

Document History

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Chapter 9

Cultural Heritage

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Glossary

Term	Definition
Iron Age	The period of human activity between 700 BC and 43 AD.
Medieval	The period of human activity between 1066 AD and 1550 AD.
Mitigation	Measures which have the purpose of avoiding, reducing or compensating for adverse environmental impacts. It may also include measures to create environmental benefits.
Modern	The period of human activity from 1900 to the present day.
Neolithic	New Stone Age. The period of human activity between 4,500 BC and 2,500 BC.
Ordnance Datum	The standard measure of sea level in the UK, from which all heights are measured for mapping purposes.
Post-medieval	The period of human activity between 1550 AD and 1900 AD.
Prehistoric	The period before the year 43 AD.
Receptor	The existing environmental feature that would be affected by an impact – for instance a specific archaeological site.
Requirement	A requirement listed as a condition of planning permission.
Registered Historic Landscape	A landscape area included in either the Register of Landscapes of Outstanding Historic Interest in Wales or the Register of Landscapes of Special Historic Interest in Wales (Part 2 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales).
Registered Park and/or Garden	A park or garden included in Part 1 of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales.
Zone of Theoretical Influence (ZVI)	The zone from which the scheme could theoretically impart an impact based partly on visibility and professional judgement.
Zone of Theoretical Visibility (ZTV)	The zone from which the scheme is theoretically visible over 'bare

List of Abbreviations

Abbreviation	Description
AOD	Above Ordnance Datum
ASIDOHL	Assessment of the Significance of the Impact of Development on Historic Landscape
DHA	Designated Historic Assets
GGAT	Glamorgan-Gwent Archaeological Trust
HER	Historic Environment Record
HLW	Registered Landscape of Outstanding Historical Interest
NMR	National Monuments Record
PPW	Planning Policy Wales
WHS	World Heritage Site
ZTV	Zone of Theoretical Visibility

9.1 SUMMARY OF SIGNIFICANT EFFECTS

9.1.1 One scheduled monument, GM588 Y Domen Fawr round cairn has been assessed as potentially receiving a moderate effect from indirect visual impact.

9.2 INTRODUCTION

Study Areas

Wind Farm Study Area

9.2.1 The Archaeology and Cultural Heritage Study Area comprises two spatial levels. Firstly, an Immediate Study Area, comprising the site as defined by the application boundary and access track, for which the potential for direct physical impacts from groundworks has been assessed and constraint mapping was provided as part of design iteration, which avoided impacts on known historic assets as shown in Figures 9.1 and 9.2.

Wider Study Area

9.2.2 Secondly, a Wider Study Area has been defined comprising a zone in which indirect (mostly visual impacts) from the turbines might affect designated historic assets (DHA) susceptible to significant change. Those assets that have been identified as potentially experiencing change through development within their setting, have been included in the assessment. For those DHAs which show a potential significant change to their setting in both Immediate and Wider Study Areas by proximity or through intervisibility, further analysis including visual modelling has been undertaken to assess the level of impact. Figure 9.3 shows listed buildings and conservation areas within 2 km that have been assessed, whilst Figure 9.4 maps DHAs such as scheduled monuments within 5 km, that have been assessed.

9.3 LEGISLATION POLICY AND GUIDANCE

9.3.1 The following list comprises key legislation, policy drivers and national guidance that have relevance to the Archaeology and Cultural Heritage assessment:

9.3.2 Overarching National Policy Statements EN – 1 (Energy) and EN – 3 (Renewable Energy Infrastructure)¹ contain sections 5.8 and 2.5.34 respectively, which outline the need to assess potential impacts on the historic environment, and for planning authorities to balance potential harm against the need to deliver national targets for renewable energy and emissions reductions. Section 5.8.18 in EN – 1 discusses the potential effects from new development to the setting of designated heritage assets and states that planning authorities should seek to “preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset”;

9.3.3 The Historic Environment (Wales) Act 2016 is the primary statutory tool for protecting historic assets and sustainable management of the historic environment. It is designed to enable greater transparency into decisions taken on the historic environment and to make it a statutory requirement for information on the historic environment to be safe guarded for the public good.

9.3.4 The Well-being of Future Generations Act of 2015 defines sustainable development as *'the process of improving the economic, social, environmental and cultural well-being of Wales by taking action ... aimed at achieving the well-being goals'*. It requires public bodies in Wales to consider the long-term impact of their decisions, and whether such decisions contribute to social, cultural, environmental, and economic well-being in Wales.

9.3.5 National policy within Wales is set out in by Planning Policy Wales Edition 11, December 2021 (“PPW”), in which Section 5.7 states the importance of Renewable Energy, and Section 6.1 The Historic Environment (within the chapter on Distinctive and Natural Places) explains the need for a reasonable and proportionate impact assessment to ensure proposed development is sustainable and to prevent unnecessary harm to historic assets;

9.3.6 PPW is supported by Technical Advice Note 24: The Historic Environment (May 2017) which is designed to assist local authorities with developing their local plans and for determination of planning applications or listed building consent in relation to historic assets.

9.3.7 The three principal guidance documents that will be followed in this assessment are those produced by Cadw on behalf of the Welsh Government for managing historic assets:

- Heritage Impact Assessment in Wales (May 2017);
- Setting of Historic Assets in Wales (2017); and
- Conservation Principles for the sustainable management of the historic environment in Wales (March 2011) to establish objective assessment of the value and significance of historic assets within and surrounding the proposed development site.

9.3.8 Local planning policy is contained within Blaenau Gwent’s Replacement Local Development Plan 2018-2033 (January 2020) which includes Strategic Policy 14: Preservation and Enhancement of the Built Environment. This has eight points to outline major elements of the historic environment to be protected and enhanced, and for them to make a contribution to tourism. It lists the World Heritage Site at Blaenavon, 13 scheduled monuments, and 54 listed buildings, two conservation areas and a registered park and garden, as well as the Historic Landscapes at Brynmawr/Clydach Gorge and Blaenavon. It also highlights the need for protection of the setting to these designated assets, and to provide protection for assets of local historic interest.

9.4 CONSULTATIONS

Scoping

9.4.1 Consultation was undertaken with relevant heritage agencies as part of the scoping exercise. The results of this scoping are summarised in Table 9.1.

Table 9.1: Summary of scoping consultation responses

Consultee	Scoping Comment	Response
Wind Farm		
Cadw	Scoped out: non designated historic assets outside the application boundary.	Cadw’s scoping response 12/07/2021 agreed to the proposed methodology and to those assets that should be scoped out.
Blaenau Gwent County Borough Council	Scoped out: designated historic assets that fall outside the Zone of Theoretical Visibility (ZTV) for hub and full rotor blade with the exception of specific examples.	Blaenau Gwent County Borough Council’s scoping response 14/07/2021 incorporated advice from the Glamorgan Gwent Archaeological Trust which concurred with the proposed methodology and the approach to scoping out the historic
Glamorgan Gwent Archaeological Trust	Scoped out: World Heritage Sites and Historic Landscapes of Wales due to their distance from the scheme, and	

¹ Department of Energy and Climate Change July 2011

Consultee	Scoping Comment	Response
	<p>the preliminary visual modelling which demonstrates negligible change to the baseline.</p> <p>Scoped out: Assessment of the Significance of the Impact of Development on Historic Landscape (ASIDOHL) for HLW as the distance to the nearest HLW at over 5 km should preclude the need for such assessment.</p>	<p>assets that were specified in the scoping report. Archaeological investigations might be required prior to, or post determination.</p>

Impacts Scoped Out of Assessment

9.4.2 The preliminary ZTV modelling undertaken as part of the scoping exercise provided evidence for a lack of potential significant impact on the World Heritage Site (WHS) at Blaenavon or on the Registered Landscape of Outstanding Historical Interest (HLW) at Blaenavon. The western boundary of the WHS is c.6 km east of the site's red line boundary, whilst the western boundary of the HLW just overlaps with the 5 km Wider Study Area. Due to their distance away from the turbines and the minimal visibility of the proposed turbine blade-tips, Cadw agreed that impacts on the WHS and HLW did not need assessment, and that an ASIDOHL would not be required.

Scoped Into the Assessment

9.4.3 The ZTV modelled for 180 m blade-tip height shows that the following scheduled monuments would have intervisibility with five turbines: GM588 Y Domen Fawr round cairn, MM345 Cefn Man Moel Cross-ridge Dyke, MM181 Incline Haulage Winding Engine, Mynydd Bedwellty, MM347 Afon Sirhowy Hut Circle, MM339 Trefil Tramroad, and MM344 Twyn Bryn March round cairn. Three further scheduled monuments would have intervisibility with four turbines (MM218 Marine Colliery Pumping Engine, MM287 Tredegar Ironworks Cholera Cemetery, and GM451 Capel y Brithdir). GM317 Three Platform Houses on Cefn Brithdir and GM339 Site of Tegernacus inscribed stone, have been filtered out due to a minimal degree of visual impact. GM317 faces west and the topography of the Cefn y Brithdir ridge very largely hides this asset from visual change to the east. The site of the inscribed stone is adjacent to the chapel, and the heritage significance for this asset is the written record and its localized relationship to the chapel and routeway, rather than long-distance views to the east, towards the Manmoel ridge. In addition MM218 Marine Colliery Pumping Engine is filtered out as it is no longer in its original location, having been moved in 2003, and originally would have been located beneath the engine house, a function and position without any distant visual relationships.

9.4.4 The two conservation areas and registered park and garden in Tredegar would have intervisibility with five turbine blade-tips, as would a large number of listed buildings within the urbanised surroundings at the northern end of the site. Seven buildings have been selected as representative of these assets (Table 9.5), to assess the degree of impact the listed buildings might experience from the proposed wind farm.

9.4.5 Summary of historic assets scoped in for assessment.

- Construction (direct impact)
 - GGAT 06916 Round cairn Domen Fawr II
 - GGAT 06917 Round cairn Domen Fawr I
 - GGAT 06986 Round cairn Domen Fawr III

- GGAT 08679 Cefn Manmoel Dyke C
- GGAT 08676 boundary stone
- GGAT 08680 Cefn Manmoel Dyke D
- GGAT 08681 Cefn Manmoel enclosure
- GGAT 03970 Steel, Iron & Coal Company
- Operation (indirect impact)
 - GM588 Y Domen Fawr round cairn (Scheduled Monument)
 - MM345 Cefn Man Moel Cross-ridge Dyke
 - MM181 Incline Haulage Winding Engine
 - MM347 Afon Sirhowy Hut Circle
 - MM339 Trefil Tramroad
 - MM344 Twyn Bryn March round cairn
 - MM218 Marine Colliery Pumping Engine
 - MM287 Tredegar Ironworks Cholera Cemetery
 - GM451 Capel y Brithdir
 - GM317 Three Platform Houses
 - GM339 Site of Tegernacus inscribed stone
 - 1861 The Town Clock (Listed Building)
 - 1874 Stables and Barn at the Fountain Inn
 - 1875 The Fountain Inn
 - 22496 Sirhowy Ironworks
 - 22524 Christ Church
 - 22530 British Steel Tinplate Works General Office
 - 22531 Furnace Bank
 - GT39 Bedwellty Park, Tredegar (Registered Park and Garden)
 - WAL/BG/1Tredegar Historic Core & Heritage Initiative (Conservation Area)

9.5 METHOD OF ASSESSMENT

Desk Based Assessment

9.5.1 Cadw's Conservation Principles (page 18) states in Managing Change to an Historic Asset: "*Changes to historic assets are inevitable To ensure the long-term future of historic assets, change needs to be managed to ensure that their significance is not diminished as a consequence*" and paragraph 47 "*When considering the severity of potential impacts upon an historic asset, there should always be proportionality and reasonableness*". The heritage assessment has used these key aims of the guidance to ensure the results of the study are focused on a proportionate response to potential impacts on heritage significance from the degree of change that might result from the proposed development.

9.5.2 The proposed development would result in change to the existing baseline, and change has been considered as impacts according to the degree of change they have caused to heritage significance. As appropriate the baseline survey has been guided by the Chartered Institute for Archaeologists' Standard and Guidance for Historic

Environment Desk-Based Assessment. The assessment then identified impacts and effects as direct or indirect, adverse or beneficial, and short-term, long-term, reversible or permanent. Direct impacts are those which physically alter an asset and therefore its heritage significance; indirect impacts are those which affect the heritage significance of an asset by causing change within its setting.

- 9.5.3 Key aspects of a wind farm that might affect the historic environment, such as visual dominance, scale, intervisibility, vista and sight-lines, movement, sound or light effects, and unaltered setting, would form part of the criteria for assessment. More detailed guidance has also been issued by Cadw, including the Setting of Historic Assets in Wales (May 2017) and Heritage Impact Assessment in Wales (May 2017). These promote a staged approach to assessing assets, their historic significance, and the potential impacts from development, and have been applied to undertake the cultural heritage EIA.
 - 9.5.4 Cadw’s guidance Managing: Setting of Historic Assets in Wales has been applied during the assessment. This includes a four-stage process in assessment of impacts:
 - Stage 1: Identify the historic assets within the Study Area, and those that might be affected by the proposed development;
 - Stage 2: Define and Analyse the Setting;
 - 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.
 - 9.5.5 This guidance is sufficiently detailed for a clear distinction to be made between the aims of the assessment, which is to establish heritage significance, how setting contributes to that heritage significance, and how this might be altered by a development, as opposed to merely stating that all development would result in change to the surroundings of a heritage asset. In summary, this approach is required because the simple fact that a new development might be visible from a heritage asset is not in itself an adverse impact. The guidance is designed to manage change and allow sustainable development which does not substantially harm the historic environment, and the staged assessment process allows a balanced view to be established as to what is of importance for understanding a historic asset in its setting.
- Filtering to identify historic assets potentially affected**
- 9.5.6 The ZTV modelled for 180 m blade-tip height shows that the following scheduled monuments would have intervisibility with five turbines: GM588 Y Domen Fawr round cairn, MM345 Cefn Man Moel Cross-ridge Dyke, MM181 Incline Haulage Winding Engine, Mynydd Bedwellty, MM347 Afon Sirhowy Hut Circle, MM339 Trefil Tramroad, and MM344 Twyn Bryn March round cairn. Three further scheduled monuments would have intervisibility with four turbines (MM218 Marine Colliery Pumping Engine, MM287 Tredegar Ironworks Cholera Cemetery, and GM451 Capel y Brithdir). GM317 Three Platform Houses on Cefn Brithdir and GM339 Site of Tegernacus inscribed stone, have been filtered out due to a minimal degree of visual impact. GM317 faces west and the topography of the Cefn y Brithdir ridge very largely hides this asset from visual change to the east. The site of the inscribed stone is adjacent to the chapel, and the heritage significance for this asset is the written record and its localized relationship to the chapel and routeway, rather than long-distance views to the east, towards the Manmoel ridge. In addition MM218 Marine Colliery Pumping Engine is filtered out as it is no longer in its original location, having been moved in 2003, and originally would have been located beneath the engine house, a function and position without any distant visual relationships.
 - 9.5.7 The two conservation areas and registered park and garden in Tredegar would have intervisibility with five turbine blade-tips, as would a large number of listed buildings within the urbanised surroundings at the northern end of

the site. Seven buildings have been selected as representative of these assets (Table 9.5), to assess the degree of impact the listed buildings might experience from the proposed wind farm.

Site walkover survey and visits to affected assets

- 9.5.8 On 24 August 2022 a ground visit was conducted to key designated and non-designated historic assets that might be affected by the proposed wind farm. The aim was to identify the assets and to record their condition of preservation, as well as to appreciate them within their landscape setting to better understand how this contributes to their heritage significance. The results of this survey allow an informed assessment of potential impact from the turbines and associated infrastructure.

Detailed significance and impact assessment criteria

- 9.5.9 CPAT has developed a methodology for EIA which allows an objective and transparent assessment. To assess heritage significance an asset is related to designation status and grading, and, where non-designated, to a scale of national to negligible importance (see Table 9.2). Setting is not quantified on a scale but used to assist the assessment of the magnitude of impact, which is presented in Table 9.3. This table acts as an aid to consistency in the exercise of professional judgment and provides a degree of transparency for others in evaluating the conclusions reached by this assessment.

Table 9.2: Heritage Significance

Heritage Significance	Explanation
Highest	World heritage sites
	Scheduled monuments
	Grade I and II* listed buildings
	Grade I and II* registered parks and gardens
	Designated battlefields
	Protected wrecks
High	Non-designated assets of equivalent significance
	Grade II listed buildings
	Grade II registered parks and gardens
	Conservation areas
	Non-designated assets of equivalent significance
Medium	Archaeological sites which are of particular individual importance within the regional archaeological resource
	Archaeological sites of local importance
Low	Sites are of minor importance or with little remaining to justify a higher category
Negligible	Negligible or no heritage significance
Unknown	Further information is required to assess the potential of these sites

Source: CPAT

Table 9.3: Magnitude of Impact

Magnitude of impact	Definition
High beneficial	The development would considerably enhance the heritage significance of the affected asset or the ability to appreciate it
Medium beneficial	The development would enhance to a clearly discernible extent the heritage significance of the affected asset or the ability to appreciate it
Low beneficial	The development would enhance to a minor extent the heritage significance of the affected asset or the ability to appreciate it
Very low beneficial	The development would enhance to a very minor extent the heritage significance of the affected asset or the ability to appreciate it
Neutral / None	The development would not affect, or would have harmful and enhancing effects of equal magnitude, on the heritage significance of the affected asset or the ability to appreciate it
Very low adverse	The development would erode to a very minor extent the heritage significance of the affected asset or the ability to appreciate it
Low adverse	The development would erode to a minor extent the heritage significance of the affected asset or the ability to appreciate it
Medium adverse	The development would erode to a clearly discernible extent the heritage significance of the affected asset or the ability to appreciate it
High adverse	The development would severely erode the heritage significance of the affected asset or the ability to appreciate it

Source: CPAT

9.5.10 The significance of effect is presented in Table 9.4. This provides a matrix that relates the heritage significance to the magnitude of impact (incorporating contribution from setting where relevant) to establish the likely significance of effect. A significant effect would be one that was identified as substantial in Table 9.4. A moderate effect could also be considered as significant according to professional judgement.

Table 9.4: Significance of effect (red denotes a significant effect; amber might be significant)

Magnitude of impact	Heritage significance				
	Highest	High	Medium	Low	
High beneficial	Substantial	Substantial	Slight	Very slight	Enhancement
Medium beneficial	Substantial	Moderate	Slight	Very slight	
Low beneficial	Moderate	Slight	Very slight	Very slight	
Very low beneficial	Slight	Very slight	Negligible	Negligible	
Neutral / nil	Neutral / nil	Neutral / nil	Neutral / nil	Neutral / nil	Neutral / nil
Very low adverse	Slight	Very slight	Negligible	Negligible	Harm
Low adverse	Moderate	Slight	Very slight	Very slight	
Medium adverse	Substantial	Moderate	Slight	Very slight	
High adverse	Substantial	Substantial	Moderate	Slight	

9.6 BASELINE RESULTS

Data sources

9.6.1 Data have been purchased from the National Monuments Record (NMR) and Glamorgan-Gwent Archaeological Trust (GGAT) to provide the Historic Environment Record (HER) information for non-designated historic assets that lie within the site boundary and adjacent to it, the Immediate Study Area (Figures 9.1 and 9.2). There are 42 assets listed by the HER (although two are duplicates) and 26 in the NMR, with surprisingly little overlap between the two. The HER has six Bronze Age/prehistoric monuments (barrows and cairns) and the NMR two, with both sets of data including the scheduled monument of Domen Fawr in their entries. The other assets are complementary to Domen Fawr as part of a funerary landscape ranged along the crest of Manmoel. No Roman sites are included in either data set. The HER has eight medieval sites and the NMR four, which includes several entries for different parts of the Manmoel Dyke scheduled monument, an enclosure and a boundary stone associated with the dyke. The HER has 25 post-medieval assets, mostly quarries, but also including a leat, buildings and structures, Manmoel road and earthworks. The NMR has 15 post-medieval assets which are mostly earthwork features such as pits and paths, but also a chapel. The full list of both HER and NMR entries are included in Table 9.4.

9.6.2 Data have been downloaded from the *Lle. Gov.wales* portal but the original source for these data is Cadw. Further data exist and are accessible by the public, but copyright restrictions forbid their use for commercial purposes. Awareness of these additional assets, however, have informed the site walkover survey. The distribution of assets of high sensitivity have been mapped for the Wider Study Area (Figures 9.3 and 9.4) i.e. World Heritage Sites, Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Historic Landscapes of Wales and Conservation Areas. These data have been layered into a GIS so that they can be shown spatially against base mapping, historical mapping, and topography.

Wind Farm baseline

Immediate Study Area - direct physical impacts

9.6.3 Historic assets which could be physically impacted by groundworks associated with the proposed development are identified as:

Table 9.5: Historic assets within the site boundary or adjacent to it (Figure 9.1 and Figure 9.2)

PRN	Description	Type	Period
Cadw (DHA)			
GM588	Y Domen Fawr round cairn	Round cairn	Prehistoric
MM345	Cefn Man Moel cross-ridge dyke	Cross Ridge Dyke	Unknown (Prehistoric/medieval)
HER (NDHA)			
GGAT02212.0g	Trackway Ebbw Vale	Trackway	Medieval
GGAT06534g	Quarry	Quarry	Post medieval
GGAT06824g	Sheepfold	Sheep fold	Post medieval
GGAT06910g	Quarry and tips	Quarry	Post medieval
GGAT06988g	Linear feature, Cwm, Blaenau Gwent	Earthwork	Post medieval
GGAT07043g	Ebbw Vale Round Barrow	Round barrow	Bronze Age
GGAT07263g	Footbridge, Tredegar, Blaenau Gwent	Footbridge	Post medieval
GGAT08677g	Cefn Man Moel Dyke A	Cross-ridge dyke (defence)	Prehistoric/medieval
GGAT08680g	Cefn Man Moel Dyke D	Dyke	Medieval
GGAT08681g	Cefn Man Moel enclosure	Stock enclosure	Medieval
GGAT03970g	STEEL, IRON and COAL COMPANY	Steel works	Post medieval
GGAT06526g	MANMOEL ROAD	Road	Medieval
GGAT06530g	Feeder Leat, Scotch Peter's Reservoir, Tredegar	Leat	Post medieval
GGAT06530g	Feeder Leat, Scotch Peter's Reservoir, Tredegar	Leat	Post medieval
GGAT06531g	MOUNTAIN AIR GATE INN	Dwelling	Post medieval
GGAT06533g	Quarry	Quarry	Post medieval
GGAT06534g	Quarry	Quarry	Post medieval
GGAT06824g	Sheepfold	Sheep fold	Post medieval
GGAT07012g	Domen Fawr Round Cairn IV	Mound	Bronze age
GGAT06905g	Quarry	Quarry	Post medieval
GGAT06906g	Quarry	Quarry	Post medieval

PRN	Description	Type	Period
GGAT06907g	Quarry	Quarry	Post medieval
GGAT06908g	Quarry	Quarry	Post medieval
GGAT06909g	Quarry	Quarry	Post medieval
GGAT06910g	Quarry and tips	Quarry	Post medieval
GGAT06911g	Quarry and tips	Quarry	Post medieval
GGAT06912g	Quarry pits	Quarry	Post medieval
GGAT06913g	Quarry	Quarry	Post medieval
GGAT06914g	Structure	Structure	Post medieval
GGAT06915g	Quarry	Quarry	Post medieval
GGAT06916g	Domen Fawr Round Cairn II	Cairn	Bronze Age
GGAT06916g	Domen Fawr Round Cairn II	Cairn	Bronze Age
GGAT06917g	Domen Fawr Round Cairn I	Cairn	Bronze Age
GGAT06931g	Quarry	Quarry	Post medieval
GGAT06933g	Building	Building	Post medieval
GGAT06934g	Level	Adit	Post medieval
GGAT06935g	Building	Building	Post medieval
GGAT06986g	Domen Fawr Round Cairn III	Earthwork	Bronze Age
GGAT06987g	Earthwork	Earthwork	Post medieval
GGAT06988g	Linear feature, Cwm, Blaenau Gwent	Earthwork	Post medieval
GGAT07042g	Ebbw Vale Ring Cairn	Ring cairn	Prehistoric
GGAT07043g	Ebbw Vale Round Barrow	Round barrow	Bronze Age
GGAT07263g	Footbridge, Tredegar, Blaenau Gwent	Footbridge	Post medieval
GGAT08676g	Cefn Man Moel Boundary Stone	Boundary stone	Medieval
GGAT08677g	Cefn Man Moel Dyke A	Dyke (defence)	Unknown
GGAT08677g	Cefn Man Moel Dyke A	Dyke (defence)	Unknown
GGAT08679g	Cefn Man Moel Dyke C	Dyke (defence)	Medieval
GGAT08679g	Cefn Man Moel Dyke C	Dyke (defence)	Medieval
GGAT08680g	Cefn Man Moel Dyke D	Dyke (defence)	Medieval
GGAT08680g	Cefn Man Moel Dyke D	Dyke (defence)	Medieval
GGAT08681g	Cefn Man Moel Enclosure	Dyke (defence)	Medieval
GGAT08681g	Cefn Man Moel Enclosure	Dyke (defence)	Medieval
NMR (NDHA)			Post medieval
535795	Cruglwyn, machinery	Machinery	Modern

PRN	Description	Type	Period
535796	Cruglwyn, linear feature ii	Linear feature	Modern
10662	Harpers road methodist chapel (wesleyan), Victoria, Ebbw vale	Chapel	Post medieval
86971	Brierly Hill mine workings	Coal workings	Post medieval
403442	Y Domen Fawr	Round cairn	Bronze Age
407565	Cefn Manmoel, cross ridge dyke	Linear earthwork	Medieval
535589	Cefn Manmoel, cairn II	Ring cairn	Bronze Age
535590	Cefn Manmoel, path II	Path	Medieval
535591	Cefn Manmoel, bank V	Bank (earthwork)	Post medieval
535592	Cefn Manmoel, track III	Trackway	Post medieval
535585	Cefn Manmoel, path I	Path	Medieval
535586	Cefn Manmoel, bank III	Field boundary	Post medieval
535587	Cefn Manmoel, pit III	Pit	Post medieval
535588	Cefn Manmoel, bank IV	Bank (earthwork)	Post medieval
535781	Cruglwyn, ditch	Ditch	Medieval
535797	Cefn Manmoel, bank VI	Bank (earthwork)	Post medieval
535798	Cefn Manmoel, bank VII	Bank (earthwork)	Post medieval
535776	Cefn Manmoel, ditch	Ditch	Modern
535777	Cefn Manmoel, path III	Path	Medieval
535779	Cruglwyn, track II	Trackway	Post medieval
535780	Cruglwyn, pit I	Pit	Post medieval
535782	Cruglwyn, path I	Path	Post medieval
535783	Cruglwyn, track III	Trackway	Post medieval
535784	Cruglwyn, path II	Path	Post medieval
535785	Cruglwyn, pit II	Pit	Modern
535786	Cruglwyn, pit III	Pit	Post medieval

Source: CPAT

Wider Study Area – indirect impacts

9.6.4 Designated historic assets which could be indirectly affected through visual impact within the Wider Study Area are shown on Figures 9.3 and 9.4. In total 77 listed buildings are identified, many of which are grouped within town and village centres, and a comparison with visual modelling has been undertaken to help filter which assets are most likely to be impacted and therefore should be assessed. Historic assets of high sensitivity in the study area, which could be adversely affected by the proposed development within their setting, are identified in Table 9.6.

Table 9.6: Designated and Registered Historic Assets within the study area that were assessed

National no.	Name	Type	Period
SMs			
MM218	Marine Colliery Pumping Engine	Industrial monument	Post Medieval/Modern
GM317	Three Platform Houses on Cefn Brithdir	Platform house	Medieval
MM287	Tredeggar Ironworks Cholera Cemetery	Cemetery	Post Medieval/Modern
MM344	Twyn Bryn March round cairn	Round Cairn	Prehistoric
MM345	Cefn Man Moel cross-ridge dyke	Cross Ridge Dyke	Unknown
MM181	Incline Haulage Winding Engine, Mynydd Bedwellty	Industrial monument	Post Medieval/Modern
MM185	Sirhowy Ironworks	Industrial monument	Postmedieval/Modern
GM451	Capel y Brithdir	Chapel	Medieval
GM588	Y Domen Fawr round cairn	Round cairn	Prehistoric
MM339	Trefil Tramroad	Tramroad	Post Medieval/Modern
MM347	Afon Sirhowy hut circle	Hut circle settlement	Prehistoric
RPGs			
Grade II			
GT39	Bedwellty Park, Tredeggar	Early 19 th century urban landscape park	Post Medieval/Modern
LBs			
Grade II* and II			
1861	The Town Clock	Located in the centre of the circle	Post Medieval/Modern
1874	Stables and Barn at the Fountain Inn	Located across courtyard from Fountain Inn, facing south-east	Post Medieval/Modern
1875	The Fountain Inn	Located along west-facing valley side	Post Medieval/Modern
22496	Sirhowy Ironworks	Ironworks is set into hillside to east	Post Medieval/Modern
22524	Christ Church	Prominently sited on E side of Church Street, the spire dominating the town.	Post Medieval/Modern
22530	British Steel Tinsplate Works General Office	Prominently located along Steelworks Road	Post Medieval/Modern
22531	Furnace Bank	Opposite the main entrance to Ebbw Vale Steelworks	Post Medieval/Modern
CA			
WAL/BG/1	Tredeggar Historic Core & Heritage Initiative	It is notable both as one of the first planned towns, and for its	Post Medieval/Modern

National no.	Name	Type	Period
		place at the foundation of the National Health Service	

Source: CPAT

9.6.5 Although other historic assets with statutory and non-statutory designations fall within the Wider Study Area, those listed above in Table 9.5, are considered to be those assets with potential significant visibility of the turbines, and these will therefore form the basis for the proportionate assessment of potentially significant effects arising from the proposed changes. Virtually all the listed buildings, plus the registered garden and conservation area, would come within the zone of 5 blade tip visibility. Assessment of the conservation area and registered park and garden would cover many of these as an asset group. Although a small number of Grade II listed buildings, specifically in Ebbw Vale, would have theoretical visibility of the blade tips, their heritage significance and setting largely relates to their urban baseline, and so Christ Church has been selected as representative of this asset group, with the Grade II* British Steel works and Furnace Bank as additional examples from Ebbw Vale. The closest listed buildings to the turbines would be The Fountain Inn and Stables, so these would also be assessed.

Historic Landscape Development

9.6.6 The historic assets within the site and Wider Study Area include limited evidence for some prehistoric activity within this landscape, but the assets indicate a well-utilised region with settlement in the river valleys, and funerary practice in the surrounding uplands. This comprises two scheduled Bronze Age cairns or burial monuments (GM588 within the central eastern part of the site, and MM344 c.3.5 km to the north of the site), and three further cairns north of Domen Fawr within the site (GGAT 06986g, 06916g, and 06917g), a ring cairn at the southern end (07042g), and settlement evidence in the form of at least one, possibly two, roundhouses, in association with a field system (MM347 located c.5 km north-west of the site). The scheduling description assigns a Bronze Age date to the roundhouse and states that it has an entrance facing north-north-west. This is unusual as roundhouses normally have entrances that face south-east or south to benefit from getting the most light into the interior. A cross-ridge dyke at the southern end of the site (MM345) could be of prehistoric origin, although it might equally be a boundary feature of medieval date.

9.6.7 Although there is no known evidence for Roman activity, there are assets recorded as of medieval date. These include three house platforms (GM317) located c.4 km south-west of the site, on the westward-facing side of Cefn Brithdir, with a chapel (GM451) and an inscribed stone GM339) c.800m south-east of the houses, and trackways along the ridgeline suggest ancient rights of way connecting these assets with locations further away. A trackway which heads upwards towards the site from Tredegar is recorded as of possible medieval origin (GGAT 02212g). Within the southern part of the site an earthen bank with ditches on either side is aligned north-west – south-east (GGAT 08680g) and two lengths of a cross-ridge dyke (08679) which run west-east either side of Manmoel Road and are associated with an earthwork enclosure (08681g) used possibly for stock management. The dyke and enclosure meet at a boundary stone (08676g) which may be of earlier date. Much of Manmoel is common grazing and this land-use would have been an arrangement which dates back to at least medieval times.

9.6.8 Although the post-medieval period is dominated by the industrial heritage of the area, there are elements of the rural economy that form a continuation from earlier times. Manmoel Road and other routeways run south along the ridge, and these may well be ancient in origin. The northern end of the road is followed by a community boundary, which terminates at its southern end against a west-east boundary shown on the 1st edition OS map of 1888 (Appendix A9.1) running from Bedwellty Pits to the eastern side of the ridge, and then heading south-east

along the crest. The HER records a sheepfold (GGAT 06824g) at the northern end of the access road to the site (the northern end of Manmoel Road) and a ditch (06988g) on the western edge of the site towards the southern end. Two quarries are recorded towards the north end of the site (06534g and 06910g), on its eastern and western sides. Historic mapping such as the Ordnance Survey First Edition of 1888 show quarrying and old coal levels along much of the eastern edge of Manmoel adjacent to the site, and others within Coed y Rhyd to the west. A series of footbridges across a feeder lead to Scotch Peter's Reservoir are listed in the HER, and many structures and other features within and around the site are of 18th – 20th century industrial origin, including a large number of quarries.

9.6.9 Within 2 km there are 78 listed buildings of post-medieval date, 12 of which are Grade II* and the rest Grade II. The great majority are located within the urban centres around the northern end of the site, and include industrial structures and factories, domestic residences, transportation structures such as bridges and viaducts, recreational and commemorative structures, municipal and religious buildings and structures. Scheduled monuments include the Sirhowy Ironworks (MM185) c.2 km to the north-west of the site, the Rhymney Upper Furnace (GM403) c.4.5 km to the west, an Incline Engine (MM181) c.750 m west of the site, the Marine Colliery Pumping Engine (MM218) c.2.5 km to the south-east, the Clydach Coal Level (MM264) c.4.5 km to the north-east, the Trefil Tramroad (MM339) c.4.5 km to the north-west, and the Tredegar Ironworks Cholera Cemetery (MM287) c.2 km to the west.

9.6.10 The surrounding historic environment also includes two area designations, the Tredegar Historic Core Conservation Area and the Grade II Registered Park & Garden of Bedwellty Public Park in Tredegar. These protected zones overlap one another, and the Conservation Area is divided into two parts: Bedwellty Park and Garden and the Southern Town Area. They are located over 1 km to the west of the site, within the Sirhowy Valley.

Site Visit to Assess Heritage Assets within their Setting

9.6.11 On 24 August 2022 a ground visit was conducted to key designated and non-designated historic assets that might be affected by the proposed wind farm. The site visit was conducted in reasonably dry weather (although light conditions were overcast) with an approach from the north so that the location and prominence of Cefn Manmoel and Domen Fawr could be experienced in their existing landscape and compared with the same view including the proposed array of turbines aligned along the ridge from Domen Fawr for 1.5 km to the south. Within the site the main historic assets were identified including scheduled monuments and the Bronze Age non-designated historic assets, barrows, cairns and potential dykes (Appendix A9.3 Figures A9.1.1 – A9.1.9).

9.6.12 Cefn Manmoel forms a north-south ridge sloping gradually to the south, with the Sirhowy valley to the west and Ebbw Vale to the east. The highest point along Manmoel is at Domen Fawr at 504 m above sea level, on the summit of which the scheduled monument of a Bronze Age burial mound or round cairn (GM588 and GGAT 07012g Domen Fawr round cairn IV) has been positioned (Appendix A9.3 Figures A9.3.1 – A9.3.4). The mound is c.15 m in diameter and rises to a height of 1 m above ground level in the south-west, and 2 m high on the northern side. It is located on the very edge of the steep drop to the east into Ebbw Vale, and at the point at which Domen Fawr descends to the north. The monument would have been placed in this location so that it could be seen from a wide area, suggesting its association must have been principally with a community along Ebbw Vale, rather than the Sirhowy valley to the west. The monument has been eroded by a track along its western side, it has a bench located on its top resulting in further erosion, and a 20th century brick and concrete structure inserted into its northern side, causing considerable damage to the cairn.

9.6.13 Downhill to the west and north-west smaller round cairns and other earthworks exist which may have been contemporary. They occupy a small plateau and were difficult to find within the general rough grass vegetation. Two cairns were found, with the eastern one c.2m diameter, and the western one c. 4 m in diameter, and both 0.2 – 0.3 m high (Appendix A9.3 Figure A9.3.5). A third-round cairn included in the HER was not identified on the

ground but instead a linear earthwork was found which ran between the two identified cairns, and it is possible that this might have been mistaken for a mound when first recorded (Appendix A9.3 Figure A9.3.6).

- 9.6.14 At the southern end of the proposed turbine array several cross-ridge dykes have been recorded, which were difficult to identify within the general rough vegetation. Some mowed strips formed tracks along and across the ridge in this zone and some potential linear banks and ditches were found which probably correspond with the cross-ridge dykes listed in the HER (Appendix A9.3 Figures A9.3.7 and A9.3.8). The earthwork remains of a post-medieval building adjacent to Manmoel Road was also visible (Appendix A9.3 Figure A9.3.9).
- 9.6.15 Visits were also conducted to Tredegar and Ebbw Vale to gauge the sensitivity and potential impact from the proposed wind farm to selected listed buildings, the conservation area and the registered park and garden at Bedwellty. This part of the survey confirmed that the urban environment largely curtailed views of Cefn Manmoel from the designated historic assets, with tall trees and thick vegetation prevented views of the development area from within Bedwellty park (Appendix A9.3 Figures A9.3.10 – A9.3.14).

Heritage significance of selected assets

GM588 Y Domen Fawr round cairn

- 9.6.16 Cadw's scheduling description states "*The monument comprises the remains of a large burial cairn, probably dating to the Bronze Age (c.2300 BC - 800 BC) and is situated on the north-east side of a prominent ridge on Cefn Manmoel. The stone-built cairn is roughly circular on plan and measures about 12 m in diameter and up to 1 m in height. A small rectangular brick and concrete structure (probably a pillbox or observation post dating from WWII) has been inserted into its north-west side. However, the remainder of the cairn is substantially intact. The cairn commands fine views over the valley to the east.*"
- 9.6.17 The burial mound is typical in being located in a commanding position (Appendix A9.3 Figures A9.3.1 and A9.3.2) visible from the valley to the east, strongly indicating a communal association with contemporary settlement at Ebbw Vale. The aesthetic of this location is the visibility of the mound structure against the skyline, and appreciation of it in its relatively remote location, in an upland marginal area rather than as part of the settled river valley below. Despite damage and erosion to the monument (Appendix A9.3 Figures A9.3.3 and A9.3.4) its large size suggests that evidential and historical value would survive in a reasonably well-preserved condition, including the likelihood of it containing a Bronze Age inhumation and paleoenvironmental remains. Other cairns are found along Cefn Manmoel, and these monuments have a group value as part of an upland zone set aside for specific purposes by the Bronze Age communities surrounding them. There is also association with the cross-ridge dyke and other linear earthworks to the south, which may be of a contemporary date with Y Domen Fawr cairn.

MM345 Cefn Man Moel Cross-ridge Dyke

- 9.6.18 The scheduling description states "*The monument comprises a linear cross-ridge dyke running across the Cefn Man Moel ridge. The earthen bank is aligned from NE to SW and measures about 270 m in length by about 5m in thickness and up to 0.7 m in height; the associated ditch is situated immediately to the NW and measures about 2.5 m in width and about 0.6 m in depth. There is intermittent evidence of a low counterscarp bank. The tradition of cross-dyke building appears to roughly span two millennia, beginning in the middle Bronze Age and lasting throughout the Iron Age and into the early medieval period. They have been interpreted as territorial boundaries, defining areas of political influence and ritual association, including internal territorial boundaries and land allotment within communities.*"
- 9.6.19 The communal value of this relatively well-preserved monument relates to its role in defining different territories, with the ditch to the north-west suggesting it was constructed by a community to the south, to constrain access along the ridgeway. Aesthetically it would have been designed to be visible from close quarters along the ridge

(Appendix A9.3 Figure A9.3.8), but it is unlikely to have been conceived for the purpose of its visibility in the landscape for any great distance in any direction. The dyke's physical remains offer evidence over construction techniques, contemporary environmental conditions, and period of construction and use, and in combination with other dykes, enclosures and linear features on Cefn Manmoel, it includes an element of group value. If of medieval date the dyke could have historical value in association with documentary records, identifiable communities and administrative boundaries.

MM181 Incline Haulage Winding Engine, Mynydd Bedwellty

- 9.6.20 The scheduling description states "*The monument consists of the remains of incline haulage gear, dating to the 19th century. The winding gear stands halfway up the side of the Sirhowy Valley, above Bedwellty Pits at the top of a disused tramroad, and on the lip of an old quarry. The site consists of two stone-built piers, 2 m across and 1.5 m deep, each supporting a cast iron square sectioned axle with cast iron and wood drum wheels. The axles are supported on iron plates bolted onto the top of the walls. The system was built around 1850, was self-acting and was used to lower quarried stone down the incline to Bedwellty pits yard. The site has recently been restored.*"
- 9.6.21 This monument has very strong communal connections with Tredegar and neighbouring settlements as an important centre of employment and economic prosperity for the area from the mid-19th century. Aesthetically the ruins of the drum and winding mechanism evoke a sense of nostalgia amongst the abandoned quarry workings, now reverted to nature and set within an open valley-side landscape. There is good potential for evidential value from the condition of the surviving parts of the structure to better understand the technology of the period, and good historical value through documentary records, industrial histories of the area and links with local families.

MM347 Afon Sirhowy Hut Circle

- 9.6.22 The scheduling description states "*The monument comprises a fine hut circle, the foundations of a round house probably dating to the Bronze Age (c.2300 BC - 800 BC) and situated within open moorland on the slopes to the SE of the gully containing the Afon Sirhowy. The hut circle is well-preserved and measures 5.3 m in diameter within a low grass-covered stony bank 1.1 m in thickness and 0.2 m in height. Terraced into the slope on the rear, an entrance is visible in the NNW side. The hut circle is situated upon well-drained and sheltered N-facing slopes, in an area largely cleared of stones. There are clearance heaps at the base of the slope and traces of field banks evident. The remains of a further hut circle are situated downslope. It is very likely that the settlement and associated field system once extended further to the SE, within the area now enclosed and improved.*"
- 9.6.23 There is minimal communal value associated with this monument, as it dates from prehistory and is relatively far distance from any modern settlement apart from Dros y Llyn Farm to the east. Its aesthetic value lies in the open landscape and gentle valley side occupied by the monument, sloping down to the Sirhowy stream north of the settlement and near its confluence with a tributary. The preservation of this monument as upstanding structures demonstrates its strong evidential value for archaeological research, providing information on domestic and farming arrangements from three thousand years ago. There is possibly some historical value, if the site has been noted by antiquarians or mentioned in land deeds and Tithe maps.

MM339 Trefil Tramroad

- 9.6.24 The scheduling description states "*The Trefil Tramroad Company was formed in 1793 by the ironmasters of the Beaufort, Sirhowy and Ebbw Vale ironworks. The tramroad was engineered by Thomas Dadford Jnr and was completed in 1796. It brought limestone from the Trefil Quarries to the tollhouse at Trefil Machine and from there on to the respective ironworks. The tramroad was partially re-laid on several occasions over the following century. In 1919 the line of the tramroad was completely re-engineered and converted to locomotive-bearing standard-gauge. Two sections of the original route survive, having been cut off by the new railway: a short section boasting*

a square drainage culvert; and a longer loop around Cwm Milgatw that includes impressive engineering features such as bridges, cuttings and revetments. Features along the track bed include an original iron drainpipe which has been exposed by erosion, several stone-built culverts and numerous stone blocks.”

- 9.6.25 The communal value of this monument relates to the physical connection it makes between the open country and limestone quarries, with the urban centres where the ironworks were located in the valleys below. Aesthetic value lies in appreciating the engineering feat of constructing this tramway in the late 18th century through difficult terrain around the Cwm Milgatw. The surviving sections of the old tramway contain much of evidential value for understanding 18th and 19th century engineering and the development of transportation technology, from the design and construction techniques incorporated into the structures that comprise the tramway. Documentary sources and historical studies show its historical value as an extremely important component of the 18th - 19th century industrial development along the Heads of the Valleys.

MM344 Twyn Bryn March round cairn

- 9.6.26 The scheduling description states *“The monument comprises the remains of a burial cairn, probably dating to the Bronze Age (c.2300 BC - 800 BC) and situated in open moorland on the S-facing slopes of Twyn Bryn March above the Nant Milgatw in the Eastern Brecon Beacons. The low stone-built cairn is circular on plan and measures about 5.5 m in diameter and 0.2 m in height. Although it has been disturbed in the past - there is a slight central depression - the majority of the base of the cairn remains intact.”*
- 9.6.27 There is minimal communal value associated with this monument, as it dates from prehistory and is at a relatively far distance from any modern settlement. Aesthetically it is located on a spur with streams to either side and appears to have been designed so that it could be best appreciated viewed from the south looking up to the skyline. Its well-preserved state gives confidence that much archaeological potential survives for information on burial rites and palaeoenvironmental records. The cairn might have some historical value as a monument in an upland rural landscape otherwise largely devoid of man-made features which would be mentioned in charters and land deeds and used a boundary marker.

MM287 Tredegar Ironworks Cholera Cemetery

- 9.6.28 The scheduling description states *“The monument consists of the remains of a cholera cemetery from the epidemics which swept many emerging industrial communities in the 19th century. The epidemic at Tredegar in 1849 was focused on the housing for the ironworks. As in many areas, a separate cemetery was created on a hilltop away from the town, owing to fears of infection from the dead. The cemetery is delimited by the wrought iron bases of fence posts in a rectangle measuring 20 m by 40 m. It appears to contain six rows of graves with some 30 graves in each row. About 25 headstones remain standing and there are roughly 25 fallen slabs. Other graves are marked by stone edgings or mounds. Among legible inscriptions, in English and Welsh, nearly all record deaths in 1849, and many are directly ascribed to workers at Tredegar Ironworks. One is dated 1866. Given that there were often several burials per plot, the cemetery may represent between 200 and 600 fatalities.”*
- 9.6.29 The site has a very strong communal value as the descendants of those buried in the cemetery still live in Tredegar and surrounding settlements. It is an emotive reminder of a period when communities who lived in close proximity were exposed to sudden disease sweeping through the population, and the related social conditions they lived in. Its aesthetic value lies in the remote location on an open hillside, so that the chances of spreading the disease were lessened, providing a poignancy for those visiting the site and a clear separation from a busy urban and industrial landscape. The site has evidential value in the archaeological resource of the burials, and the palaeo-osteological and related studies that could inform us of the mid-19th century population at Tredegar. The

inscriptions on the gravestones provide direct historical value for individuals buried in the cemetery, and documentary sources for the cholera outbreak give a solid context for the reasons it was required.

GM451 Capel y Brithdir

- 9.6.30 The scheduling description states *“The monument consists of the remains of a chapel dating to the medieval period. Until its demolition in 1960, the medieval chapel of Capel-y-Brithdir stood alongside the ridgeway route along Cefn-y-Brithdir, 150 m south-west of the 7th century memorial stone of Tegernacus (now in the National Museum of Wales). During demolition, a cross incised slab of probable 10th-11th century date was found built into its walling. (The slab is now in St Gwladys's Church, Bargoed). The demolished remains of the church were heaped within the lower part of its walls to form a platform-like monument.”*
- 9.6.31 The scheduled monument has lost most of its communal value, having been demolished in 1960, although some association remains due to more recent graves within the surrounding graveyard. The aesthetic value derives from appreciation of its relatively remote setting along a ridge, next to an ancient routeway. Archaeological evidence includes an early inscribed stone built into the chapel, and beneath the existing monument to the demolished building the foundations of the medieval chapel and burials show its evidential value. Documentary sources and historical studies exist which provide historical value and context for any interpretation of the monument.

GT39 Bedwellty Park, Tredegar

- 9.6.32 This Grade II registered park and garden is described in its listing as *“Early nineteenth-century urban landscape park, with interesting contemporary features, including rockwork and an unusual and very well preserved ice-house.”* Bedwellty House (Appendix A9.3 Figure A9.3.11) was presented, along with its grounds, to the people of Tredegar by the Morgan family of Tredegar House in 1901, for recreational purposes. The house and grounds are intricately linked to Tredegar as they were the 19th century home for the owner of the Ironworks which provided employment to many people within the town. Apart from the historic buildings and other structures that would have been consistent with a grand house of the time (such as the main house, icehouse, stable-block etc) the registered park also includes a bandstand and the war memorial for the community.
- 9.6.33 It has a strong communal value as a recreational area within the urban and industrialised landscape, and for the inclusion of the war memorial in the grounds. A collection of mining objects including a large lump of coal intended for the Great Exhibition but too heavy to be transported to London, enhances the communal value due to its historic links with coal mining and ironworking. The park has aesthetic value for the garden setting it provides to the main house and its pleasant paths and associated structures. There is some evidential value from the archaeological potential within the built heritage and from might be buried beneath it, and there is significant historical value in the records of ownership and related connections with the town and industrial development of the area.

Bedwellty Park and Garden, and the Southern Town Conservation Areas

- 9.6.34 A Conservation Area Appraisal was completed in 2006 which characterised the existing proposed parts of the Tredegar conservation area². This identified the two most significant attributes of the town that met the criteria of special architectural and historic interest:
1. The foundation of the National Health Service derived from the Tredegar Medical Aid Society and the town's links with Aneurin Bevan
 2. Tredegar was the first planned industrial town in Britain and therefore a leader in urban planning.
- 9.6.35 The townscape is dominated by the town clock from which roads radiate outwards in all directions from a central circle of buildings surrounding it. The town plan included Bedwellty Park and House as an integral part to form its

² Capita Symonds and Capita Percy Thomas Ltd July 2006 *Tredegar Townscape Initiative: Conservation Area Appraisal & Design Guide* for Blaenau Gwent County Council

southern end, with a road curving west around the park to access the town without disturbing the owner of the Ironworks in his family residence. A chapel was built to provide the centrepiece of views westwards from the Circle. North and east do not appear to have been laid out for specific views.

- 9.6.36 The historic core of the town is in the bed and along the sides of the valley and has important views down the valley and to the heights surrounding it. It was first developed during the first two decades of the 19th century, to service the Tredegar Ironworks and associated blast furnaces, replacing what had previously been a predominantly rural economy with dispersed small farms and ridgeway communication routes. The foundation of the Tredegar works replaced the earlier Sirhowy Ironworks, and success led to the construction of the longest tramway of the period, 23 miles, from Tredegar to Newport.
- 9.6.37 Buildings from the time of the Tredegar Medical Aid Society still survive, such as No 10 The Circle (the administrative centre for the society), although the Edwardian General Hospital has been demolished.

Listed Buildings

- 9.6.38 In total there are 78 listed buildings within the search area (Appendix A9.2), of which many are included in the Tredegar Conservation Area. The classification of these into types includes a majority as domestic, and also a high number of industrial buildings, with others assigned to agricultural and subsistence, religious, ritual, or funerary, recreational, commemorative, institutional and commercial classes. The scoping report identified a representative sample of these listed buildings that would be proportionate for assessment purposes (Table 9.7).

Table 9.7: Listed buildings within the study area to be assessed

National no.	Name	Type	Period
LBs	Grade II* and II		
1861	The Town Clock	Located in the centre of the circle, Tredegar	Post Medieval/Modern
1874	Stables and Barn at the Fountain Inn	Located across courtyard from Fountain Inn, facing south-east	Post Medieval/Modern
1875	The Fountain Inn	Located along west-facing valley side, Troedrhwi-gwair	Post Medieval/Modern
22496	Sirhowy Ironworks	Ironworks is set into hillside to east, located north of Tredegar	Post Medieval/Modern
22524	Christ Church	Prominently sited on E side of Church Street, Ebbw Vale, the spire dominating the town.	Post Medieval/Modern
22530	British Steel Tinplate Works General Office	Prominently located along Steelworks Road, Ebbw Vale	Post Medieval/Modern
22531	Furnace Bank	Opposite the main entrance to Ebbw Vale Steelworks	Post Medieval/Modern

1861 Town Clock

- 9.6.39 The grade II* cast iron clock was erected in 1858 funded by public subscription with donations from the Tredegar Ironworks manager. It forms the centrepiece to the town square now called The Circle (Appendix A9.3 Figure A9.3.10) and was illuminated by gaslight so it could be seen day and night.
- 9.6.40 The clock has strong communal value as being the centrepiece to the town square, a meeting place for the community and a hub for services, and through its function to keep the inhabitants and foundry workers constantly aware of the time. It is an aesthetically pleasing example from a renowned clock-maker, with a design specifically conceived to reflect the values of the community and the main employer in Tredegar, constructed in iron and elegantly fashioned and lit. There is no archaeological value but historically its value lies in the relationship between this planned town for the foundry workers and related service industries, and the erection of the clock through public subscription and the contributions of benefactors, principally the family of the manager of the ironworks.

1874 & 1875 Stables and Barn at the Fountain Inn, and The Fountain Inn

- 9.6.41 The Fountain Inn is a grade II listed building designated as a well-preserved 17th century former upland farmhouse of white-washed rubble construction, converted to a public house in the later 19th century for the increasing industrial population. It was enlarged and given a second storey during this period. The stables and barn (also grade II) lie to the NW of the inn, facing SE across small courtyard The stables are a three-bay range with loft above, comprising white-washed rubble walls and corrugated iron roof. The barn is probably of a slightly different date and has a steeper roof.
- 9.6.42 The communal value has been largely lost following the demise of much of the mining and industrial community, and closure of the public house, although in its heyday it formed a social centre for the community. The complex was located at the end of a no through road and served as a base for a local society. Aesthetically the appearance of the buildings and their relatively remote location, are evocative of the conditions that the rural community lived in before widescale industrialisation changed much of the surrounding environment. The buildings retain archaeological value from the physical evidence they provide for a post-medieval farmhouse of single storey, L-shaped plan, slightly excavated into the hillside, with a lofted cowhouse downslope, and its later expansion on the 19th century with stables and barn. Its historical value derives from the physical evidence it provides for the transformation of the Valleys during the 19th century when the farmhouse was adapted as a public house for the mining community of Troedrhwi-gwair, and the cowhouse converted to a dairy.

22496 Sirhowy Ironworks

- 9.6.43 The grade II* Sirhowy Ironworks (also scheduled monument MM185) are designated as a significant survival of the early iron industry in the Monmouthshire Valleys. The standing remains consist of a massive rubble-built furnace bank with arched openings and barrel-vaulted passageways. A circular brick furnace base survives within the structure, as well as another outside, built into the hillside to the south. Other surviving structures include rectangular stone buildings, culverts and conduits, and cast-iron pipes. Architectural features include brick footings and headers to arches, ocular and narrow arched openings, and mixed stone and brick facades.
- 9.6.44 From their construction during the late 18th century until closure in the late 19th century the ironworks comprised one of the major industries of the area, employing many of the male population living in Tredegar. As such their physical presence continues to remind the present-day population of the foundations for the community, and thus provides important communal value. Aesthetically they were not designed to be admired for their beauty, but following their closure and general deterioration, their prominence within the local hillside, contrasting to the more rural landscape, imbues the ruins with great presence and some value for appreciating the aesthetics of a former industrial complex in this location. Archaeologically the site holds value for evidence of the foundry and related

industrial processes which the standing structures contain, as well as an unknown resource for below ground preservation of remains. There is strong historical value because of the 100-year history of the works, which included up to five blast furnaces, and the development of the site and related infrastructure during the 18th – 19th centuries. This included a mill for water power, and later a steam engine to power the bellows, construction of a very early and major tramway to take the product to Newport, coke-yards and lime-kilns, water management, and casting houses. Documentary sources contain a wealth of information about the site and its contribution to the economic development of the surrounding region and country.

22524 Christ Church

9.6.45 This grade II listed building was designated as a well-designed and prominent Anglican church, by one of the leading church architects of the later 19th century. The massive scale of the well-preserved church (Appendix A9.3 Figure A9.3.13) is testimony to the growth and influence of its patron, the Ebbw Vale Iron Company. The design is in Early English style, and constructed using red Risca sandstone, with grey Forest stone, and Bathstone for the window heads. The traditional plan consists of a nave with lean-to aisles, an apsidal chancel, a porch, and a massive four storey tower and spire to the south-west. The roof and spire are covered with slate.

9.6.46 The communal value is high, due to its continued use as a place of worship and a centre for the community for over 150 years. Its aesthetic value derives from how an observer appreciates the style of architecture and materials used, as it is out of proportion for the surrounding urban landscape, and dominates views throughout the landscape beyond (for this reason it is sometimes called the “Cathedral of the Hills”). There is no real archaeological value in this building, but historically it has considerable value as a deliberate act by the Ebbw Vale Ironworks Company to create an Anglican place of worship within the growing town (c. 9000 population). It was located in an area renowned for the number of public houses, and the commissioning of its design from the London architect of John Norton on a scale that would be dramatic, was probably intended to impose stronger moral conduct within the community.

22530 British Steel Tinplate Works General Office

9.6.47 This grade II* listed building was designated as a very fine and rare survival of an industrial office complex, with much of its character and detail well-preserved. Designed by a leading firm of Cardiff architects to an unusually high specification, it reflects the great prosperity of the steelworks in the Edwardian period. Built in the early 20th century it was designed not only to be functional, but also to be admired for its architectural character in a Dutch/Baroque style. The main range is very long and of red brick, with extensive detail in buff coloured ashlar, with slate roofs. The building comprises a central two-storey entrance block, with long single storey wings, and a tall clock tower at the south end, which was intended to form a centrepiece. The central block is three bays wide with the end ones projecting, and there are elaborately shaped gables, with ashlar finials.

9.6.48 There is high communal value to this building as the headquarters of a very successful local industry which employed a large number of the population in Ebbw Vale, and through various changes continued to operate in some form into modern times. Although never completed to the original design due to the First World War, its aesthetic value is also high due to the prestige of the architects who were employed (Veall & Sant of Cardiff) by the Ebbw Vale Iron and Steel Company, and the architectural embellishments it was given as a showpiece for the company. There is no real archaeological value in the building but historically the documentation about it and also the longer history of iron and steel in Ebbw Vale, gives it a high historical value.

22531 Furnace Bank

9.6.49 This grade II* listed building was designated as an extremely scarce survival of a vast furnace bank, begun in the late 18th century, and preserved largely intact due to its reuse in the later 19th century as a charging bank. In size, only the furnace bank at Cyfarthfa may be a larger contemporary survival nationally and internationally. Although now fairly ruinous the furnace bank includes at least six furnaces, and possibly two more, with a retaining wall that has three inserted coal chutes with cast iron lintels and shuts. It is a high structure built out of Pennant stone with brick window surrounds and extends for c.250 m. The listing description says “*Long central section of bank is higher, with three buttresses towards its south-east end. This section probably incorporates the earliest remains of the furnaces, but due to the height of deposited spoil, any likely surviving casting arches (probably two) at the north-west end are hidden. The north-western third of this section of wall (including the first buttress) is a late 19th century rebuilding in rock-faced Pennant stone.*”

9.6.50 Its communal value is high due to the fact that these furnaces were integral to the economy of Ebbw Vale in the 19th century and early 20th century and employed a large number of the male population. Aesthetic value is poor although the massive nature of their construction makes the listed building an eye-catching structure. There is high archaeological and historical value due to the evidence from the physical remains, buried deposits and documentary records which could provide detailed information on the industrial processes and component parts of iron and steel production during the 18th – 20th centuries.

The contribution of setting to heritage significance of affected assets

9.6.51 The preceding paragraphs have described the designated historic assets and outlined their heritage significance based on the four values (communal, aesthetic, archaeological and historical) that Cadw’s guidance *Conservation Principles for the Sustainable Management of the Historic Environment in Wales* recommends. The following paragraphs discuss the surroundings in which the affected assets are experienced, and what within their setting contributes to their heritage significance, so that the impact from the proposed development can be assessed. Cadw’s guidance *Setting of Historic Assets in Wales* has been applied to assist with establishing the contribution of setting to the heritage significance of the assets, so that factors such as functional and physical relationships, topography, landscape/townscape, original and current layout, views to and from the asset, its prominence, cultural connections and other sensory perceptions have been considered.

GM588 Y Dolen Fawr round cairn

9.6.52 The Bronze Age burial monument is located on the highest point in the landscape at 504 m Above Ordnance Datum (AOD), along the crest of Cefn Manmoel in an open landscape of close-cropped grassland. Views from the monument extend long distances on all sides, and its summit position means there was an intention for it to be seen from the landscape round about, as a prominent landmark (Appendix A9.3 Figures A9.3.1 and A9.3.2). As a burial monument in such a prominent location it is likely that the intention was to display legitimacy to the surrounding territory by burying leaders of the community in this upland context. In addition, the complementary nature of settled fertile valleys with more marginally productive uplands, would have allowed funerary practices to be undertaken in a distinct zone away from habitation, and perhaps symbolically as near to the sky as humans could reach. The surrounding moorland would therefore have been liminal space, with a probable sacred aspect imbued to it. Currently footpaths lead through the monument, and Manmoel Road is located c.300 m to the west, with a single farm beyond. The views from the monument look down upon the urban extension of Ebbw Vale at Waun-Lwyd to the east with wooded and grassed hills beyond. To the west the views are more rural over the valley of the Sirhowy, whilst to the north and south lies the treeless moorland of Cefn Manmoel. Much of the original setting for the cairn has been preserved, although the urban development of the valleys and their related industries, have introduced significant change in recent centuries.

9.6.53 The contribution of setting to this burial monument is its topographical location, remoteness from habitation, and its moorland character.

MM345 Cefn Man Moel Cross-ridge Dyke

9.6.54 The undated cross-ridge dyke is located running east – west across the north-south aligned Cefn Manmoel. The current road cuts through the dyke, which is plainly visible as an earthwork with ditch to north and bank to south (Appendix A9.3 Figure A9.3.8). The landscape either side is rough grazed moorland, devoid of trees, with the general trend in the topography being a gradual descent to the south. Long distance views are achieved from walking along the monument, but it is not built to a size that suggests long distance views to it would have been important, rather that it would have become apparent in the near distance as a boundary feature, possibly a barrier, when approaching it from the north or south. A modern farm and two turbines have been built on Cefn Manmoel to the west of the monument, as well as their service roads from the main Manmoel road, but apart from these the surrounding landscape has been preserved remarkably well, giving a sense of the remoteness of the location.

9.6.55 The setting that contributes to the heritage significance of this monument is the Cefn Manmoel ridge across which it has been cut, near the southern end of the landform. It is localised in nature and the wider setting of the surrounding hills contribute little further to understanding, appreciating and experiencing the monument in its setting.

MM181 Incline Haulage Winding Engine, Mynydd Bedwellty

9.6.56 The stone-built engine house is positioned on an east facing hillside, within an old quarry works, now revegetated. Its immediate setting comprises deciduous woodland to the north and downslope to the east, a steep localised escarpment to the west, and a more open aspect to the south where tributaries to the Sirhowy have eroded stream beds into the landscape. Grassed tracks approach the engine house from the south-east and continue north from it, but these are of historic importance rather than of much use in modern times. For its wider setting the engine house was a functional component to the quarry workings and was not designed as a structure to be seen and admired from any great distance, or to be used as a belvedere to admire the surrounding landscape.

9.6.57 The setting that contributes most to its heritage significance is therefore the historic context that lies around it, the quarry and the valley below which served as the artery to transport the product away, and from where the works would have come when the works were in operation. The wider landscape contributes little to the understanding, appreciation and experience of this monument.

MM347 Afon Sirhowy Hut Circle

9.6.58 The monument's immediate setting is the valley of a tributary for the Sirhowy River. Unusually for round houses this hut circle is located on a north-facing slope, with a relatively steep valley side rising to the south. Rough grassland and the winding course of the stream form the immediate environment, with the wider setting being the open landscape of rough grazing surrounding the source of the Sirhowy. A modern farm and road lie to the east, but otherwise very little appears to have changed within this landscape for centuries. The hut circle was not positioned in a prominent location so that it could be easily seen, or so that it could have long-distant views, in fact it would seem that the reverse is true, with the valley location being chosen perhaps because it hid the hut, and/or that it was more protected from winds and weather. Proximity to the stream may also have been a factor in deciding its location.

9.6.59 The setting that contributes to its heritage significance by helping in understanding, appreciating and experiencing the monument, is provided by the sheltered environs of the small valley in which it is situated.

MM339 Trefil Tramroad

9.6.60 The immediate setting for the tramway is the steep gorge of the Nant Milgatw, which the railway route loops around. The tramway is cut into the top of the valley side, with an open landscape of gently rising moorland and rough grazing on the exterior to west, north and east, and the scree covered and thinly vegetated valley slopes on the interior. The southern end of the gorge has been blocked by a more recently constructed embankment to carry the new route which avoids the loop around the head of the valley. The wider setting is described within the scheduling description to include "*The Trefil Tramroad played a vital role in the development of the iron industry along the Heads of the Valleys and thus also the communities that were supported by them. The rare surviving sections are a vivid illustration of the scale of the industrial ironworking landscape, linking the limestone quarrying industry (of which only a fraction of the original Trefil Quarries survives, scheduled as MM338) and the various remains of the ironworks themselves.*" These elements of the historic industrial landscape lie to the west and east of the scheduled area but are largely not directly visible from the Cwm Milgatw and the tramway section around it.

9.6.61 The setting that contributes most to the heritage significance of the tramway is the topographic location of the scheduled monument, looping around the head of the valley. Understanding and appreciation of the feat of engineering to negotiate the physical barrier presented by Cwm Milgatw, and how the tramway linked the Trefil quarries to the west with the ironworks at Tredegar and elsewhere to the east, is best achieved through experiencing the scheduled monument within the natural environment of the valley.

MM344 Twyn Bryn March round cairn

9.6.62 This burial monument is located on the south- and west-facing slopes of open moorland between two small streams flowing south which are tributaries for the River Sirhowy. The altitude is c.445 m AOD and the monument commands long-distance views on all sides except to the north where the land rises to c.550 m. It appears to be an isolated monument without contemporary barrows and cairns in close proximity, and its location part-way up the hillside was probably carefully contrived so that it would appear silhouetted against the skyline from specific locations within the Sirhowy Valley. The wider setting could include potential intervisibility with the general location of Domen Fawr and related Bronze Age burial mounds within the site along the Manmoel ridge, but the distance between these (c.6 km) and the scale of the cairn at Twyn Bryn March suggests there would be little chance of seeing the actual monument.

9.6.63 The setting that contributes to its heritage significance is the upland and open landscape, a location which enhances the sense of separation between the land of the living and that of the other world. This is best understood and appreciated by walking through the landscape, from the valley up to the cairn, so that its topographic and remote positioning can be best experienced.

MM287 Tredegar Ironworks Cholera Cemetery

9.6.64 The Cholera cemetery is situated on a narrow mountain ridge, located between Rhymney and Tredegar. It is a rectangular (modern) fence-defined space containing gravestones and unmarked plots. Its immediate setting is a zone of rough grassland, remote from Tredegar to the north and the current cemetery at Cefn Golau from which it is separated by Cefn Golau Pond, a reservoir with an embankment that rises above the northern and eastern sides of the cemetery. The land rises slightly to the east, before it descends to the Sirhowy Valley and Tredegar, and the wider setting beyond comprising the surrounding hills and valleys. There are no roads or tracks to the cemetery and many of the surviving gravestones have fallen over, giving it a neglected and forgotten feel, which adds to the sense of pathos that the cemetery evokes due to its history. Its location on a west-facing slope with a ridge between it and the town, reflects the terror that the Cholera outbreak elicited, and the decision to separate those who died from it, from the zone of the living.

9.6.65 Although no longer a well-visited part of the Tredegar landscape, it evokes a strong sense of history which its remote location enhances, and it is this that the setting most intensely contributes to the heritage significance of the monument.

GM451 Capel y Brithdir

9.6.66 The immediate setting of the demolished chapel is within its stone-walled churchyard which is located on a south-facing spur of the Cefn Brithdir ridge at c.380 m AOD. Its position is clearly associated with the ancient ridgeway route which runs north-west – south-east, and the link with the 7th century Tegernacus Stone which lies c150 m to the north-west. The road diverts around the churchyard, and a plantation has grown up all around its eastern side, but historically the chapel was located amidst fields, rather than moorland which lies c.200 m to the north. The wider setting includes the Bargoed and Rhymney Valleys to the west and east, with New Tredegar and then the rising land of the Mynydd Bedwellty further to the east. The Manmoel ridge lies beyond the Sirhowy Valley on the far side of Mynydd Bedwellty, but this would not have formed a major part of the setting for Capel y Brithdir because of the more important intervening landform.

9.6.67 The setting that contributes most to the heritage significance of the chapel is how it relates to the Cefn Brithdir ridgeway, and the farmland surrounding (but currently with trees blocking views to the east). Understanding and appreciating the foundation of a medieval church site in this location is achieved through this landscape context.

GT39 Bedwellty Park, Tredegar and the Southern Town Conservation Area

9.6.68 In its designation the grade II Bedwellty Park is described as an early 19th century urban landscape park. The park contained the gardens and pleasure grounds surrounding Bedwellty House, now a park for the public to enjoy. The immediate setting for the park is the big house and ancillary buildings it was designed to accommodate (Appendix A9.3 Figures A9.3.11 and A9.3.12), and its location within the valley bottom, at the southern end of the planned town of Tredegar. The wider setting includes the town and the historic ironworks, for which the house acted as the residence for the works manager, but the current setting includes the urban landscape that has developed during the 20th century when Tredegar expanded around the park on all sides.

9.6.69 The contribution of setting to the heritage significance of the registered park and to the conservation area is derived from its location in the Sirhowy Valley which provided the topographic location for the development of the ironworks during the 18th and 19th centuries, as well as the domestic housing for the workers and the urban infrastructure to support this industrial community. The hills surrounding the valley provide the skyline which contains the urban setting for these designated historic assets, limiting horizons but acting as a reminder of the upland rural landscape, and the geological origin for the raw resources on which the industry was based.

1861 Town Clock

9.6.70 The immediate setting for the Town Clock is The Square at the centre of Tredegar, and the wider setting is the urban environment and community which is served by the clock. It is particularly visible along the vistas formed by the main streets that form the main axes for the town plan. Because of its height, however, the surrounding skyline also has some relevance for its wider setting.

9.6.71 The setting that contributes most to the heritage significance of the Town Clock is the town square and related streets that lead into the central focal point formed by the clock.

1874 & 1875 Stables and Barn at the Fountain Inn, and The Fountain Inn

9.6.72 These listed buildings are located at the end of a track that connects them with Troedrihwgair and then the road north to Tredegar. The immediate setting is the rural location at the end of the track, at the western end of a valley for a stream issuing from Manmoel, which forms a steeply rising hillside to the east. Trees and other vegetation surround the house and stable block. To the west the land descends to the Sirhowy River, and the opposite side of the valley dominates the skyline in this direction.

9.6.73 The setting that contributes to the heritage significance is the rural surroundings which enhance the farming origins of the listed buildings, and proximity to the small row of houses that form Troedrihwgair, and the community who used it when it was a public house. The hillside of the Sirhowy Valley defines the extent of this setting.

22496 Sirhowy Ironworks

9.6.74 The visible remains are partially built into a west-facing hillside, largely tree covered, although the area of the ruin is grassed. Downslope to the west a modern depot and industrial units lie adjacent, with further industrial units and housing along Graham's Yard Road. The immediate setting is therefore the tree-covered hillside to the north, east and south with green space to the south-west, and urban development to the west. The wider setting is the part industrial and part residential zone of modern Tredegar, defined by the A4048 and 4047, and A465 Heads of the Valley roads. Historically this zone was heavily industrialised with railways, coke ovens, ironworks, spoil heaps, reservoirs and large buildings, with residential areas further away at Dukestown to the north, Scwrfa to the west, or Sirhowy to the south-east.

9.6.75 The setting that contributes most to the heritage significance of Sirhowy Ironworks is the surviving topography comprising the Sirhowy valley and the modern settlements which owe their origin to the industrial heritage and employment that the ironworks provided. Views and connections with the more extensive hilly landscape surrounding the valley has little contribution to how the ironworks can be understood and appreciated in their setting.

22524 Christ Church

9.6.76 The church is located on an east-facing hillside within a largely residential zone of Ebbw Vale, the heart of the community it serves, with a street pattern that has changed little from the 19th century when it was constructed. The historic zone of railway and industrial complexes to the east has now changed significantly to an environment of more open space and vegetation, with some large business buildings and car parking off the A4046. The immediate setting is defined by two residential streets (Church Street/Church Crescent the B4478, and a small east-west street to the north) whilst residential housing also borders the church to the south and east. The topography is a significant part of the wider setting, as the landscape drops steeply to the east towards the river, and this also brings into the view the eastern side of the valley as a backdrop to the church and its landmark tower. Looking west from the Leisure Centre, however, the church and tower is viewed with the bald crest of the Manmoel ridge as a significant element in the view. Within the streets surrounding the church, views of it are very constrained by the built environment, and the Manmoel ridge does not form part of the vistas which allow a viewer to understand and appreciate the church in its setting (Appendix A9.3 Figures A9.3.13 and A9.3.14).

9.6.77 The setting that contributes to the heritage significance of the church are the residential streets surrounding it. It is from these houses that the congregation is mostly derived, and for which the church draws its historic significance. It was designed and built to serve the Ebbw Vale community, and this significance is appreciated by it forming part of the urban plan, set within the confines of the river valley and wider historic industrial landscape.

22530 British Steel Tinsplate Works General Office

9.6.78 The listed building is located in the valley bottom, close to the train station, and with a large modern commercial building to the west. It has lost its historic setting of a heavily industrialised location with railways and the Ebbw Vale Iron and Steel works to the south and north-east. Its immediate setting includes open space lies to the north (the former Ebbw Vale House gardens) and new residential estates which have been built on the hillside to the north-east. To the south lies the train station and playing fields lying between two large buildings (the Ebbw Fawr Learning Community and the Leisure Centre). The best views of the listed building are from the A4281 Steelworks Road which runs past its eastern side, and from the hillside to the east. Views of the building as you approach from the north include the Manmoel ridge as the topographic frame for the river valley, with Domen Fawr clearly visible as a prominent feature on the skyline.

9.6.79 The setting that contributes to the heritage significance of the listed building is its topographic location within the valley bottom, in close association with the train station. The large commercial and institutional buildings that lie in close proximity to the west and south, reflect the historic scale of the steelworks that formerly occupied these locations, but the current experience is very different from what would have contributed to the heritage significance of the building as a focal point for the industry around it.

22531 Furnace Bank

9.6.80 Furnace bank is constructed into a steep west-facing hillside, just below the road accessing Cwm Draw industrial estate. Vegetation obscures much of the complex now, whilst new housing lies below to the west in Clos Pen y Cae, next to the river. The wider setting is the valley in which the furnaces and the steelworks were historically set, but the surrounding industrial complex of manufacturing and railways, has now very largely been replaced by trees, residential housing and commercial business/industrial units.

9.6.81 The setting that contributes to the heritage significance of Furnace Bank is the seemingly precarious location, perched above the river and contemporary domestic housing, and with a more commercial zone and additional residential housing on the hillside above to the east. Lying at the centre of the community on the east bank and south of Newtown, the furnaces have a setting which reflects their importance to the socio-economic development and origins of this part of Ebbw Vale.

Future Baseline

9.6.82 Without the proposed wind farm at Manmoel, the baseline is likely to remain largely unchanged, with the ridge continuing as common land with rough grazing. Some additional turbines are likely to be permitted within the surrounding area, but it is unlikely that much development would occur within the application site or within close proximity to it.

9.7 ASSESSMENT OF POTENTIAL EFFECTS

9.7.1 Stage 1 of Cadw's *Heritage Impact Assessment in Wales* (2017) was achieved through a baseline survey. This included data gathering from the LLE Welsh Government portal for spatial information and purchase of data from the Glamorgan Gwent Archaeological Trust's Historic Environment Record (Enquiry No. 6521), and, after sorting to remove duplications and errors, layering this into a GIS for spatial analysis. These searches fulfil planning policy requirements. Further information has been gathered as part of a specific study in 1999, *The Upland Survey of Blaenau Gwent: An Archaeological Survey*, and in 2013 *West Monmouthshire and adjacent uplands: An Uplands Initiative Archaeological Survey*.³ The Historic Wales portal has been consulted to compare with the HER data. A site walkover survey was conducted in November 2021 so that any previously unknown archaeological remains

³ Hayman, R. and Horton, W. 2013 *West Monmouthshire and adjacent uplands: An Uplands Initiative Archaeological Survey* RCAHMW.

were added to the baseline data, and the existing condition of known assets were checked. To identify those historic assets with the potential to be affected, a ZTV was modelled by the Landscape Architects which highlighted assets most likely to experience significant visual change.

9.7.2 Stage 2 employed the available evidence and the site visit, so that an assessment of the heritage significance of the historic assets could be proposed. The field visit also enabled a better understanding of the landscape in which the historic assets are located, so that the contribution their setting makes to their heritage significance could be better appreciated.

9.7.3 Stage 3 was to assess the degree of potential change to the landscape and the potential impact caused by development within the setting of historic assets. As a preliminary task a ZTV was superimposed over an OS map with historic assets plotted to filter out assets which would not experience intervisibility with the turbines, supplemented by a field visit for those designated assets that have the potential to be significantly affected. The ZTV has used the hubs and full rotor blade length as the criteria for this ZTV filtering exercise, as blade-tip ZTVs can be very misleading once vegetation and structures are introduced which effectively screen out the theoretical visual change that a ZTV bare earth model produces. From selected historic assets that appeared liable to impact, visual modelling was used to help appreciate the degree of change that the turbines would introduce into this landscape.

Embedded Mitigation

9.7.4 Stage 4 was integrated into the design iteration process. Initial feedback to the turbine array and ancillary works was provided via constraint mapping and by a comparison of potential direct or severe indirect impacts on historic assets. Alternative siting of turbines, access road, grid connection and related items formed part of an iterative design process to help avoid or minimise potential effects on historic assets.

9.7.5 The wind farm will comprise five turbines limited to a maximum blade-tip height of 180 m to help reduce indirect visual impacts. Transformers will be sited in close vicinity, together with access tracks and cable routes, a sub-station and a construction compound, the locations of which have been modified to avoid identified constraints. A sixth turbine at the northern end of the site was dropped during the design iteration process. To reduce further impacts the grid connection will utilise the existing 33 kV overhead line which crosses the site from east – west, and a second connection will be via the Ebbw Vale sub-station.

Wind Farm Assessment

9.7.6 The turbines will be located along the crest of the Manmoel ridge (the site lies at c.460 m AOD with a high point of 504m between T3 and T4) and will range from north to south at these grid coordinates 316340, 207310 to 316970, 206016. The ridge separates communities in Tredegar in the Sirhowy Valley to the west from Ebbw Vale in the east, although to the north of the site the urban landscape connects the two. The land descends steeply to the west and east by c.150 m but is more gradual to the north and south. To the south a rural landscape predominates.

9.7.7 Chapters 4 and 5 of this ES describe the site selection process, iterative design approach and project details. Changes from the proposed development to the existing baseline can produce impacts, beneficial or adverse, or result in a neutral effect. The impacts can be direct (physical) or indirect through development within the setting of a designated historic asset, they can be caused during construction, operation or decommissioning, and can be temporary, reversible or permanent.

Direct impacts

9.7.8 In addition to two scheduled monuments there are several non-designated historic assets (NDHA) which are located within the red line boundary. The site layout shows five clusters of construction activity around each of the

turbines, with an access track connecting them, and some of these locations appear coincident with NDHAs according to the scale of mapping used. On the ground a greater separation between groundworks and NDHAs might occur, but on existing evidence there is likely to be direct impact on archaeological remains in these locations and from trenches to lay underground cables. Grid coordinates for the turbines and vulnerable NDHAs are given in Table 9.8. The coordinates for the turbines are points, and do not reflect the full extent of the groundworks which would occur as part of the construction process, so the threat to archaeological remains is pronounced. This applies particularly to linear monuments due to the likelihood of underground cabling having to be excavated through them, and specifically the scheduled monument MM345 Cefn Manmoel cross-ridge dyke. However, the trenching would only harm a very minimal zone of a long monument, so a very low adverse impact is expected, which results in a **slight effect**.

Table 9.8: Turbine grid coordinates and NDHAs in close proximity

Turbine						
No	Easting	Northing	NDHA	Type	Easting	Northing
1	316342	207314	GGAT 06916	Round cairn Domen Fawr II	316340	207321
			GGAT 06917	Round cairn Domen Fawr I	316317	207316
			GGAT 06986	Round cairn Domen Fawr III	316400	207320
2	316582	207027				
3	316659	206670	GGAT 08679	Cefn Manmoel Dyke C	316636- 316744	206528- 206534
4 and compound	316800	206332	GGAT 08676	boundary stone	316839	206143
			GGAT 08680	Cefn Manmoel Dyke D	316761- 316837	206170- 206136
			GGAT 08681	Cefn Manmoel enclosure	316843	206139
5	316971	206018	GGAT 08681	Cefn Manmoel enclosure	317096	206042
			GGAT 03970	Steel, Iron & Coal Company	317000	206000

9.7.9 Turbine 1 is located approximately where two – three round cairns are listed on the HER (GGAT 06916g, 06917g, and 06986g). The potential impact is from construction groundworks including crane pads and access roads, which could damage or destroy known archaeological remains. If damage occurred, this would be permanent and irreversible so the impact would be **high adverse** and the effect on an asset of medium importance would be **moderate**. The same assessment would apply to the other NDHAs in proximity to the proposed turbines and crane bases, with the exception of GGAT 03970 which is a general location for a documentary reference to a relatively modern industrial activity. Turbine 4 also has the compound located along its western side, which would include a much larger area of groundworks than the other four turbine locations.

Indirect impacts

9.7.10 Indirect impacts from development within the setting of a historic asset is principally caused by visual intrusion affecting appreciation and understanding of the heritage significance of the asset and how its location in the landscape is experienced. Noise and movement from construction and operation of the turbines can also result in indirect impacts.

9.7.11 The scheduled monument at Domen Fawr (GM588) is the closest designated historic asset to the turbines, and one of two located within the application boundary. It lies c. 150 m north of T2 and c.300 m south-east of T1. The introduction of tall structures into the current baseline of its moorland setting would constitute an adverse change as the existing views to and from the burial cairn include relatively few large modern buildings and/or vertical structures. In particular the proximity of Turbine 1 and its location within the cluster of smaller cairns to the north-west of the scheduled monument, would result in an adverse impact by breaking the historic visual relationship between the cairns as they were probably originally intended, and as they have continued to contribute to the appreciation of Domen Fawr round cairn until the present day. The interposing of the turbine in this location would interrupt and dislocate the appreciation of the smaller cairns lower down the hill with the head of the Sirhowy valley beyond, and the noise generated by construction and operation would erode the tranquillity of the scheduled monument’s setting. There would be a loss to the relatively unchanged historic setting which was the specific type of remote upland landscape selected for ritual funerary activities in the Neolithic and Bronze Age periods. The scale of Turbine 2 to the south, although not directly affecting the relationship between cairns, would detract from appreciation of the vista of the moorland setting and Manmoel ridge that forms the current baseline setting for Domen Fawr scheduled monument. However, the prominence of the cairn on the highest ground overlooking Ebbw Vale would not be compromised and would continue to be easily appreciated from most directions. The current condition of the monument has been degraded by insertion of a 20th century building and erosion caused by human traffic, but the proposed development would not affect the cairn with any direct impact. The impact is assessed as **Low Adverse** which on an asset of the highest significance would result in a **moderate effect**.

9.7.12 At the south end of the application area Cefn Manmoel Cross-ridge Dyke (MM345) lies c.350 m south-east of Turbine 5. This and turbines 2 – 4 would be visible in views along the Manmoel ridge to the north-west, changing the historic remote upland setting for the dyke through the construction of modern vertical structures. The design of the monument suggests it was laid out as a territorial boundary for those approaching from the north, but it is not suggested that it had a military function or would have been garrisoned with lookouts. The impact through development within the setting of this scheduled monument is therefore assessed as **very low adverse** to an asset of the highest significance, resulting in a **slight effect**.

9.7.13 Although there might be various degrees of visual change to other scheduled monuments in the study area, the analysis of their heritage significance and the contribution that setting makes to this, does not suggest there would be impacts from construction or operation of the wind turbines that would affect that significance through development within their setting. Most are related to industrial heritage and have no functional or symbolic resonance with the landscape and monuments of Manmoel ridge, and even Twyn Bryn March round cairn (MM344) which does have such associations lies c.5 km to the north-west of Turbine 1 which is too distant for it to receive any real impact on its heritage significance.

9.7.14 The listed buildings in Tredegar and Ebbw Vale, and the conservation area and registered park and garden in Tredegar, have been assessed for their heritage significance and setting, and the site visit confirmed that views of Manmoel are severely curtailed from the respective valleys, with existing vegetation and the built environment dominating viewsheds. The introduction of turbines which might break the skyline above Manmoel would have no discernible impact on the heritage significance of these assets or the contribution made to that by the setting surrounding them. This also applies to those listed buildings in a rural setting where, for example, the location of the Fountain Inn and Stables is hidden in a small valley in the side of Manmoel hill, and there is no significance in seeing these assets against the skyline to the east.

Table 9.9: Significance of effect

Ref	Name	Heritage Significance	Degree of Impact	Significance of effect
DHA				
<i>Indirect impacts</i>				
MM218	Marine Colliery Pumping Engine	Highest	None	Nil
GM317	Three Platform Houses on Cefn Brithdir	Highest	None	Nil
MM287	Tredegar Ironworks Cholera Cemetery	Highest	None	Nil
MM344	Twyn Bryn March round cairn	Highest	None	Nil
MM345	Cefn Manmoel cross-ridge dyke	Highest	Very low adverse	Slight
MM181	Incline Haulage Winding Engine, Mynydd Bedwellty	Highest	None	Nil
MM185	Sirhowy Ironworks	Highest	None	Nil
GM451	Capel y Brithdir	Highest	None	Nil
GM588	Y Domen Fawr round cairn	Highest	Low adverse	Moderate
MM339	Trefil Tramroad	Highest	None	Nil
MM347	Afon Sirhowy hut circle	Highest	None	Nil
GT39	Bedwellty Park, Tredegar	High	None	Nil
1861	The Town Clock	Highest	None	Nil
1874	Stables and Barn at the Fountain Inn	High	None	Nil
1875	The Fountain Inn	High	None	Nil
22496	Sirhowy Ironworks	Highest	None	Nil
22524	Christ Church	High	None	Nil
22530	British Steel Tinsplate Works General Office	Highest	None	Nil
22531	Furnace Bank	Highest	None	Nil
WAL/BG/1	Tredegar Historic Core & Heritage Initiative	High	None	Nil
NDHA				
<i>Direct impacts</i>				
GGAT 06916	Round cairn Domen Fawr II	Medium	High adverse	Moderate
GGAT 06917	Round cairn Domen Fawr I	Medium	High adverse	Moderate

Ref	Name	Heritage Significance	Degree of Impact	Significance of effect
GGAT 06986	Round cairn Domen Fawr III	Medium	High adverse	Moderate
GGAT 08679	Cefn Manmoel Dyke C	Medium	High adverse	Moderate
GGAT 08676	boundary stone	Medium	High adverse	Moderate
GGAT 08680	Cefn Manmoel Dyke D	Medium	High adverse	Moderate
GGAT 08681	Cefn Manmoel enclosure	Medium	High adverse	Moderate
GGAT 03970	Steel, Iron & Coal Company	Medium	None	Nil

9.8 MITIGATION STRATEGY

9.8.1 A summary of the assets assessed and the potential impacts upon them is shown in Table 9.9. There are eight with a moderate significance of effect, and one with a slight effect. Seven of the moderate effects are direct impacts which can be mitigated through inclusion within the CEMP (see Chapter 5: Project Description) so that groundworkers are aware of the risks, micro-siting and archaeological investigation and recording. Ideally the assets would be located on the ground and marked out by archaeologists prior to start of construction, so that protection zones around them can be erected to prevent damage from machinery. Archaeological monitoring during construction would then ensure any unknown remains that are disturbed are appropriately investigated and recorded, so that understanding of the monuments in the area can be enhanced. There is no mitigation measure to reduce the effect on the two scheduled monuments subject to indirect impacts.

9.9 CUMULATIVE ASSESSMENT

9.9.1 Within the 5 km study area there are four wind farms with each comprising just two or three turbines (Pen Bryn Oer, Blaentillery Farm, Eurocaps, and the consented scheme at Coed y Gilfach Farm) as well as 15 single turbines operational or consented.

9.9.2 Cumulatively the turbines at Pen Bryn Oer and Eurocaps extend the visual intrusion that Turbine 1 would bring to the viewshed north-westwards from the Domen Fawr round cairn. The turbines from these wind farms flank Turbine 1 to the west and the east which interferes with the visibility of the head of the Sirhowy valley and surrounding upland. One round cairn is located in this upland, and also prehistoric settlement which might have had associations with Domen Fawr. The other turbines are over three kilometres away, however, and are therefore recessive compared to Turbine 1 and the prominence of the structure in proximity to Domen Fawr round cairn. There are no specific visual associations between Twyn Bryn March round cairn or the Afon Sirhowy hut circle with Doman Fawr beyond a general awareness of the landform, and therefore the cumulative impact is assessed as **negligible**, with a **nil** significance of effect.

9.9.3 The nearest turbines to the south of Manmoel, at Cruglwyn are quite prominent in views to the south-west and form a backdrop to appreciation of the Cefn Man Moel cross-ridge dyke when approaching it from the north. The addition of Turbines 3 and 4 would cumulatively add to the distraction of tall modern structures and moving blades whilst experiencing the scheduled monument in its setting, and the noise of the turbines would also detract from appreciating the remote location that the cross-ridge dyke occupied in the past. This would increase the degree of impact to **low adverse**, resulting in a **moderate effect** on the dyke.

9.10 CONCLUSIONS

9.10.1 This study has complied with guidance as recommended by Cadw to assess the heritage significance and the contribution that setting makes to that significance, for DHAs within 5 km, and for NDHAs within the application boundary.

9.10.2 The proposed turbine array would have moderate effects on eight historic assets, and a slight effect on another. Mitigation can reduce the effect on seven of the moderately affected assets to a residual score of **medium adverse** impacts resulting in a **slight effect**. The remaining moderate effect is for the scheduled monument at Domen Fawr which is in relatively close proximity to Turbines 1 and 2, and the fact that Turbine 1 is located within a group of associated but smaller round cairns which would erode to a minor extent its heritage significance and our ability to appreciate it.

9.10.3 Cumulative assessment has identified a slight increase to the potential impact on the Cefn Manmoel cross-ridge dyke scheduled monument, which would result in a **moderate effect** on his asset.

9.10.4 The proposal would not affect other designated assets such as listed buildings, a registered park and garden and a conservation area.

9.11 RESIDUAL EFFECTS

9.11.1 There is a slight upward change to the potential indirect impacts and the significance of their effect on one of the designated historic assets identified in Table 9.9, due to cumulative impacts, as there is no mitigation that can be introduced to alleviate the potential changes to the visual and noise baseline conditions. In respect to the non-designated historic assets, the proposed mitigation measures allow a downgrading in the significance of effect to a varying degree (Table 9.10). The linear earthworks (the dykes) will continue to be affected by trenching and access roads, but the mitigation measures can help minimise these and produce some additional archaeologically valuable information, whereas for the less extensive assets it is possible that these can be avoided altogether. For the three cairns located within the Turbine 1 zone, the construction and operation of the turbine continues to be assessed as a high adverse impact. These results are summarised in Table 9.10.

Table 9.10: Residual significance of effect

Ref	Name	Heritage Significance	Degree of Impact	Significance of effect
GM588	Y Domen Fawr round cairn	Highest	Low adverse	Moderate
MM345	Cefn Manmoel cross-ridge dyke	Highest	Low adverse	Moderate
GGAT 06917	Round cairn Domen Fawr I	Medium	High adverse	Moderate
GGAT 06916	Round cairn Domen Fawr II	Medium	High adverse	Moderate
GGAT 06986	Round cairn Domen Fawr III	Medium	High adverse	Moderate
GGAT 08679	Cefn Manmoel Dyke C	Medium	Medium adverse	Slight
GGAT 08676	boundary stone	Medium	Very low adverse	Nil
GGAT 08680	Cefn Manmoel Dyke D	Medium	Medium adverse	Slight
GGAT 08681	Cefn Manmoel enclosure	Medium	Low adverse	Very Slight

Table 9.11: Summary of residual effects resulting from the proposed wind farm development

Receptor	Impact	Sensitivity	Magnitude of Impact	Significance of Effect	Mitigation	Significance of Residual Effect
Construction Phase						
MM345 Cefn Manmoel cross-ridge dyke	Direct: turbine & crane, underground cables, access road and vehicular damage	Highest	Low adverse	Moderate	Archaeological monitoring and recording	Moderate – Not Significant
GGAT 6917 Round cairn Domen Fawr I	“	Medium	High adverse	Moderate	Marking out, Archaeological monitoring and recording	Moderate
GGAT 6916 Round cairn Domen Fawr II	“	Medium	High adverse	Moderate	“	Moderate
GGAT 6986 Round cairn Domen Fawr III	“	Medium	High adverse	Moderate	“	Moderate
GGAT 8679 Cefn Manmoel Dyke C	underground cables, access road and vehicular damage	Medium	High adverse	Moderate	Archaeological monitoring and recording	Slight
GGAT 8680 Cefn Manmoel Dyke D	“	Medium	High adverse	Moderate	Archaeological monitoring and recording	Slight
Cefn Manmoel enclosure						
GM588 Y Domen Fawr round cairn	Indirect visual Turbine 1, and to a lesser extent Turbine 2	Highest	Low adverse	Moderate	None possible	Moderate - Significant
Decommissioning Phase						
N/A						

9.12 STATEMENT OF COMPETENCE

9.12.1 This chapter has been written by Timothy Malim, a heritage professional with 40 years' experience.

Table 9:12: Statement of Competence

Discipline	Consultant	Company	Experience
Cultural Heritage	Tim Malim	Clwyd Powys Archaeological Trust	<p>Timothy Malim has 40 years of experience in the archaeology and heritage sector, working in all parts of the UK and abroad. He is very familiar with the legislation and policy requirements in the different jurisdictions within the UK and has acted as expert witness at five public inquiries including Keirs Hill Wind Farm, Ayrshire in 2015.</p> <p>He has undertaken many environmental impact assessments, examining the relationship between cultural heritage and the potential impact from wind turbines and other tall structures. He has a proven track record in analysing what is of significance for heritage assets, and what within their settings would contribute to understanding and appreciation of that significance. These are the criteria against which the magnitude of change and potential impacts are weighed as part of a methodical approach to EIA.</p> <p>Of particular relevance is the Cultural Heritage Assessment for EIA and assessment of settings of Listed Buildings, and Impact Assessment on the setting of the World Heritage Site of Hadrian's Wall that he undertook for Hellrigg Wind Farm, Cumbria. He has also acted on schemes such as Carno III Wind Farm mid-Wales, Pant y Maen Wind Farm (North Wales), Moel Fferm Wind Farm (South Wales), Garn Fach Wind Farm (Powys), Allt Duine Wind Farm, Gilston Wind Farm (Scottish Borders), Stroupster Wind Farm (Highlands), Crida (Bridgnorth, Shropshire) Scout Moor (Greater Manchester), Harryburn (Argyll), various Fenland schemes, and others.</p> <p>Qualifications include:</p> <p>BA (Hons) Archaeology (Institute of Archaeology, London) FSA Fellow of the Society of Antiquaries of London MCIa Member of the Chartered Institute of Archaeologists</p>