposts, traditional farm buildings, commercial buildings and domestic houses, cottages and minor county houses.

- Builth Wells Conservation Area; and,
- Pencerrig RHPG (Cadw Ref. PGW(Po)19(P)W).

6.72 Information as to why designated heritage assets within the Core Study Area have been screened in or out of the assessment of effects is presented in **Appendix 6.1**.

6.73 Data held by the HCPA HER has identified 3094 non-designated historic assets within the Core Study Area. These are characterised by:

- Prehistoric funerary and ritual monuments, including the sites of, or poorly preserved remains of, Bronze Age cairns and standing stones, field systems and later prehistoric defended enclosures;
- Roman roads identified by archaeological field survey and excavation, or the projected alignment of Roman roads;
- Early medieval and medieval building platforms, field systems, ridge and furrow cultivation and cottages and houses thought to contain elements dating from the medieval period; and,
- Post-medieval farmhouses, traditional farm buildings, cottages, sheepfolds, field clearance cairns, field boundaries, mills, mill ponds, weirs, churches and chapels, marker stones, war memorials, shooting butts, fords and quarries.

6.74 Those historic assets that have not been designated have been assessed to be of **low** to **medium** importance.

Wider Study Area

6.75 The following designated historic assets of **high** importance are located within the Wider Study Area:

- 63 scheduled monuments;
- 187 listed buildings;
- Llandrindod Wells Conservation Area; and,
- Llangoed Hall and Llandrindod Wells Public Parks RHPGs.

6.76 The location of these designated historic assets are shown on **Figure 6.3**.

6.77 Information as to why designated heritage assets within the Wider Study Area have been scoped in or out of the assessment of effects is presented in **Appendix 6.1**.

Historic Assets Screened in for Detailed Assessment¹⁹

6.78 Where designated heritage assets of **high** importance within the Core and Wider Study Areas (refer to **Figures 6.2** and **6.3**) have been identified as having theoretical visibility with the Proposed Development, the presence of which during operation has the potential to change their setting and the contribution their setting makes to their heritage significance, they have been included for further assessment. These are set out below.

6.79 Cefn Wylfre Stone Circle and Round Barrow and Cefn Wylfe Round Barrow (Cadw Refs. RD177; RD178) comprise a stone circle surrounding a central round barrow (Cadw Ref. RD177) and two round barrows (Cadw Ref. RD178) at Cefn Wylfre. The setting of these assets is characterised by heather moorland managed for game shooting. The stone circle and barrow have been discreetly sited, set back on a terrace below the highest point of Cefn Wylfre (east) on the west-facing slope of Cefn Wylfre that projects into the Edw Valley below. Approximately 600 m east (Cadw Ref. RD178) the barrows are located on the highest point of Cefn Wylfre and the Glascwm range of hills. This location may have been chosen for the wide views it provides. These assets' deliberate placement in the landscape, the Edw Valley to the west and spatial relationship with one another, as well as other putatively contemporary funerary and ritual assets in the landscape contributes to their heritage significance.

6.80 While their position in the landscape may have been intended to enable intervisibility with other putatively contemporary assets of a similar form and function, including the barrows on Aberedw Hill (Cadw Ref. RD074), the contribution these setting relationships makes to their heritage significance is often limited by the scale of their physical remains and the distance between them.

6.81 Carneddau Round Cairn (Cadw Ref. RD122) is located just below the southern peak of the Carneddau range (c.430 m AOD). **Cwm-berwyn Round Cairn (Cadw Ref. RD122)** on the summit of the hill on the east side of the Carneddau range (376 m AOD). Other highpoints in the

¹⁹ This approach following the four-stage approach to assessing the impact of setting change to the heritage significance of historic assets presented in the Cadw setting guidance (2017).

Carneddau range are occupied by contemporary funerary assets of a similar type and form (Cadw Refs. RD235; RD221; RD220; RD226; see **Appendix 6.1**). The Carneddau cairn appears to have been sited to enable views north along the edge of the escarpment towards the Carneddau Round Carins (Cadw Ref. RD235).

6.82 The settings of these assets share the same key elements, principally high points within the Carneddau range, which enable views over the surrounding landscape and down into the valleys below. Where intervening topography and the size and form of assets allows intervisibility between assets or the topographic features (high points) on which they have been positioned may also have been important. These assets' deliberate placement in the landscape and spatial relationship with one another, as well as other putatively contemporary funerary and ritual assets in the landscape therefore contributes to their heritage significance.

6.83 The significance of these Bronze Age funerary and ritual assets (Cadw Refs. RD177; RD178; RD122; RD222) is largely derived from the evidential (scientific) and historical (illustrative) value of their physical remains, including any buried archaeological remains, which have the potential to enhance the knowledge of funerary and ritual practices during the Bronze Age. In addition, any paleoenvironmental information that may be preserved in soils beneath these assets have the potential to inform the understanding of climate, local conditions and land cover when the barrows were constructed.

6.84 Castle Bank Hillfort (Cadw Ref. RD149) occupies a ridge running north-north-east / south-south-west between the hill ranges of Gilwern to the north and Carneddau and Aberedw to the south. The fort comprises a single collapsed stone rampart enclosure, a smaller annex and building platforms within the main enclosure. **Caer Einon Camp (Cadw Ref. RD014)** includes three lines of artificial defences on the northern side with a complex entrance arrangement and hut platforms. The manmade defences are best experienced when approaching from the north, or when looking north from within the enclosure. Extensive views from the enclosure include as far as the Wye Valley to the south-west.

6.85 Hillforts functioned as temporary and permanent settlements, defensive structures and symbols of power within the landscape, reflecting control over natural resources and people. The platforms within the enclosures suggest domestic occupation, though it remains unclear whether this was temporary, permanent, exclusive, or open to all local inhabitants. The

enclosures and ramparts indicate a defensive role, but they likely also served to display power and control. The enclosures' prominent positions were chosen not only for defence but also for its strategic advantage in overlooking the surrounding territory and natural resources, as well as enabling an element of control. Their elevated locations enable excellent views over the valleys below likely exploited, particularly through agricultural activity.

6.86 The visibility of hillforts in the landscape may have played an important role in expressing the power and control of their occupants. For these assets their prominent locations above the Camnant and Cnithio valleys are likely to have been a crucial element in projecting power and control over the landscape, its natural resources and people. The spatial relationships between these assets, and others of a similar type and form also contributes to the knowledge and understanding of patterns of settlement, land management and political/social relationships between groups.

6.87 Their significance is largely derived from the evidential and historical value of their physical remains, that have the potential to enhance the knowledge of later prehistoric defences and activity within them, including the function of buildings, and when and how they were occupied. They form an important element within the wider later prehistoric landscape, and as such their spatial relationship with other contemporary assets, combined with their positioning, enables an understanding and appreciation of its deliberate siting to take advantage of its defensive position, dominance, and ability to project a level of power and control over a territory. The views their locations enable, down into the valleys below, contribute to how these aspects of their setting are experienced and to the heritage significance of these historic assets.

6.88 Penarth Mount Castle Mound (Cadw Ref. RD076) typifies the simplest form of medieval earthwork 'castle', comprising an earthwork motte surrounded by a ditch. The motte appears to be modified natural knoll. The current surroundings of the motte include a large modern poultry shed at Penarth Farm, c.170 m north-west. The motte occupies the southern tip of a south-facing spur above a tributary of the River Edw. Wylfre hill rises sharply to the west. The asset's slightly elevated position provided views from it east across the valley to Little Hill. Strategically the motte would have enabled its occupants a level of control and the observation of movement through the valley. The size of the motte and the lack of an accompanying bailey suggests that it may have acted as an outlier to the larger castles at Colwyn Castle and The

Mount (Cadw Refs. RD035; RD036), controlling access to the along the Edw Valley and protecting their southern flank. These key elements of its setting contribute to its heritage significance.

6.89 Colwyn Castle and The Mount Mound and Bailey Castle, Hundred House (Cadw Refs. RD035; RD036) comprise a motte with an accompanying bailey. Colwyn Castle was built on top of an early Roman fort (c AD 50s). It is likely that its strategic location shared the same objective, controlling movement from/to the Wye Valley along the Cnithio valley to the south-west between Aberedw to the south and Carneddau to the north. The modern road linking the Wye Valley to Hundred House and the lowlands beyond (A481) pass below Colwyn Castle.

6.90 Colwyn Castle motte is occupied by a modern farm, the field enclosures with numerous mature trees, which along with the A481, forms its immediate surroundings. Less than 900 m to the east of Colwyn Castle, the Mount is located on level ground c.50 m north-east of the River Edw. The castle's incorporation into the surrounding post-medieval field enclosures does not detract from the understanding and appreciation of it as a defensive structure that once would have dominated the entrance to the narrow Edw Valley.

6.91 These assets form an important element within the medieval landscape around Aberedw and beyond. As such their spatial relationship with other contemporary assets, including those at Fforest Wood, Aberedw and Builth (Cadw Refs. RD075; RD117; RD029; BR031; refer to **Appendix 6.1**), combined with their deliberate placement in the landscape, enables an understanding and appreciation of their deliberate siting to take advantage of their defensive position, dominance, and projection of power and control. The views their locations enable, into, along and over the Edw and Cnithio valleys, contribute to how these aspects of their setting are experienced and to the heritage significance of these historic assets.

6.92 The heritage significance of these assets is primarily derived from the evidential and historical value of their physical remains. This includes any surviving buried archaeological remains associated with the medieval fortifications, as well the earlier Roman fort at Colwyn. Any physical remains have the potential to provide an understanding of the chronology of their construction, their period of use and likely military/civil functions, leading to a better understanding of how they interacted with one another.

Implications of Climate Change for Existing Conditions

6.93 Climate change projections for Wales highlight that summer and winter temperatures are likely to be greater than the current baseline, with winter rainfall increasing and summer rainfall decreasing.

6.94 Increase in rainfall will change groundwater and soil conditions, potentially affecting the preservation of buried archaeological remains and eroding/flooding above ground historic assets.

Future Baseline in the Absence of the Proposed Development

6.95 In the 'do nothing' scenario, there will be little physical change to the heritage significance of the historic assets within the Site from current land use (livestock grazing) which entails processes, which cause little or minimum ground disturbance to areas that have not already been disturbed. As such, only natural decay (weathering and erosion) is considered likely to affect any assets in the 'do nothing' scenario. It should, however, be noted that patterns of rural land use may change as a consequence of the UK leaving the European Union and as Welsh Government objectives drive an increase in woodland expansion.

6.96 Borrow Pit A (see **Chapter 3: Site Selection and Design Strategy** and **Figure 4.1d**) has been subject to historical quarrying and will be used for the extraction of rock prior to being restored to heathland following completion of the construction phase (**Appendix 7.5: Outline Habitat Management Plan**). It is understood by the Applicant that the landowner has permitted development rights to continue extraction of rock from this quarry but that at the time of writing, such extraction is not taking place. In the 'do nothing' scenario it is therefore possible that extraction could continue in this area without restoration taking place.

6.97 Effects related to change in setting in a 'do nothing' scenario are impossible to quantify as it primarily rests on whether new proposals for development are brought forward elsewhere within the surroundings of the Site.

Embedded Design Mitigation

6.98 The design of the Proposed Development has sought to avoid or minimise (as far as reasonably possible) effects to historic assets. Each iteration of the design has been reviewed to ensure that direct physical effects to known historic assets are avoided where possible. Where direct physical effects occur, it is only to assets of low importance. Similarly, how turbines will appear within the setting of historic assets has been a key consideration in design refinements. Care has been taken to reduce the prominence of turbines in key lines of sight to and between historic assets.

6.99 Further detailed information on the evolution of the design of the Proposed Development is presented in **Chapter 3**.

Good Practice Measures

6.100 Good practice measures to prevent, reduce, and/or where possible offset potential physical effects to historic assets, including previously unrecorded buried archaeological remains, are proposed. Measures which will be adopted include:

- The temporary fencing off or marking out (as appropriate) of historic assets in proximity to the construction footprint to prevent accidental damage during construction.
- Implementation of a working protocol should previously unrecorded buried archaeological remains (e.g. archaeological deposits and features) be discovered.
- The use of a Construction Environmental Management Plan (CEMP), supplemented by toolbox talks as appropriate, to highlight the historic environment sensitivities of areas of the Site to those working on the Proposed Development. An outline CEMP is provided at **Appendix 4.2**.
- Appointment of an Archaeological Clerk of Works (ACoW) to supervise targeted groundbreaking operations and provide onsite advice on avoidance of effects (e.g. providing onsite identification and recording of previously unrecorded historic assets and liaising with the local authority archaeological adviser (HCPA) as necessary).

6.101 HCPA will be consulted to provide guidance on appropriate conditions to be applied to any consent.

Micrositing

6.102 During construction, micrositing may take place to allow adjustment within a defined radius of the proposed turbine locations, and a similar tolerance either side of the access track locations. The micrositing allowance for turbines and associated infrastructure is 50 m, as set out in **Chapter 4: Development Description**. Following a review of these areas and after the implementation of restrictions to micrositing, direct physical effects to historic assets due to micrositing have been avoided.

6.103 Further detailed information on changes to micrositing allowance to avoid direct physical effects to historic assets is presented in **Table 6.1** in **Appendix 6.1**.

Scope of the Assessment

Effects Assessed in Full

6.104 This assessment concentrates on the effects of construction and operation of the Proposed Development upon those historic assets identified during the review of desk-based information and field surveys.

6.105 The EIA Scoping process, baseline conditions and professional judgement has identified the following effects for detailed assessment:

- Direct effects resulting from physical change to historic assets within the Site. Historic assets beyond the Site are not at risk of direct physical change as a result of the Proposed Development.
- Direct effects to designated and non-designated historic assets that are identified as being sensitive to setting change. These effects are considered in relation to the Site and the different study areas as set out above.
- Cumulative operational effects as a result of setting change.

Effects Scoped Out

6.106 On the basis of the desk based and field survey work undertaken, the professional judgement of the EIA team, experience from other relevant projects and policy guidance or standards, and feedback received from consultees, the following effects have been ‘scoped out’ of detailed assessment, as agreed in the Scoping Direction:

- Direct physical effects to historic assets outside the Site (historic assets beyond the Site are not at risk of physical change as a result of the Proposed Development);
- Direct effects due to setting change to non-designated historic assets beyond the Core Study Area (given the distance over which significant effect arising from setting such effects are unlikely, given the scale and nature of the Proposed Development);
- Cumulative effects to the heritage significance of historic assets during construction due to setting change (this is because such effects are short-term and temporary);
- Indirect physical effects on historic assets as a consequence of vibration, dewatering or changes in hydrology (since such effects are unlikely, and will not be significant, given the scale and nature of the Proposed Development);
- Cumulative physical effects (these are considered highly unlikely given the nature/location of the Proposed Development); and
- Decommissioning effects have not been assessed, on the basis that direct/physical construction effects will be more intensive and therefore represent the worst-case assessment of potential impacts.

Assessment of Effects

6.107 The assessment of effects identified above is based on the project description as outlined in **Chapter 4**. Unless otherwise stated, potential effects identified are considered to be adverse.

Construction Effects

Predicted Construction Effects (Direct Physical Effects)

6.108 No direct physical effects during the construction phase of the Proposed Development to designated historic assets have been identified.

6.109 Direct physical effects resulting from the construction of the Proposed Development have been identified for 10 non-designated historic assets recorded within the Site, however only one is considered to be significant.

6.110 The construction activities within cable route could result in the total loss of the physical remains (evidential and historical value) of Cwm, farmstead, a traditional farm building (HCPA Ref. PRN137420). The total loss of this historic asset of low importance could lead to a level of impact judged to be **large** resulting in a **moderate** potential level of effect (significant) for the purposes of EIA.

6.111 Information on non-significant direct physical effects to the remaining nine non-designated historic assets is presented in **Appendix 6.1**.

Committed Additional Mitigation

6.112 Cables and working areas within the cables route will avoid physically interacting with the traditional farm building at Cwm, farmstead (HCPA Ref. PRN137420) between NGR308530253011 and NGR308495253002. During construction the building will be fenced off along with an appropriate buffer and clearly demarcated to prevent accidental damage.

6.113 To mitigate the potential for previously unrecorded buried archaeological remains to be present within the construction footprint of the substation and construction compounds, a staged approach to post-consent mitigation is proposed. Following consent, a programme of archaeological evaluation will be agreed with PCC archaeological advisors (HCPA). This may include both non-intrusive and intrusive archaeological investigations within the construction footprint of the substation and construction compounds. The results of the archaeological evaluation will be used to inform any subsequent mitigation requirements. Mitigation may include the strip/map/excavate methodology during groundbreaking or targeted area

excavation, including preparation of a report on the results of the landscape survey and preparation and submission of an ordered archive.

6.114 The programme of archaeological evaluation and any subsequent mitigation will be undertaken in line with a Written Scheme of Investigation agreed with HCPA.

6.115 Additional mitigation for non-significant direct physical effects is identified in **Table 6.1** of **Appendix 6.1**.

Residual Construction Effects

6.116 Following the implementation of the additional mitigation identified above and in **Table 6.5** (below), none of the direct physical effects due to the construction of the Proposed Development are predicted to be significant effects. Residual construction effects are presented in **Table 6.5**.

Operational Effects

Predicted Operational Effects (Direct Effects Due to Setting Change)

6.117 Significant direct effects due to setting change as a result of the operation of the Proposed Development have been identified for two designated heritage assets of **high** importance. These are considered below.

6.118 Information on non-significant effects to six designated historic assets and one non-designated historic assets due to setting change is presented in **Appendix 6.1**.

6.119 All direct effects due to setting change will last for the life of the Proposed Development and will be reversible upon decommissioning.

Designated Historic Assets

Aberedw Hill Round Barrows (Cadw Ref. RD074)

6.120 This asset comprises four round barrows, a group of three barrows on Aberedw Hill (northern group), and the fourth barrow located on a ridge approximately 1.2 km to the south. This assessment considers the direct effects resulting from setting for the northern group of

barrows and the southern barrow separately, before identifying the level of effect for the four barrows as a single asset.

6.121 The ZTV for the Proposed Development identifies that all 18 turbines will be present in the setting of the four round barrows (refer to **Figures 6.5 to 6.8**). The nearest turbines to the northern group (clockwise from the north) will be turbines T4, T1, T2, T3 and T5. These turbines are approximately 500 m, 600 m, 280 m, 380 m and 690 m from the central barrow of the three respectively (refer to **Figure 6.7**). The nearest turbine to the western barrow is T3 c.220 m west (refer to **Figure 6.6**). The nearest turbines to the eastern barrow are T1 c.345 m south and T2 c.290 m west (refer to **Figure 6.8**). Turbines T7, T8, T9, T10, T11, T12 and T6, are distributed along the ridge above Milo Brook to the east, north-east and the house shore ridge to the north. The remaining turbines recede east and north-east across Aberedw Hill Common.

6.122 Turbines T1, T2 and T3 are located below but on the edge of the plateau forming the highest point of Aberedw Hill. Turbines T4 and T5 to the north of the barrows, are slightly lower and further from the plateau's edge. It is likely that the hardstanding for T1, T2 and T3 will be visible from the barrows and the plateau on which they have been deliberately sited, as well as the access tracks between these turbines. While at a greater distance from the northern group of barrows and to a greater or lesser extent below them, Turbines T6 to T12, will add to the sense of encirclement of Aberedw Hill and by default the barrows upon it. The associated hardstandings and access tracks will add to the sense of enclosure and separation from the landscape setting of the barrows i.e. the Aberedw range and the lowland valleys surrounding it.

6.123 All five turbines (T1 to T5) and their associated infrastructure will be a pronounced intrusion into the setting of the northern group of barrows. They will dominate their hilltop plateau setting and by doing so reduce their connectivity with Aberedw range to the north-east and the lowland valleys. The sense of place and the character of their setting i.e. the isolated open hilltop plateau, will be substantially altered.

6.124 The natural approach to the northern barrow group, from the north-east around the top of the horseshoe formed by the Milo valley (see **Figure 6.5**) will be occupied by Turbines T6, T12, T14 and the remaining turbines along the northern escarpment edge of Aberedw, along with their hardstanding and linking access tracks. The open common character of this approach will be dominated by these elements of the Proposed Development, and those to the south (such as

T11, T10 and T9). Views towards Aberedw Hill from the horseshoe ridge will include T5, T4, T3, T2 and T1, as well as the hardstanding and access tracks from T5, T4 and T3. This infrastructure will diminish the prominence of the three barrows on the skyline when viewed from the horseshoe ridge, and the sense of anticipation that their setting on Aberedw Hill may have been intended to convey.

6.125 Similarly, the presence and dominance of turbines T3, T2 and T1 in the setting of the northern group of barrows, will have a detrimental effect on the apparent 'reveal' of the barrows as they first disappear from view, before appearing again until reaching the edge of the plateau (refer to **Figure 6.6**). The appreciation of their monumental size and form, which may have been intended by their positioning on the plateau, will be impacted by the scale and form of turbines T1 to T3.

6.126 While the topography and landforms that underpin the setting of these barrow, and the ability to understand the factors that may have led to their deliberate placement in the landscape, the presence of the Proposed Development will substantially alter the way the key setting relationships for the northern group of barrows will be appreciated and experienced. This includes:

- How the deliberate siting on the highest point of Aberedw Hill is appreciated and experienced from the plateau and when approaching the barrows.
- The relationship with natural landscape barriers, routeways and attractive places for settlement and agriculture, including the valleys of the River Wye and River Edw, by enclosing the barrows and their hilltop plateau setting, diminishing the appreciation of the intervisibility with the rest of Aberedw Hill Common to the north and north-east and the lowland valleys below and how this element of their setting is experienced.
- Interrupting the views the barrow's siting on Aberedw Hill may have been intended to exploit, including those towards other highpoints where contemporary funerary and ritual activity took place.
- Substantially altering the sense of place characterised by their open common and the putative performative space created by their plateau setting.

- Altering the sense of anticipation when traversing the natural approach along the northern ridge, enhanced by their sudden disappearance and reveal when reaching the plateau through the distraction caused and the substantial alteration to the character of this element of the barrows setting.
- Changing the isolated open common character of the barrows current setting.

6.127 The southern barrow is located on a north/south ridge, south of and below Aberedw Hill. Given their position on the northern side of the plateau, the northern group of barrows have no intervisibility with the barrow to the south. The spatial relationship between these barrows and others in the landscape will not be affected by the Proposed Development.

6.128 The Proposed Development will be to the north and north-east of the southern barrow (refer to **Figure 6.9**). The nearest turbines T1, T2 and T3 will be between c.1 km and 1.2 km to the north. The hardstanding of turbines T1 and T2 and their associated access tracks will be present in the southern barrows setting. The southern barrow occupies a different topographical position to the northern group, with a stronger setting relationship with the ridge on which it has been positioned and the Ceinhinog valley to the east and Wye to the west and to a lesser extent the Edw Valley to the south, than Aberedw Hill. The barrows position on the ridge enables expansive views of these landscape forms, while preventing intervisibility of the barrow from below the ridge.

6.129 Turbines T1 to T3 will be seen to be held back from the ridge, and the remaining turbines, including T7, will appear to fade across Aberedw Hill Common to the north and north-east, behind and beyond Aberedw Hill. Despite the presence of the Proposed Development to the north, the character of the open common setting of the southern barrow will be maintained as will the setting relationship with the lowland to the west, south and south-east. The contribution these key setting relationships make to how this barrow is understood and appreciated as a Bronze Age funerary asset will not be affected, although the way its open common setting on the edge of the Aberedw range is experienced will be slightly altered.

6.130 The presence of the Proposed Development in the landscape during operation, will substantially alter the setting of the northern group of barrows, and will be a negative influence on how they are appreciated, and their setting is experienced in the landscape, adversely affecting the heritage significance of these barrows. Changes to the southern barrow will slightly

alter how its setting is experienced. This change to the way this asset's setting contributes to the way it is appreciated and experienced will lead to a level of impact judged to be **large** resulting in a **major** level of effect, which is a significant effect in EIA terms.

Cwmblaenerw Enclosed Long Hut (Cadw Ref. RD169)

6.131 As can be seen from the visualisation produced to inform this assessment up to 18 turbines will be present in the setting of the enclosed long hut during the operation of the Proposed Development (refer to **Figure 6.10**). In addition, the hardstanding and access tracks for turbines T15 and T18 are predicted to be visible from the asset along with borrow pit A. The nearest turbines (clockwise from the north) will be T16, T17, T18, T15 and T14. These turbines are approximately 490 m, 620 m, 770 m, 350 m and 390 m from the centre of the scheduled area respectively. Borrow pit A will be located approximately 350 m east of the asset on the adjacent west-facing slope.

6.132 The full extent of turbines T15 and T18 (to the south-east and south) and their hardstanding and part of their access tracks will be visible from the asset. Turbines T14 (west), T16 (north) and T17 (east) to a greater or lesser extent will be partly screened by intervening topography. The remaining turbines will appear to recede behind intervening high ground to the west and south-west of the asset, as the Proposed Development extends towards Aberedw Hill. The asset will be encircled by turbines (T16, T17, T18, T15 and T14) which will constitute an intrusive presence in the asset's setting and dominate the enclosed moorland surroundings of the enclosed long hut, changing its character.

6.133 While the prominence of the borrow pit A will diminish with time following reinstatement and revegetating, it is likely that it will permanently change the profile of the adjacent west-facing slope and will remain a noticeable change to the asset's setting.

6.134 The ability to understand the key setting relationships that contribute most to the heritage significance of the enclosed long hut, comprising its location on the edge of the open Aberedw Hill Common just beyond the enclosed pasture at Blaen-wern, the access to the open hill for grazing, possibly associated areas of cultivation ridges and the functional relationship between the long hut and its surrounding enclosure will remain and will remain readable in the landscape. The spatial relationship with other designated and non-designated historic assets of a similar date, form and function across Aberedw Hill Common, that contribute to the

understanding of the exploitation of the common during the medieval and post-medieval period, patterns of settlement and land use will remain perceptible. The ability to appreciate these relationships in relation to the open common and how these are experienced, and the asset's sense of place, will be affected by the presence of the Proposed Development, given the proximity of turbines, their size and scale.

6.135 The physical remains of the asset from which the evidential and historical value of the enclosed long hut is derived, and their potential contribution to understanding the date, occupation and function of the asset, and what they may tell us about the agricultural systems, economy and the exploitation of marginal upland resources will not be affected by the Proposed Development.

6.136 The presence of the Proposed Development in the landscape during operation will be a marked change to setting of the enclosed long hut and change the character of its surrounding open common, and a negative influence on how it is appreciated and experienced in the landscape, and will affect the historic asset's heritage significance. This change to the way the asset's setting contributes to the way it is appreciated and experienced will lead to a level of impact judged to be **medium** resulting in a **moderate** level of effect, which is a significant effect in EIA terms.

Committed Additional Mitigation

6.137 For developments of this sort, it is difficult to fully mitigate impacts to historic assets resulting from setting change during the operation beyond those changes to the design and layout identified as the Proposed Development evolves (embedded mitigation). Therefore, no specific additional mitigation to reduce the potential effects to historic assets due to setting change resulting from the presence of the Proposed Development in the landscape have been identified.

Residual Operational Effects

6.138 As no additional mitigation is proposed to address significant setting effects, the significance of effects remain as reported above.

Cumulative Effects

6.139 No significant cumulative effects to historic assets have been identified resulting from the operation of the Proposed Development. Further information on cumulative effects is presented in **Appendix 6.1**.

Interrelationship Between Effects

6.140 No interrelationships between effects have been identified.

Monitoring

6.141 No further survey requirements or monitoring have been identified for the historic environment at this stage.

Summary of Significant Effects

6.142 **Table 6.5** below summarises the predicted significant effects of the Proposed Development on the historic environment.

Table 6.5 Summary of significant effects to historic assets

Likely Effect	Importance	Magnitude	Significance	Mitigation	Significance of Residual Effect
Construction (direct physical effects)					
Cwm, farmstead (HCPA Ref. PRN137420)	Low	Large	Moderate (significant)	The cables and working area will avoid physically interacting with the traditional farm building at Cwm, farmstead (HCPA Ref. PRN137420) between NGR308530253011 and NGR308495253002. During construction the building will be fenced off along with an appropriate buffer and clearly demarcated to prevent accidental damage.	No change
Operation (direct effects resulting from setting change)					
Aberedw Hill Round Barrows (Cadw Ref. RD074)	High	Large	Major (significant)	None Proposed	Major (significant)

Likely Effect	Importance	Magnitude	Significance	Mitigation	Significance of Residual Effect
Cwmblaenerw Enclosed Long Hut (Cadw Ref. RD169)	High	Moderate	Moderate (significant)		Moderate (significant)