

11 CULTURAL HERITAGE

11.1 Introduction

- 11.1.1 This chapter discusses the Cultural Heritage of the proposed Pen March Wind Farm and its surroundings. Cultural Heritage comprises all elements of the historic environment, including archaeology, built heritage and the history of the area.
- 11.1.2 The chapter has been informed by a detailed historic environment desk-based assessment which considers designated assets including scheduled monuments, listed buildings, conservation areas, registered historic parks and gardens, registered battlefields and World Heritage sites. It also considers non-designated archaeological and historic assets recorded on the Glamorgan Gwent and Clwyd Powys Historic Environment Records and the National Monuments Record.
- 11.1.3 The scope of this assessment was to consider if the Proposed Scheme would result in any significant effects to designated and non-designated historic assets within and beyond the Site. It also considered the archaeological potential of the area in question, highlighting any areas of known or suspected archaeological potential and if the Proposed Scheme would result in any significant effects to any buried archaeological deposits.

11.2 Statutory and planning context

- 11.2.1 The following **Table 11.1** summarises the statutory and planning/policy context (national/regional/local) for assessment work relating to the historic environment in Wales.

Table 11.1: Legislation and guidance

Document	Summary
Legislation	
Ancient Monuments and Archaeological Areas Act 1979	Previously the primary legislation for protecting archaeological remains and Scheduled Ancient Monuments in Wales.
Planning (Listed Buildings and Conservation Areas) Act 1990	Previously the primary legislation for protecting listed buildings and Conservation Areas in Wales.
Historic Environment (Wales) Act 2016	The 2016 Act consolidates the Ancient Monuments and Archaeological Areas Act 1979 and also the Planning (Listed Buildings and Conservation Areas) Act 1990. It is supported by a number of planning guidance documents, a number of which are still in preparation. The Act most specifically provides better safeguards for the protection of Scheduled Monuments, Listed Buildings and Historic Parks and Gardens. It will also include further guidance on place names.
Planning Policy	
Planning Policy Wales v11, rev Feb 2021	Technical Advice Note 24 'The Historic Environment' was adopted on 31st May 2017 and is unaltered by the February revisions of PPW. This replaced Circular 60/96 'Planning and the Historic Environment' and Circular 61/96 'Planning and the Historic Environment: Historic Buildings and Conservation Areas'. This states that 'The purpose of this TAN is to provide guidance on how the planning system considers the historic environment during development plan preparation and decision making on planning and Listed Building (LBC) applications. This TAN provides specific guidance on how the following aspects of the historic environment should be considered: a) World Heritage Sites b) Scheduled monuments c) Archaeological remains d) Listed buildings e) Conservation areas f) Historic parks and gardens g) Historic landscapes

Document	Summary
	h) Historic assets of special local interest'
Future Wales The National Plan 2040, 2021	Policy 18 – Renewable and Low Carbon Energy Developments of National Significance Proposals for renewable and low carbon energy projects (including repowering) qualifying as Developments of National Significance will be permitted subject to policy 17 and the following criteria: 6. there are no unacceptable adverse impacts on statutorily protected built heritage assets; The cumulative impacts of existing and consented renewable energy schemes should also be considered.
Caerphilly County Borough Local Development Plan up to 2021: Policy SP6	Development proposals should contribute to creating sustainable places by having full regard to the context of the local, natural, historic and built environment and its special features ...
Caerphilly County Borough Local Development Plan up to 2021: Policy NH1.1 – Upper Rhymney Valley	Key Policy, Management and Development Control Issues: Long Term - Future development proposals should not see the loss of any historic environment or geological or geomorphological features present within the landscape. Protect elements of Dowlais Free Drainage water management system.
Merthyr Tydfil, the Replacement Local Development Plan 2016 - 2031 LDP Objective 9	To protect, enhance and promote all heritage, historic and cultural assets
Merthyr Tydfil, the Replacement Local Development Plan 2016 - 2031 Policy CW1: The Historic Environment	The integrity of our historic environment assets will be conserved and enhanced. Development proposals will only be permitted where it can be demonstrated they would preserve or enhance the architectural quality, character or the historic or cultural importance of our designated historic environment assets. Development affecting undesignated historic environment assets including, Locally Listed Buildings or structures, Landscapes of Outstanding Historic Interest in Wales, Urban Character Areas and Archaeologically Sensitive Areas should have regard to their special character and archaeological importance.

Document	Summary
A Management Plan for the Bannau Brycheiniog National Park 2015-2020	Managing the Historic Environment 1) Protect and manage the Park's historic environment 2) Raise awareness and understanding of the Park's historic environment 3) Develop a regional strategy to protect, manage and monitor the Park's historic environment. 4) Recognise and enhance farming's role in managing the Park's landscape
Guidance	
Cadw planning guidance documents	Conservation Principles, Cadw 2011 which includes the following six principles. 1. Historic assets will be managed to sustain their values 2. Understanding the significance of historic assets is vital 3. The historic environment is a shared resource 4. Everyone will be able to participate in sustaining the historic environment 5. Decisions about change must be reasonable, transparent and consistent 6. Documenting and learning from decisions is essential Heritage Impact Assessments in Wales, Cadw 2017 Managing Setting of Historic Assets in Wales, Cadw 2017 These notes that the setting of an historic asset includes the surroundings in which it is understood, experienced, and appreciated embracing present and past relationships to the surrounding landscape. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral. Setting is not a historic asset in its own right but has value derived from how different elements may contribute to the significance of a historic asset.
Guide to Good Practice on Using The register of landscapes of Historic Interest in Wales in the Planning and Development Process, Cadw 2007, Rev 2	Includes the methodology on the Assessment of the Significance of the Impact of Development on Historic Landscape Areas on the Register of Landscapes of Historic Interest in Wales (ASIDOHL2) process

Document	Summary
Chartered Institute for Archaeologists (CIfA) guidance	Standard and guidance for the preparation of Historic Environment Desk-Based Assessments, CIfA 2021 Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment, CIfA, 2021 Code of conduct: professional ethics in archaeology, CIfA 2021 Regulations for Professional Conduct, CIfA 2021
Welsh Archaeological Trusts	Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs), Welsh Archaeological Trusts July 2018 (reviewed 2019)

11.3 Consultation undertaken

11.3.1 Consultation regarding cultural heritage has been undertaken during the initial scoping for the project and at the start of the preparation of both the historic environment desk-based assessment and ASIDOHL.

Table 11.2: Consultation summary

Consultee	Key issues raised	Actions in response to consultee comments
Cadw	1) Cadw noted that the initial proposal submitted with the 2020 Scoping Report indicated at least 1 turbine and associated infrastructure would be located within the Merthyr Tydfil Landscape of Outstanding Historic Interest (LOHI). They therefore advised that an ASIDOHL2 should be included in the EIA. 2) Cadw stated in the Scoping response that assessment of the potential impacts on historic assets should have regard to Pitwellt Pond, Prehistoric Hut Circle Settlement (proposed) GM623. 3) Cadw noted that the submitted ZTV with the 2020 Scoping Report indicated the development had some potential to impact on Gelligaer Landscape of Special Historic Interest, on recorded and un-recorded burial cairns along the ridges of the surrounding valleys between Fochriw and Bedlinog and identified that there may be some inter-visibility between Morlais Castle (GM028) and Cyfarthfa Castle (Grade I Listed). 4) Discussion on the general scope of the project and information relating to search areas, criteria used to determine which designated assets needed further consideration.	1) An ASIDOHL2 has been prepared for the EIA, the scope of which has been agreed with Cadw. 2) The proposed scheduled monument, which comprises the remains of an enclosure and adjacent circle hut settlement, which probably dates to the late prehistoric period, has been included in the assessment. The presence of the future scheduled monument was considered during the design process. 3) The historic assets identified by Cadw have been included in the assessment. The revised ZTV for the final scheme was used. 4) Agreed search areas and methodologies that have been used in the desk-based assessment that have informed this chapter
GGAT	Discussion of approach to the baseline assessments and	Preparation and approval of a written scheme of investigation

Consultee	Key issues raised	Actions in response to consultee comments
	request Historic Environment Record data	which provided the methodology for the assessment. Obtained data
CPAT	Request Historic Environment Record data	Obtained data
NMR	Request information from National Monuments Record data and information on aerial photography	Obtained data
BBNP Archaeological Officer	Contacted to determine if they have their own data bases of archaeological information or if they required specific methodologies for assessment.	It was confirmed that they do not have their own database of information or methodologies.

11.4 Approach to the assessment

Baseline Characterisation

- 11.4.1 The study area to assess designated historic assets is the Site plus a 10 km buffer from its boundary. A 3 km area has been used to assess Registered Landscapes of Interest in Wales as prepared for the ASIDOHL. The study area for non-designated historic assets is the Site Boundary plus a 2 km buffer from its boundary.
- 11.4.2 For the purposes of Planning Policy in Wales TAN 24 – The Historic Environment, the historic environment is defined as: *All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and deliberately planted or managed* (Welsh Government, 2017).
- 11.4.3 A historic asset is: *An identifiable component of the historic environment. It may consist or be a combination of an archaeological site, a historic building or area, historic park and garden or a parcel of historic landscape. Nationally important historic assets will normally be designated* (Welsh Government, 2017).
- 11.4.4 The assessment principally involved consultation of readily available archaeological and historical information from documentary and cartographic sources. The major repositories of information comprised:
- Glamorgan Gwent Archaeological Trust (GGAT) Historic Environment Record (HER) for known historic assets within 2 km of the Site (i.e. the study area);
 - Clwyd Powys Archaeological Trust (CPAT) HER for known historic assets within 2 km of the Site;
 - Royal Commission on the Ancient and Historical Monuments of Wales National Monument Record information for known historic assets within 2 km of the Site;

- scheduled monuments, registered historic parks and gardens, registered historic landscapes; listed buildings and conservation areas (Cadw/Welsh Government);
- air photographs held by RCAHMW, Britain from Above, Google Maps and those taken for the scheme;
- review of Lidar data, both that from the LLE website and the Lidar survey undertaken specifically for the Site; and
- site visits.

Assessment Methodology

Setting Assessment

- 11.4.5 A settings assessment has been undertaken giving due consideration to Cadw guidance on setting as laid out in Managing Setting of Historic Assets in Wales and Heritage Impact Assessment in Wales, and similarly within the Welsh Government's Planning Policy Wales Technical Advice Note 24: The Historic Environment.
- 11.4.6 In simple terms, setting is defined as 'the surroundings in which a historic asset is understood, experienced and appreciated'. It therefore must be recognised from the outset that 'setting' is not a historic asset, and cannot itself be harmed. Its importance relates to the contribution it makes to the significance of the historic asset and the extent to which it allows that significance to be understood, experienced and appreciated.'
- 11.4.7 Welsh Government guidance identifies that 'change in the historic environment is inevitable', but it is only harmful when significance is damaged.
- 11.4.8 In that regard, the Cadw Conservation Principles document states that significance of an historic asset 'embraces all of the cultural heritage values that people associate with it, or which prompt them to respond to it'.
- 11.4.9 As such, when assessing the impact of proposals on designated historic assets beyond the boundary of a development site, it is not a question of whether setting would be affected, but rather a question of whether change within an asset's 'setting' would lead to a loss of 'significance' or the ability to understand, experience and appreciate 'significance' based on the above 'heritage interest' as defined by Cadw.
- 11.4.10 On a practical level, the Cadw guidance identifies an approach to assessing setting in relation to development management which is based on a four-stage procedure; i.e.:
- Stage 1: identify the historic assets;
 - Stage 2: define and analyse the setting which is made up of:
 - its current surroundings
 - our present understanding and appreciation of the historic asset
 - what (if anything) survives of its historic surroundings.
 - Stage 3: evaluate the potential impact of change or development; and
 - Stage 4: consider options to mitigate the impact of a proposed change or development.

11.4.11 The timeline used in the assessment to identify archaeological time periods is as follows:

Table 11.3: Timeline used in this assessment

Period	Dates	
Palaeolithic	c.450,000 – 12,000 BC	Prehistoric
Mesolithic	c. 12,000 – 4000 BC	Prehistoric
Neolithic	c.4000 – 1800 BC	Prehistoric
Bronze Age	c.1800 – 600 BC	Prehistoric
Iron Age	c.600 BC – AD 43	Prehistoric
Roman	AD 43 – c. AD 410	Historic
early medieval	c. AD 410 – AD 1086	Historic
medieval–	1086 – 1485	Historic
post medieval	1486 – 1900	Historic
modern	1901 – Present	Historic

11.4.12 The baseline for the report has been determined through the searches of the GGAT and CPAT HERs, NMR data and Cadw lists of designated assets to determine our existing knowledge of historic assets both within the Site and the appropriate study areas.

11.4.13 Detailed methodologies for all aspects of the baseline assessment are contained in the technical assessment reports as follows:

- Historic Environment Desk-based Assessment (HEBDA) (**Technical Appendix 11.1, Volume 4**)
- Historic Landscape Assessment (ASIDOHL2), (**Technical Appendix 11.2, Volume 4**)

Value of receptors

11.4.14 The historic environment receptors discussed in this chapter are as follows in the table below.

Table 11.4: Receptor value and sensitivity

Value	Description
High	World Heritage Sites; Grade I and II* Registered Parks and Gardens; Scheduled Monuments; Protected Wreck Sites; Registered Battlefields; Grade I and II* Listed Buildings; Registered Historic Landscapes and undesignated heritage assets of equal importance. Well preserved historic landscapes with exceptional coherence and time depth, and areas associated with cultural heritage with globally important activities, innovations or people. A setting which possesses key attributes that make a strong positive contribution to the understanding and/or appreciation of the values

Value	Description
	that embodies its importance. This would typically relate to the settings of assets of high and medium value and sensitivity.
Medium	Conservation Areas; Grade II Registered Parks and Gardens; Grade II Listed Buildings; heritage assets on local lists; and undesignated assets of equal importance. Conservation areas that contain buildings that contribute significantly to historic character. Historic townscapes with important historic integrity. Designated special historic landscapes and areas on local registers for their regional or local significance. A setting which possesses some key attributes that make a positive contribution to the understanding and/or appreciation of the values that embodies its importance. This would typically relate to the settings of assets of high and medium value and sensitivity.
Low	Designated or undesignated assets of local importance poorly preserved with limited value. Unlisted buildings of modest quality in their fabric, townscape of limited historic integrity, and robust undesignated historic landscapes that have intangible cultural heritage associations of local significance. A setting which possesses some attributes that make little positive contribution to the understanding and/or appreciation of the values that embodies its importance.
Negligible	Assets with little or no surviving archaeological interest, buildings or urban landscapes of no architectural interest, intrusive buildings, and landscapes / settings of assets with little or no significance or historic interest.

Magnitude of impact (change)

11.4.15 The magnitude of change for the setting of designated historic assets used in this chapter is as laid out in **Table 11.5** and the scale is defined in terms of harm to the setting of the heritage assets. This is used where the proposals will not cause any direct (physical impacts) to the heritage assets, but where changes to their setting could occur from the proposals which could impact upon their significance.

Table 11.5: Definition of impact magnitude regarding setting of heritage assets

Magnitude of Effect (impact)	Change to Setting
High	A comprehensive and fundamental change to the key positive attributes of a heritage asset's setting, such that the setting is substantially or totally altered.
Medium	A considerable change to the key positive attributes of a heritage asset's setting such that its contribution to the importance of the asset is appreciably reduced
Low	A limited change to the key positive attributes of a heritage asset's setting resulting in a slight but discernible reduction to its contribution to the asset's importance.

Magnitude of Effect (impact)	Change to Setting
No Change	No change to the setting of a heritage asset that effects its significance.

11.4.16 **Table 11.5** provides scales of harm to the setting of designated assets within the vicinity of the Proposed Scheme, where no direct impacts will occur but changes to their setting could be considered to reduce the significance of the historic assets.

11.4.17 Elements of a setting may make a positive or negative contribution to the value of a heritage asset, may affect the ability to appreciate that value, or may be neutral. The key attributes of setting that contribute to the importance of the heritage asset comprise the asset's physical surroundings, the experience of the asset and the asset's associative attributes. A setting which possesses key attributes that make a strong positive contribution to the understanding and/or appreciation of the values that embodies its importance would be considered to make a high contribution to its importance. A setting which possesses some key attributes that make a positive contribution to the understanding and/or appreciation of the values that embodies its importance would make a medium contribution to its importance. Where a setting possesses some attributes that make little positive contribution to the understanding and/or appreciation of the values that embodies its importance, the contribution to its importance would be low.

11.4.18 Where it has been identified that there is no risk of physical effects to a heritage asset, and where its setting is such that there is no potential for it to be affected by the presence of the proposed scheme, the asset is not considered further in the assessment.

11.4.19 Where there will be direct impacts to historic assets (designated or not) then the following table defines the magnitude of that effect.

Table 11.6: Definition of direct impact magnitude for archaeological deposits

Magnitude of Effect	Guideline Criteria
Major	Complete destruction or a fundamental, substantial change of an archaeological site of moderate importance. Partial destruction of an archaeological site of high importance
Moderate	Partial destruction or removal of key elements of an archaeological site of moderate importance. Complete destruction of an archaeological site of low importance.
Minor	Partial destruction of an archaeological site of low importance.
No change	No change to the archaeological site.

Determination of significance

11.4.20 The approach to determine the significance of effects has been as follows:

- identify the relevant receptors
- derive their value (importance) based on the criteria set out in **Table 11.4**

- identify and consider the likely impacts from each activity
- determine the magnitude of change likely as a result of the impacts (**Tables 11.5 and 11.6**)
- present the environmentally and ecologically significant effects and then consider how additional mitigation may reduce negative effects.

Nature of effect

11.4.21 In addition to determining the significance of the effect, the assessment process also includes a qualitative description regarding the nature of the effect. These terms add additional information about how the effect would affect receptors.

Table 11.7: Assessment descriptors

Term	Nature of effect descriptors
Adverse	An effect which has the potential to decrease receptor value or status relative to baseline conditions.
Beneficial	An effect which has the potential to increase receptor value or status relative to baseline conditions.
Short-term	Effects that persist only for a short time, e.g. during the construction (or decommissioning) phase only; includes reversible effects.
Long-term	Effects that persist for a much longer time, e.g. for the duration of the operational phase (essentially until the development ceases or is removed/reinstated); includes effects which are permanent (irreversible) or which may decline over longer timescales.

11.4.22 Environmental mitigation measures are necessary to address likely **significant** adverse environmental effects (these are shaded in grey in **Table 11.8**). The environmental effects of impacts can be referred to as either being before, or following establishment of, environmental mitigation.

Table 11.8: Significance of environmental effect on historic assets due to physical impacts on heritage assets

Sensitivity	Magnitude			
	Major	Moderate	Minor	No change
High	Major	Major	Major / Moderate	Minor
Medium	Major	Major / Moderate	Moderate	Minor
Low	Major / Moderate	Moderate	Minor	Negligible
Negligible	Minor	Minor	Negligible	Negligible

Table 11.9: Significance of environmental effect on historic assets due to impacts on the setting of heritage assets

Sensitivity	Magnitude			
	Major	Moderate	Minor	No change
High	Major	Moderate	Minor	Negligible
Medium	Moderate	Minor	Minor	Negligible
Low	Minor	Minor	Negligible	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Limitations of the assessment

- 11.4.23 The assessment of potential impact to designated historic assets in the study area has been based upon the Zone of Theoretical Visibility provided for the Proposed Scheme.
- 11.4.24 The baseline data used for the assessment compiles information held on the GGAT and CPAT HERs as well as the NMR. These are records of only the known sites within the area and other archaeological remains may be present that have hitherto not been identified buried below ground. Site visits and analysis of Lidar data have not identified any further definite archaeological remains within the Site Boundary, other than areas of possible quarrying around the area of the proposed control building and electrical compound.

Design basis and assumptions

- 11.4.25 Throughout the process of the project design historic assets have been considered and initial constraints of known sites within the Site area have been identified at the outset. The designs and layouts of the wind turbines and associated infrastructure has avoided the locations of known historic assets where possible.
- 11.4.26 As part of the design process for the Proposed Scheme peat surveys have been undertaken to determine the locations of such areas. These have the potential to contain archaeological information on past environments, seal buried archaeology and artefacts can also be preserved within peat, including organic material. The design has ensured that these areas of peat are avoided where possible by the proposal and its associated infrastructure.

11.5 Existing environment

Scheduled Monuments

- 11.5.1 There are 102 scheduled monuments within 10 km of the Proposed Scheme. A four stage process was used to determine which required detailed assessment. This is included in Appendix 1 of the HEDBA (refer to **Technical Appendix 11.1, Volume 4**). The first stage identified all of the monuments. All scheduled monuments are of high value and sensitivity as laid out in **Table 11.4**.
- 11.5.2 A second stage removed all scheduled monuments not lying within the ZTV or which lay on the edges of visibility zones (where only one or two turbines may have

theoretically been visible) which reduced the number down to 63. This considered which monuments would not have any changes to their setting which would impact upon their significance.

- 11.5.3 The third stage looked at the 63 remaining scheduled monuments and considered them each in relation to their site type, whether their setting contributed to their significance and if the Proposed Scheme would cause any changes to their setting, or cause no change. This reduces the number of scheduled monuments that required assessing to seven (**Table 11.10**; and **Figure 11.1, Volume 3**).
- 11.5.4 A further site is due to be designated as a scheduled monument which lies within the Site Boundary (provisional number GM623). This was also added to the scheduled monument assessment as sites being considered for scheduling need to be considered as scheduled monuments (Historic Environment (Wales) Act 2017).

Table 11.10: Scheduled Monuments (SM) considered for further assessment

SM Number	Name	Period	NGR	Distance from Site
BR277	Carn y Bugail and Carn Felen Round cairns	Prehistoric	SO 08829 13672	3.2 km
BR278	Waun y Gwair Cairn Round cairn	Prehistoric	SO 07689 12276	1.9 km
BR322	Garn Fawr round cairn	Prehistoric	SO 2350 15140	6.1 km
BR389	Twyn Ceilog Round Cairn	Prehistoric	SO 09911 13105	3.0 km
GM563	Morlais Hill ring cairn	Prehistoric	SO 05255 09643	3.3 km
GM028	Morlais Castle	Medieval	SO 04958 09585	2.6 km
GM569	Garn Pontsticill ring cairn	Prehistoric	SO 05278 11788	3.4 km
GM623	Enclosure south east of Pitwellt Pond (to be scheduled)	Prehistoric	SO 08165 09633	In Site Boundary

- 11.5.5 Carn y Bugail and Carn Felen Round cairns (BR277), Waun y Gwair Cairn Round cairn (BR278), Twyn Ceilog Round Cairn (BR389) and Garn Fawr round cairn (BR322) were considered as a group as they all lie to the north of the Site Boundary and likely have visible interconnection and association between them. Three of the cairns lie within 2 km to the north of the Site and the third around 6 km to the north-east.
- 11.5.6 All of the scheduled cairns have the following site type description: *'The monument is of national importance for its potential to enhance our knowledge of prehistoric burial and ritual practices. The monument is an important relic of a prehistoric funerary and ritual landscape and retains significant archaeological potential, with a strong probability of the presence of both structural evidence and intact burial or ritual*

deposits. Cairns may be part of a larger cluster of monuments and their importance can further enhanced by their group value.

- 11.5.7 Morlais Hill ring cairn (GM563) and Garn Pontsticill ring cairn (GM569) are also grouped together due to their proximity to one another on the western side of the Nant Morlais Valley. The ZTV suggests that intervisibility will not include all of the turbines for the monuments.
- 11.5.8 Again both monuments are described as for the ring cairns above as being of national importance for their *'potential to enhance our knowledge of prehistoric burial rites and ritual, social organisation and the environment. The feature is an important relic of a prehistoric funerary and ritual landscape and retains significant archaeological potential, with a strong probability of both structural evidence and the presence of intact burial or ritual deposits.'*
- 11.5.9 Morlais Castle (GM028) is of medieval date. The scheduling description notes that *'The remains are now almost completely collapsed but represent a curtain walled enclosure measuring about 130m north-south by 60m wide outside of which is a rock-cut ditch and counterscarp bank. Towers were situated around the wall at the angles; one on the west side, three on the east and one each at the north and south ends. The latter two were about 20m diameter and would have served to dominate the skyline.'*
- 11.5.10 The monument is considered of 'national importance for its potential to enhance our knowledge of medieval defensive and domestic practices and has strong historical associations. The monument is well-preserved and an important relic of the medieval landscape. It retains significant archaeological potential, with a strong probability of the presence of both structural evidence and intact associated deposits.'
- 11.5.11 The prehistoric enclosure within the Site Boundary south- east of Pitwellt Pond (GM623; HER Ref GGAT0489m) comprises a large D-shaped drystone wall enclosure and lies within approximately 150 m of the proposed location of the control building and electrical compound. The monument lies at the base of a relatively steep slope comprising exposed rock and up to the plateau on which Pitwellt pond lies. These restrict views to the majority of the proposed wind turbine area, but Turbines 1, 3 and 6 are likely to be visible, as will possibly the southern edge of the control building and electrical compound.
- 11.5.12 The setting of the monument will be impacted upon by the proposal, although the main views from the Site are to the north-west, west, south-west, south and south-east, with views to the east and north-east obscured by the steep natural slope. The enclosure may have been positioned here to take advantage of shelter from this slope.

Listed Buildings

- 11.5.13 There are 322 listed buildings located within the 10 km study area. A three stage assessment process has been used to determine which listed buildings required further detailed assessment.
- 11.5.14 The first stage was to identify all of the listed buildings. The second stage removed all of those listed buildings that did not lie within the ZTV, which reduced the number down to 172 listed buildings.

11.5.15 The following stage of the process was to consider each building in terms of its type, the reason for listing (where given) and its general location. Where there were clear views to the Proposed Scheme ascertained from site visits or where their site type was such that a change to their setting may be considered to change their significance, they were taken for more detailed assessment further reducing the number down to 7 listed buildings (**Table 11.11**; and **Figure 11.1, Volume 3**). These include two Grade II* listed buildings (High value and sensitivity) and five Grade II listed buildings (Moderate value and sensitivity).

11.5.16 The vast majority of buildings in the 10 km study area are associated with the industrialisation of the area and associated buildings constructed for the managers or workers within these industries, buildings associated with their spiritual or social well-being, and structures associated with transportation. The growth of the towns around Merthyr are directly linked to the exploitation of the landscape for these industries to acquire ore for metal production, coal for fuel and water for both steam power and industrial processes. The structures have always been associated with exploitation of the landscape for its resources, and changes in technology have led to constant changes in the landscape. The introduction of wind turbines into the landscape is further evolution in this process and this is taken into account when assessing any change to the settings of the listed buildings.

Table 11.11: Listed Buildings (LB) considered for further assessment

LB Number	Building Name	Grade	Site type	Visibility
13546	Nos 1-14 (consec) Collins Row	II	Domestic	High
13547	Nos 14-28 (consec) Lower Row	II	Domestic	High
13548	Nos 1-13 (consec) Middle Row & attached Windsor Arms PH	II	Domestic	High
13578	Church of St David	II*	Religious, Ritual and Funerary	High
21430	Penueel Baptist Church	II*	Religious, Ritual and Funerary	High
11384	Tower of Old Church of St Gwynno	II	Religious, Ritual and Funerary	Medium
81189	Hy Brasail	II	Domestic	Medium

11.5.17 The three rows of terraces at Bute Town, also lie within the Bute Town Conservation Area (moderate value and sensitivity). All are listed at grade II level (moderate value and sensitivity) and comprise Nos 1-14 (consec) Collins Row (13546); Nos 14-28 (consec) Lower Row (13547) and Nos 1-13 (consec) Middle Row & attached Windsor Arms PH (13458).

11.5.18 The listed building descriptions state that they were constructed at some point after 1828 to house the iron workers of the Union Ironworks north of Rhymney. They are

of better quality than most of the workers housing in the area, and situated away from other areas of urban development, leaving them quite isolated. They lie south-east of the Site Boundary.

- 11.5.19 To the west of the terraces lies the Bute Town reservoir, which was also associated with the ironworks. This is at a raised level above the housing, but there are still views from the ends of the terraces directly towards the Proposed Scheme. The wind turbines will be clearly visible from the listed buildings and conservation area.
- 11.5.20 As has been noted previously, the cottages were originally built for ironworkers and situated in an industrialised landscape exploiting resources for iron production and power. It is only in recent years that the landscape has become less industrialised and more rural. The wind turbines will create a further change to this landscape, but their purpose is again to exploit resources to generate power.
- 11.5.21 The Church of St David (13578) and Penuel Baptist Church (21430), both Grade II* listed buildings (high value and sensitivity), lie to the south-east of the Site Boundary within the centre of Rhymney and on the northern edge of the Rhymney Conservation area. Both buildings have limited views to the north-east towards the proposed wind farm.
- 11.5.22 Both buildings were constructed in around 1839 to provide for the spiritual needs of the increasing population of Rhymney. The church is set in a walled churchyard with a number of larger trees around its perimeter. The chapel is set in a lawned enclosure with no trees. Both buildings are taller than those in their surroundings, many of which are terraced houses.
- 11.5.23 The Tower of the Old Church of St Gwynno (11384) is a grade II listed building (moderate value and sensitivity) and lies to the south-west of the new church built in 1870. The surviving remains are that of a medieval church and the former parish church of Vaynor. They lie within woodland.
- 11.5.24 The church was demolished in 1870 but much of the tower remains intact. The old church tower would have been a focal point within the landscape in all directions during the medieval period, when it would have served the surrounding communities and farms within the parish. It is now less visible than it once was. It lies 2.6km west of the wind farm.
- 11.5.25 Hy Brasail (81189) is a grade II listed house (moderate value and sensitivity) lying some 2.7km west of the proposed wind farm. It is located on the western side of the road to Pontsticill with its main façade pointing east.
- 11.5.26 The building is listed due to its *'finely executed and theatrically designed Italian-style villa of Edwardian date' added in 1912 to a former standard late 19th century house. The listing description says that the 'story that the house was built to lure an Italian Contessa to Wales is not proven. The additions on a grand scale and of finely detailed Bath stone add very little in terms of living space, a monumental stair in the main tower and one long room above an open loggia, the second tower having no rooms at all.'* The building is certainly a bit of an anomaly in this area.

Conservation Areas

- 11.5.27 There are 12 conservation areas within 10 km of the Site Boundary. Four of these lie outside of the ZTV and were not considered further (Aberdare Town Centre; Cwmfelin; Tredegar Heritage Initiative and Bedwellty Park). Conservation Areas are considered of moderate value and sensitivity.
- 11.5.28 The remaining conservation areas are: Council Street and Urban Street; Cyfarthfa; Morgantown (Merthyr Tydfil); Town Centre (Merthyr Tydfil); Thomastown (Merthyr Tydfil); Dowlais; Bute Town; and Rhymney Town.
- 11.5.29 The HEDBA considered the significance of each of these conservation areas in terms of what they were and their recognised vistas and views, and determined whether the Proposed Scheme would cause a change in their significance from a change in their setting. This was also informed by site visits.
- 11.5.30 Only the Bute Town Conservation Area was considered for further detailed assessment (**Figure 11.1, Volume 3**).

Registered Parks and gardens

- 11.5.31 There are six Registered Parks and Gardens (RPG) within the 10 km search area: Cyfarthfa Castle (reference PGW(Gm)1(MER)); Aberfan: Cemetery, Garden of Remembrance and Former Tip and Slide Area (ref. PGW(Gm)69(MER)); Cefn Coed Cemetery & Jewish Burial Ground (ref. PGW(Gm)70(MER)); Aberdare Park (ref. PGW(Gm)2(RCT)); Bedwellty Park (ref. PGW(Gt)39(BLG)) and Buckland House (PGW(Po)6(POW)).
- 11.5.32 Both Buckland House, Aberdare Park and Bedwellty RPGs lie outside the ZTV and no change will occur to their significance from the Proposed Scheme.
- 11.5.33 An assessment was made of the significance of these remaining RPGs of Cyfarthfa Castle, Cefn Coed Cemetery and Jewish Burial Ground; and The Aberfan: Cemetery, Garden of Remembrance and Former Tip and Slide Area, including information included on their significant views. It was concluded that the Proposed Scheme will cause no change to the significance of these RPGs. The significance of the environmental effect on registered Parks and Gardens is negligible.

Registered Historic Landscape

- 11.5.34 The ASIDOHL provided the assessment of significance of the impact of the Proposed Scheme upon 26 historic landscape character areas (HLCAs) of the Merthyr Tydfil Registered Historic Landscape of Wales (HLW (MGL) 2) within a 3 km study area (**Figure 11.2, Volume 3**). Registered Historic Landscapes are of high value and sensitivity.
- 11.5.35 The ASIDOHL2 process is undertaken in five stages. The first compiles contextual information and introduces the Historic Landscape Character area. The second stage identifies those HLCA areas that lie within the Site Boundary, in this case a much of Merthyr Common, North HLCA 041 and a very small part of Pengarnddu HLCA 035. Following this the direct impacts of the proposals are considered and an assessment of the impact on the HLCAs is determined.

- 11.5.36 The third stage describes and quantifies those all of the HLCA areas where they fall within the 3 km study area, at which point the additional 24 HLCA areas were described and the ZTV used to quantify the areas where the wind turbines would be visible from the HLCAs. In this case the areas where three or more turbines were visible was used. This was supplemented with information gleaned from site visits.
- 11.5.37 The fourth stage evaluates the relative importance of each of the HLCA areas, followed by assessment of the importance of those areas which lie within the ZTV where three or more turbines were visible. A number of the HLCA areas had very limited or no intervisibility with the Proposed Scheme.
- 11.5.38 The fifth stage determines the overall impact of the Proposed Scheme on each of the HLCA areas.

Bannau Brycheiniog National Park

- 11.5.39 Although the Pen March Wind Farm does not extend into the Bannau Brycheiniog National Park, the effect upon its setting has been considered. A number of the scheduled monuments considered within the initial assessments lie within the Park boundary, and their interrelationship in terms of the prehistoric landscape, rather than the modern Park landscape, has been considered.
- 11.5.40 Impacts to the setting of the Bannau Brycheiniog National Park would be through the visibility of the turbines. Based on the ZTV produced, this is mostly restricted to the higher ground to the northwest of the Pen March Wind Farm. The Brecon Beacons National Park Landscape Character Assessment (August 2012) notes that 'Larger renewable energy schemes outside the National Park such as wind turbines and solar farms may also affect views from within the National Park.' The Management Plan recognises that *'the National Park cannot be preserved unchanged. Managing the landscape means confronting change. This could be the impact of climate change...'*
- 11.5.41 The Landscape Character Assessment identifies three character areas within 10km to the north of the Pen March Wind Farm where visibility is indicated by the ZTV. These area Character Area 7: Central Beacons; Character Area 8: Talybont and Taff Valley Reservoir Valleys; and Character Area 9: Mynddoedd Llangatwg and Llangyndir. Of these Character Area 7 and 8 have the most areas of intervisibility, with Character Area 9 having limited areas on some of the higher ground within 10km.
- 11.5.42 For Character Area 7: Central Beacons, the distinctive characteristics in terms of archaeology and built heritage are summarised as follows: *A range of historic features, including abandoned settlements to 20th century artefacts including pill box, tank traps and military memorials. Relatively few prehistoric sites compared to other LCAs. Very little settlement or other development within this LCA. However, views from the area encompass the surrounding settled landscape. The A470 follows the western boundary of the LCA. The special qualities in terms of cultural heritage features are identified as: Memorials within the landscape include the Tommy Jones Obelisk and a discreet military memorial near the summit of Pen y Fan. There are also aeroplane crash sites. Scheduled Monuments include abandoned settlements from the prehistoric and medieval periods, and a Roman road crosses the area north-south. It also has a notable absence of prehistoric ceremonial sites compared with the slightly lower surrounding upland areas.*

- 11.5.43 For Character Area 8: Talybont and Taff Valley Reservoir Valleys, the distinctive characteristics in terms of archaeology and built heritage are summarised as follows: *Many historic features lost under reservoirs and forests. Surviving features include farms, field boundaries and Vaynor church. Parts of the Brecon and Newport Railway survive, including Pont-sarn viaduct, the opening of the tunnel which connected the Talybont and Taff valleys, and some track (now the Brecon Mountain Railway) and station buildings. Very limited settlement within the LCA (Llwynonn, Pontsticill and occasional farms). Other built development includes housing for reservoir workers, large-scale water treatment works below dams, and former limestone quarries. The special qualities in terms of cultural heritage features are identified as: A range of cultural heritage sites, including Scheduled Monuments dating from the Neolithic to Medieval periods, Vaynor church, and surviving industrial archaeology relating to the Brecon and Newport railway, including the Pont-sarn viaduct and tunnel openings. Extensive prehistoric sites survive on higher land.*
- 11.5.44 For the Character Area 9: Mynddoedd Llangatwg and Llangyndir, the distinctive characteristics in terms of archaeology and built heritage are summarised as follows: *A concentration of prehistoric archaeological sites, including numerous Cairns on high ground, plus more recent archaeology associated with quarrying. Very limited settlement, but views to settlement in the Usk valley to the north, and other development (e.g. roads, pylons) beyond the southern boundary of the National Park. The special qualities in terms of cultural heritage features are identified as: A prehistoric ritual landscape, with a concentration of Scheduled Monuments and other non-scheduled sites, including round cairns, platform cairns, cairn cemetery and hut circles. Later Scheduled Monuments include post-medieval/ modern tramroads associated with quarrying.*
- 11.5.45 The significance of the environmental effect on Character Areas 7: Central Beacons and Character Area 8: Talybont and Taff Valley Reservoirs is considered further below. The significance of the environmental effect on Character Area 9: Mynddoedd Llangatwg and Llangyndir is negligible.

Local and National Monuments Record Data

- 11.5.46 A 2 km study area was used for a review of archaeological sites, monuments, findspots and buildings recorded on the GGAT and CPAT HERs and the National Monuments Record (NMR).
- 11.5.47 A number of the NMR records correspond with the local HER data, as well as scheduled monuments and listed buildings.
- 11.5.48 There are 79 GGAT HER records within the Site Boundary (**Figure 11.3 and 11.4, Volume 3**), and 319 records in total within the study area. There are no CPAT HER records within the Site Boundary and 103 records within the 2 km study area. There are nine NMR records within the Site Boundary (**Figure 11.3**) and 412 records in total within the study area.

Prehistoric

- 11.5.49 The GGAT HER records 10 prehistoric sites within the study area, 4 of which lie within the Site Boundary. The CPAT HER records 50 prehistoric sites within the 2 km study

area and the NMR records 57 sites. This is a total of 117 prehistoric records. No CPAT or NMR records lie within the Site Boundary.

- 11.5.50 The most numerous site types recorded on the HERs are cairns, for which there are 81 records. The majority of these lie north of the Site Boundary on the upland hills in two main groups at Cefn Yr Ystrad to the north-west and Twyn Ceiliog to the north-east. Cairns are typically Bronze Age burial mounds placed in relatively prominent places to be visible to the wider area.
- 11.5.51 There are two cairns recorded within the Site Boundary (PRNs GGAT04893m and GGAT03139m). These lie on the western side of the Site Boundary close to an outcrop of limestone and the site of the large enclosure defined by stone banks (GGAT04892m) which is in the process of being scheduled (GM623).
- 11.5.52 There are nine prehistoric enclosures recorded within the study area, including the one due to be scheduled (GM623; GGAT04892m) which lies within the Site Boundary and a prehistoric field boundary (GGAT04886m).
- 11.5.53 No further prehistoric site types are recorded within the Site Boundary, but within the 2 km study area are a further five settlement sites, seven possible buildings or hut circles, one standing stone, two stone circles (one of which may be modern), two banks and six walls.
- 11.5.54 The potential for archaeological remains dating to the prehistoric period is considered to be moderate, as prehistoric monuments are known in the area although none within the actual development area itself. The site visit did not identify any further possible prehistoric sites within the development boundary, although a number of probable stone built hut circles were noted around the enclosure to be scheduled which are also visible on aerial photographs. No possible prehistoric sites were visible from interrogation of Lidar data within the development area.
- 11.5.55 Due to the large number of cairns in the vicinity of the Proposed Scheme, it is possible that hitherto unidentified remains of cairns are present at the Site which would be considered of regional (moderate) importance. Further prehistoric settlement or unenclosed hut circles could be present on the south-western side of the Proposed Scheme area where the stone banked enclosure lies. These could be considered of regional (moderate) to national (high) importance if present.
- 11.5.56 Peat surveys have been undertaken across the Site Boundary which have identified areas and depths where peat deposits survive. This includes areas of peaty soils. Where peat survives at depth, it has the potential to contain well preserved environmental remains, typically of prehistoric date (although later environmental evidence may also survive). The waterlogged conditions of deeper peat deposits lead to anaerobic conditions that can preserve organic material, such as wood or leather for example. The peat surveys were undertaken at the beginning of the project design and where possible the turbine locations and infrastructure have avoided any deeper areas of peat, although do mostly cross areas of shallow peaty soil deposits where the preservation of organic remains and organic material is far less likely as the anaerobic conditions required for survival of such remains is not present.
- 11.5.57 Based on the peat surveys, the turbines are all situated in areas of less than 40 cm depth (a typical topsoil depth) where survival of environmental remains is unlikely. The crane pad areas partially encroach into the 50 – 75 cm depth, where there is also

a low potential for surviving environmental remains. The indicative construction working areas (including access tracks) also avoid any peats deeper than 50 – 75 cm, excluding a small part of an area adjacent to Turbine 3 which slightly encroaches into an area of around 1 m depth.

- 11.5.58 Overall the design of the Proposed Scheme avoids those areas of peat where the depth is such that there is a potential for environmental information or organic material to be present, excluding one small area on the edge of the likely working area around Turbine 3.

Roman

- 11.5.59 The GGAT and CPAT HERs record two Roman roads within the study area, these include a roughly north to south aligned road directly west of the Site Boundary and a further possible branch running from a point directly north-west of the Site Boundary and heading south-east running partly through south-western edge (RR621-02a). No sign of this road was noted during site visits or through analysis of Lidar data.
- 11.5.60 There are no Roman sites recorded on the NMR within the study area.
- 11.5.61 The paucity of records Roman within the study area indicates that the potential for further archaeological remains of Roman date to be present is low. If remains were to be present they may be considered of local (low) to regional (moderate).

Early Medieval

- 11.5.62 No records of early medieval date area recorded within the study area. The potential for remains of this date to be present is considered low. If present, remains of this date would be of at least local (low) significance

Medieval

- 11.5.63 The GGAT holds six records of medieval date within the study area, two of which lie within the Site Boundary. The CPAT HER has one record and the NMR four records within the study area. In total there are 14 medieval records within the study area.
- 11.5.64 The sites recorded within the Proposed Scheme area include the supposed site of a medieval battle named Rhyd Y Milwyr, located within the far eastern edge (GGAT00441m). The GGAT HER notes that the authority of the battle is considered a forgery and that the record should be rejected. The second record is of a medieval house platform lying in the south-western part of the Site Boundary (GGAT04894m).
- 11.5.65 Other records in the study area include a further battlefield to the west, the former site of a medieval building (presumably agricultural), a medieval clearance cairn, the locations of three further medieval buildings, a farmstead, an enclosure and the site of a deserted medieval village.
- 11.5.66 The upland area of the Site Boundary is unlikely to have seen much medieval activity other than in the form of isolated farmsteads, field boundaries or shelters for livestock. There is considered to be a low potential for archaeological remains of medieval date to be present. If they were then they would be of local (low) archaeological importance.

Post Medieval

- 11.5.67 By far the most numerous sites recorded are of Post medieval date and mostly associated with the later part of the period and industrialisation of the area.
- 11.5.68 The GGAT HER holds 262 records of post medieval date within the study area of which 35 records lie within the Site Boundary.
- 11.5.69 A number of these features are associated with the Dowlais Free Drainage System. This is described by the GGAT HER (GGAT05066m) as *'an ingenious system of reservoirs and leats, fed by gravity and which in part dates to c. 1818' it 'was crucial to the expansion of the ironworks at Dowlais and indeed Penydarren. It supplied water to the coal mines and ironworks of Dowlais via an extensive above-ground network of leats and reservoirs and underground U-shaped channels, built to the 'Dowlais pattern' within various levels, such as the Brew House Level, and Buxton's or the Purple Level. The system acted to drain a variety of coal seams including the Lower Four Feet seams of the Cwm-bargoed, Trecatty and Trehir area and the Upper, and Lower Four Feet, Big Coal, Red, Blue and Spotted Vein in the Pantywaun, Rhaslas, and South Tunnel areas, before eventually draining into a water pit at Tyle Dowlais Pit, from where water could either be pumped back to the surface system or allowed to drain to the charging levels of the Penydarren furnaces.'*
- 11.5.70 Both Pitwellt Pond (GGAT02700m) and Jepson's Pond (GGAT86808m) lie within the Site and are noted as being the two most prominent features of the drainage system. Although the HER records Pitwellt Pond as being an existing reservoir and some of the adjacent leats still active, at the time of the site visit the reservoir no longer contained water.
- 11.5.71 Pitwellt Pond (GGAT02700m) is the largest of the reservoirs and is directly connected on its western side to 'Sluice 2' (GGAT02709m) a sluice which connects to 'Leat 1' (GGAT02139m), described as an 'active leat on the Dowlais Free Drainage System running east - west, (flowing east), from Pitwellt Pond towards the lower slopes of Merthyr Common'. The Pitwellt Pond Sluice House (GGAT02140m) connects 'Pitwellt Pond with Merthyr Common Leat 1, of breezeblock construction nine courses high, with a sturdy cast iron door set in the north-eastwards looking face and a concrete roof. Possibly modern replacement of an earlier feature'.
- 11.5.72 On the southern edge of Pitwellt Pond lies 'Leat 2' (GGAT02221m) again described as an 'active leat on the Dowlais Free Drainage System running north - south, (flowing south), out of Pitwellt Pond. Just to the south of this is the site of the Pitwellt Pond Well, a feature marked on the 1919 Ordnance Survey map (GGAT02110m). At the southern end of 'Leat 2' lies the Pitwellt Pond Reservoir (GGAT02118m), which comprises a pair of two small adjacent reservoirs, and the GGAT HER notes that it was 'built in c. 1902 by the Merthyr Tydfil Corporation as part of further sanitation improvement, in an effort to prevent further out breaks of disease'.
- 11.5.73 Some 500 m to the north of Pitwellt Pond lies 'Sluice 1' (GGAT02708m) which is recorded as being 'marked as a sluice on the First Edition (1875) Ordnance Survey map but is marked as a weir on the Third Edition (1919) Ordnance Survey map.' 'Leat 3' (GGAT04193m) lies adjacent to 'Sluice 1' and is described as 'step banked active leat on the Dowlais Free Drainage System running north - south, (flowing south), linking the Nant Morlais with Pitwellt Pond.' A crossing Point (GGAT04194m)

runs across 'Leat 3' and is described as an 'area of cobbles, measuring 10 m in length and 3 m in width, placed in a now dried up streambed or leat to create an artificial ford.'

- 11.5.74 Jepson's Pond (GGAT86808m) is an extant water filled reservoir shown on the 1875 Ordnance Survey map. The map also records a sluice house to the south of the reservoir (GGAT02713m).
- 11.5.75 A number of quarries are recorded within the Site including Dowlais Quarry (GGAT02122m) to the east of Jepson's Pond which is marked as an 'old quarry' on the 1919 Ordnance Survey map. Cefn Ystrad Quarry (GGAT02418m) lies east of Pitwellt Pond and comprises a series of six scoops, none measuring more than 20 m in diameter, which have been created by the quarrying of outcropping rock. This quarry site lies on the southern edge of the proposed control building and electrical compound for the development and is visible on Lidar data. To the west of Pitwellt pond lies a possible Millstone Quarry (GGAT02138m).
- 11.5.76 To the south-east of Pitwellt Pond lies Merthyr Common 'Quarry 3' (GGAT03187m) which comprises '*a series of squared platforms and piles of quarried stone possibly graded into specific sizes, adjacent to associated quarry workers huts*'. The adjacent former quarry workers huts (GGAT04890m) which is recorded as being '*a complex of quarrymen's huts, adjacent to the associated quarry workings. Some of the huts may have been built on the sites of Prehistoric settlement features.*' This area lies on the slopes above the proposed scheduled monument (GM623) prehistoric enclosure.
- 11.5.77 'Quarry 1' (GGAT03200m) lies directly adjacent to the proposed control building and electrical compound north of Pitwellt Pond. A further quarry called Pitwellt Pond Quarry (GGAT04884m) lies directly on the north-western side.
- 11.5.78 Jepson's Pond Tips (GGAT03148m) lie in the southern part of the Site Boundary and are very visible features in the landscape.
- 11.5.79 A number of other records within the Site Boundary relate to the former rail and tramways that provided transportation to and from the numerous quarries in the area, most notably the Twynau Gwynion quarries to the west of the Proposed Scheme. These include two junctions (GGAT08513m and GGAT08497m), bridge abutments of large triangular shaped earthen banks on either side of the Nant Morlais (GGAT04887m), an adjacent Tramroad Causeway 'comprising linear stone bank near boulder strewn stream' (GGAT08510m), a revetment (GGAT08512m) and two broken sections of dual-purpose vandyked plate (GGAT08511m) all lying on the western edge of the Site Boundary adjacent to the Twynau Gwynion quarries.
- 11.5.80 A railway was present along the southern part of the Site Boundary, and a railway junction (GGAT08509m) is recorded directly north of Jepson's Pond. An area of concrete railway posts boundary markers lies to the north of the road along the southern side of the Site Boundary (GGAT03124m). These lie close to the proposed construction compound and access track to the wind farm.
- 11.5.81 Agricultural features within the Site Boundary include the general drystone and turfstone walled landscape of Blaencarno Common (GGAT03129m); a sheepfold on the northern side of the Site Boundary (GGAT02714m); two shooting butts located to the east of Pitwellt Pond and close to the proposed control building and electrical compound (GGAT 03059m) and another north of Pitwellt Pond (GGAT03138m); and

a revetted platform (GGAT04896m) located south-east of Pitwellt Pond. Close to this is a record of a collapsed feature (GGAT02471m) comprising a 'large rectangular feature which measures 7 m in width and 11 m in length with a depth of approximately 1 m'. It is uncertain what this represents.

- 11.5.82 The final two records within the Site Boundary held on the GGAT HER are associated with water management and it is uncertain if they are separate from the Dowlais Free Drainage System. These include enhancement works to the Nant Morlais (GGAT04885m) north-west of Pitwellt Pond and a springhead is also recorded (GM04889m) south-east of Pitwellt Pond.
- 11.5.83 The CPAT HER records 33 sites of post medieval date. None of these lie within the Site Boundary.
- 11.5.84 The NMR holds records of 320 post medieval sites within the study area. Eight of these lie within Site which include three sheepfolds (NPRN 243161, NPRN 243162 and NPRN 243163), a limestone quarry (NPRN 243167) and a shooting butt (NPRN 243159).
- 11.5.85 The other records are associated with Blaen Carno quarry in the southern part of the area (NPRN 80459), Jepson's Pond (NPRN 86808), and a general number for the Merthyr Common Free Drainage System (NPRN 402950).
- 11.5.86 All of the records of post medieval date recorded on the HERs and NMR within the study area can be split up into a number of overall categories: agriculture; coal mining; drainage; iron foundries; mineral extraction and transport; social; and transportation
- 11.5.87 Post medieval records are known to be located within the Site Boundary, including the known sites associated with agriculture, mineral extraction and associated drainage schemes. The potential for hitherto unknown sites to be present within the Site Boundary is also considered high. The importance of such assets of post medieval date would be of local (low) importance.

Modern

- 11.5.88 The HERs and NMR record 45 records of modern date within the study area. The GGAT HER has 10 records, three of which lie within the Site Boundary. One of these is a modern sluice gate added to the Dowlais Free Drainage System near Pitwellt Pond (GGATG04192m). Two further records lie within the Site Boundary, a dew pond (GGAT03198m) and an air craft crash site of a Vampire VV618 on the south-eastern side of the area (GGAT05180m).
- 11.5.89 The CPAT HER has seven records in the study area, though none within the Site.
- 11.5.90 The NMR holds 26 records, of which one lies within the Site Boundary. This is a record for the same air craft crash site of the Vampire VV618 in the south-eastern part of the Site Boundary (NPRN 243539) which notes it crashed on 27th October 1953.
- 11.5.91 The overall records comprise a large mix of site types and include: air craft crash sites; marker cairns; allotments; a blast engine house; a modern chapel; a chemical works; a cinema; a compensation basin; a dam; a sluice; a Constitutional Club; a cricket ground; a drill hall; a filter house; a hut; a library; a limekiln; a railway and

signal box; a sculpture; a park; a pond; a quarry; an opencast coal mine; part of a World War II stop line (defensive line); a swimming pool; excavations of then Ynys Fach Iron Works; and surprisingly, the first McDonalds restaurant built at Merthyr Tydfil.

- 11.5.92 There is a moderate potential for further modern sites to be present within the Site Boundary, although they would be of local (low) to negligible archaeological importance.

Multi-Period Sites

- 11.5.93 The NMR hold records of one multi-period sites, that of the village of Pontsticill. This settlement has medieval origins and continues to be occupied today.

Undated or Natural Features

- 11.5.94 The GGAT HER records 28 undated sites or natural features within the study area. Twelve of these lie within the Site Boundary, five of which were initially identified as archaeological sites but have subsequently been determined to be natural features: a cairn later determined to be natural (GGAT00781m); two possible circular features later determined to be natural (GGAT04897m and GGAT04898m); a stone circle, subsequently dismissed (GGAT04196m); and a natural rock outcrop (GGAT00780m).
- 11.5.95 Other undated sites recorded on the GGAT HER within the Site Boundary comprise: a group of four undated sheep shelters (GGAT00782m); a linear bank of large boulders (GGAT04905m); a possible quarry scoop (GGAT04895m); and a possible rectangular enclosure now destroyed (GGAT07578m).
- 11.5.96 Three further records marked as undated are actually post medieval in date including a tramroad junction associated with the Twynau Gwynion tramroad on the western side of the Site Boundary leading to the quarries (GGAT08496m); Blaen Carno Quarry within the southern part of the Site Boundary (GGAT08170m); and Jepson's Pond also within the southern part of the Site Boundary (GGAT08171m).
- 11.5.97 The CPAT HER holds records of three undated sites and the NMR 4 records. None of these lie within the Site Boundary. Overall 35 undated or natural sites are recorded in the study area.

Previous Archaeological Investigations

- 11.5.98 The GGAT HER holds records for 12 previous archaeological investigations within the study area. These comprise numerous field visits which have identified features recorded on the GGAT HER, especially those related to the iron industry of the area, the results of which are shown on **Figure 11.4 (Volume 3)**.
- 11.5.99 A few records relate to archaeological desk-based assessments prepared for specific projects. No intrusive archaeological investigations are recorded within the Site Boundary.

Map Regression, Aerial Photographs and LiDAR data

- 11.5.100 Map regression undertaken for the Site shows very little change within the Site Boundary until the earlier part of the 19th century when the Dowlais Free Drainage System and various mineral extraction sites are shown. No new historic assets were identified through map regression.
- 11.5.101 Aerial photography and Lidar data analysis has shown no clear hitherto unrecorded historic assets being present within the Site Boundary. Remains of quarries and the Dowlais Free Drainage System show up clearly, as do a number of the already recorded archaeological sites. A number of possible mounds were noted within the Site Boundary which could potentially be remains of prehistoric burial cairns, although they are more likely natural features. None of these features lie within footprint of the proposed construction works for the Proposed Scheme.

11.6 Assessment of effects

- 11.6.1 The construction works for the Proposed Scheme will cause direct adverse impact upon any hitherto unrecorded archaeological remains within the footprint of any ground works for the Proposed Scheme. Archaeological remains could be exposed, damaged or destroyed by as it is assessed that they would lie at a shallow depth below the present ground surface. This would be an adverse environmental effect. The significance of such effects would be dependent upon the significance of any remains that may be present within the working areas (low to high).
- 11.6.2 It is considered unlikely that remains of high significance (equivalent to scheduled monuments) will be encountered during the works. If this does occur where there will be a substantial effect upon them from construction works, then there would be a major adverse effect upon them. This would be long-term (permanent) and irreversible.
- 11.6.3 Where archaeological remains of medium significance are revealed, where there will be a substantial effect upon them from construction works, then there would be a major adverse effect upon them. This would be long-term (permanent) and irreversible.
- 11.6.4 Where archaeological remains of moderate significance would be partially disturbed or a site of low archaeological significance would be disturbed, then there would be a moderate adverse effect upon them. This would be long-term (permanent) and irreversible.
- 11.6.5 Where partial disturbance of archaeological remains of low significance was to occur, then this would be a minor adverse effect, and again it would be long-term (permanent) and irreversible.
- 11.6.6 If no archaeological remains are present, then there will be no change.

Construction Phase

- 11.6.7 The construction phase of the development could have adverse physical effects on archaeological remains (through exposure, damage or destruction). This would come through the process of construction where the full access tracks, turbine hardstandings, turbine bases, turning heads and areas for the control building and

electrical compound are carried out and further topsoil stripping occurs. The significance of such effects would be dependent upon the significance of any remains that may be present within the working areas (**low to high**). Such effects to buried archaeological remains would be long-term (permanent) and irreversible. There will be **no change** if no remains are present.

- 11.6.8 Elements of the Dowlais Free Drainage System will be impacted upon by the wind farm proposal. A number of the water courses and channels will be crossed by access roads and other infrastructure. The Dowlais Free Drainage System would be considered an asset of medium value and sensitivity. Elements potentially associated with the Dowlais Free Drainage System are also located on the eastern side of the Site within the Proposed Off-site Habitat Management Area. This area includes a number of water courses and a series of straight, north to south aligned drainage channels, which may also have been used for agricultural purposes rather than for industrial ones. The Off-site Management Area will involve blocking of some of these water channels at either end to generate peat growth and also to establish curlew habitats. The drainage channels themselves will not be removed or infilled (excluding at either end) such that the features are still visible in the landscape. The proposal will directly affect only a very small part of the whole system and as such would lead to a **magnitude of effect at the minor – moderate** level.
- 11.6.9 Environmental effects on the setting of surrounding designated historic assets will also be limited during this phase, until turbines are erected. The adverse effects would be short-term during the construction phase and reversible.
- 11.6.10 Environmental effects on the setting of the Bannau Brycheiniog National Park during construction will be minimal as the majority of the works will be at a low level and have very limited intervisibility with the identified Character Areas such that the environmental effect would be negligible up until the point the wind turbines are constructed.

Operational Phase

- 11.6.11 Once the Proposed Scheme has been constructed and in operation there will be no further adverse physical effects on buried archaeological remains within the Site Boundary. Any archaeological remains within the footprint of the ground works for the Proposed Scheme will have already been removed.
- 11.6.12 Adverse environmental effects on the setting of designated historic assets in the area will continue during the operation of the Proposed Scheme. The identified adverse effects would be short-term during the operational phase and reversible.
- 11.6.13 Eight scheduled monuments (high value and high sensitivity) were considered to have potential impacts to their settings from the proposed Pen March Wind farm.
- 11.6.14 The settings of the group of scheduled Bronze Age cairns of Carn y Bugail and Carn Felen Round cairns (BR277), Waun y Gwair Cairn Round cairn (BR278), Twyn Ceilog Round Cairn (BR389) and Garn Fawr round cairn (BR322) are likely to have visible interconnection and association between them. All of the cairns lie on hilltops north of the Application Boundary and as noted in some of their individual descriptions, there is intervisibility between these cairns and other unscheduled ones as well. The proposal will not intrude into this intervisibility, but the turbines will be clearly visible

in the background when looking between some of these cairns. The presence of the turbines will create a change to the settings of the monuments, but it is considered that such a change will be at a **low level of magnitude**, creating a limited change to the key positive attributes of these scheduled monuments' settings resulting in a slight but discernible reduction to its contribution to the asset's importance.

- 11.6.15 The two scheduled Bronze Age ring cairns of Morlais Hill (GM563) and Garn Pontsticill (GM569) are also grouped together due to their proximity to one another on the western side of the Nant Morlais Valley. The ZTV suggests that intervisibility will not include all of the turbines for the monuments.
- 11.6.16 Both cairns lie on upper hillslopes west of the Application Boundary and there is likely to be intervisibility between them and other unscheduled ones as well. The proposal will not intrude into this intervisibility, but the turbines will be clearly visible in the background when looking between some of these cairns. The presence of the turbines will create a change to the settings of the monuments, but it is considered that such a change will be at a **low level of magnitude**, creating a limited change to the key positive attributes of these scheduled monuments' settings resulting in a slight but discernible reduction to its contribution to the asset's importance.
- 11.6.17 The scheduled medieval Morlais Castle (GM028) is located on a small hilltop directly west of the Application Boundary. Views to the east from the castle will clearly see the windfarm. The castle was located to dominate the Nant Morlais valley, but is also located to provide clear wider views in all directions. The wind farm will be visible from the castle and this will cause change to its setting. This change will be limited and at a **low level of magnitude** resulting in a slight but discernible reduction to its contribution to the asset's importance.
- 11.6.18 The prehistoric enclosure within the Site Boundary south- east of Pitwellt Pond (GM623; HER Ref GGAT0489m) comprises a large D-shaped drystone wall enclosure and lies within approximately 150 m of the proposed location of the control building and electrical compound. The monument lies at the base of a relatively steep slope comprising exposed rock and up to the plateau on which Pitwellt pond lies. These restrict views to the majority of the proposed wind turbine area, but Turbines 1, 3 and 6 are likely to be visible, as will possibly the southern edge of the control building and electrical compound.
- 11.6.19 The setting of the monument will be impacted upon by the proposal, although the main views from the site are to the northwest, west, southwest, south and southeast, with views to the east and northeast, towards the wind farm, obscured by the steep natural slope. The enclosure may have been positioned here to take advantage of shelter from this slope. The proposal will cause no direct impacts upon the monument itself, although it will result in a change to its setting. This will be at a **low level of magnitude**, causing a limited change to the key positive attributes of the heritage asset's setting resulting in a slight but discernible reduction to its contribution to the asset's importance. The low level has been determined as the wind farm lies on the sides of the monument where visibility is already restricted by the natural land slope.
- 11.6.20 Assessment has led to only 7 listed buildings being considered further where the operational wind farm will have an impact upon the setting of the buildings. These

include two Grade II* listed buildings (High value and high sensitivity) and five Grade II listed buildings (Moderate value and moderate sensitivity).

- 11.6.21 The three rows of terraces at Bute Town, also lie within the Bute Town Conservation Area (moderate value and sensitivity). All are listed at grade II level (moderate value and sensitivity) and comprise Nos 1-14 (consec) Collins Row (13546); Nos 14-28 (consec) Lower Row (13547) and Nos 1-13 (consec) Middle Row & attached Windsor Arms PH (13458).
- 11.6.22 The cottages were originally built for ironworkers and situated in an industrialised landscape exploiting resources for iron production and power. It is only in recent years that the landscape has become less industrialised and more rural. The wind turbines will create a further change to this landscape, but this their purpose is again to exploit resources to generate power. Pen March Wind Farm will be visible from the listed buildings and conservation area that and this will cause change to their setting. This change will be at a **low level of magnitude**, creating a limited change to the key positive attributes of the heritage assets' settings resulting in a slight but discernible reduction to its contribution to the assets' importance. The low level has been determined due to the present rural setting of Bute Town being a modern creation, and the original setting would have been an industrial one.
- 11.6.23 The Church of St David (13578) and Penuel Baptist Church (21430), both Grade II* listed buildings, lie to the south-east of the Site Boundary within the centre of Rhymney and on the northern edge of the Rhymney Conservation area. Both buildings have limited views to the north-east towards the proposed wind farm. The limited views from these buildings to the windfarm and the distance between them is such that the proposal will cause change at a **low level of magnitude**, causing a limited change to the key positive attributes of the heritage asset's setting resulting in a slight but discernible reduction to its contribution to the asset's importance.
- 11.6.24 The Tower of the Old Church of St Gwynno (11384) is a grade II listed building and lies to the south-west of the new church built in 1870. The surviving remains are that of a medieval church and the former parish church of Vaynor. They lie within woodland. The church was demolished in 1870 but much of the tower remains intact. The old church tower would have been a focal point within the landscape in all directions during the medieval period, when it would have served the surrounding communities and farms within the parish. It is now less visible than it once was. It lies 2.6 km west of the proposed wind farm and not all turbines will be visible from the asset. It is considered that the proposal will cause a change at a **low level of magnitude**, causing a limited change to the key positive attributes of the heritage asset's setting resulting in a slight but discernible reduction to its contribution to the asset's importance.
- 11.6.25 Hy Brasail (81189) is a grade II listed house (moderate value and sensitivity) lying 2.7 km west of the proposed wind farm. It is located on the western side of the road to Pontsticill with its main façade pointing east towards the Pen March Wind Farm. The house was presumably built in this location to make the most of the rural views to the east. It is considered that the proposal will cause change at a **low level of magnitude**, causing a limited change to the key positive attributes of the heritage asset's setting resulting in a slight but discernible reduction to its contribution to the asset's importance

- 11.6.26 Environmental effects on the setting of the Bannau Brycheiniog National Park during the operational phase will be restricted to the southern part of the Landscape Character Area 7: Central Beacons and the upland parts only of the Landscape Character Area 8: Talybont and Taff Reservoir Valleys. During the operational phase, wind turbines will be visible from parts of the upland areas of these character areas. For both character areas, the amount of intervisibility will be a small percentage of their whole, although larger for Character Area 8: Talybont and Taff Reservoir Valleys.
- 11.6.27 The cultural heritage sites recognised as being special qualities of Landscape Character Area 7 will not be affected by the proposed development. It is also noted as having fewer upland prehistoric sites in relation to adjacent character areas.
- 11.6.28 Landscape Character Area 8 is summarised as ‘characterised by its reservoirs, surrounded by steep sided, dark green forested valleys. Between the reservoir valleys are more open ridges of upland moorland which have long views across the reservoirs and their surrounding forests.’ Little of these elements of the Character Area are intervisible with the Pen March Wind Farm and the noted cultural heritage features identified as being special qualities of the area will mostly be unaffected, except for prehistoric sites in higher land where a low level magnitude of change to their settings may occur.
- 11.6.29 It is determined that a slight adverse change in the significance of the landscape character areas 7 and 8 may occur from the proposal but this would be a **low level of magnitude**.

Decommissioning Phase

- 11.6.30 During decommissioning any negative effects from the Proposed Scheme to the setting of designated historic assets would be removed. This would revert back to **no change** for the settings of designated assets.

11.7 Grid Connection

- 11.7.1 The grid connection will run from the location of the control building and electrical compound on the south-western side of the Site Boundary to an existing electricity substation 1.3 km south-west of the Proposed Scheme located at NGR SO 07161 08799 adjacent to Pengarnddu.
- 11.7.2 The route of the grid connection is yet to be determined. It could potentially run through the area of the now dry Pitwellt Pond. If it runs around the pond to the north, then it could cross leats associated with Pitwellt Pond and the Dowlais Free Drainage System and the stream course of the Nant Morlais.
- 11.7.3 The design of the grid route, which is not part of this application, will need to take into account the archaeological remains associated with Pitwellt Pond and the prehistoric enclosure that is due to be scheduled (GM623). These should be avoided or mitigation provided by the grid connection route.

11.8 Additional Mitigation

Direct Adverse Effects on Archaeological Remains

- 11.8.1 In order to mitigate any adverse environmental effects on archaeological remains within the footprint of the construction works for the Proposed Scheme a phased archaeological approach should be undertaken. The Applicant will be responsible for funding all archaeological works.
- 11.8.2 An archaeological condition for this phased approach should be attached to permission being granted for the Proposed Scheme. The first phase of the works would be an archaeological evaluation undertaken of the construction works area using trial trenches in advance of then development commencing. This would determine the presence or absence, significance, extent, character, date and state of preservation of any archaeological remains.
- 11.8.3 A post-determination phase archaeological approach is considered appropriate as the area is unlikely to contain any archaeological remains of national significance. This is based on previous surveys undertaken by GGAT and through site visits undertaken for this assessment and analysis of Lidar data and aerial photography. The proposals are mostly for access tracks and isolated areas around the six wind turbine locations rather than large open areas of development.
- 11.8.4 Geophysical survey of the proposal is not considered appropriate in this case due to topography and vegetation cover across much of the Site Boundary as being coarse grasses and areas of exposed bedrock. Some geophysical survey at a low resolution has been undertaken on the western side of the Site Boundary to determine the presence and location of any shakeholes within the geology, which would be a constraint to development. As the features to be identified were large, the resolution of the surveys was low and could be undertaken within the area. For archaeological prospection, high resolution surveys are required.
- 11.8.5 It is proposed that an archaeological written scheme of investigation (WSI) would be prepared for the Site by a professional archaeological company, and a Registered Organisation with ClfA. The WSI or specification would need to be agreed with the Planning Services section of Glamorgan Gwent Archaeological Trust in their capacity as archaeological advisors to the local planning authorities. Written approval from the LPA will also be required. The WSI should cover initial evaluation of the Site, methodologies for subsequent mitigation scenarios that may be required, as well as details regarding the reporting and archiving on all stages of work through to completion of the project. A brief overview of the process to be covered within the WSI is included below.
- 11.8.6 An initial trial trench evaluation would be undertaken across those areas of the Proposed Scheme where impacts to archaeological remains might occur. A report on the findings will then be prepared to identify where archaeological remains have been identified, and the nature and date of such remains. An archive on the results will also be required.
- 11.8.7 Should significant archaeological remains be identified during the evaluation then further archaeological mitigation will be required to undertake more detailed investigation and analysis of such remains, possibly through an archaeological

excavation. This will target those areas of significant remains identified at the evaluation stage.

- 11.8.8 Following excavation, if and where necessary, post excavation assessment reports on the results will need to be prepared. This would determine the extent of further analysis needed on finds or environmental information recovered from the works and the scope of further reporting and publication if necessary. An archive will be prepared on all of the results.
- 11.8.9 If only a few archaeological remains are revealed or remains of low significance are identified through evaluation, an archaeological watching brief implemented during mobilisation and construction works may be needed.
- 11.8.10 All archaeological works undertaken at the Proposed Scheme would need to be monitored by the Planning Services section of GGAT to ensure the works are being undertaken to the correct standards and to view the archaeological results.
- 11.8.11 All archaeological reports will be lodged with the GGAT HER and made publicly available, including online. The archives will be stored with appropriate repositories (digital archives with the NMR) and again should be publicly accessible
- 11.8.12 The access track is known to run through the location of a leat associated with the Dowlais Free Drainage System. Where any features of the Dowlais Free Drainage System are located within areas of development, they should be retained intact and protected from disturbance such that they could be uncovered at the decommission stage.
- 11.8.13 The possible route of the grid connection may run through or around the location of Pitwellt Pond. The route should avoid running through the site of the pond as it is part of the Dowlais Free Drainage System which local policy indicates should be retained. If a route to the north is chosen around the pond, further leats may need to be crossed by the works.

Indirect Adverse Impacts on Designated Historic Assets

- 11.8.14 Indirect environmental effects on designated historic assets will come through changes in the settings of the features that will result in an adverse change to their significance. Assessment indicates that the adverse change will be low level of magnitude. The same will be true for impacts to the setting of the Bannau Brycheiniog National Park Landscape Character Areas 7: Central Beacons and Character Area 8: Talybont and Taff Reservoir Valleys.
- 11.8.15 Mitigation to reduce this adverse effect is unlikely to be feasible. The turbines cannot be screened and have already been designed to be located in the best positions considering all aspects of the environmental disciplines discussed in this EIA.

11.9 Summary of effects

- 11.9.1 For archaeological remains identified and mitigated through a phased archaeological process, the residual effects would be **adverse of low magnitude and long term (permanent)**. The significance of the environmental effect would be considered Major/Moderate or lower (**Table 11.8**) depending upon the importance of and the extent of disturbance to any archaeology revealed. The process of archaeological

mitigation through preservation by record (investigation of archaeological remains) will still result in permanent damage to the remains, although this is partly offset by the availability of reports on the archaeological recording completed.

- 11.9.2 Bridging the leat of the Dowlais Free Drainage System will mitigate the adverse effects and reduce the magnitude of harm to negligible. The significance of the environmental effect would be considered minor.
- 11.9.3 For the indirect adverse impacts on the settings of designated historic assets, mitigation is not possible, although only a minor magnitude of effect (less than substantial harm) has been identified for those designated historic assets identified as being impacted.
- 11.9.4 The scheduled monuments (high value and sensitivity) of Carn y Bugail and Carn Felen Round cairns (BR277), Waun y Gwair Cairn Round cairn (BR278), Twyn Ceilog Round Cairn (BR389) and Garn Fawr round cairn (BR322) all lie on hilltops north of the Site Boundary and there is some intervisibility between them and other cairns in the local area. The proposals will not intrude into this intervisibility, but the turbines will be clearly visible in the background when looking between some of these cairns. The presence of the turbines will create a change to the settings of the monuments, but it is considered that such a change will be at a low level that does not seriously affect the significance of the designated heritage assets. The significance of the environmental effect on the Carn y Bugail and Carn Felen Round cairns (BR277), Waun y Gwair Cairn Round cairn (BR278), Twyn Ceilog Round Cairn (BR389) and Garn Fawr round cairn (BR322) is minor.
- 11.9.5 The scheduled monuments (high value and sensitivity) of Morlais Hill ring cairn (GM563) and Garn Pontsticill ring cairn (GM569) lie on upper hillslopes west of the Site Boundary and there is likely to be intervisibility between them and other unscheduled cairns in the area as well. The Proposed Scheme will not intrude into this intervisibility, but the turbines will be clearly visible in the background when looking between some of these cairns. The presence of the turbines will create a change to the settings of the monuments, but it is considered that such a change will be at a low level that does not seriously affect the significance of the designated heritage asset. The significance of the environmental effect on the Morlais Hill ring cairn (GM563) and Garn Pontsticill ring cairn (GM569) is minor.
- 11.9.6 The scheduled monument (high value and sensitivity) of Morlais Castle (GM028) is located on a small hilltop directly west of the Site Boundary. Views to the east from the castle will clearly see the wind farm. The castle was located to dominate the Nant Morlais valley but is also located to provide clear wider views in all directions. The wind farm will be visible from the castle and this will cause change to its setting. This change will be at a low level that does not seriously affect the significance of the designated heritage asset where it is not necessarily serious to the significance of the designated heritage asset, but enough to be described as noticeable or material. The significance of the environmental effect on Morlais Castle (GM028) is minor.
- 11.9.7 The Proposed Scheme will cause no direct impacts upon the prehistoric enclosure within the Site Boundary south-east of Pitwellt Pond (GM623; HER Ref GGAT0489m). This is proposed to be given scheduled status and is therefore considered as such for this assessment and is therefore of high value and sensitivity.

Overall it is considered that the Proposed Scheme will result in a low level magnitude of change to the setting of the monument. The change will not be so serious as to vitiate or drain away the significance of the future designated scheduled monument. The significance of the environmental effect on the prehistoric enclosure within the Site Boundary south-east of Pitwellt Pond (GM623; HER Ref GGAT0489m) is minor.

- 11.9.8 The wind farm will be very visible from Bute Town Conservation Area and the listed buildings of Nos 1-14 (consec) Collins Row (13546), Nos 14-28 (consec) Lower Row (13547) and Nos 1-13 (consec) Middle Row & attached Windsor Arms PH (13458) and this will cause change to their setting. These are all of moderate value and sensitivity. This change will cause a low level magnitude of change to their setting where it is not necessarily serious to the significance of the designated heritage asset, but enough to be described as noticeable or material. This has been determined as the buildings were originally built within and to serve an industrial landscape. The introduction of wind turbines are an evolution of this industrial landscape. The significance of the environmental effect on Nos 1-14 (consec) Collins Row (13546), Nos 14-28 (consec) Lower Row (13547); Nos 1-13 (consec) Middle Row & attached Windsor Arms PH (13458) and the Bute Town Conservation Area is minor.
- 11.9.9 The limited views from the grade II* listed (high value and sensitivity) Church of St David (13578) and Penuel Baptist Church (21430) within Rhymney to the wind farm and the distance between them is such that the Proposed Scheme will cause a low level of magnitude of change to its setting that will not seriously affect the significance of the designated heritage asset. The significance of the environmental effect on the Church of St David (13578) and Penuel Baptist Church (21430) is minor.
- 11.9.10 Some of the wind turbines are likely to be visible from the grade II (moderate value and sensitivity) listed Tower of the Old Church of St Gwynno (11384). As such the Proposed Scheme will cause a low level of magnitude of change to its setting, where the harm does not seriously affect the significance of the designated heritage asset. The significance of the environmental effect on the Tower of the Old Church of St Gwynno (11384) is minor.
- 11.9.11 The eastern views from the grade II listed (moderate value and sensitivity) Hy Brasail (81189) may include the wind turbines. It was presumably built in this location to make the most of the rural views which will be encroached upon by the wind turbines. Overall the Proposed Scheme will cause a low level of magnitude of change to its setting, which does not seriously affect the significance of the designated heritage asset. The significance of the environmental effect on Hy Brasail (81189) is minor.
- 11.9.12 The ASIDOHL indicated that for the majority of the HLCA areas (high value and sensitivity) the overall significance of the impact would be slight or very slight. The significance of the environmental effect would be considered Negligible for these HLCA areas (Table 11.8). For Merthyr Common, North HLCA 041, Twynau Gwynion Quarries HLCA 042, Garth and Blaen-y-Garth HLCA 043, Dowlais Top HLCA 047 and Dowlais Great Tip, Trecatti, Trehir and Twyn-y-Waun HLCA 078, the overall significance of impact was assessed as moderate. The significance of the environmental effect on these specific HLCA areas would be considered moderate.

11.10 References

References are contained with the **Technical Appendices 11.1 and 11.2 (Volume 4)**