

5 LANDSCAPE AND VISUAL

5.1 Introduction

Background

5.1.1 This landscape and visual impact assessment (LVIA), which has been undertaken by Optimised Environments Limited (OPEN), considers effects on the landscape resource - both direct effects and effects on how the landscape is perceived - and the effect on visual amenity (views) within the study area (**Figure 5.1, Volume 3**). Cumulative effects arising from the addition of the Proposed Scheme to other major development are also considered. Technical Appendices to this LVIA should be read in conjunction with the chapter as follows:

- Volume 4, Technical Appendix 5.1: LVIA Methodology;
- Volume 4, Technical Appendix 5.2: LANDMAP
- Volume 4, Technical Appendix 5.3: Bannau Brycheiniog National Park (BBNP) special qualities assessment
- Volume 4, Technical Appendix 5.4: Residential Visual Amenity Assessment (RVAA)
- Volume 4, Technical Appendix 5.5: Visual Assessment of Visible Aviation Lighting
- Volume 4, Technical Appendix 5.6: Cumulative Developments
- Volume 4, Technical Appendix 5.7: Landscape and Visual Common Land Statement

5.1.2 This chapter is also supported by figures and visualisations as follows:

- Volume 3: Plan Figures 5.1 to 5.23
- Volume 3: LVIA Visualisations - Viewpoints 1-26 - Figures 5.24 to 5.49
- Volume 3: LVIA Visualisations – Wirelines A-G – Figures 5.50 to 5.56
- Volume 3: Appendix 5.2 Figures 5.2-1 to 5.2-10
- Volume 3: Appendix 5.4 Figures 5.4-1 & 5.4-2
- Volume 3: Appendix 5.5 Figures 5.5-1 to 5.5-5

The Proposed Scheme

5.1.3 The Proposed Scheme is located across the Merthyr Tydfil County Borough Council and Caerphilly County Borough Council areas, as shown on **Figure 5.1, (Volume 3)**. The LVIA is based on the construction, operation, and decommissioning of a Wind Farm development of 6 turbines with a maximum height of 180 m.

5.1.4 In compliance with EIA Regulations, 'worst-case' parameters are applied to the assessment of likely significant effects. In the LVIA, the turbines with the larger swept area (therefore largest rotors) are considered to be the 'worst-case' parameter for the majority of landscape and visual effects. The exception to this is when considering turbine lighting where the 'worst-case' parameter is considered to be the higher hub

height and as a result, different turbine hub height and rotor dimensions are assessed in the Lighting Assessment.

- 5.1.5 The candidate turbine assessed in the LVIA is for a turbine with a 105.5 m hub height and 149 m rotor diameter. The candidate turbine assessed in the Lighting Assessment is for a turbine with a 117 m hub height with a 126 m rotor diameter. Turbine candidates are described in **Chapter 3: Proposed Scheme (Volume 2)** and shown on **Figure 3.1 (Volume 3)**. Other elements of infrastructure of the Proposed Scheme assessed in this chapter, which includes turbine access tracks, control building and electrical compound including battery storage area, and temporary construction compound, are also described in **Chapter 3**. The landscape and visual aspects of the site selection and design are described in full in **Chapter 2: Site Selection and Design Evolution, (Volume 2)**.

Key Guidance Documents

- 5.1.6 The LVIA follows Optimised Environments Limited's (OPEN) methodology devised specifically for the assessment of Wind Farm developments (see **Technical Appendix 6.1, Volume 4**) and generally accords with 'Guidelines for Landscape and Visual Impact Assessment: Third Edition' (Landscape Institute and IEMA, 2013) ('GLVIA3'), the key source of guidance for LVIA.
- 5.1.7 Other sources of guidance used and referenced in the LVIA include the following:
- Visual Representation of Wind Farms Version 2.2 (NatureScot, 2017);
 - Visual Representation of Development Proposals, Technical Guidance Note 06/19. Landscape Institute (2019);
 - Assessing the Cumulative Impact of Onshore Wind Energy Proposed Schemes. NatureScot (2021);
 - Assessing impacts on Wild Land Areas -Technical Guidance. NatureScot (2020);
 - Guidance for Assessing the Effects on Special Landscape Qualities. NatureScot (DRAFT 2018-2019 or as updated);
 - Technical Guidance Note 2/19 Residential Visual Amenity Assessment. Landscape Institute (2019);
 - Landscape Character Assessment Guidance for England and Scotland. NatureScot and TCA (2002);
 - Design Commission for Wales (2014), 'Designing Wind Farms in Wales'; and
 - Siting and Designing of Windfarms in the Landscape: Version 3a. NatureScot (2017).

5.2 Statutory and planning context

5.2.1 This section includes a short summary of national and local policy of particular relevance to landscape and visual amenity that have been taken into account in this chapter.

European Landscape Convention (ELC)

5.2.2 The ELC is devoted exclusively to the protection, management and planning of all landscapes in Europe. Landscape is described as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (ELC, 2000). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition, it applies to ordinary or even degraded landscape as well as those areas that are of outstanding value or protected.

5.2.3 The ELC became binding in the UK from 1 March 2007. As a signatory, the UK government has therefore undertaken to adopt general policies and measures to protect, manage and plan landscapes as follows:

- to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;
- to establish and implement landscape policies aimed at landscape protection, management and planning through the adoption of the specific measures. These include awareness-raising, training and education, identification and assessment of landscapes, definition of landscape quality objectives and the implementation of landscape policies;
- to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies mentioned in the bullet above; and
- to integrate landscape into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.

5.2.4 The implications and application of the ELC to Wales are to be found in Section 6.3 of Planning Policy Wales Edition 11.

Legislation and Planning Policy

Table 5.1: Legislation

Legislation Summary	Relevance to assessment
National Parks and Access to the Countryside Act 1949	
National Parks and Access to the Countryside Act 1949 provided the framework for the establishment of National Parks and AONBs. The provisions of this Part 2 of this Act have effect for the purpose of - <i>'(a) conserving and enhancing the natural beauty, wildlife and cultural heritage of the areas specified in the next following subsection; and</i>	The potential effect of the Proposed Scheme on the special qualities of Bannau Brycheiniog National Park (BBNP) is considered in

Legislation Summary	Relevance to assessment
<i>(b) promoting opportunities for the understanding and enjoyment of the special qualities of those areas by the public.'</i>	Technical Appendix 5.3 (Volume 4).
Environment Act (1995)	
Sets out the duty of certain bodies to have regard to the purposes for which National Parks are designated (to preserve and enhance the natural beauty of the Park areas and for the purpose of promoting their enjoyment by the public) that they shall seek to foster the economic and social well-being of local communities within the National Park by cooperating with local authorities. If it appears there is a conflict between those purposes then the relevant authority shall attach greater weight to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the area of the National Park.	The potential effect of the Proposed Scheme on the special qualities of BBNP is considered in Technical Appendix 5.3 (Volume 4).

Table 5.2: Planning Policy

Policy Summary	Relevance to Chapter
Planning Policy Wales Edition 11	
Section 6.3.1 Landscape advises that: <i>"Landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. Landscape policy is guided by the European Landscape Convention."</i>	Effects on landscape character are assessed in section 5.10 of this chapter.
6.3.3 notes that <i>"Collaboration and engagement with adjacent planning authorities, Natural Resources Wales (NRW), Cadw and the third sector will be necessary to draw on a wide range of expertise and evidence. This means:</i> <i>ensuring Wales contributes to meeting international responsibilities and obligations for landscapes;</i> <i>ensuring statutorily designated sites are properly protected and managed;</i> <i>ensuring that the value of all landscapes for their distinctive character and special qualities is protected; and</i> <i>ensuring the opportunities landscapes provide for tourism, outdoor recreation, local employment, renewable energy and physical and mental health and well-being are taken into account and multiple well-being benefits for people and communities secured.</i> 6.3.4 <i>Where adverse effects on landscape character cannot be avoided, it will be necessary to refuse planning permission.'</i>	The LVIA includes consideration of effects on the characteristics of local landscapes including landscape features, landscape character areas and landscape designations. Effects on landscape character and landscape designations are assessed in section 5.10 of this chapter.

Policy Summary	Relevance to Chapter
6.3.12 notes that in relation to the Characteristics of Local Landscapes <i>“Planning Authorities should provide for the conservation and, where appropriate, enhancement of local landscapes.</i> <i>This may include policies for landscape features, characteristics and qualities of local significance, and the designation of Special Landscape Areas (SLAs). Planning authorities should state which features, characteristics or qualities require extra protection, and explain how the policy or designation will achieve this protection.”</i>	The LVIA includes consideration of effects on the characteristics of local landscapes including landscape features, landscape character areas and landscape designations. Effects on landscape character and landscape designations are assessed in section 5.10 of this chapter.
6.3.20 notes the importance of LANDMAP as an <i>“information resource, methodology and monitoring baseline for the landscapes of Wales”</i> LANDMAP assessments <i>“can help to inform development management decisions”</i>	See section 5.11 of this chapter and Technical Appendix 5.2: LANDMAP assessment, (Volume 4).
6.3.5 notes that <i>‘The statutory landscape designations that apply in Wales are National Parks, and AONBs. Planning authorities have a statutory duty to have regard to National Parks and AONB purposes. This duty applies in relation to all activities affecting National Parks and AONBs, whether those activities lie within, or in the setting of, the designated areas.’</i> <i>‘The special qualities of designated areas should be given weight in the development planning and the development management process.’</i>	Effects on the special qualities of the BBNP are considered in detail in Technical Appendix 5.3, (Volume 4).
6.3.18 notes that <i>‘Common land is a finite resource and should not be developed unnecessarily. It is important in agricultural terms and valued for its leisure and environmental interests, particularly its significant role in habitat conservation. Access to it should not be prevented or impeded unnecessarily to ensure its proper management.’</i>	The landscape and visual aspect of the ‘environmental interests’ of common land are considered in Technical Appendix 5.7: Landscape and Visual Common Land Statement, (Volume 4).
6.8 notes that <i>‘There is a need to balance the provision of lighting to enhance safety and security to help in the prevention of crime and to allow activities like sport and recreation to take place with the need to:</i> <i>• protect the natural and historic environment including wildlife and features of the natural environment such as tranquillity;</i> <i>• retain dark skies where appropriate;</i> <i>• prevent glare and respect the amenity of neighbouring land uses; and</i> <i>• reduce the carbon emissions associated with lighting.</i>	The effects of visible aviation lighting are assessed in Technical Appendix 5.5: Visual Assessment of Visible Aviation Lighting, (Volume 4).

Policy Summary	Relevance to Chapter
<i>Dark sky reserves exist in various parts of Wales, including Snowdonia, [Bannau Brycheiniog] and the Elan Valley. Dark sky reserves can contribute positively to an area in economic and environmental terms and their characteristics should be taken into account when preparing development plan strategies and policies and when considering individual development proposals.'</i>	
PPW Technical Advice Notes (TANs)	
TAN 12 Design, states that '<i>Appraisal of the landscape should focus on its quality in terms of geology and geomorphology, vegetation and habitats, visual and sensory quality and historic and cultural quality. "LANDMAP" is one method of assessment which has the potential to provide a framework and information base from which good design and management can be developed.'</i>	A detailed LANDMAP assessment is presented in Technical Appendix 5.2, (Volume 4), and the LANDMAP evaluation information is also considered in the landscape sensitivity assessments in section 5.10.
TAN 24 Historic Environment states that '<i>Planning Policy Wales identifies that local planning authorities should protect and conserve parks and gardens, and their settings, included in the register of historic parks and gardens in Wales. Whilst inclusion in the register does not introduce any new consent regimes, registered historic parks and gardens, and their settings, may be protected through the planning system.'</i>	The potential effect of the Proposed Scheme on Registered Historic Parks and Gardens is considered in section 5.10. See also Chapter 11: Cultural Heritage (Volume 2).
Future Wales – The National Plan 2040	
Policy 17 – Renewable and Low Carbon Energy and Associated Infrastructure <i>'The Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet our future energy needs. In determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales' international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency.'</i> <i>'New strategic grid infrastructure for the transmission and distribution of energy should be designed to minimise visual impact on nearby communities. The Welsh Government will work with stakeholders, including National Grid and Distribution Network Operators, to transition to a multi-vector grid network and reduce the barriers to the implementation of new grid infrastructure'</i>	Chapter 2: Site Selection and Design Evolution sets out the iterative process that has influenced the design of the Proposed Scheme. As described in Chapter 3: Proposed Scheme, the refinement of the site infrastructure has been carefully considered alongside the potential for landscape and visual effects and mitigation. See also section 5.6.

Policy Summary	Relevance to Chapter
Policy 18 – Renewable and Low Carbon Energy Developments of National Significance The following Policy 18 criteria relate to this LVIA <i>‘1. outside of the Pre-Assessed Areas for wind developments and everywhere for all other technologies, the proposal does not have an unacceptable adverse impact on the surrounding landscape (particularly on the setting of National Parks and Areas of Outstanding Natural Beauty);</i> <i>2. there are no unacceptable adverse visual impacts on nearby communities and individual dwellings;</i> <i>The cumulative impacts of existing and consented renewable energy schemes should also be considered.’</i>	Effects on landscape character and landscape designations are assessed in section 5.10 of this chapter. The visual effects resulting from the Proposed Scheme during construction and operation are assessed in the LVIA in section 5.12. Cumulative landscape and visual effects of the Proposed Scheme considered in sections 5.10 and 5.12.
Merthyr Tydfil County Borough Local Development Plan (2016-2031) adopted January 2020	
Policy EnW5: Landscape Protection <i>‘Development proposals will be permitted where it can be satisfactorily demonstrated that:</i> <i>a) It would not cause unacceptable harm to the character and quality of the landscape setting of the County Borough;</i> <i>b) Development within Special Landscape Areas are sensitive to their special characteristics;</i> <i>c) Development respects the local distinctiveness and historic character of the landscape;</i> <i>d) Development will safeguard local landscape character and landscape features, including views, which make a significant contribution to the character, history and setting of the locality;</i> <i>e) Development secures the enhancement of the character, appearance and quality of the landscape, through restoration, management or enhancement where possible;</i> <i>f) There is no satisfactory alternative and the benefits associated with the development can be demonstrated to outweigh the harm; and</i> <i>g) Where damage to local landscape character cannot be avoided appropriate mitigation has been secured.’</i>	Effects on landscape character and landscape designations are assessed in section 5.10 of this chapter.
Policy EcW8: Renewable Energy <i>‘Development proposals for renewable energy will be permitted where:</i> <i>They do not have an unacceptable landscape and visual impact, including on the setting of the [Bannau Brycheiniog] National Park.</i>	Effects on landscape character and landscape designations are assessed in section 5.10 of this chapter. Effects on the special qualities of the BBNP are considered in detail in Technical Appendix 5.3, (Volume 4).

Policy Summary	Relevance to Chapter
<i>There would be no unacceptable cumulative impacts in combination with existing or consented development.</i> <i>Satisfactory mitigation can be put in place to minimise the impacts of the renewable energy proposal and its associated infrastructure.</i> <i>Proposals make provision for the appropriate restoration and after-care of the land for its beneficial future re-use.'</i>	Visual effects are assessed in the LVIA in section 5.12. Cumulative landscape and visual effects of the Proposed Scheme considered in sections 5.10 and 5.12. As described in Chapter 3: Proposed Scheme, the design of the Proposed Scheme has been carefully considered alongside the potential for landscape and visual effects and mitigation. See section 5.6.
Caerphilly County Borough Local Development Plan (2010) adopted November 2010	
SP10 – Conservation of Natural Heritage <i>'The Council will protect, conserve, enhance and manage the natural heritage of the County Borough in the consideration of all development proposals within both the rural and built environment</i> <i>The term Natural Heritage covers the geology, geomorphology, biodiversity, landscape and amenity value of the County Borough. It embraces the relationships between landform and landscape, habitats and wildlife and the natural and built environment.'</i>	Effects on landscape character and landscape designations are assessed in section 5.10 of this chapter.
CW2 Amenity <i>'Development proposals must have regard for all relevant material planning considerations in order to satisfy the following requirements:</i> <i>A – There is no unacceptable impact on the amenity of adjacent properties or land'</i>	The RVAA in Technical Appendix 5.4, (Volume 4) assess the visual effect on properties within 2 km.
CW4 – Natural Heritage Protection <i>'Development proposals that affect locally designated natural heritage features, will only be permitted:</i> <i>A – Where they conserve and where appropriate enhance the distinctive or characteristic features of the Special Landscape Area (SLA) or Visually Important Local Landscape (VILL).'</i>	Effects on landscape designations are assessed in section 5.10 of this chapter.
NH1 – Special Landscape Areas (SLAs) <i>'Special Landscape Areas (SLAs) are local non-statutory designations that seek to protect areas that exhibit distinctive landscape, historical, cultural, biodiversity and geological features and characteristics within the County Borough.</i> <i>These areas will be protected from any development that would harm their distinctive features or characteristics. The policy is not designed to preclude development. However, an applicant will need to demonstrate that any development proposal will not</i>	Effects on landscape designations are assessed in section 5.10 of this chapter.

Policy Summary	Relevance to Chapter
<i>have an unacceptable impact on the specific distinctive features or characteristics associated with the SLA.'</i>	
NH2 – Visually Important Local Landscapes <i>'Visually Important Local Landscapes (VILLs) are non-statutory designations that seek to protect the distinctive features or characteristics of the visual and sensory landscape of the County Borough and how we perceive and respond to the landscape around us. Development proposals should demonstrate that these features of the visual and sensory LANDMAP aspect layer are conserved and, where appropriate enhanced for the benefit of the visual landscape.'</i>	Effects on landscape designations are assessed in section 5.10 of this chapter.
In relation to Strategy Area 1: Heads of the Valleys Regeneration Area Paragraph 3.11 highlights that – <i>'The Upper Rhymney Valley offers the most significant potential in terms of energy production within the county borough due to the presence of coal resources at Nant Llesg and the potential of the Upper Rhymney Valley area in terms of renewable energy generation.'</i> Also noting that the area <i>'is particularly prominent when viewed from the A465 Heads of the valleys Road'</i> and that <i>'due to its prominence, any proposals for development associated with energy generation within the Upper Rhymney Valley will need to recognise that development must be undertaken in an environmentally acceptable manner. Development proposals should, where appropriate, secure effective landscape rehabilitation and enhancement as an integral part of the scheme.'</i>	Effects on landscape character are assessed in section 5.10 of this chapter and visual effects are assessed in section 5.12. As described in Chapter 3: Proposed Scheme, the design of the Proposed Scheme has been carefully considered alongside the potential for landscape and visual effects and mitigation. See also section 5.6.

5.3 Consultation undertaken

Table 5.3: Consultation

Consultee	Key issues raised	Applicant Action
DNS: EIA Scoping Direction 17/07/20 The Planning Inspectorate	ID.8 – <i>‘The Planning Inspectorate considers the initial 45km Study Area to be appropriate, but advises that the assessment of effects should ultimately be based on the extent of potential impacts (see comments ID.10 and ID.13 below).’</i>	The LVIA has assessed effects based on the initial 45 km, focussing on a more detailed 26 km area for landscape character assessment based on advice within NRW GN46. This NRW guidance has also been used for the specific study areas used in the LANDMAP assessment. See section 5.4 of the LVIA.
DNS: EIA Scoping Direction 17/07/20 The Planning Inspectorate	ID.9 – <i>‘The consultees identified in Section 4.7 of the SR are considered appropriate. In addition, Cadw and the Glamorgan Gwent/Clwyd Powys Archaeological Trusts as identified in Section 10 of the SR should be consulted with regards to historic landscapes, where the effects of those landscapes are relevant to the LVIA.’</i>	Cadw and the Glamorgan Gwent/Clwyd Powys Archaeological Trusts have been consulted on in relation to Cultural Heritage matters, as detailed in Chapter 11: Cultural Heritage .
DNS: EIA Scoping Direction 17/07/20 The Planning Inspectorate	ID.10 – <i>‘The Planning Inspectorate expects the ES to assess any significant effect on landscape character, and do not consider it appropriate at this stage to scope out effects on landscape receptors beyond 15km (as stated in paragraph 4.50 of the SR). NRW highlight that the assessment of effects on landscape character should consider the effects on the character of the area affected by the proposal, rather than simply on the whole of a given Aspect Area or Landscape Character Area, which can be very large areas of land.’</i>	The study area used for the landscape character assessment is based on NRW guidance note 46 which suggests a 26 km study area for developments of the scale proposed. See section 5.4 of the LVIA.
DNS: EIA Scoping Direction 17/07/20 The Planning Inspectorate	ID.11 – <i>‘In addition to the designated landscapes identified at paragraph 4.25 of the SR, the ES should consider the effects on the locally designated landscapes identified by MTCBC and CCBC in their Scoping consultation responses. [Bannau Brycheiniog] National Park is also designated as an International Dark Sky Reserve, and this designation should also be considered, regarding aviation lighting on turbines.’</i>	Landscape designations are assessed in section 5.10 of the LVIA. The BBNP is assessed in Technical Appendix 5.3, (Volume 4) .
DNS: EIA Scoping Direction 17/07/20	ID.12 – <i>‘The Planning Inspectorate notes that NRW, MTCBC and CCBC all suggest additional viewpoints in their Scoping consultation responses. Viewpoints included within the ES should be agreed with consultees referred to in comment ID.9 above.’</i>	Viewpoints were agreed with NRW, MTCBC and CCBC. Viewpoints were also circulated to Cadw and the Archaeological Trust as part of this consultation.

Consultee	Key issues raised	Applicant Action
The Planning Inspectorate		
DNS: EIA Scoping Direction 17/07/20 The Planning Inspectorate	ID.13 – <i>‘The Inspectorate advises that the cumulative study area should be based on the extent of potential impacts. The cumulative assessment should not only consider the impacts where the development would be visible in relation to other turbines, but should also consider other vantage points where there would be an increased awareness of wind turbines visible from the same location but in multiple directions. The cumulative assessment should also include all projects that may lead to cumulative visual effects within the study area (such as other major energy infrastructure projects) rather than just wind energy schemes. The list of cumulative schemes should be agreed with the relevant consultees.’</i>	Each of the LVIA viewpoints considered in detail have assessed cumulative effects in all directions where there are visible cumulative schemes. Visualisations also include baseline wireline views illustrating this cumulative situation from each of the LVIA viewpoints. Cumulative information was shared with key consultees during the viewpoint consultation including maps of cumulative schemes to be included in the cumulative assessment. The LVIA has considered the potential for non-wind energy development cumulative effects. See also Technical Appendix 5.1: Methodology, (Volume 4) .
DNS: EIA Scoping Direction 17/07/20 The Planning Inspectorate	Although intended for larger schemes, the Planning Inspectorate’s guidance for Nationally Significant Infrastructure Projects – Advice Note 17: Cumulative Effects Assessment sets out a staged process for assessing cumulative impacts that may be of relevance to the Applicant.	It is agreed that Advice Note 17 is not intended for DNS projects. However, reference is made to the approach advocated in the advice note within the methodology in order that comparable reference can be made. See also Technical Appendix 5.1: Methodology, (Volume 4) .
DNS: EIA Scoping Direction 17/07/20 The Planning Inspectorate	ID.14 – <i>‘The Planning Inspectorate notes that MTCBC and CCBC highlighted residential properties to be included in the assessment of residential visual amenity within their Scoping consultation responses. The scope of the residential visual amenity assessment should be agreed with relevant consultees.’</i>	Technical Appendix 5.4: RVAA, (Volume 4) assesses residential properties or property groups within 2 km in line with 2019 Landscape Institute technical guidance note 2/19 Residential Visual Amenity Assessment.
DNS: EIA Scoping Direction 29/06/20 Merthyr Tydfil	<i>‘Section 4.2 refers to the locally designated landscapes that would be considered in the assessment. This should include the Nant Morlais & Cwm Taf Fechan Special Landscape Area within Merthyr Tydfil, as well as the Merthyr Tydfil Landscape of Outstanding</i>	SLAs are considered in section 5.10 of the LVIA. LOHI and LSHI designations are considered in Chapter 11: Cultural Heritage .

Consultee	Key issues raised	Applicant Action
County Borough Council	<i>Historic Interest (LOHI) and the Gelligaer Landscape of Special Historic Interest (LSHI).'</i>	
DNS: EIA Scoping Direction 29/06/20 Merthyr Tydfil County Borough Council	<i>'The cumulative assessment should not only consider the impacts where the development would be visible in relation to other turbines, but should also consider other vantage points where there would be an increased awareness of wind turbines visible from the same location but in multiple directions. For example, there are long distant panoramic views towards Merthyr Common and Brecon Beacon National Park from Gelligaer Landscape of Special Historic Interest to the south. There are already a number of turbines visible from the summit at Pengarnbugail (within the northern part Gelligaer LSHI) in various directions that have some impact on the broad uninterrupted views. In this respect, the cumulative assessment should consider the capacity of the landscape to absorb additional turbines of various scales within the landscape from such vantage points.'</i>	Each of the LVIA viewpoints considered in detail have assessed cumulative effects in all directions where there are visible cumulative schemes. Visualisations also include baseline wireline views illustrating this cumulative situation from each of the LVIA viewpoints, including from key elevated locations and hill tops in the area 'vantage points'. In line with cumulative guidance, operational turbines have been included in the baseline assessment for the LVIA.
DNS: EIA Scoping Direction 29/06/20 Merthyr Tydfil County Borough Council	<i>'The restoration of the Ffos Y Fran open cast mine, particularly the reduction in the height of the overburden mounds, should be taken into consideration in the LVIA. The production of wireframes and photomontages to illustrate the changes in the landscape would be appropriate.'</i>	The LVIA has used 5 m terrain DTM in the production of visualisations which includes the long standing overburden mounds within its data. In order to illustrate reduction of the mounds DTM which pre-dates the open cast mine would be required, however, this data is not available. It should be noted that whilst the mounds are a feature in certain views in the LVIA, denoting the industrial context of the area, the mounds themselves do not obscure or restrict views of the Proposed Scheme.
DNS: EIA Scoping Direction 29/06/20 Merthyr Tydfil County Borough Council	<i>'In terms of the preliminary LVIA viewpoints (VP) set out in Table 4.2, it is considered that a VP should be included at the summit of Pengarnbugail and within the Registered Cyfarthfa Park and Gardens. With reference to the ZTV, both locations appear to have the potential for all 7 of the proposed turbines to be visible.'</i>	Both of these additional viewpoints are included in the LVIA. See also viewpoint selection rationale in Technical Appendix 5.1: Methodology, (Volume 4) .
	<i>'Section 4.38 highlights that consideration will be given to the potential impact on residential amenity. It should be noted that there are two residential properties in the eastern part of</i>	Residential properties within 2 km are assessed in Technical Appendix 5.4: RVAA . These properties are

Consultee	Key issues raised	Applicant Action
	<i>Pengarnddu Industrial Estate and two residential properties situated to the north of the industrial estate.'</i>	considered in Technical Appendix 5.4, (Volume 4) .
	<i>'Notwithstanding the above comments, the overall approach to the assessment of the potential impacts on the landscape and visual amenity is agreed. The initial 45km radius study area is also deemed to be appropriate.'</i>	Agreement noted and for detailed Methodology please refer to Appendix 5.1: Methodology, (Volume 4) .
DNS: EIA Scoping Direction 07/07/20 Caerphilly County Borough Council	<i>'Further viewpoints within the Caerphilly Borough I'd expect to be included, in addition to those already outlined include' extracted from table – PProW Gelligaer FP101; Fochriw; Rhymney Common; and Manmoel Rd.</i>	These additional viewpoints are included in the LVIA. See also viewpoint selection rationale in Technical Appendix 5.1: Methodology, (Volume 4) .
	<i>'The North Rhymney Valley Visually Important Local Landscape designation with the Caerphilly LDP should be included in the assessment as this area affords extensive views of the application site.'</i>	This landscape designation is considered in section 5.10 of the LVIA.
DNS: EIA Scoping Direction 07/07/20 Caerphilly County Borough Council	<i>'The northern edge of Rhymney should be included in the residential visual amenity assessment.'</i>	The northern edge of Rhymney is outside of the RVAA study area, however, the viewpoint at Hoel Uchaf is located at the northern edge of Rhymney and residential receptors have been assessed at this viewpoint.
	<i>'The settlement of Fochriw, at approximately 5km to the south of the site, which is likely to afford direct views of the should be included.'</i>	A viewpoint at Fochriw is included in the LVIA.
DNS: EIA Scoping Direction 07/07/20 Caerphilly County Borough Council	<i>'The Rhymney Valley Ridgeway Walk which affords direct views north within 5km of the site and Sirhowy Valley Walk, both long distance paths to the south and southeast respectively, to be included in the visual assessment.'</i>	The Rhymney Valley Ridgeway Walk is represented by Wireline C and assessed at Viewpoint 13, the Sirhowy Valley Walk is represented Viewpoint 17. See also viewpoint selection rationale in Technical Appendix 5.1: Methodology, (Volume 4) .
DNS: EIA Scoping Direction 07/07/20 Caerphilly County Borough Council	<i>'I understand that further information regarding developments is to be included in the cumulative assessment and that the methodology is to be finalised following this initial consultation process. The cumulative assessment should also include all major energy infrastructure projects within the study area including the recently approved Wauntysswg Solar Farm located approximately 5km to the southwest, which will be seen in</i>	The LVIA has considered the potential for non-wind energy development cumulative effects. See also Technical Appendix 5.1: Methodology, (Volume 4) .

Consultee	Key issues raised	Applicant Action
	<i>views afforded from the Rhymney Valley Ridgeway Long Distance path.'</i>	
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Please note, our LANDMAP Guidance Note 3 and Draft Landscape Sensitivity and Capacity in relation to on-shore wind and solar pv developments (2018) are currently under review, in light of the forthcoming NDF and increasing size of wind turbines.'</i>	Noted, the LVIA has referred to NRW guidance Note 46 which supersedes GN3.
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q4.1 - A 45km study area has been defined, based on guidance within Scottish Natural Heritage's Visual Representation of Wind Farms distance of 45km for 150m+ sized turbines. We consider this to be acceptable.'</i>	Agreement noted and for detailed Methodology please refer to Technical Appendix 5.1: Methodology, (Volume 4) .
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q4.2 - We consider Cadw and the Glamorgan Gwent/Clwyd Powys Archaeological Trusts should be consulted with regards to the Merthyr Tydfil, East Fforest Fawr & Mynydd-y-Glog and Gelli-gaer Common Landscapes of Historic Interest, which are included in the Register of Landscapes of Historic Interest in Wales. We note reference is made to the Historic Landscapes in the Cultural Heritage Chapter and recommend cross-referencing with regard to historic landscape character should be made between the Cultural Heritage and LVIA assessments.'</i>	Cadw and the Glamorgan Gwent/Clwyd Powys Archaeological Trusts have been consulted on in relation to Cultural Heritage matters, as detailed in Chapter 11: Cultural Heritage and cross referenced in the LVIA.
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q4.3 - Given the scale of the proposal, we advise that landscape character areas at a greater distance from the proposal would be inter-visible and there is potential for significant landscape effects beyond 15km. LANDMAP Guidance Note 3: Guidance for Wales. Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines (p.11 6.2) advises that, for Visual and Sensory Aspect Areas, significant landscape effects could extend to around 20km+ where there are sensitive upland/mountainous areas in the overall study area. With regard to assessment of effects on landscape character, this should assess the effects on the character of the area affected by the proposal, rather than simply on the whole of a given Aspect Area or Landscape Character Area, which can be very large areas of land.'</i>	The study area used for the landscape character assessment is based on NRW guidance note 46 which suggests a 26 km study area for developments of the scale proposed. See section 5.4 of the LVIA.
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q 4.4 - We note reference to the National Park's Management Plan, Special Qualities and SPG Landscape Character 2012, which includes the Landscape Character Assessment. We agree consideration of these documents is</i>	The BBNP is assessed in Technical Appendix 5.3, (Volume 4) . Viewpoints within the BBNP and outside with views towards it have informed

Consultee	Key issues raised	Applicant Action
	<i>required in the LVIA. As well as visual effects from receptors within the National Park, consideration should be given to visual effects looking towards the park from viewpoints outside and within its setting. Since the turbines are anticipated to be up to 180m in height, the effects of aviation lighting on the National Park need to be considered, with visualisations from the National Park. It should be noted that the National Park is an International Dark Sky Reserve.'</i>	the BBNP assessment of special qualities. Visible Aviation Lighting is assessed in Technical Appendix 5.5, (Volume 4) , which includes two night time viewpoints within the BBNP. The DSR is considered in Technical Appendix 5.5 .
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q4.5 - We note the intention to consult with regard to selected viewpoints. There are 8 selected viewpoints within the National Park. From an initial desk-based assessment, we also anticipate visibility from: areas within the park to the east of the A470, around Cefn Cil-Sanws and Garn du; from Mynydd Llangynidr; from the Beacons horseshoe, including Graig Fan Ddu; from areas to the south and north of the A4059 around Cadair Fawr and Fan Fawr; and, from Gelli-gaer Common to the south, looking towards the park. With regard to presentation of visualisations, SNH Visual Representation of Wind Farms Guidance 2.2 states that photomontages are of most value for views within 20km for turbines up to 150m. We recommend this guidance is used.'</i>	Viewpoints have been discussed with NRW through email consultation and during a specific LVIA meeting on 14.01.21. Additional viewpoints and approach was agreed at this meeting. See also viewpoint selection rationale in Technical Appendix 5.1: Methodology, (Volume 4) .
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q 4.6 With regard to cumulative effects, it should be noted that, in accordance with the Guidelines for Landscape and Visual Impact Assessment 3rd Edition, NRW considers the combined effects of wind farms/turbines on the National Park. The Scoping proposes consideration of only the additional effects of the proposal on landscape character and visual amenity. GLVIA3 does not require applicants to consider the wider strategic effects, however strategic bodies such as NRW will consider the full implications of cumulative effects on the National Park. The Scoping Report, at 4.49 considers that cumulative effects are not likely to be a determining issue as there are few other schemes within 10km. We consider that cumulative effects have the potential to occur beyond 10km, given that there is potential for significant landscape effects between 15 & 20km and cumulative effects up to these distances should be considered in the assessment.'</i>	Each of the LVIA viewpoints considered in detail have assessed cumulative effects in all directions where there are visible cumulative schemes, detailing cumulative effects arising as a result of the Proposed Scheme in combination with cumulative wind energy developments within the 45 km study area. baseline wireline views illustrating this cumulative situation from each of the LVIA viewpoints. CZTVs have also been prepared for cumulative wind energy developments within 20 km of the Proposed Scheme. Cumulative information was shared with key consultees during the viewpoint consultation including maps of cumulative schemes to be

Consultee	Key issues raised	Applicant Action
		included in the cumulative assessment.
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q4.7 - The proposals for the residential amenity assessment are unlikely to be a major concern with regards to the National Park. We recommend the Applicant consults the relevant LPAs in relation to this.'</i>	Noted. Technical Appendix 5.4: RVAA, (Volume 4) , assesses residential properties or property groups within 2 km in line with 2019 Landscape Institute technical guidance note 2/19 Residential Visual Amenity Assessment.
DNS: EIA Scoping Direction 03/07/20 NRW	<i>'Q4.8 – With regard to effects scoped out, as for Q4.3, that landscape effects up to 20km should be considered, in line with LANDMAP GN3. Landscape and Visual effects during construction are likely to occur in the surrounding area as well as on the site. We recommend these should be considered in the assessment. Section 4.51 of the Scoping Report considers that the primary mitigation is intended to be through the design of the layout of the turbines and infrastructure as seen from key viewpoints. We do not consider that this type of mitigation would substantially reduce impacts on the National Park, given the proximity of the large scale turbines.'</i>	The study area used for the landscape character assessment is based on NRW guidance note 46 which suggests a 26 km study area for developments of the scale proposed. See section 5.4 of the LVIA. Mitigation is described in section 5.6 of the LVIA.
Meeting with NRW 14.01.21	NRW confirmed that were happy with most viewpoints and justifications given. An additional viewpoint was suggested from the horseshoe ridge.	An additional wireframe was agreed to be included from the horseshoe ridge. See Technical Appendix 5.1, (Volume 4) , for more detail on viewpoint selection rationale.
Meeting with NRW 14.01.21	NRW agreed the use of NatureScot guidance for night-time photography after dusk. Photography timing constraints and safety concerns when selecting night-time viewpoints were accepted by NRW. NRW confirmed Craig Y Fan Ddu and A4059 good viewpoints in which to appreciate the darkness of BBNP. NRW highlighted that the BBNP SPG on obtrusive lighting is also a useful reference.	Visible Aviation Lighting is assessed in Technical Appendix 5.5, (Volume 4) , which includes two night time viewpoints within the BBNP. Night time photography was captured after dusk.
Meeting with NRW 14.01.21	NRW acknowledged that Historic Landscape Areas would be picked up in the Cultural Heritage assessment but also asked for crossover with Cultural Heritage and landscape assessment with regard to registered historic landscapes as well as the historic landscape aspect for LANDMAP. During the meeting, it was stated that the Historic Landscapes would form part of the	Registered Historic Parks and Gardens are considered in the LVIA and Technical Appendix 5.2, (Volume 4) , considers the Historic Landscape aspect layer in the LANDMAP assessment. Whilst Historic Landscape Areas form part of the

Consultee	Key issues raised	Applicant Action
	baseline in the LVIA but that the Cultural Heritage assessment would assess the effect on the registered area resulting from the proposal.	Landscape Character baseline assessment, it is the Cultural Heritage assessment that assesses the effect on these areas as a result of the Proposed Scheme, see Chapter 11: Cultural Heritage .
Meeting with NRW 14.01.21	The NatureScot drafted guidance note on special qualities (SQ) assessment was suggested for use in the LVIA in relation to the BBNP special qualities assessment. NRW suggested that the assessment take account of special qualities listed in the BBNP management plan and guidelines, LANDMAP and the BBNP landscape character areas. This approach was agreed in principle during the meeting.	Detailed approach to special qualities of BBNP assessment circulated to NRW and BBNPA ahead of assessment. No further comments received. See Technical Appendix 5.3, (Volume 4) BBNP special landscape qualities assessment. BBNPA did not attend with meeting information circulated afterwards.
Caerphilly County Borough Council Email dated 19.01.21	Email response to LVIA consultation email outlining LVIA viewpoint selection and cumulative assessment. Additional viewpoints suggested by Caerphilly included - Bute Town Reservoir PRoW; Bute Town Conservation Area & Cycle Route; Bridleway Gelligaer BR 103; and PRoW Bedwellty FP 28.	These additional viewpoints were discussed with Caerphilly in follow up emails. PRoW Bedwellty FP 28 was included as an additional viewpoint and the others were relocated to coincide with other nearby viewpoints. See Technical Appendix 5.1, (Volume 4) for more detail on viewpoint selection rationale.
Merthyr Tydfil Email dated 28.01.21	Email response to LVIA consultation email outlining LVIA viewpoint selection and cumulative assessment. Additional viewpoints suggested by Merthyr Tydfil included – Mynydd Aberdar; Dowlais Conservation Area; and Trefechan.	Trefechan was included as an additional viewpoint, Mynydd Aberdar as an additional wireframe with Dowlais Conservation Area not included due to limited visibility. See Technical Appendix 5.1, (Volume 4) for more detail on viewpoint selection rationale.
Merthyr Tydfil Email dated 05.05.21	Additional viewpoint request at Pontsticill	Pontsticill was included as an additional viewpoint. See Technical Appendix 5.1, (Volume 4) for more detail on viewpoint selection rationale.

5.4 Approach to the assessment

Study Area

- 5.4.1 The initial step in the LVIA is the establishment of the Study Area for the assessment. Guidance developed by NatureScot (Visual Representation of Windfarms Version 2.2, February 2017) indicates that an area with a radius of 45 km from the nearest turbine is appropriate for the turbines of the size proposed in the Proposed Scheme. The 45 km study area was also agreed with consultees through scoping. The 45 km radius is shown on **Figure 5.1, (Volume 3)**.
- 5.4.2 A more detailed 15 km study area was proposed at scoping stage in which to assess the landscape character effects. NRW commented that according to LANDMAP guidance note 3 that significant landscape character effects may occur beyond 20 km. Guidance note 3 has been replaced with guidance note 46 which provides more defined guidance on study areas relating to development types and scales. In following that guidance a study area of 26 km has been used in the LVIA for the assessment of landscape character effects.
- 5.4.3 Visual receptors have been considered within a 45 km study area, with a more detailed focus for those receptors found closer to the site, including for – settlements within 10 km, Public Rights of Way within 5 km and individual properties within 2 km (as considered in the RVAA and in accordance with Landscape Institute (LI) guidance). See **Technical Appendix 5.4, (Volume 4)** for further description of the RVAA study area.

Desk Study

- 5.4.4 The assessment is initiated through a desk study of the Site and Study Area as described above. ZTV analysis of the Proposed Scheme has been carried out for the Study Areas outlined above (including cumulative ZTVs, CZTVs), as has mapping of landscape character, landscape related designations, wild land areas and principal visual receptors. The Study Areas are not intended to provide a boundary beyond which the Proposed Scheme would not be seen, but rather to define the areas within which it may have a significant landscape or visual effect. A significant effect is, in reality, very unlikely to occur towards the edges of the identified Study Areas.
- 5.4.5 The desk study also utilises Geographic Information System (GIS) and Resoft Windfarm software to explore the potential visibility of the Proposed Scheme. The resultant ZTV diagrams and wirelines provide an indication of which landscape and visual receptors are likely to be key in the assessment.

Field Survey

- 5.4.6 To inform the LVIA and layout design process, field survey was undertaken between November 2020 and October 2021. Viewpoint photography was captured during field survey visits in periods of good visibility. Field surveys were carried out throughout the 45 km radius area, although surveys were concentrated within the areas shown on the ZTV to gain theoretical visibility of the Proposed Scheme.
- 5.4.7 Field survey included visits to viewpoints as well as extensive travel around the Study Area to consider potential effects (including cumulative) on landscape character and

on the experience of views seen from travel routes through the landscape. These visits have allowed the landscape character and the visual amenity of the Study Area to be experienced in a range of different conditions and seasonal variation. The field survey allows the assessors to judge the likely scale, distance, extent and prominence of the Proposed Scheme directly.

- 5.4.8 The landscape of the Site was assessed for any particular features that contribute to the landscape character of the Site or are important to the wider landscape setting. In particular, the form and pattern of the land was assessed from the Site and surrounding area to better understand its character and to take these qualities into account in the siting and design of the Proposed Scheme. The landscape character types for the Study Area were reviewed and the key characteristics of the landscape were identified. The field surveys provided an experience of the character types of the Study Area and verification of how these areas might be affected by the Proposed Scheme. Visual amenity was surveyed including both static and sequential views, from receptors representative of the range of views and viewer types likely to experience the Proposed Scheme. Views from a variety of distances, aspects, elevations and extents were included. Receptor types include individual properties and settlements; main transport routes; main visitor locations; areas of cultural significance; the range of landscape character types within the Study Area; and the cumulative effects of the Proposed Scheme in combination with other existing or proposed wind farms in the Study Area.

5.5 Assessment Methods

Introduction

- 5.5.1 The detailed methodology for the assessment is described in detail in **Technical Appendix 5.1: Landscape and Visual Assessment Methodology, (Volume 4)**. The broad principles used in the assessment of the significance of effects are also described here.
- 5.5.2 The objective of the assessment of the Proposed Scheme is to predict the likely significant effects on the landscape and visual resource. In accordance with the EIA Regulations the landscape and visual effects are assessed to be either significant or not significant. The LVIA does not define intermediate levels of significance as the EIA Regulations do not provide for these.
- 5.5.3 The significance of effects is assessed through a combination of two considerations; the sensitivity of the landscape receptor or view and the magnitude of change that would result from the addition of the Proposed Scheme.

Sensitivity of Receptor

- 5.5.4 Sensitivity is an expression of the ability of a landscape receptor or view to accommodate the Proposed Scheme. Sensitivity is determined through a combination of the value of the receptor and its susceptibility to the Proposed Scheme. The factors that determine these criteria are described in **Technical Appendix 5.1 (Volume 4)**. Levels of sensitivity - high, medium-high, medium, medium-low and low - are applied in order that the judgement used in the process of assessment is transparent.

Magnitude of Change

- 5.5.5 Magnitude of change is an expression of the extent of the effect on landscape receptors and views that would result from the introduction of the Proposed Scheme. The magnitude of change is assessed in terms of a number of variables and the factors that determine these criteria are described in **Technical Appendix 5.1, (Volume 4)**. Levels of magnitude of change - high, medium-high, medium, medium-low, low and negligible - are applied in order that the judgement used in the process of assessment is transparent.

Categories of Effects

- 5.5.6 The LVIA is intended to determine the effects that the Proposed Scheme would have on the landscape and visual resource. For the purposes of assessment, the potential effects on the landscape and visual resource are grouped into four categories:
- Physical effects are restricted to the area within the Site Boundary and are the direct effects on the existing fabric of the Site, such as alteration to ground cover. This category of effects is made up of landscape elements, which are the components of the landscape such as rough grassland and moorland that may be directly and physically affected by the Proposed Scheme.
 - Effects on landscape character: landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character arise either through the introduction of new elements that physically alter this pattern of elements, or through visibility of the Proposed Scheme, which may alter the way in which the pattern of elements is perceived. This category of effects is made up of landscape character receptors, which fall into two groups; landscape character types and landscape-related designated areas.
 - Effects on views: the assessment of effects on views is an assessment of how the introduction of the Proposed Scheme would affect views. The assessment of effects on views is carried out in two parts:
 - an assessment of the effects that the Proposed Scheme would have on a series of viewpoints; and
 - an assessment of the effects that the Proposed Scheme would have on views from principal visual receptors (relevant settlements and routes found throughout the Study Area).
 - Cumulative effects arise where the study areas for two or more wind farms (or in some cases other relevant development) overlap so that both of the wind farms/developments are experienced at a proximity where they may have a greater incremental effect, or where wind farms/other developments may combine to have a sequential effect.
- 5.5.7 It is important to remember that the objective of the cumulative assessment is different from the assessment of effects of the Proposed Scheme itself. In the cumulative assessment the intention is to establish whether or not the addition of the Proposed Scheme, in combination with other relevant existing and proposed wind farms, may lead to a landscape character or view that is characterised primarily by wind farms so that other patterns and components are no longer definitive. The assessment of the effects of the Proposed Scheme itself focusses on the effect that the Proposed Scheme would have on the viewpoints, principal visual receptors and

landscape character receptors, taking baseline developments into consideration. Baseline (operational and under construction) developments are taken into consideration in both the assessment of the Proposed Scheme itself and the cumulative assessment, while consented, application and scoping stage developments are considered only in the cumulative assessment. In accordance with guidance (NatureScot, 2021), the LVIA for each receptor considered assesses the effect arising from the addition of the Proposed Scheme to the cumulative situation, and not the overall effect of multiple developments.

Potential Effects

- 5.5.8 Potential effects are those which could result from the construction and operation of the Proposed Scheme. **Table 5.4** describes the typical landscape and visual effects that can arise from the construction and operation of a wind farm; it should be noted that their inclusion in this table does not imply that they will occur, or be significant, in the case of the Proposed Scheme.

Table 5.4: Potential Effects

Specific Element	Potential Effects	Potential Sensitive Receptors
Construction		
Construction plant, temporary construction facilities, temporary meteorological masts, construction cranes, construction of on-site electrical and control building compound	Temporary physical effects on landscape fabric Permanent physical effects on landscape fabric (i.e. permanent removal of vegetation / forestry / ground cover) Temporary effects on landscape character Temporary effects on views Temporary cumulative effects	Physical landscape features Landscape character receptors Visual receptors
Operation (Day-Time)		
Turbines, access tracks, control building and electrical compound, restored construction compound and working areas, permanent meteorological masts	Long term effects on landscape character including cumulative effects Long term effects on views including cumulative effects	Landscape character receptors Visual receptors
Operation (Night-Time)		
Turbine lighting on turbines	Long term effects on views	Visual receptors

- 5.5.9 The effects of the construction and operation of the Proposed Scheme on the landscape and visual resource would arise principally from the construction and operation of the turbines and access tracks. The temporary construction facilities, such as cranes, construction vehicles, construction compound and delivery vehicles required during the construction would also have effects on the landscape and visual resource during the 12 month construction period. The operational lifespan of the

Proposed Scheme would be 35 years, after which it would be appropriately decommissioned. It is expected that decommissioning would involve activities similar in nature to that of construction.

- 5.5.10 Operational and construction effects are assessed and reported together in this chapter. Due to the large scale of the wind farm proposed, it is considered that there would be no instances where construction effects trigger a significant landscape and visual effect for receptors where operational effects are found to be not significant.

Turbine Lighting

- 5.5.11 The wind turbines would be fitted with visible aviation lighting in accordance with the Air Navigation Order (2016) and Civil Aviation Authority (CAA) requirements. As such, there is potential for the Proposed Scheme to be visible at night. Specific requirements for aviation and navigational lighting would be agreed with the relevant stakeholders post-consent and prior to construction. The CAA requires that all obstacles at or above 150 m above ground level are fitted with visible lighting and in the case of wind turbines these should be located on the nacelle. There is an additional requirement for lights to be provided at an intermediate level of half the nacelle height. These would need to be fitted around the towers to allow for 360-degree horizontal visibility.
- 5.5.12 A description of the turbine lighting requirements is found within **Chapter 3: Proposed Scheme** and **Chapter 12: Other EIA Topics, Section 12.6 Aviation**. Based on this, a worst-case aviation lighting scheme has been assessed, which assumes visible aviation lighting located on all 6 turbine hubs and intermediate lighting on all towers.
- 5.5.13 See also **Technical Appendix 5.5: Visual Assessment of Turbine Lighting, (Volume 4)**, which describes the lighting parameters and approach to assessing night time effects in more detail in relation to the Proposed Scheme. The LVIA assesses the visual effects of visible aviation lighting in **Technical Appendix 5.5, (Volume 4)**, which includes specific lighting ZTVs and night time visualisations. Section 5.13 of this chapter summarises the findings of **Technical Appendix 5.5**.

Nature of Effects

- 5.5.14 The effects of a proposed wind farm may be assessed as 'beneficial' or 'adverse' under the term 'Nature of effect'. The landscape and visual effects of wind farms are difficult to categorise in either of these brackets as, unlike other disciplines, there are no definitive criteria by which the effects of wind farms can be measured as being categorically 'beneficial' or 'adverse'. Generally, in the development of 'new' wind farms, a precautionary approach is adopted by OPEN, which assumes that significant landscape and visual effects will be weighed on the adverse side of the planning balance. Beneficial effects may, however, arise where a proposed wind farm contributes to the enhancement of desirable characteristics such as the restoration of a degraded landscape (e.g. through peatland restoration) and neutral effects may occur where the proposed wind farm fits with the existing landscape character. Unless it is stated otherwise, the significant effects identified in this assessment are considered to be adverse. Judgements on the nature of effect are based on professional experience and reasoned opinion informed by best practice guidance.

Duration and Reversibility of Effects

- 5.5.15 The effects of the Proposed Scheme are of variable duration, and are assessed as short-term or long-term, and permanent or reversible.
- 5.5.16 It is anticipated that the operational life of the Proposed Scheme would be 35 years. The turbines, site access tracks control building and electrical compound would be apparent during this time, and these effects are considered to be long-term.
- 5.5.17 Other infrastructure and operations such as the construction processes and plant (including tall cranes for turbine erection) and construction and storage compounds would be apparent only during the construction period of the Proposed Scheme and are considered to be short-term effects and would be restored at the end of the construction process.
- 5.5.18 The reversibility of effects is variable. The most apparent effects on the landscape and visual resource, which arise from the presence of the turbines, are reversible as the turbines would be removed on decommissioning. The effects of the tall cranes and heavy machinery used during the construction and decommissioning periods are also temporary and reversible. In order to avoid repetition, the duration and reversibility of effects are not reiterated throughout the assessment.

Assessment of Significance

- 5.5.19 The significance of effects is assessed through a combination of the sensitivity of the landscape receptor or view and the magnitude of change that would result from the addition of the Proposed Scheme. While this methodology is not reliant on the use of a matrix to determine the conclusion of a significant or not significant effect, a matrix is included in **Table 5.5** below to illustrate how combinations of sensitivity and magnitude of change ratings can give rise to significant effects. On this basis potential impacts are assessed as of Negligible, Minor, Moderate-Minor, Moderate, Moderate-Major and Major. In those instances where the magnitude has been assessed as 'no change' and the level of effect is recorded as 'No effect'.
- 5.5.20 For the purposes of this assessment, any effects with a significance level of Major and Moderate-Major have been deemed significant in EIA terms (dark grey shaded boxes in **Table 5.5**). 'Moderate' levels of effect have the potential, subject to the assessor's professional judgement, to be considered as significant or not significant, depending on the sensitivity and magnitude of change factors evaluated (light grey shaded boxes in **Table 5.5**). These assessments are explained as part of the assessment, where they occur. Significance can therefore occur at a range of levels depending on the magnitude and sensitivity, however in all cases, a significant effect is considered more likely to occur where a combination of the variables results in the Proposed Scheme having a defining effect on the landscape character or view. Definitions are not provided for the individual categories of significance shown in the matrix and the reader should refer to the detailed definitions provided for the factors that combine to inform sensitivity and magnitude
- 5.5.21 Effects assessed as being either Moderate-Minor, Minor or Negligible level are assessed as not significant (white boxes in **Table 5.5**).
- 5.5.22 In line with the emphasis placed in GLVIA3 upon the application of professional judgement, an overly mechanistic reliance upon a matrix is avoided through the

provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor.

Table 5.5: Matrix used to guide determination of effect significance

Magnitude Sensitivity	High	Medium-High	Medium	Medium-Low	Low	Negligible
High	Major (Significant)	Major (Significant)	Moderate-Major (Significant)	Moderate (Significant / Not Significant)	Moderate - Minor (Not significant)	Minor (Not significant)
Medium-High	Major (Significant)	Moderate-Major (Significant)	Moderate (Significant / Not Significant)	Moderate (Significant / Not Significant)	Moderate - Minor (Not significant)	Minor (Not significant)
Medium	Moderate-Major (Significant)	Moderate (Significant / Not Significant)	Moderate (Significant / Not Significant)	Moderate - Minor (Not significant)	Minor (Not significant)	Minor (Not significant)
Medium-Low	Moderate (Significant / Not Significant)	Moderate (Significant / Not Significant)	Moderate - Minor (Not significant)	Minor (Not significant)	Minor (Not significant)	Negligible (Not significant)
Low	Moderate (Significant / Not Significant)	Moderate - Minor (Not significant)	Minor (Not significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)

5.6 Mitigation

Primary Mitigation

- 5.6.1 The layout of the Proposed Scheme is a vital part of the EIA process and is the stage where the biggest contribution can be made to mitigate potential landscape and visual effects, creating a wind farm which is appropriate for the existing landscape character and visual features of an area. The design of the Proposed Scheme has evolved as part of an iterative process which has aimed to provide an optimal design in environmental, as well as technical and economic terms and landscape and visual mitigation measures have been a central consideration in the design process.

Mitigation of Physical Landscape Effects

- 5.6.2 Ground disturbance on-site would be restricted as far as practicable and any soil materials excavated would be retained on the Site for re-use on areas to be re-

vegetated following the construction phase. The proposed construction compound, tracks, turbine hardstands and associated working areas have been considered throughout the design process to minimise landscape and visual impacts where possible.

Mitigation of Landscape Character and Visual Effects

- 5.6.3 The landscape and visual design strategy for the Proposed Scheme is described in **Chapter 2: Site Selection & Design Evolution, (Volume 2)**. The proposed turbine layout has been designed to minimise the effect on the surrounding landscape and visual resource. Therefore, the turbine layout design has evolved with the intention of presenting a simple, well-balanced image of the Proposed Scheme in the majority of views.

Turbine Lighting Mitigation

- 5.6.4 **Chapter 12: Other EIA Topics (Volume 2)**, includes an Aviation section and an assessment of the turbine lighting requirements of the Proposed Scheme. As described in **Technical Appendix 5.5**, it is proposed that visibility sensors are installed on relevant turbines to measure prevailing atmospheric conditions and visibility range. Should atmospheric conditions (for example an absence of low cloud cover, rain, mist, haze or fog) mean that visibility around the Site is greater than 5 km from the Proposed Scheme, CAA policy permits lights to operate in a lower intensity mode of 200 candela (being a minimum of 10% of their capable illumination). If visibility is restricted to 5 kms or less, the lights would operate at 2000 candela.

5.7 Assumptions and Limitations

Zone of Theoretical Visibility Analysis

- 5.7.1 There are limitations in the theoretical production of ZTVs, and these should be borne in mind in their consideration and use:
- The ZTVs illustrate the 'bare ground' situation, and do not take into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility;
 - The ZTVs do not indicate the reduction in visibility that occurs with increased distance from the Proposed Scheme. The nature of what would be visible from 3 km away would differ markedly from what would be visible from 20 km away, although both are indicated on the ZTVs as having the same level of visibility; and
 - There is a wide range of variation within the visibility shown on the ZTV. For example, an area shown on the blade tip ZTV as potentially having visibility of all of the turbines may gain views of the smallest extremity of blade tips, or of full turbines. This can make a considerable difference in the effects of the Proposed Scheme on that area.
- 5.7.2 These limitations mean that while the ZTVs are used as a starting point in the assessment, providing an indication of where the Proposed Scheme theoretically would be visible, the information drawn from the ZTVs should not be completely relied upon to accurately represent visibility of the Proposed Scheme.

Visualisations

5.7.3 Photographs and other graphic material such as wirelines and photomontages used in the assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what would be apparent to the human eye. NatureScot provides the following information on the limitations of visualisations that are produced according to the NatureScot guidance 'Visual Representation of Windfarms' (February 2017):

- *"Visualisations of windfarms have a number of limitations which you should be aware of when using them to form a judgement on a windfarm proposal. These include:*
- *a visualisation can never show exactly what the windfarm will look like in reality due to factors such as: different lighting, weather and seasonal conditions which vary through time and the resolution of the image;*
- *the images provided give a reasonable impression of the scale of the turbines and the distance to the turbines, but can never be 100% accurate;*
- *a static image cannot convey turbine movement, or flicker or reflection from the sun on the turbine blades as they move;*
- *the viewpoints illustrated are representative of views in the area, but cannot represent visibility at all locations;*
- *to form the best impression of the impacts of the windfarm proposal these images are best viewed at the viewpoint location shown;*
- *the images must be printed at the right size to be viewed properly (260mm by 820mm); and*
- *you should hold the images flat at a comfortable arm's length. If viewing these images on a wall or board at an exhibition, you should stand at arm's length from the image presented to gain the best impression."*

5.8 Existing Environment

Introduction

- 5.8.1 The landscape and visual baseline provides a description of the existing landscape and visual conditions in the area that may be affected. Establishing the baseline will, when reviewed alongside the description of the Proposed Scheme, form the basis for the identification and description of the landscape and visual effects of the Proposed Scheme.
- 5.8.2 The baseline description of the landscape that may be affected is primarily determined by the physical footprint of the Proposed Scheme components and the ZTV (**Figures 5.11a – 5.12b, Volume 3**). The baseline also describes current pressures that may cause change in the landscape in the future, in particular drawing on information for wind energy developments that are not yet present in the landscape but are at other stages in the planning process. Operational and under construction wind energy developments are regarded as part of the baseline landscape character of the area. Any changes resulting from the Proposed Scheme are assessed within this context in the assessment of landscape and visual effects.
- 5.8.3 This section provides a baseline overview of the landscape and visual resource in the study area. The preliminary assessment in sections 5.10 and 5.12 has identified those landscape and visual receptors that may have the potential to experience significant effects, which require to be assessed in full. Detailed baseline descriptions are provided separately within the assessment section for each receptor considered to have potential for significant effects following the preliminary assessment.

Landscape and Visual Baseline Overview

Site Context

- 5.8.4 The Pen March site area is in an upland location found at the northern edges of the south Wales valleys landscape, located east of Pontsticill valley and Merthyr Common, to the north of the A465 Heads of the Valleys Road with the northern edges of the Site Boundary following the southern edges of the Bannau Brycheiniog National Park (BBNP). The Proposed Scheme turbines are approximately 1.4 km to the north-east of Merthyr Tydfil and 2.4 km to the north-west of Rhymney with other settlements stretching west and east along the connecting A465 and then southwards along the valleys. The site area in relation to the landscape and visual study area is shown on **Figure 5.1 (Volume 3)** and also in more detail on **Figure 5.10 (Volume 3)** where it is overlain on aerial mapping.
- 5.8.5 **Figure 5.2 (Volume 3)** shows the topography of the site and immediately surrounding landscape. The site area predominantly lies on a south facing, undulated upland. The topography of the site varies from 535 m AOD in the north to 350 m AOD in the south. The south facing aspect is generally consistent across the site although it is broken by number of watercourses and ditches draining to the south which cut the slope resulting in a series of minor undulations (watercourses within the site area include Nant Tor-gwyn, Nant Morlais and Nant Pitwellt). Pitwellt Pond and Jepson's Pond are topographical features on the site and along with the more disrupted quarry landscapes in the western portion of the site area (Twynau Gwynion), are indicators

of the sites quarrying past. Shake holes are present within the site area as can be seen within the base mapping on **Figure 5.10, (Volume 3)**.

- 5.8.6 The site is open and exposed moorland / rough grassland, with evidence of past and current extractive activity, including disused quarries at Twynau Gwynion (498 m AOD) in the west of the site and Pitwellt Pond and Jepson's Pond in the south.
- 5.8.7 Settlement pattern within the study area can be separated into two contrasting aspects: to the south of the site area which includes the settled valleys landscapes of south Wales; and to the north of the site area which is far less settled with large areas of the BBNP remote from settlement. The settlement pattern within the immediate context of the site reflects this contrasting pattern with settled areas largely found to the south and west of the site area. This immediate context includes the settlement edges of Merthyr Tydfil and Rhymney, smaller rural settlements of Pontsticill to the west and Trefil to the east as well as scattered individual properties to the south east and south west.
- 5.8.8 Overhead lines cross the southern parts of the Site area and evidence of sites quarrying past can still be appreciated on the Site. The large scale industrial units and retail park immediately to the south-west of the site area are notable features that lie to the east of Merthyr Tydfil on the edges of the upland landscape of the Site area.
- 5.8.9 The Site area sits across two LANDMAP Visual and Sensory aspect layers, the summary descriptions of these aspect areas are as follows:
- 5.8.10 MRTHRVS313 Merthyr North Flank - *'The area is of exposed upland character with moorland rising to 530m. The visual and sensory character is generally bleak and open with long views. It is a complex area in which the variety of land uses over time have fragmented the appearance and changed the otherwise large scale upland. The resulting mix is sometimes jarring but elsewhere the diversity adds interest. The unifying influence is the fact that these land uses have clearly altered the landscape. The north eastern corner of this area feels remote from development but much of the remaining area is clearly influenced by the proximity to the town. Settlement is present on the north side of the A465 and abuts the area - terraced housing, large scale industry and retail parks. The retail park in particular is very exposed and sits uncomfortably on the edge of the upland moorland. There are many signs of past and current extractive activity including the active Vaynor Quarry cutting northwards east of Cefn Cil-Sanws, and disused quarries at Morlais, Bryniau and at Twynau Gwynion. Other past industrial activity is indicated by Pitwellt Pond. Morlais Hill and Castle form an important landmark which can be seen from the south side of Merthyr. The adjacent golf course is not particularly visually distinct in long views. The range of active and no longer used industrial sites influence the character of the landscape and the adjacent residential and retail areas. The power lines are detractors in this landscape.'*
- 5.8.11 CYNONVS361 Rhoslas - *'2 separate areas, divided by A465, upland areas lying at approximately 400mAOD of rough grassland, but strong underlying feel of industrial past... industrial remnants include old railway sidings/earthworks... views dominated by adjacent upland areas... overhead pylons are visual detractors, and A465*

noise/movement impact... overall a discordant area with slightly unsettling air...Recent Ffos-y-fran development intrudes to west.'

Landscape Character

- 5.8.12 The landscape assessment considers the effect of the Proposed Scheme on the landscape character of the Site and the surrounding area.

National Landscape Character Areas

- 5.8.13 The Welsh landscape is classified at the national level by National Landscape Character Areas (NLCAs). The 48 NLCAs are defined at a broad landscape scale, each with descriptive character profiles. The Proposed Scheme lies within the northern edges of NLCA 37: South Wales Valleys. NLCAs are shown on **Figure 5.3a (Volume 3)** and key Landscape Characteristics of NLCA 37 are listed by NRW as follows:

- 'Extensive Upland plateau - typically wild and windswept, often with unenclosed tracts, running roughly north-south as 'fingers' parallel between intervening deep valleys.
- Numerous steep-sided valleys - typically aligned in parallel, flowing in southerly directions, shaped by southward flowing glaciers, leaving behind distinctive corrie ('cwm') and crag features. Major rivers include the Tawe, Taff and Rhymney.
- Ribbon urban and industrial areas in valleys - in places extending up valley sides and to valley heads. The area is sometimes regarded as being part of a 'city region'. Middle and eastern valleys tend to be the most heavily and continuously developed, e.g. Rhondda Valley. The uplands by comparison have little or no settlement.
- Extensive remains of heavy industry - with a mix of derelict, preserved and largely redeveloped areas, notably for coal mining. Preserved as heritage (World heritage Site) at Blaenafon this typically includes old railway alignments, buildings and former tips.
- Contrast of urban valley activity next to quiet uplands - e.g. busy roads, new developments, traffic noise, night lighting, verses the adjacent wilder, remoter, quieter uplands.
- Large blocks of coniferous plantation and deciduous woodland fringes - covering many steep hillsides and hilltops, most notably in the middle to western portion of the area, providing a softer contemporary landscape where there was once industry.
- Heather, rough grassland and steep bracken slopes - dominate many plateaux and are grazed mainly by sheep. Much is common land.
- Improved pastures on some lower valley sides - grazed by sheep and some dairy cattle.
- Field boundaries - dry stone walls mark the boundary of common land while fields on lower slopes are bounded by dense hawthorn hedges, interspersed with swathes of broadleaved woodland.
- Transport routes restricted to valleys - the intervening topography makes valley to valley travel difficult, except at heads and bottoms of valleys. Occasionally there are roads that climb steeply over passes with dramatic views and 'hair pin' bends.

- Iconic cultural identity - many popular images of a tough, rugby-playing, religious, radically-minded society still remain associated with the South Wales Valleys, however today's post-industrial, internet-connected reality is somewhat different.'

LANDMAP

- 5.8.14 LANDMAP, also referred to by NRW as 'the Welsh landscape baseline', is a GIS (Geographical Information System) based landscape resource and dataset '*where landscape characteristics, qualities and influences on the landscape are recorded and evaluated into a nationally consistent dataset.*'¹ NRW has recently updated their guidance on the use of LANDMAP in LVIAs. The previous Guidance Note 3 is now titled Guidance Note 46 '*Using LANDMAP in Landscape and Visual Impact Assessment (LVIA)*' Jan 2021.
- 5.8.15 LANDMAP comprises five spatially related datasets, or aspect layers which the NRW methodology overview describes as follows:
- Geological Landscape: '*Considers the physical, primarily geological, influences that have shaped the contemporary landscape.*'
 - Landscape Habitats: '*Focuses on recording habitat features, characteristics and their spatial relationships within the context of the wider landscape.*'
 - Visual & Sensory: '*Maps landscape characteristics and qualities as perceived through our senses, primarily visually.*'
 - Historic Landscape: '*Landscape characteristics that depend on key historic land uses, patterns and features.*'
 - Cultural Landscape Services: '*Describes the links between landscape and people, from the way in which cultural, or human activity shapes the landscape, to the way in which culture shapes the way we respond to landscape.*'
- 5.8.16 LANDMAP divides these five aspect layers into aspect areas for which characteristics are described and each aspect area is given an evaluation score which are defined as:
- 'Outstanding: nationally important;
 - High: regional or county importance;
 - Moderate: local importance
 - Low: little or no importance'
- 5.8.17 The LANDMAP guidance¹ defines a 4-step filtering process to ascertain the aspect areas that are required to be assessed in the LVIA. The filtering approach varies depending on the aspect layers being considered and the guidance divides the approach into two distinct groups:
- **Geological Landscape, Landscape Habitats and Cultural Landscape Services** - the initial search area (Filter 1) includes the aspect areas that immediately overlap or are adjacent to the Site Boundary. Filters 2, 3 and 4 relate to the relationship to other aspect areas, theoretical visibility and evaluation scoring. This filtering process has been carried out in detail within **Technical Appendix 5.2, (Volume 4)**.

¹ NRW, GN46 'Using LANDMAP in Landscape and Visual Impact Assessment (LVIA)' Jan 2021

- **Visual & Sensory and Historic Landscape** - the initial search area (Filter 1) includes the aspect areas that lie within 26 km of the outermost turbines of the Proposed Scheme. This is based on the scale of the Proposed Scheme when reflecting on the table of search and study areas provided in the guidance. Filters 2, 3 and 4 relate to theoretical visibility, evaluation scoring and high sensitivity visual receptors. This filtering process has been carried out in detail within **Technical Appendix 5.2, (Volume 4)**.

5.8.18 Aspect areas for all five aspect layers are mapped in **Figures 5-2.1 to 5-2.10 (Volume 3)**.

Landscape Character Assessment

5.8.19 LANDMAP guidance states that '*Assessors carrying out LVIA need to judge the appropriate scale of reporting for the development, which may not always be the reporting scale of LANDMAP. For example, a housing proposal may need smaller reporting units whereas a wind farm may need larger ones.*' The guidance goes on to recommend that LANDMAP is used as the starting point and that '*reporting units may be LANDMAP visual and sensory aspect areas, where these are not entirely suitable, other LANDMAP aspect layers can be used to assist with the subdivision or amalgamation of visual and sensory aspect boundaries.*'

5.8.20 Landscape Character Areas (LCAs) have been identified within a variety of characterisation and sensitivity studies within south east Wales. It is considered that these LCAs represent the most appropriate scale 'reporting units' for the Proposed Scheme and have therefore been used as the basis for Landscape Character Assessment in the LVIA. Landscape Character Areas have been identified in the following published studies:

- Bannau Brycheiniog Landscape Character Assessment, 2012 (Fiona Fyfe Associates)
- Landscape Character Assessment for Bridgend County Borough, 2013 (LUC)
- Caerphilly County Borough Smaller Scale Wind Turbine Development, 2015 (Gillespies and Caerphilly County Borough Council)
- Heads of the Valleys Smaller Scale Wind Turbine Development, Landscape Sensitivity and Capacity Study Final Report, 2015 (Gillespies)
- Monmouthshire County Council. Draft Supplementary Planning Guidance, 'Landscape', 2019. (Chris Blandford Associates and TACP).
- Neath Port Talbot LANDMAP Landscape Assessment Final Report, 2004 (White Consultants)
- Sensitivity and Capacity Study for Renewable Energy Development Blaenau Gwent CBC and Torfaen CBC, 2021, (TACP).

5.8.21 Taken together, the LCAs identified in these studies extend across much of the 26 km LANDMAP search area for the Proposed Scheme. In line with LANDMAP guidance¹ the LVIA has adopted the 26 km LANDMAP search area for the study area used in the assessment of LCAs. In areas where published studies identifying LCAs are not available Visual and Sensory aspect areas are considered to form the most suitable alternative. However, following the LANDMAP filtering process in **Technical Appendix 5.5, (Volume 4)**, none of these areas are required to be assessed in the LVIA.

- 5.8.22 The Bannau Brycheiniog Landscape Character Assessment covers the area of theoretically visible landscape within the Powys County Council part of the LANDMAP search area. The Bannau Brycheiniog Landscape Character Assessment also overlaps with Merthyr Tydfil County Borough Council, Caerphilly County Borough Council and Monmouthshire County Council.
- 5.8.23 LCAs are listed in the preliminary assessment in **Table 5.10** and shown on **Figure 5.3b-c** and with the blade tip ZTV overlain on **Figure 5.14 (Volume 3)**.

Landscape Designations

Overview

- 5.8.24 A landscape designation is an area of landscape identified as being of importance at international, national or local level, either defined by statute or identified in development plans or other documents. The landscapes are designated in relation to their special qualities or features which warrant special consideration through the planning system.
- 5.8.25 There are three ways in which such designations are relevant to the LVIA:
- The presence of a designation can give an indication of a recognised value that may increase the sensitivity of a landscape character receptor, viewpoint or visual receptor, and may therefore affect the significance of the effect on that receptor;
 - The presence of a relevant designation can lead to the selection of a representative viewpoint within the designated area, as the viewpoint will provide a representative outlook from that area; and
 - Designated areas may be included as landscape character receptors so that the effects of the Proposed Scheme on these features of the landscape that have been accorded particular value can be specifically assessed.

Landscape Designations within the Study Area

- 5.8.26 Landscape designations found in the Study Area are shown on **Figures 5.4-5.5** and also on **Figures 5.15 and 5.16 (Volume 3)** (which shows landscape designations with the blade tip ZTV of the Proposed Scheme overlaid). In relation to the Proposed Scheme, landscape designations within the Study Area include:
- The Bannau Brycheiniog National Park (BBNP). See **Figure 5.4 (Volume 3)**.
 - Registered Historic Parks and Gardens (RHPGs) - there are 145 RHPGs within the Study Area. See **Figure 5.4 (Volume 3)**.
 - Special Landscape Areas (SLAs) there are 81 SLAs within the study area, within the local authority areas of Merthyr Tydfil County Borough Council, Caerphilly County Borough Council. Including two SLAs on the site (SLA - 23. Upper Rhymney Valley and SLA - 33. Nant Morlais and Cwm Taff Fechan). See **Figure 5.5 (Volume 3)**.
 - Caerphilly County Borough Council Visually Important Local Landscapes (VILLs) – there are 4 VILLs within the study area. See **Figure 5.5 (Volume 3)**.

Registered Historic Landscapes

- 5.8.27 The historic environment that relates to the Proposed Scheme is described in **Chapter 11: Cultural Heritage (Volume 2)**. The site lies within the Merthyr Tydfil Historic Landscape which is recognised for its industrial heritage. The Glamorgan-Gwent Archaeological Trust (GGAT) have described the Historic Landscapes found in south-east Wales, and with specific relation to the Merthyr Tydfil Historic Landscape state that the *'town and its environs remain a potent example of an internationally renowned industrial landscape of the 18th and 19th centuries and a permanent reminder of man's exploitation of the landscape.'*² Whilst the specific attributes of this Registered Historic Landscape are assessed within **Chapter 11: Cultural Heritage**, it is important to recognise the heightened value that this designation brings to the underlying historic character of the Site and surrounding area. This is acknowledged in the sensitivity assessment for Landscape Character Areas that overlap with areas of Historic Landscape and is also taken account of within the evaluation of the Historic Landscape aspect layer of LANDMAP.

Visual Baseline Overview

Blade Tip Zone of Theoretical Visibility (ZTV)

- 5.8.28 The blade tip ZTV is shown alongside landscape character, designations and visual receptors on **Figures 5.14 to 5.21** and alongside viewpoints on detailed 50k mapping at A1 size on **Figure 5.11b (Volume 3)**, which for greater legibility has been produced for an approximate 26 km area within which the majority of ZTV extent is found.
- 5.8.29 The landform of the site and surrounding area has a notable influence on the extent of visibility across the study area and the pattern of theoretical visibility produced by the Proposed Scheme responds to the surrounding landform in the following ways.
- 5.8.30 Blade tip theoretical visibility is found in an east-west broad swathe along the north and south sides of the Heads of the Valley corridor. Theoretical visibility stretches out across the ridges that define the valleys landscape to the south of the Site and is also found along the sides of the Rhymney Valley. Further to the south theoretical visibility dissipates at the southern ends of the valleys landscape before with further patches on the group of hills that separate Caerphilly from Cardiff to the south.
- 5.8.31 To the north and within BBNP theoretical visibility is found on the hill summits, ridgelines and elevated plateaux within the central area of the BBNP, particularly immediately to the north of the Site. More distant patches of theoretical visibility are also found to the east on The Black Mountains and Sugar Loaf and to the west on the moorland plateau of Forest Fawr. Elsewhere in the study area distant visibility beyond 20 km is very limited and limited to smaller patches on hill tops.

Hub ZTV

- 5.8.32 The hub height ZTV for the proposed wind farm is shown in **Figure 5.12a** and in detail on **Figure 5.12b (Volume 3)**. The hub height ZTV is run at the turbine hub (or nacelle) height, of 105.5 m and shows potential visibility of any part of a wind turbine up to the

² http://www.ggat.org.uk/cadw/historic_landscape/Merthyr_Tydfil/English/Merthyr_Main.htm

height of its hub or nacelle (but not all of the wind turbine tower would necessarily be seen). Comparison between ZTVs to blade tip and hub allows identification of those areas from which the turbine towers might not be visible, but the blades (or part of these) would. The areas of visibility shown on the blade tip ZTV (**Figures 5.11a & 5.11b**) but not on the hub height ZTV (**Figures 5.12a & 5.12b**) are the areas from which parts of the blades may be visible, and not the towers. The overall pattern of theoretical visibility shown in the hub height ZTV is broadly similar to the blade tip ZTV, but with reduced theoretical visibility extent at the edges of the blade tip theoretical visibility. In the wider area there is notably less theoretical visible extent in Powys to the north of BBNP and also to the south across the Severn Channel.

- 5.8.33 Reductions in extent of theoretical visibility also occur within the valleys that immediately surround the site area including most notably within the Upper Rhymer Valley to the east and the Taf Fechan valley to the west.

Horizontal Angle ZTV

- 5.8.34 The Horizontal Angle ZTV is shown on **Figure 5.13 (Volume 3)**. The Horizontal Angle ZTV measures how much of the horizontal field of view is theoretically occupied by the Proposed Scheme. It measures the maximum lateral spread from the furthest left to the furthest right theoretically visible turbine of the Proposed Scheme. The information is presented as a horizontal angle in degrees. The horizontal angle ZTV provides further information on the likely magnitude of effect of the Proposed Scheme because the results reflect the effect that distance has on the apparent size of the Proposed Scheme: a large object up-close has more visual impact than the same sized object further away (all other things being equal). The horizontal angle ZTV is displayed using coloured bands showing incremental degrees of horizontal angle, in order to highlight areas of higher effect.
- 5.8.35 The horizontal angle ZTV shows that the widest, theoretical, horizontal field of view is occupied in close proximity to the Proposed Scheme, particularly within the footprint of the proposed turbines themselves, where the turbines could occupy more than 180 degrees (50 %) of the field of view. Within around 500 m of the proposed turbines the HZTV drops to between 90-180 degrees (25 to 50 %) and within around 1 km of the proposed turbines would be between 50-90 degrees (14 to 25 %).
- 5.8.36 The Proposed Scheme will have a slightly wider horizontal extent in views from the north-east and south-west, where the proposed wind farm will appear more spread out on the skyline across the width of the Site, but will have a reduced horizontal extent in views from the north-west and south-east, where the proposed turbines will be appear more clustered within a smaller part of the skyline.
- 5.8.37 The HZTV is notable for the magnitude at which the horizontal angle occupied by the Proposed Scheme decreases with distance. From 3 km, the horizontal angle occupied by the Proposed Scheme drops to less than 30 degrees (8 %); beyond 7 km to less than 10 degrees (3 %), albeit that to the north this change occurs within around 4.5 km; and beyond 12 km to less than 5 degrees (1 %) of the field of view.
- 5.8.38 The visual effect of the Proposed Scheme will therefore diminish with distance; generally resulting in a higher magnitude of change from locations at closer proximity, where the Proposed Scheme occupies a wider horizontal extent (or 'lateral spread'),

and a lower magnitude of change from distant locations for much of the study area where the extent of the horizon occupied by the Proposed Scheme is small.

Principal Visual Receptors

Settlements

- 5.8.39 Settlements in the study area are shown on **Figure 5.6** and in detail on **Figure 5.8 (Volume 3)**. The South Wales valleys are well settled in contrast with the BBNP which has little settlement. Much of the settlement within the study area therefore is to the south of the Site and due to the topography of the valleys landscape, theoretical visibility is restricted to those settlements which are within around 10 km of the Proposed Scheme. Key settlements in relation to the Proposed Scheme within 10 km include Merthyr Tydfil (1.4 km); Rhymney (2.4 km); Tredegar (4.6 km); Pontsticill (1.9 km); Princetown (2.1 km); Lechryd (1.9 km); Bute Town (1.9 km) and Fochriw (4.6 km).

Residential Properties

- 5.8.40 The upland landscape of the Site area is not settled however there a large number of individual properties and edges of settlement within close context to the Proposed Scheme. The RVAA presented in **Technical Appendix 5.4 (Volume 4)**, has identified 54 individual properties and property groupings within or at the edges of the 2 km RVAA study area. Residential properties are shown on **Figure 5.4-1**, overlain with the turbine Blade Tip ZTV and on **Figure 5.4-2** overlain on the turbine Hub ZTV.

Roads

- 5.8.41 There are a number of A and B class roads within the Study Area as shown on **Figure 5.6** and in detail on **Figure 5.8 (Volume 3)**. Key routes for the Proposed Scheme include the following:
- The A465 Heads of the Valleys road which cuts across the study area east to west and passes close to the south of the Site;
 - The A roads that run along the floors of the valleys connecting to the Heads of the Valleys road, including the A4058 / A4061 / A4233 within the Rhondda Valley, A4059 along the Cynon Valley, the A4054 and A470 along the Taff Valley, the A469 along the Rhymney Valley, the A4048 along the Sirhowy Valley, the A4046 along the Ebbw Valley, the A467 and the Ebbw Fach Valley and the A4043 along the Lwyd Valley;
 - The roads that cross the BBNP and connect to the Heads of the Valleys road including the elevated A4059, the A470 within the Taf Fawr Valley, the B4560 between Beaufort and Llangynidr, and the A4077 / A40 along the Usk Valley.

Rail

- 5.8.42 The rail routes within the study area comprise a series of routes that connect the settlements at the Heads of the Valleys with Cardiff, the coastal routes that connect Bristol to Cardiff and Swansea, the Mid Wales route between Swansea and Llandrindod in the west of the study area and a route between Newport and Hereford

in the east of the study area. There are also heritage railways within the study area including the Brecon Mountain Railway, the Pontypool and Blaenavon Railway, and the Dulas Valley / Vale of Neath Railways.

Recreational Routes

- 5.8.43 Key long distance walking routes in the study area include the Cambrian Way and Beacons Way that cross the BBNP both on hilltops and through valleys; the Taff Trail which connects Cardiff to Brecon through the valleys and across the BBNP; the Rhymney Valley Ridgeway Footpath which connects Caerphilly to Rhymney; and the Sirhowy Valley Walk which connects Newport and the Wales Coast Path to Tredegar.
- 5.8.44 There are a number of long distance cycle routes in the valleys following key road corridors through the valley between settlements, key routes include NCRs 468 / 469 within Rhymney Valley, NCR 46 that runs along the Heads of the Valley road to the south of the Site and NCR 8 that follows the valley of the Taf Fechan to the west of the Site.

Public Rights of Way (PRoW)

- 5.8.45 There are PRoW at the edges of the Site area some of which are located within the Application Boundary to the east and west of the Site. These PRoW are not located where the Proposed Scheme infrastructure would be located and their routes would not deviate or be permanently affected due to the introduction of the Proposed Scheme. Whilst several of the LVIA viewpoints are located on PRoWs and therefore visual assessments carried out from these locations, the PRoWs themselves will remain unaffected by the introduction of the Proposed Scheme and are therefore not considered further in this assessment. PRoWs are mapped on **Figure 5.10** Site Context (**Volume 3**).

Bannau Brycheiniog National Park

- 5.8.46 The BBNP is a nationally designated landscape and as such is a popular draw for recreational receptors in the study area where people could experience views of the Proposed Scheme while exploring the trails, path networks, hills and routes across the BBNP. There are numerous visitor attractions within the park area, including activity centres, walking and hiking trails including the Brecon Way and a heritage railway that runs from Pant Station in Merthyr Tydfil to Torpantau.

Bannau Brycheiniog Dark Sky Reserve

- 5.8.1 The Bannau Brycheiniog Dark Sky Reserve is a valued recreational destination as recognised within the BBNP website³. The BBNP was awarded Dark Sky Reserve (DSR) status in 2013 by the International Dark-Sky Association. *'International Dark Sky Reserves are areas recognised as possessing an exceptional or distinguished quality of starry nights and nocturnal environment specifically protected for scientific, natural, educational, cultural, heritage or public enjoyment.'*⁴ The DSR is assessed

³ <https://www.breconbeacons.org/things-to-do/activities/stargazing>

⁴ <https://www.beacons-npa.gov.uk/the-authority/press-and-news/archive/2013-2/february-2013/brecon-beacons-becomes-the-world2019s-5th-international-dark-sky-reserve/>

within **Technical Appendix 5.5 (Volume 4)** and shown on **Figures 5.5-3 and 5.5-4 (Volume 3)**.

- 5.8.2 The DSR attracts people wishing to appreciate the night time sky with an absence of night time light pollution. The BBNPA promotes 10 viewing locations in the DSR which offer stopping points to view the night sky⁵ '10 places to go stargazing'. The sensitivity of the 10 viewing locations to the potential effects of the turbine lights is higher than other areas of the DSR, as visitors will come to these sites with the express intention of viewing the night sky and this experience could be affected by other sources of light.
- 5.8.3 Of the 10 locations promoted by BBNPA for the DSR, there is no visibility of the Proposed Scheme aviation lighting. While these 10 viewing locations are identified as being suitable viewing sites, people could feasibly be viewing the night sky from any part of the DSR. The viewpoint on the A4059 is one such location which is accessible by car. Elevated and remote hills in the central area of the DSR such as at Pen y Fan and the connecting 'horseshoe' of hills that surround Pen y Fan, which offer visibility of the Proposed Scheme, are remote upland areas and they are not generally somewhere that people are likely to go at night to view the night sky (in general, people would tend to use the viewing locations). However, in order to capture the experience for those who do decide to venture to more remote areas of darkness, the viewpoint at Craig Y Fan Ddu has also been used to illustrate the effect of the Proposed Scheme visible aviation lighting at night.

Viewpoints

- 5.8.4 The viewpoints used in the assessment have been selected to cover points of specific importance such as recognised viewpoints, designated landscapes, settlements, important routes and attractions, and to inform the definition of the likely extent of significant visual effects arising from the Proposed Scheme. A variety of landscape character areas, different directions and distances have also been represented in the selected views.
- 5.8.5 26 viewpoints for the LVIA have been selected in consultation with MTCBC, CCBC, NRW, CADW and BBNP. The viewpoint selection rationale is included in **Technical Appendix 5.1: Methodology (Volume 4)**. **Table 5.6** lists the viewpoints and provides information on their location, the receptors which may experience views at these locations, viewpoint distance, elevation and view direction to the Proposed Scheme. Viewpoint locations are shown in conjunction with the blade tip ZTV on **Figures 5.11a** (A3 size) and **5.11b** (A1 size) and the hub height ZTV on **Figures 5.12a** (A3 size) and **5.12b** (A1 size). Viewpoint visualisations have been prepared (**Figures 5.24 to 5.49**) to meet the requirements of NatureScot (Visual Representation of Wind Farms Version 2.2, December 2017).

⁵ <https://www.breconbeacons.org/things-to-do/activities/stargazing/10-places-to-go-stargazing>

Table 5.6: LVIA viewpoints

VP No	Viewpoint Name	Grid Ref		Receptor Type / LCT / Designation	Nearest proposed turbine (km) / Elevation (AOD m) / View Direction		
1	PRoW (Gelligaer FP 101)	309828	210056	Caerphilly SLA 23 - Upper Rhymney Valley / HOV LCA 17 - Upland north of the Heads of the Valleys corridor	0.9	390.7	W
2	A465 / Heads of the Valleys Road	309109	209001	HOV LCA 16 - Rhymney Valley from Rhymney to Bargoed	1.2	362.3	NW
3	Pant, Merthyr Tydfil (NCN 46)	307030	209140	HOV LCA 17 - Upland north of the Heads of the Valleys corridor	1.4	361.8	NE
4	A469 / Bute Town (NCN 468)	310359	209123	Caerphilly SLA 23 - Upper Rhymney Valley / HOV LCA 16 - Rhymney Valley from Rhymney to Bargoed	1.9	321.6	NW
5	Pontsticill	305620	211182	Bannau Brycheiniog National Park / BBNP LCA 8 - Talybont and Taff Reservoir Valleys	2.1	347.1	E
6	Pant Station, Brecon Mountain Railway	305951	209655	Merthyr Tydfil SLA 33 - Morlais and Cwm Taff Fechan / HOV LCA 17 - Upland north of the Heads of the Valleys corridor	2.1	341.8	E
7	Rhymney	311129	209007	HOV LCA 16 - Rhymney Valley from Rhymney to Bargoed	2.6	335.5	NW
8	Cefn yr Ystrad	308788	213618	Bannau Brycheiniog National Park / BBNP LCA 9 - Mynyddoed Llangatwg and Llangynidr	2.7	615.3	S
9	Rhymney Common	311896	208674	Caerphilly SLA 23 - Upper Rhymney Valley / HOV LCA 18 - Mynydd Bedwellte and associated upland	3.4	405.1	NW
10	Trefil	312247	212717	Blaenau Gwent SLA 8 - Trefil and Garnlydan Surrounds / HOV LCA 17 - Upland north of the Heads of the Valleys corridor	3.8	427.4	SW

VP No	Viewpoint Name	Grid Ref		Receptor Type / LCT / Designation	Nearest proposed turbine (km) / Elevation (AOD m) / View Direction		
11	Cyfartha Park	304568	207411	Cyfartha Castle RHPG / HOV LCA 10 - Merthyr Tydfil	4.4	260.7	NE
12	Trefechan	303607	208881	HOV LCA 10 - Merthyr Tydfil	4.6	271.1	E
13	Fochriw	310774	206017	HOV LCA 13 - Upland moorland between Taff and Rhymney Valleys	4.6	358.5	NW
14	Tredeggar, Deighton Playing Fields	314072	209747	HOV LCA 19 - Heads of the Valley Corridor	5.0	325.0	W
15	Garn Ddu	302758	212400	Bannau Brycheiniog National Park / BBNP LCA 8 - Talybont and Taff Reservoir Valleys	5.2	460.7	E
16	Pen Garnbugail	310048	203560	Merthyr Tydfil SLA 31 - Gelligaer & Craig Fargoed / HOV LCA 13 - Upland moorland between Taff and Rhymney Valleys	6.7	475.5	N
17	Cefn Manmoel (Sirhowy Valley Walk)	316199	207460	Blaenau Gwent SLA 2 - Cefn Manmoel / HOV LCA 22 - Northern Manmoel Ridge	7.7	445.9	NW
18	Beacons Way (Craig Y Fan Ddu)	305430	218342	Bannau Brycheiniog National Park / BBNP 7 - Central Beacons	7.8	646.5	SE
19	B4560, Cefn Pwll-coch	316452	214476	Bannau Brycheiniog National Park / BBNP 9 - Mynyddoed Llangatwg and Llangynidr	8.3	492.5	SW
20	Mynydd Carn-y-cefn	318408	208054	Blaenau Gwent SLA 6 - Mynydd Carn-y-Cefn & Cefn yr Arail / HOV LCA 24 - Mynydd Carn-y-cefn & Cefn yr Arail	9.6	515.4	W
21	A4059	298754	216122	Bannau Brycheiniog National Park / BBNP LCA 3 - Fforest Fawr	10.4	434.5	SE
22	PRoW (Bedwellty FP 28)	315970	201612	HOV LCA 16 - Rhymney Valley from Rhymney to Bargoed	11.2	315.6	NW
23	A4233 Meardy Rd	299524	201562	Rhondda Cynon Taf SLA 56 - Hirwaun Common,	12.1	345.5	NE

VP No	Viewpoint Name	Grid Ref		Receptor Type / LCT / Designation	Nearest proposed turbine (km) / Elevation (AOD m) / View Direction		
				Cwm Darea & Cwm Aman / HOV LCA 2 - Hillside landscape south and west of Hirwaun			
24	Pen y Fan	301229	221547	Bannau Brycheiniog National Park / BBNP LCA 7 - Central Beacons	12.5	882.1	SE
25	Black Mountains, Pen Cerrig-calch	321708	222371	Bannau Brycheiniog National Park / BBNP LCA 13 - The Black Mountains	17.3	701.3	SW
26	Sugar Loaf	327231	218775	Bannau Brycheiniog National Park / BBNP LCA 12 - Skirrid and Sugar Loaf	19.9	593.15	SW

5.8.6 'Wireline only' illustrative viewpoints were also agreed in consultation with MTCBC, CCBC, NRW, CADW and BBNP. Wireline visualisations have been prepared for these locations as shown on **Figures 5.50 – 5.56 (Volume 3)** and listed in **Table 5.7**.

Table 5.7: Wireline only viewpoints

VP No	Viewpoint Name	Grid Ref		Nearest proposed turbine (km) / Elevation (AOD m) / View Direction		
A	Craig Fan Ddu, Cairn	301929	218251	9.4	663.3	SE
B	Mynydd Llangynidr	312343	215134	5.6	556.0	SW
C	Cefn Brithdir, Rhymney Valley Ridgeway Walk	312778	203875	7.5	431.6	NW
D	Mynydd Aberdar	302106	205568	7.5	453.8	NE
E	Cadair Fawr	297792	212314	10.0	483.8	E
F	Mynydd Cefn-y-Gyngon	296323	203495	13.5	404.8	NE
G	Fan Fawr	296462	218942	13.9	714.6	SE

Cumulative Development Baseline

Introduction

5.8.7 The cumulative assessment set out in the LVIA assesses only the additional landscape and visual effects of the Proposed Scheme, in the context of different baseline scenarios that make assumptions about existing and proposed wind farms. It does not present an assessment of the combined effects of all of the relevant cumulative developments on the landscape. See **Technical Appendix 5.1** for more detail on cumulative assessment methodology.

Wind Energy Cumulative Development

- 5.8.8 A review of the broad wind farm context within a 45 km radius has been undertaken and it is considered that any cumulative effects that would occur, would arise as a result of the pattern of development within the 45 km Study Area radius, rather than as a result of changes beyond this. This broad wind farm context is listed in Appendix 5.6 and shown on **Figure 5.22a** which includes mapping of cumulative sites within the 45 km study area and provides the baseline context for the cumulative assessment. The cumulative mapping includes operational, consented and application stage wind energy developments and where the turbines are greater than 50 m to blade tip, as of March 2023. Any changes in the cumulative situation after this date are not incorporated in the assessment.
- 5.8.9 Schemes that are at the pre-planning or scoping stage are typically not considered in the assessment of cumulative effects due to layout and design uncertainties at the pre-application stages and as such firm information on which to base the assessment of this scenario is not available. However, in response to PAC comments made by BBNPA in relation to the emerging pattern of development to the south of the BBNP, an assessment of the scoping scenario is also included in the LVIA. The effects identified in this scoping scenario are considered as being less likely to arise than the application stage and consented scenarios, as it is possible that scoping stage projects will not ultimately be developed in the form set out at Scoping, or may not gain consent or become operational, which reduces the likelihood of scoping stage scenario effects arising in full.
- 5.8.10 Based on surrounding topography, the theoretical visibility of the Proposed Scheme and the locations of groups of wind energy developments within the wider study area it is considered unlikely that significant cumulative effects would occur between the Proposed Scheme and any of the cumulative sites located beyond 20 km.
- 5.8.11 For this reason, the detailed assessment within the LVIA has focussed on the cumulative sites within 20 km of the Proposed Scheme as listed below **Table 5.8**.
- 5.8.12 Cumulative sites within 20 km are shown on **Figure 5.22b (Volume 3)** and diagrams showing Cumulative Zone of Theoretical Visibility (CZTV) for those operational, consented and application developments within 20 km of the Proposed Scheme are shown on **Figures 5.23a-h (Volume 3)**. Whilst not assessed in detail in the LVIA, operational, consented and application schemes beyond 20 km are included in wireframe diagrams (where visible) to support the approach to cumulative assessment. CZTVs have also been produced for scoping stage developments on **Figures 5.23i** (scoping schemes within 10 km) and **Figure 5.23j** (scoping schemes within 10-20 km), scoping schemes within 20 km have been included on the cumulative wirelines.

Table 5.8: Cumulative Wind Energy Developments within 20 km

Wind Energy Development	Status	Blade Tip (m)	No. of Turbines	Distance from Proposed Scheme (km)
Pengarnddu Industrial Estate	Operational	77	1	1.2

Wind Energy Development	Status	Blade Tip (m)	No. of Turbines	Distance from Proposed Scheme (km)
St Merryn Meat Factory	Operational	77	1	1.5
Tafarnaubach Industrial Estate	Operational	74	1	2.4
Pen Bryn Oer	Operational	110	3	3.2
Rassau Ind Est,	Operational	72	1	5.7
Former Tech Board Site	Operational	77	1	6.9
Bedlwyn Farm	Operational	86.5	1	8.6
Cruglwyn	Operational	86.5	2	8.9
Penrhiwgwaith Farm	Operational	87	1	9.1
Pen-yr-heol Farm	Operational	77.9	1	9.1
Cefn Bach Farm	Operational	78	1	9.3
Gelli-wen Farm	Operational	77	1	9.9
Groesfaen Farm	Operational	77	1	10.3
Tir Cook Farm	Operational	77	1	10.7
Cefn Fforest Farm	Operational	102	1	12.1
Pen Y Fan Ganol Farm	Operational	73.5	1	13.0
Oakdale	Operational	130	2	14.5
Mynydd Bwlfa	Operational	115 / 125	9	14.6
Pen-y-fan Industrial Estate	Operational	123.5	1	14.9
Mynachdy Farm	Operational	67.89	2	15.2
Pen y Cymoedd	Operational	145	76	15.5
Maerdy	Operational	145	8	15.6
Ferndale (Penrhys)	Operational	74	8	16.4
Castell Llwyd Farm	Operational	77	1	17.3
Bryn Ysgawen Farm	Operational	77	1	19.7
Unit 18 Rassau Industrial Estate	Consented	80	1	6.3
Unit 19 Rassau Industrial Estate	Consented	80	1	6.3
Rhigos Road	Consented	78	1	15.7
Abergorki	Consented	149.9	3	16.4
Llwynceilyn Farm	Consented	125	2	17.6
Land At Graig-yr-hufen Road	Consented	77	1	18.3
Nant-y-Gwyddon	Consented	121.5	1	19.3
Mynydd Carn-y-Cefn	Application	175	8	12.1
Silent Valley	Application	103	1	10.0

Wind Energy Development	Status	Blade Tip (m)	No. of Turbines	Distance from Proposed Scheme (km)
Penrhyn Farm	Scoping	77	1	3.4
Penrhyn Farm 2	Scoping	62	1	3.5
Manmoel	Scoping	180	5	7.7
West Monmouthshire Golf Club	Scoping	78	1	8.7
Abertillery	Scoping	180	7	14.7
Land east of Llwynon Road	Scoping	73.5	1	15.4
Hafodarth	Scoping	51	1	15.6
Hafodarth Farm	Scoping	62	1	15.7
Mynydd Llanhilleth	Scoping	180	8	15.8
Mynydd Maen	Scoping	149.9	16	19.2
Twyn Hywel Energy Park	Scoping	200	20	17.5

Existing Wind Energy Developments

- 5.8.13 Operational wind energy developments are a feature of the immediate landscape context and more widely across the valleys landscape within the southern half of the study area. Operational developments in the immediate area include - the 77 m high single turbines immediately south west of the site at Pengarnddu Industrial Estate and St Merryn Meat Factory; the three turbines of Pen Bryn Oer at 3.2 km to the south-east of the Site and single turbines at Tafarnaubach (74 m high) and Rassau Industrial Estates (72 m high) and Former Tech Board (77 m high) close to the A465 to the east of the Site at 2.4, 5.7 and 6.9 km respectively. There are further clusters of operational turbines and small turbine groups further to the south of the Site (between 8.6 and 15 km) in the valleys to the north of the Blackwood and Bargoed settlement including – Bedlwyn Farm, Cruglwyn, Penrhiwgwaith Farm, Pen-yr-heol Farm, Cefn Bach Farm, Gelli-wen Farm, Groesfaen Farm, Tir Cook Farm, Cefn Fforest Farm, Pen Y Fan Ganol Farm, Oakdale, Pen-y-fan Industrial Estate. Tips heights range between 73.5 and 130 m but are mostly between 73.5 and 86.5 m to tip.
- 5.8.14 A group of operational wind farms are found at around 15 km to the south-west of the Site occupying a large area to either side of the Rhondda valley. This cluster includes - Mynydd Bwllfa (9 turbines at 115 / 125 m to blade tip); Pen y Cymoedd (76 turbines at 145 m to blade tip); Meardy (8 turbines at 145 m to blade tip) and Ferndale (8 turbines at 74 m to blade tip). This is a large cluster of wind farm development which is visible from many parts of the study area. The western edges of this cluster extend beyond 20 km with Pen y Cymoedd following the forested uplands south of the Vale of Neath to around 25 km to the west of the Site. Other wind farms that appear in the context of this large cluster beyond 20 km include Maesgwyn (13 turbines at 115 m to blade tip); Ffoch Nest (11 turbines at 115 m to blade tip); Taff Ely (20 turbines at 52 m to blade tip); Ffynnon Oer (16 turbines at 93 m to blade tip); Pant Y Wal &

extension (18 turbines at 115/125 m to blade tip); and Llynfi Afan Renewable Energy Park (12 turbines at 118 m to blade tip).

Consented Wind Energy Scenario

- 5.8.15 In addition to the existing wind energy developments, there is potential for further change to the landscape and visual baseline as a result of consented wind energy developments being built. The 'consented scenario' assumes that all consented stage wind energy developments have become operational and are part of a theoretical baseline situation that also includes the existing developments. The closest consented development to the Proposed Scheme is an additional two 80 m high turbines at the Rassau Industrial Estate, 6.3 km to the east. Other consented turbines are found within or close to the large existing cluster of development to the south-west and lie between 15 and 20 km from the Proposed Scheme including – single turbines at Rhigos Road (78 m to blade tip), Land At Graig-yr-hufen Road (77 m to blade tip); and Nant-y-Gwyddon (121.5 m to blade tip); Abergorki (3 turbines at 149.9 m to blade tip); and Llwynceilyn Farm (2 turbines at 125 m to blade tip).

Application Wind Energy Scenario

- 5.8.16 Similar to the consented scenario, the 'application scenario' assumes that all application stage wind energy developments have become operational and are part of a theoretical baseline situation that also includes existing and consented stage wind farms. There is greater uncertainty in the prediction of potential changes resulting from wind energy planning applications, as they may or may not ultimately become built features in the landscape. There are only two application stage wind energy developments within 20 km, the single turbine Silent Valley (103 m to blade tip) 10 km to the east of the Proposed Scheme and Mynydd Carn-y-Cefn (8 turbines at 175 m to blade tip) 12.1 km to the south-east of the Proposed Scheme.

Scoping Wind Energy Scenario

- 5.8.17 Similar to the application scenario, the 'scoping scenario' assumes that all scoping wind energy developments have become operational and are part of a theoretical baseline situation. The effects identified are considered as being far less likely to arise, as it is unlikely that all application and scoping wind farms will gain consent. There are eleven such scoping schemes within 20 km of the Proposed Scheme as listed above in **Table 5.8**. The majority of these scoping schemes are to the south-east of the Proposed Scheme. Scoping stage wind farms in this area include Manmoel, Abertillery, Mynydd Llanhilleth, Mynydd Maen. There are also a number of single turbine scoping schemes to the east and southeast and the Twyn Hywal Energy Park to the south.

Non-Wind Energy Cumulative Development

- 5.8.18 As described in **Technical Appendix 5.1, (Volume 4)**, and in line with advice provided by the Planning Inspectorate in the 2020 Scoping Direction (**Technical Appendix 1.2, Volume 4**), other forms of major development have also been considered to determine whether or not they could potentially lead to a significant

cumulative effect when considering landscape or visual interaction with the Proposed Scheme.

- 5.8.19 A comprehensive list of developments has been compiled and this 'long list' and the approach to compiling this list is described in **Chapter 3: Proposed Scheme (Volume 2)**. Those non-wind cumulative developments within this 'long list' that fall within the cumulative study area are listed in **Technical Appendix 5.6: Cumulative Developments (Volume 4)** and shown on **Figure 5.22c-d (Volume 3)**.
- 5.8.20 In order to focus the cumulative assessment on the potential for significant cumulative effects, the LVIA has undertaken a process of scoping out projects and activities from this list where it is assessed there would be no potential for a significant cumulative effect as a result of the addition of the Proposed Scheme. This preliminary assessment is based on professional judgement, assessment rationale and guidance relevant to landscape and visual impacts .
- 5.8.21 The results are presented in **Technical Appendix 5.6 (Volume 4)**, along with descriptive justification where required. **Technical Appendix 5.6** concludes that none of the non-wind cumulative developments in the study area are considered to have the potential to contribute to significant cumulative landscape or visual effects. This is largely due to distance or separation between the Proposed Scheme and the cumulative development or due to lack of cumulative interaction that has the potential to cause a significant cumulative effect.

5.9 Assessment of Physical Landscape Effects

Introduction

- 5.9.1 The first category of effects covered in the assessment is physical effects, which are direct effects on the fabric of the Site, such as changes to ground cover. Physical effects are found only on the Site, where existing landscape elements may be removed or altered by the Proposed Scheme. The methodology for the assessment of physical effects is described in full in **Technical Appendix 5.1, (Volume 4)**. It should be noted that landscape elements are assessed with reference to their contribution to the landscape character rather than in ecological terms.
- 5.9.2 The areas of the Site in which the turbines and the majority of infrastructure would be located are entirely within the grassland/ marshy grassland ground cover. The physical landscape effect of the Proposed Scheme on the grassland ground cover element is therefore assessed in detail in this section.
- 5.9.3 A very short section of the road embankment of the A465 Heads of the Valleys Road near the Perngarnddu Industrial Estate would be disrupted to allow for access from the A465 to the minor road that follows the southern boundary of the Site. The road embankment is grass bounded by a post and rail fence with the occasional small tree or shrub. The removal of these small trees and shrubs to accommodate access to the Site is considered to be of a very minor consequence with no potential for significant effects.

Grassland

Sensitivity

- 5.9.4 The grassland on the Site comprises a mix of improved and unimproved grassland with areas of bracken and marshy grassland. Grassland is a common feature of the Welsh landscape and within the immediate context of the Site accounts for much of the upland ground cover within the study area. It is a typical feature therefore of the Welsh uplands and an abundant landscape element within south east Wales. Grassland ground cover is therefore considered to have a medium-low value. The susceptibility to change of this landscape element is medium-low due to the potential for reinstatement and restoration of the ground cover following construction. The combination of value and susceptibility results in a Medium-Low sensitivity for the grassland ground cover found within the Site.

Magnitude of Change

- 5.9.5 All of the Proposed Scheme turbines would be located on grassland. The proposed turbines would have concrete foundations that would remove the grassland ground cover at the base of each turbine. Much of the infrastructure required would also be located on grassland, including access tracks, turbine hardstandings, control building and electrical compound, battery storage area, meteorological mast, construction compound and cable routes are all proposed to be located within this land cover. The Proposed Scheme would result in an alteration to the grassland ground cover from the removal of small areas of this landscape element during the construction phase. Following construction, grassland would be reinstated over the areas not

permanently occupied by infrastructure that have been disturbed by landform change including the restored construction compound, cable routes and edges of tracks. The remaining grassland within the Site would be retained over the lifetime of the Proposed Scheme.

- 5.9.6 The area of grassland to be removed in the construction and operation of the Proposed Scheme is very limited in relation to the total area of grassland on the Site and elsewhere within LCA 17 (Upland north of the Heads of the Valleys corridor) and therefore constitutes only a minor alteration to the landscape element. The magnitude of change of this removal is therefore considered to be Low.

Significance of the Effect

- 5.9.7 The effect of the Proposed Scheme on grassland is considered to be Minor and Not Significant. The extent of grassland removal is not considered to constitute a redefinition of this landscape element as a component of the site area or the wider landscape.

5.10 Landscape Character Assessment

Introduction

- 5.10.1 Landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character occur both on the Site, where the pattern of elements that characterises the landscape would be directly altered by the addition of the Proposed Scheme to the landscape; and off-site, around the Study Area, where visibility of the Proposed Scheme may alter the way in which this pattern of elements is perceived.
- 5.10.2 It should be noted that levels of magnitude of change on landscape character receptors are generally found to be lower than the magnitude of change on viewpoints that lie within these receptors. This means, for example, that if a viewpoint is assessed to undergo a medium-high magnitude of change it does not necessarily follow that the landscape character types within which it lies would also undergo a medium-high magnitude of change but may undergo a medium magnitude of change instead. This is because the effects on viewpoints are assessed within the context of a specific outlook of the Proposed Scheme and are usually specifically selected to gain a direct view over the Site. The landscape character of a receptor is not necessarily determined so specifically by the outlook over the Proposed Scheme, and there are many other considerations, both visual and perceptual, that may combine to give an area its landscape character. This means that the Proposed Scheme may have a lesser degree of influence on landscape character than on a specific view. This is particularly true of areas that lie slightly further away from the Proposed Scheme. In the immediate vicinity of the Site, up to around 2 km away - the magnitude of change on viewpoints and landscape character is likely to be similar, but beyond this, the magnitude of change on landscape character is found to often diminish more rapidly as the influence of the turbines is subsumed in the many other influences on landscape character.

- 5.10.3 Viewpoints are referred to in this assessment as they provide a useful indication of the appearance of the Proposed Scheme from specific locations within the various landscape receptors, but the level of magnitude of change may vary between the viewpoint assessment and the landscape character assessment.

Preliminary Assessment

Landscape Character Areas

- 5.10.4 As described in the baseline overview, the LVIA has focussed its assessment of LCAs within 26 km which is in line with the search area advocated in LANDMAP guidance¹. LCAs have been identified from various published studies within this 26 km study area. These studies have similar numbering syntax for their identified LCAs and for ease of reference the following abbreviations in **Table 5.9** have been used in the LVIA.

Table 5.9: LCA Naming in LVIA

LCA Abbreviation	Published Study in which LCAs are identified
BBNP LCA	Bannau Brycheiniog Landscape Character Assessment, 2012 (BBLCA). Fiona Fyfe Associates.
BCB LCA	Landscape Character Assessment for Bridgend County Borough, 2013. LUC
CCB LCA	Caerphilly County Borough Smaller Scale Wind Turbine Development, 2015. Gillespies and Caerphilly County Borough Council.
HOV LCA	Heads of the Valleys Smaller Scale Wind Turbine Development, Landscape Sensitivity and Capacity Study Final Report, 2015. (HOVSCS). Gillespies.
MCC LCA	Landscape, Draft Supplementary Planning Guidance, 2019. Chris Blandford Associates and TACP. Monmouthshire County Council
NPTC LCA	Neath Port Talbot LANDMAP Landscape Assessment Final Report, 2004. White Consultants.
BGTC LCA	Sensitivity and Capacity Study for Renewable Energy Development Blaenau Gwent CBC and Torfaen CBC, (SCSBGT) 2021, TACP.

- 5.10.5 The northern area of BGTC LCA overlays with the areas included in the HOV LCA, as the BGTC LCA is a more recent study this has been used as the baseline characterisation in this northern area. LCAs are assessed using ZTV analysis (**Figure 5.14, Volume 3**), to identify which of the LCAs within 26 km are likely to be influenced by the Proposed Scheme. Using this analysis, **Table 5.10** identifies the LCAs within 26 km that have the potential to undergo significant effects and require to be assessed in detail.

Table 5.10: Preliminary Assessment LCAs within 26 km

Status – Potential for significant effects and included in detailed assessment.	
Landscape Character Type (LCT)	Comment
HOV LCA17 - Upland north of the Heads of the Valleys corridor	All of the turbines and the majority of proposed site infrastructure would be located within this LCA.
BBNP LCA8 - Talybont and Taff Reservoir Valleys BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr HOV LCA12 - Merthyr Tydfil east valley side HOV LCA16 - Rhymney Valley from Rhymney to Bargoed HOV LCA18 - Mynydd Bedwellte and associated upland BGTC LCA 4 - Trefil and Carno	Neighbouring LCAs that fringe HOV LCA 17. Potential for significant effects due to proximity and close relationship with surrounding upland character.
BBNP LCA7 - Central beacons	Potential for significant effects due to visibility within the central and scenic elevated areas of the BBNP.
HOV LCA13 - Upland moorland between Taff and Rhymney Valleys	Potential for significant effects due to elevated visibility in the northern parts of this upland moorland LCA.
Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment.	
Landscape Character Type (LCT)	Comment
HOV LCA1 - Forested upland and plateau at Treherbert HOV LCA2 - Hillside landscape south and west of Hirwaun HOV LCA5 - Cwmaman upper valley slopes and upland	The ZTV shows theoretical visibility on elevated parts of this LCA where the influence of mining and nearby existing wind farms are an underlying characteristic. No potential for significant effects.
HOV LCA8 - Cynon Taff Ridge HOV LCA9 - Merthyr Tydfil west valley side	Whilst there is theoretical visibility of the Proposed Scheme from these urban fringe LCAs to the west of Merthyr Tydfil, the Proposed Scheme would be seen as a feature within a clearly separate part of landscape context to the east of the settlement on an upland ridge that carries the scars of disused quarries. The opencast workings at RR, Perngarnddu Industrial Estate and operational turbines form part of the landscape context of this ridge. It is considered that the Proposed

	Scheme has no potential to significantly affect the underlying characteristics of these LCAs.
HOV LCA10 - Merthyr Tydfil	This LCA is largely defined as the urban area of Merthyr Tydfil. The settlement of Merthyr Tydfil is assessed in detail as a principal visual receptor from viewpoints within and at the edges of Merthyr Tydfil and not reassessed here to avoid repetition.
HOV LCA11 - Taff Valley southern reach	The ZTV shows theoretical visibility on elevated western parts of this LCA and the key characteristics associated with the valley landscape would be unaffected. Where visible, the Proposed Scheme would be experienced as a distant feature beyond the intervening moorland landscape of HOV LCA 13. It is considered, therefore that there is no potential for the characteristics of this LCA to be significantly affected.
HOV LCA12 - Merthyr Tydfil east valley side	The underlying and extensive opencast workings that dominate and characterise this LCA result in no potential for significant effects.
BBNP LCA3 - Fforest Fawr	Whilst the ZTV shows theoretical visibility within this LCA, the Proposed Scheme would appear as a distant feature. Large scale operational wind farm context to the south of this LCA has an existing influence on its character at distance. The Proposed Scheme would appear beyond the upland plateau that lies between the Talybont and Taff Reservoir Valleys and the elevated upland ridge of Cefn yr Ystrad to the east of the Taff Fechan and as such would not have the potential to significantly affect the characteristics of this LCA.
HOV LCA14 - Bedlinog Valley and farmed upland landscape	Whilst the ZTV shows patches of theoretical visibility within this LCA, effects to key characteristics are moderated by successive layers of intervening field boundary trees and riparian woods which are spread across the LCA. No potential for significant effects.
HOV LCA15 - Darran Valley and hillsides	The ZTV shows theoretical visibility in the northern parts of this LCA, however, the moorland of HOV LCA 13 and the settlement of Fochriw to the north of this valley LCA intervenes. As a result, it is considered that there is no potential for the characteristics of this LCA to be significantly affected.
BGTC LCA's – 1, 3, 6, 7, 9, 10, 12, 13, 14, 15, 19	Theoretical visibility of the Proposed Scheme from these urban and urban fringe LCAs, is largely across the urban and industrial fringes of the corridor in the northern parts of the LCA but also stretches onto elevated ridges that separate the settled areas of Tredegar, Ebbw

	Vale, Beaufort and Brynmawr. The Proposed Scheme would be visible as a feature within a clearly separate part of the landscape to the west of this settled landscape beyond the closer wind turbines that intervene. It is considered that the Proposed Scheme has no potential to significantly affect the underlying characteristics of these LCAs.
HOV LCA22 - Northern Manmoel Ridge	Whilst the ZTV shows theoretical visibility within this LCA, the Proposed Scheme would appear as a distant feature beyond the upland ridge of Mynydd Bedwellte and the turbines of Pen Bryn Oer. This moderates the potential influence that the Proposed Scheme would have on the characteristics of this LCA.
HOV LCA24 - Mynydd Carn-y-cefn & Cefn yr Arall	Whilst the ZTV shows theoretical visibility within this LCA, the Proposed Scheme would appear as a distant feature beyond the upland ridges of Manmoel and Mynydd Bedwellte and the turbines of Pen Bryn Oer. This moderates the potential influence that the Proposed Scheme would have on the characteristics of this LCA.
HOV LCA27 - Mynydd James and Coety Mountain	The ZTV shows patches of theoretical visibility across this LCA, the Proposed Scheme would appear as a distant feature from northern parts of the LCA beyond the Pen Bryn Oer scheme. From other areas actual visibility of the site area is more restricted by successive upland ridges that intervene to the west. These factors combine to moderate the potential influence that the Proposed Scheme would have on the characteristics of this LCA.
HOV LCA6 - Afon Cynon settled valley landscape HOV LCA20 - Sirhowy Valley northern reach from Tredegar to Pochin Houses HOV LCA21 - Southern Sirhowy valley incorporating hillsides above HOV LCA23 - Ebbw Vale valley landscape HOV LCA25 - Upper Ebbw Fach Valley HOV LCA26 - Abertillery settled valley and associated valley and upland slopes	The ZTV shows that theoretical visibility is very limited in these LCAs and confined to the edges of the areas where they transition with adjacent uplands. No potential for significant effects.
NPTC LCA18 - Mynydd Resolfen, Craig-y-Llyn & Mynydd Ynyscorrwg NPTC LCA21 - Hirfynydd NPTC LCA22 - Banwen Pyrddin NPTC LCA23 - Head of Dulais Valley	Theoretical visibility is present on elevated portions of these LCAs at around 18km from the Proposed Scheme at the closest areas of theoretical visibility. These elevated areas are influenced by the nearby existing wind farms of Maesgwyn, Pen y Cymoedd, Ffynnon Oer and Mynydd Bwlfa. This in combination with the distance moderates the potential for the

	character of these LCAs to be significantly affected.
CCB LCA1 - Caerphilly west (Nelson and Abertridwr) CCB LCA4 - North Caerphilly CCB LCA6 - Mynyddislwyn CCB LCA8 - Pen y fan and land west of Newbridge CCB LCA9 - Mynydd maen	Theoretical visibility is present on elevated portions of these LCAs at 14-17 km at the closest areas of theoretical visibility. The Proposed Scheme would be viewed behind a context of closer existing wind turbines within the intervening landscape (such as Oakdale, Gelli-wen Farm, Cefn Bach Farm, Pen-yr-heol Farm, Bedlwyn Farm, Groesfaen Farm, Cruglwyn, and Penrhiwgwaith Farm) which although these turbines are relatively small in scale are much closer to these LCAs and have a greater effect on their characteristics. By contrast the Proposed Scheme would be visible beyond the Rhymney Valley from these elevated areas and would only be viewed as a distant feature alongside other distant turbines such as Pen Bryn Oer. These factors moderate the potential for the character of these LCAs to be significantly affected.
Status – Limited level of influence to the defining characteristics, due to limited / restricted or distant visibility of the Proposed Scheme, such that there is no potential for significant effects.	
<u>BBNP</u> LCA2 - Y Mynydd Du LCA4 - Waterfall Country and Southern Valleys LCA6 - Middle Usk Valleys LCA10 - Clydach Gorge LCA11 - Eastern Usk Valley LCA12 - Skirrid and Sugar Loaf LCA13 - The Black Mountains LCA14 - Wye Valley Foothills LCA15 - Blorenge Summit and Slopes <u>HOV</u> LCA3 - Afon Rhondda Fawr settled valley LCA4 - Afon Rhondda Fach settled valley LCA28 - Blaenavon LCA29 - Broad Valley landscape east and west of Abersychan LCA30 - Blaenavon and Abersychan upland moorland LCA31 - Waterfall Country and Southern Valleys (BBNP LCA)	<u>NPTC</u> LCA15 - Mynydd y Gelli LCA19 - Neath Valley <u>BCC</u> LCA3 - Llynfi & Garw Uplands and Forestry LCA6 - Mynydd Llangeinwyr Uplands LCA8 - Ogmore Forest and Surrounding Slopes CCB LCA2 - Caerphilly basin and Lower Rhymney Valley LCA3 - South Caerphilly LCA5 - Greater Blackwood LCA7 - Risca (Sirhowy and Ebbw Valleys) LCA10 - Greater Newbridge <u>MCC</u> LCA26 - Northern Hills BGTC LCA 2 - Trefil Quarry

Status – No theoretical visibility of the Proposed Scheme. No potential for significant effects and not included in detailed assessment.

BBNP

LCA5 - Western Usk Tributaries

BCC

LCA5 - Garw Valley Floor and Lower Slopes

LCA7 - Ogmore Valley Floor & Lower Slopes

LCA9 - Hirwaun Common and Surrounding Ridges

HOV

LCA7 - South west facing Afon Cynon valley side

MCC

LCA13 - Western Hills

LCA14 - Llandegfedd Reservoir

LCA15 - Upper Usk Valley

MCC

LCA16 - Llanover Lowland

LCA18 - Raglan Hinterland

LCA27 - Penyclawdd Watershed

LCA30 - Sugar Loaf Scarps

LCA30 - Sugar Loaf Scarps

LCA33 - Ysgyrd Fach

LCA34 - Blorenge

LCA41 – Abergavenney

NPTC

LCA11 - Cwm Afan and Cwm Pelenna

LCA14 - Foel Fawr

LCA24 - Dulais Valley

Landscape Designations

5.10.6 Landscape Designations in the Study Area are assessed using ZTV analysis (**Figures 5.15 and 5.16, Volume 3**), to identify which are likely to be influenced by the Proposed Scheme. Using this analysis, **Table 5.11** identifies the landscape designations within 45 km that have the potential to undergo significant effects and require to be assessed in detail.

Table 5.11: Preliminary Assessment Landscape Designations

Status – Potential for significant effects and included in detailed assessment.

Landscape Designation

Comment

Bannau Brycheiniog National Park

Close proximity to the site and assessed in detail in **Technical Appendix 5.4 (Volume 4)**.

RHPG - 37. Cyfarthfa Castle

Cyfarthfa Castle within central Merthyr Tydfil and assessed in detail within the LVIA.

SLA - 23. Upper Rhymney Valley

SLA - 33. Nant Morlais and Cwm Taff Fechan

The Proposed Scheme is within these SLAs and assessed in detail within the LVIA.

VILL - C. Northern Rhymney Valley

The ZTV shows theoretical visibility across much of the designated area. Assessed in detail within the LVIA.

Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment.

Landscape Designation

Comment

SLA - 1. Beaufort Common SLA - 2. Cefn Manmoel SLA - 6. Mynydd Carn-y-Cefn & Cefn yr Arail	Whilst there is theoretical visibility of the Proposed Scheme from these urban fringe SLAs to the east and west of Ebbw Vale, the Proposed Scheme would be visible as a feature within a clearly separate part of the landscape to the west of the immediate settled landscape that intervenes which also contains other closer wind energy developments. It is considered that the Proposed Scheme has no potential to significantly affect the underlying characteristics or qualities that define these SLAs.
SLA - 8. Trefil and Garnlydan Surrounds	This SLA includes upland areas of landscapes that surround the lower lying landscapes of the Sirhowy and Ebbw valleys within the context of the small settlement of Trefil and Garnlydon in northern Beaufort. Whilst there is theoretical visibility of the Proposed Scheme from elevated upland parts of this SLA, the experience of the lower lying areas of this SLA would only be affected to a small extent with the Proposed Scheme experienced as a feature within a clearly separate part of the landscape to the west that would not diminish its key characteristics. No potential for significant effects and not included in detailed assessment.
SLA - 5. Mynydd Bedwellty, Rhymney & Sirhowy Sides SLA - 18. Gelligaer SLA - 31. Gelligaer & Taf Bargoed	The ZTV shows that theoretical visibility would occur in northern and elevated parts of these SLAs. Wind turbines are a feature of views at closer distances than the Proposed Scheme from these areas and turbines are therefore not uncharacteristic. It is considered that whilst adding to this context that the Proposed Scheme has no potential to significantly affect the underlying characteristics or qualities that define these SLAs.
SLA - 32. Merthyr West Flank SLA - 35. Winchfawr	Whilst there is theoretical visibility of the Proposed Scheme from these urban fringe SLAs to the west of Merthyr Tydfil, the Proposed Scheme would be visible as a feature within a clearly separate part of the landscape to the east of the settlement. It is considered that the Proposed Scheme has no potential to significantly affect the underlying characteristics or qualities that define these SLAs.
RHPG - 3. Aberfan: Cemetery, Garden of Remembrance and Former Tip and Slide Area	The ZTV shows that theoretical visibility is limited to the former tip and slide area, with the garden of remembrance outside of any visibility extent and theoretical visibility within the Cemetery restricted by surrounding trees. No potential for significant effects.

Status – Limited level of influence to the defining characteristics, due to limited / restricted or distant visibility of the Proposed Scheme, such that there is no potential for significant effects.

Blaenavon World Heritage Site Wye Valley AONB Glamorgan Coast Heritage Coast RHPG - 5. Abergavenny Priory Deer Park RHPG - 15. Bronllys Hospital RHPG - 22. Cefn Coed Cemetery & Jewish Burial Ground RHPG - 26. Chepstow Park RHPG - 28. Coedarhydyglyn RHPG - 36. Cwrty-yr-ala RHPG - 56. Hensol Castle RHPG - 58. Hilston Park RHPG - 78. Maesllwch Castle RHPG - 114. Rheola RHPG - 127. The Van RHPG - 133. Trewyn RHPG - 138. Wenvoe Castle SLA - 3. Cwm Tyleri & Cwm Celyn SLA - 4. Eastern Ridge & Mynydd James SLA - 7. St Illtyd Plateau & Ebbw Eastern Sides SLA - 15. Northern Uplands SLA - 19. Mynydd Eglwysilan SLA - 20. Mynyddislwyn SLA - 21. North Caerphilly SLA - 22. South Caerphilly SLA - 24. Fforest Fawr and Caerphilly Ridge SLA - 25. Garth Hill and Pentyrch Ridges SLA - 29. Mynydd y Betws SLA - 34. Pontygwaith SLA - 36. Dulais Valley SLA - 39. Mynydd Y Garth SLA - 40. Mynydd Y Gelli SLA - 41. Vale of Neath	SLA - 45. Wentwood SLA - 47. West of Rhiwderin SLA - 48. Bannau Brycheiniog Edge at Llwydcoed SLA - 50. Craig yr Allt SLA - 51. Cwm Clydach SLA - 52. Cwm Orci SLA - 53. Cynon Valley Northern Slopes SLA - 54. Efail Isaf, Garth and Nantgarw Western Slopes SLA - 56. Hirwaun Common, Cwm Dare & Cwm Aman SLA - 58. Llantrisant Surrounds SLA - 59. Llwyncelyn Slopes SLA - 60. Mynydd Hugh and Llantrisant Forest SLA - 62. Mynydd y Cymmer SLA - 63. Mynydd y Glyn and Nant Muchudd Basin SLA - 64. Rhondda Fawr Northern Cwm & Slopes SLA - 65. Taff Vale Eastern Slopes SLA - 67. Treforest Western Slopes SLA - 69. Blaenavon Heritage Landscape SLA - 70. Eastern Uplands SLA - 73. South West Uplands SLA - 75. Western Uplands SLA - 77. Cwrt-yr-Ala Basin SLA - 78. Dyffryn Basin & Ridge Slopes SLA - 79. Ely Valley & Ridge Slopes SLA - 80. Nant Llancarfan SLA - 81. Upper & Lower Thaw Valley VILL - A. Abercarn VILL - B. Manmoel VILL - D. Rudry
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Status – No theoretical visibility of the Proposed Scheme. No potential for significant effects and not included in detailed assessment.

SLA - 9. Bryngarw Country Park SLA - 10. Foel y Dryffryn SLA - 11. Kenfig Burrows SLA - 12. Laleston SLA - 13. Merthyr-mawr Warren	RHPG - 59. Insole Court RHPG - 60. Itton Court RHPG - 61. Kemeys House RHPG - 62. Llanarth Court RHPG - 63. Llanfihangel Court
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SLA - 14. Mynydd y Gaer	RHPG - 64. Llangattock Park
SLA - 16. Porthcawl Coast	RHPG - 65. Llangoed Hall
SLA - 17. Western Uplands	RHPG - 66. Llanybi House
SLA - 26. St Fagans Lowlands and the Ely Valley	RHPG - 67. Llanharan House
SLA - 27. Wentloog Levels	RHPG - 68. Llanmihangel Place
SLA - 28. Carmarthenshire Limestone Ridge	RHPG - 69. Llanover Park
SLA - 30. North Eastern Uplands	RHPG - 70. Llantarnam Abbey
SLA - 37. Foel Trawsnant	RHPG - 71. Llantilio Court
SLA - 38. Margam	RHPG - 72. Llantrithyd Place
SLA - 42. Caldicot Levels	RHPG - 73. Llanwern Park
SLA - 43. North of Bettws	RHPG - 74. Llwynywormwood
SLA - 44. River Usk	RHPG - 75. Lower Dyffryn
SLA - 46. Wentwooge Levels	RHPG - 76. Machen House
SLA - 49. Coed-yr-Hendy and Mwyndy	RHPG - 77. Maes Manor Hotel
SLA - 55. Ely Valley at Miskin	RHPG - 79. Margam Park
SLA - 57. Llanharry Surrounds	RHPG - 80. Merthyr Mawr House
SLA - 61. Mynydd Troed y Rhiw Slopes	RHPG - 81. Miskin Manor
SLA - 66. Talygarn Surrounds	RHPG - 82. Monmouth, Chapel House
SLA - 68. Afon Lwyd Valley	RHPG - 83. Monmouth, Chippenham
SLA - 71. Llandegfedd Reservoir	RHPG - 84. Monmouth, St. John's
SLA - 72. South Eastern Lowlands	RHPG - 85. Monmouth: Nelson Garden
SLA - 74. Southern Lowlands	RHPG - 86. Neath: The Groll
SLA - 76. Castle upon Alun	RHPG - 87. Neath: Victoria Gardens
RHPG - Garnons	RHPG - 88. Newport: Beechwood Park
RHPG - Kentchurch Court	RHPG - 89. Newport: Bellevue Park
RHPG - Moccas Court	RHPG - 90. Newport: Bryn Glas
RHPG - Whitfield	RHPG - 91. Newport: Nos 15 and 17 Stow Park Circle
RHPG - 1. Abercynrig	RHPG - 92. Newport: St. Woolos Cemetery
RHPG - 2. Aberdare: Aberdare Park	RHPG - 93. Old Beaupre
RHPG - 4. Abergavenny Castle	RHPG - 94. Old Gwernyfed
RHPG - 6. Abergavenny, New Cemetery	RHPG - 95. Pant y Goitre House
RHPG - 7. Abergavenny: Bailey Park	RHPG - 96. Parc Cefn Onn
RHPG - 8. Abergavenny: Linda Vista Gardens	RHPG - 97. Parc Llewelyn
RHPG - 9. Abergavenny: The Hill	RHPG - 98. Penarth, Alexandra Park
RHPG - 10. Barry: Cold Knap Park	RHPG - 99. Penarth, Windsor Gardens
RHPG - 11. Barry: Romilly Park	RHPG - 100. Penarth: Italian Gardens
RHPG - 12. Bedwellty Park, Tredegar	RHPG - 101. Pencerrig
RHPG - 13. Bertholey House	RHPG - 102. Pencoed Castle
RHPG - 14. Briton Ferry: Jersey Park	RHPG - 103. Penhein
RHPG - 16. Brynderwen, Bettwys Newydd	RHPG - 104. Penoyre
RHPG - 17. Bryngarw	RHPG - 105. Penpont
RHPG - 18. Buckland House	RHPG - 106. Plas Llangattock
RHPG - 19. Cardiff Castle and Bute Park	RHPG - 107. Plas Machen
RHPG - 20. Cathays Cemetery	

RHPG - 21. Cathays Park	RHPG - 108. Pontcanna Fields and Llandaff Fields
RHPG - 23. Cefn Ila	RHPG - 109. Pontypool Park
RHPG - 24. Cefn Mably	RHPG - 110. Pontypridd: Ynysangharad Park
RHPG - 25. Cefn Tilla	RHPG - 111. Port Talbot: Talbot Memorial Park
RHPG - 27. Clytha Park	RHPG - 112. Pwll-yr-wrach
RHPG - 29. Coldbrook House	RHPG - 113. Raglan Castle
RHPG - 30. Coryton House	RHPG - 115. Roath Park
RHPG - 31. Court Colman	RHPG - 116. Rookwood Hospital
RHPG - 32. Coytrahen House	RHPG - 117. Ruperra Castle
RHPG - 33. Craig y Parc	RHPG - 118. Shirenewton Hall
RHPG - 34. Craig-y-Nos Castle and Country Park	RHPG - 119. Sophia Gardens
RHPG - 35. Cwmgelli Cemetery	RHPG - 120. St Fagans Castle
RHPG - 38. Dewstow House	RHPG - 121. St. Donat's Castle
RHPG - 39. Dingestow Court	RHPG - 122. Talycoed Court
RHPG - 40. Dunraven Park	RHPG - 123. Talygarn
RHPG - 41. Dyffryn	RHPG - 124. The Argoed
RHPG - 42. Ewenny Priory	RHPG - 125. The Hendre
RHPG - 43. Fairwood House	RHPG - 126. The Kymin
RHPG - 44. Ffrwdgrech	RHPG - 128. Thompson's Park (Sir David's Field)
RHPG - 45. Fonmon Castle	RHPG - 129. Treberfydd
RHPG - 46. Glangrwyney Court	RHPG - 130. Tredegar Park
RHPG - 47. Glanrhyd Hospital	RHPG - 131. Trefecca Fawr
RHPG - 48. Glanusk Park and Penmyarth	RHPG - 132. Treowen
RHPG - 49. Glen Usk	RHPG - 134. Troy House
RHPG - 50. Gliffaes	RHPG - 135. Tythegston Court
RHPG - 51. Glyn Celyn	RHPG - 136. Victoria Park
RHPG - 52. Glynhir	RHPG - 137. Waterloo Gardens and Roath Mill Gardens
RHPG - 53. Grange Gardens	RHPG - 139. Whitchurch Hospital
RHPG - 54. Gwernyfed Park	RHPG - 140. Wonastow Court
RHPG - 55. Hay Castle	RHPG - 141. Wyndcliffe Court
RHPG - 57. High Glanau	

LANDMAP aspect areas

5.10.7 **Technical Appendix 5.2 (Volume 4)** provides a preliminary assessment of all LANDMAP aspect areas in line with the filtering process advocated in LANDMAP guidance note 46. Geological Landscape, Landscape Habitats and Cultural Landscape Services aspect layers that require detailed assessment are assessed in **Technical Appendix 5.2**. Given the large degree of overlap with the assessment of landscape character, Visual & Sensory and Historic Landscape aspect layers are considered as part of the assessment of Landscape Character Areas. **Technical Appendix 5.2** cross refers to the LCAs in which these aspect areas are considered and the landscape character assessment considers these aspect layers as part of the sensitivity assessment for each LCA requiring detailed assessment.

Summary of Preliminary Landscape Character Assessment

- 5.10.8 The preliminary assessment has identified the following landscape character receptors that require to be assessed in detail as a result of the potential effects of the Proposed Scheme.

Landscape Character Areas

- BBNP LCA7 - Central beacons
- BBNP LCA8 - Talybont and Taff Reservoir Valleys
- BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr
- HOV LCA13 - Upland moorland between Taff and Rhymney Valleys
- HOV LCA16 - Rhymney Valley from Rhymney to Bargoed
- HOV LCA17 - Upland north of the Heads of the Valleys corridor
- BGTC LCA 4 - Trefil and Carno
- HOV LCA18 - Mynydd Bedwellte and associated upland

Landscape Designations

- Bannau Brycheiniog National Park – assessed in detail within **Technical Appendix 5.3, Volume 4**
- RHPG - 37. Cyfarthfa Castle
- SLA - 23. Upper Rhymney Valley
- SLA - 33. Morlais and Cwm Taff Fechan
- VILL - C. Northern Rhymney Valley

LANDMAP Aspect Areas

(Visual and Sensory or Historic Landscape aspect areas not already covered by the above character areas or designated landscapes – see Technical Appendix 5.2, Volume 4)

- LANDMAP Historic Landscape aspect area MRTHRHL004 - Morlais

5.11 Assessment of Landscape Character Effects

BBNP LCA7 - Central beacons

Baseline

- 5.11.1 This LCA is located in the centre of the BBNP. The key landscape characteristics of this LCA are summarised in the BBLCA as follows:

- *‘Geology of Devonian Senni and Brownstones Formations, highly visible in the northern scarp. Covering of plateau beds on the highest land gives the ridges a flat-topped appearance.*
- *A glacially-sculpted landscape with a dramatic northern scarp, below a line of dramatic peaks including Pen y Fan (the highest point in the [Bannau Brycheiniog] at 886m ASL). A series of horseshoe-shaped valleys radiate out from the centre, with a gradual slope downward to the south.*

- *Fast-flowing streams (fed from springs or upland bogs) radiate out from this central point. The source of the River Taff is in this LCA. Small glacial lake at Llyn Cwm Llŵch below Corn Du.*
- *Land use almost entirely open grazing on unenclosed common land.*
- *An open landscape, with trees limited to small patches of wood pasture on sheltered valley sides, although there are views across the adjacent plantations of the Talybont and Taff Reservoir Valleys.*
- *Semi-Natural Habitats of Principal Importance to Wales including marshy grassland, montane heath, modified blanket bogs, and dry heath/ acid grassland mosaic.*
- *A range of historic features, including abandoned settlements to 20th century artefacts including pill box, tank traps and military memorials. Relatively few prehistoric sites compared to other LCAs.*
- *Very little settlement or other development within this LCA. However, views from the area encompass the surrounding settled landscape. The A470 follows the western boundary of the LCA.*
- *An open, expansive landscape with a sense of airy spaciousness and of being 'on the top'. The simple texture of the vegetation contrasts with the rough, stripy appearance of the crags. A dramatic, repeating pattern of triangular-shaped faces on the northern scarp, and lines of flat-topped ridges extending into the distance to the east and west.'*

5.11.2 There are no operational turbines located within this LCA but there are large numbers of turbines and turbine groupings visible from elevated areas in the landscape that fringes the BBNP to the south. The closest of these include the Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; Pengarnddu Industrial Estate; St Merryn Meat Factory; Mynydd Bwllfa and Pen Y Cymoedd.

5.11.3 Viewpoints within this LCA include – Viewpoints 24 Pen y Fan and 18 Bannau Brycheiniog Way (Craig Y Fan Ddu).

Sensitivity

5.11.4 This LCA lies within the BBNP and value is considered to be High. This LCA overlaps with LANDMAP aspect areas BRCKNVS833 Bannau Brycheiniog and BRCKNHL829 Bannau Brycheiniog both of which have a LANDMAP evaluation of Outstanding. This LCA has some capacity to absorb the change of the type proposed without diminishing its key characteristics or special landscape qualities due to distance from the Proposed Scheme and the large scale and simple landform of the receiving landscape which is seen to the south. The widespread operational wind turbines in the view also moderate susceptibility as the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium-High resulting in a High sensitivity when combined with value.

Magnitude of Change

5.11.5 The ZTV shows that theoretical visibility is found on the south facing summits and ridgelines of this LCA. The Proposed Scheme would be separated from this LCA by the moorland plateau that is characterised by BBNP LCA9 and the forested valleys of BBNP LCA8 and effects on the key characteristics of this LCA are therefore indirect and distant.

- 5.11.6 As described in **Technical Appendix 5.3 (Volume 4)**, and as identified in the BBLCA a key sensitivity of this LCA that relates to the Proposed Scheme includes views from the summits of the Central Beacons and views towards the Central Beacons from surrounding areas where development may appear on skylines.
- 5.11.7 In terms of views from the summits and elevated ridgelines, 2 LVIA viewpoints are located within this LCA. The visual effect at these viewpoints is assessed as Moderate and Not Significant for both viewpoint 24 Pen y Fan and viewpoint 18 Beacons Way (Craig Y Fan Ddu). The not significant effect is largely due to distance and the underlying broad upland context of the receiving landscape in the view south within an extensive operational wind energy context to the south of the BBNP.
- 5.11.8 In terms of views towards the Central Beacons from surrounding areas, a large number of viewpoints that have views towards the BBNP, particularly from the valleys landscape to the south have been considered in the visual assessment. Whilst there may be views towards the Proposed Scheme within the context of the southern edges of the BBNP and its broad upland plateau landscape character, views of the Central Beacons are either not experienced in these views due to the intervening upland of southern BBNP or are in a different part of the panorama than the Proposed Scheme. On balance therefore the view of the Central Beacons would not be interrupted from the vast majority of receptors outwith the BBNP area.
- 5.11.9 Taking all of this into account the magnitude of change for this LCA is considered to be Medium-Low.

Significance of Effect

- 5.11.10 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Moderate and Not Significant**. Whilst having a High sensitivity, the magnitude of change is not considered to be at a high enough level to trigger a significant effect. This is largely due to distance and the underlying broad upland context of the receiving landscape in the view south within an extensive operational wind energy context to the south of the BBNP.

Cumulative Assessment (consented scenario)

- 5.11.11 Theoretically visible consented schemes from this LCA include Unit 18 and 19 Rassau Industrial Estate; land at Graig-yr-hufen road; Graig Fatha Farm; Llwynceyn Farm; Taf Ely Repowering; Pant y Wal Extension 2; Nant-y-Gwyddon; Abergorki; Upper Ogmor; Rhigos Road; Foel Trawsant and Melin Court. These consented schemes will only very slightly add to the cumulative backdrop of turbine development already experienced to the south. It is considered therefore that they will have minimal cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

- 5.11.12 Visible application schemes would include Silent Valley and Foel Trawsant S73. These application schemes would have little cumulative influence on the baseline

situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. Mynydd Carn y Cefn application would appear within a cluster of operational turbines, extending their influence in this part of the view, albeit only forming a small feature of the distant view. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered to be broadly similar to the assessment against the operational / under construction baseline. The magnitude of change is therefore considered to be medium-low resulting in a **Moderate and Not Significant** effect in this scenario.

Cumulative Assessment (scoping scenario)

- 5.11.13 Visible scoping schemes visible from this LCA would include – West Monmouthshire Golf Club; Abertillery; Mynydd Maen; Mynydd Llanhilleth; Hafodarthan; Hafodarthan Farm; Manmoel; Penrhyn Farm; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the south extending and intensifying the influence of the operational, consented and application schemes in the view. The introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the south. When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development and the contribution of the Proposed Scheme to this situation and spread of development slightly increases the level of change, albeit that this is moderated by distance. The cumulative magnitude of change is considered to be Medium-Low, however, the resulting effect is considered to increase to **Moderate and Significant** in this scenario.

BBNP LCA8 - Talybont and Taff Reservoir Valleys

Baseline

- 5.11.14 This LCA is located immediately south of BBNP LCA7 – Central Beacons, extending east along the Tallybont Reservoir and south to the northern edges of Merthyr Tydfil. The key landscape characteristics of this LCA are summarised in the BBLCA as follows:
- *‘Mostly underlain by Devonian age sandstones of the Brownstones Formation, with small areas of the upper Old Red Sandstone Grey Grits and Carboniferous Limestone in the south, and Twrch Sandstone on the southern margin.*
 - *A series of steep V-shaped valleys separated by flatter uplands. The Taff valleys have a strong north-south orientation and drain southwards, whilst the Talybont valley lies broadly north-east to south-west and drains into the Usk.*
 - *Chains of artificial reservoirs occur in valleys, linked by rivers. Mountain streams (and occasional waterfalls) flow down the steep valley sides, sculpting sandstone and limestone rocks.*
 - *Coniferous forestry is dominant land use, plus reservoirs, pasture and open moorland.*
 - *Surviving field boundaries usually stone walls, occasionally patched with post and wire. Some former field boundaries still visible within forestry plantations.*
 - *Extensive coniferous forests, with some larch and patches of more mixed deciduous woodland (for example on the western side of the Llwyn-onn valley). Deciduous trees also associated with watercourses.*

- *Semi-Natural Habitats of Principal Importance to Wales including modified blanket bog, marshy grassland, broadleaved and coniferous woodland, flush/spring and acid grassland.*
- *Many historic features lost under reservoirs and forests. Surviving features include farms, field boundaries and Vaynor church. Parts of the Brecon and Newport Railway survive, including Pont-sarn viaduct, the opening of the tunnel which connected the Talybont and Taff valleys, and some track (now the Brecon Mountain Railway) and station buildings.*
- *Very limited settlement within the LCA (Llwyn onn, Pontsticill and occasional farms). Other built development includes housing for reservoir workers, large-scale water treatment works below dams, and former limestone quarries.*
- *Recreation provision e.g. car parks, picnic areas, trails, Garwant Forest Visitor Centre, watersports.*
- *Generally a simple landscape composition, with large blocks of forest in simple valley landform. Forests appear strongly textured (especially where they include deciduous trees) and contrast in colour with surrounding open moorland.'*

5.11.15 There are no operational turbines located within this LCA but there are large numbers of turbines and turbine groupings visible to the south from elevated areas in the western part of this LCA. The closest of these include Mynydd Bwlfa and Pen Y Cymoedd.

5.11.16 Viewpoints within this LCA include – Viewpoints 5 Pontsticill and 15 Garn Ddu.

Sensitivity

5.11.17 This LCA lies to the south of the Central Beacons within the BBNP. This LCA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets):

5.11.18 Visual and Sensory - Talybont and Taff Valleys - BRCKNVS797 Carnafell Valley and Talybont Forest (High); BRCKNVS785 Talybont Reservoir (Outstanding); BRCKNVS838 Upper Taf Fechan Valleys (High); BRCKNVS443 Pontsticill and Pentwyn Reservoirs (Outstanding); and MRTHRVS359 Pontsticill Reservoir (Outstanding). Western area of LCA - MRTHRVS852 Upper Taf Fechan (Moderate); MRTHRVS387 Vaynor Uplands (High); MRTHRVS198 Vaynor Farmlands (Moderate); CYNONVS207 Penmoelallt (Moderate); MRTHRVS393 Taff Fawr (High); MRTHRVS624 Upper Taff Fawr (Moderate); BRCKNVS738 Taff Fawr Valley (High).

5.11.19 Historic Landscape - BRCKNHL270 Talybont Reservoir (High); BRCKNHL829 Bannau Brycheiniog (Outstanding); CynonHL006 Penmoelallt (High); CYNONHL635 Upper Cwm Taf (High); MRTHRHL002 HL002 Garn Ddu (Outstanding); MRTHRHL001 HL001 Taff Fawr valley (Moderate); BRCKNHL670 Coed Taf Fawr (Moderate)

5.11.20 Taking this into account, value is considered to be Medium-High overall recognising that value is higher within the Talybont and Taff Valleys part of the LCA.

5.11.21 The key landscape characteristics of the Talybont and Taff Valleys part of this LCA have limited capacity to absorb change of the type proposed without experiencing an alteration to this character area, however, the key features of this area also limit the

degree to which the Proposed Scheme might be experienced. The western area of this LCA has some capacity to absorb the change of the type proposed without diminishing its key characteristics or special landscape qualities due to the large scale and simple landform of the receiving landscape which lies to the east. The widespread operational wind turbines within the landscapes to the south moderate susceptibility as the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium-Low resulting in a Medium sensitivity when combined with value.

Magnitude of Change

- 5.11.22 Potential views of the Proposed Scheme are limited by forestry in the Taff Valley and there is no theoretical visibility of the Proposed Scheme within the valley of the Talybont reservoir. An area of theoretical visibility is found on elevated moorland between the Taf and Taf Fawr valleys to the west of the Site.
- 5.11.23 From this western area of the LCA, the topography of the landscape on which the Site is located appears simple in form, gradually falling in elevation to the south. The proposed turbines would appear at the edges of the BBNP beyond a broad upland ridgeline which is scarred by the remnant quarry faces associated with the disused quarries of Baltic, Twynau Gwynion and Tyle Haidd. It is notably less undulated than the dramatic views to the north of the Central Beacons. Views to the north and west from this LCA include views of the taller mountains such as Pen y Fan and Corn Du within the Central Beacons and The Black Mountain and Forest Fawr to the west. From this LCA these distinctive skylines to the Central Beacons and wider upland landscapes within the BBNP would be unaffected by the Proposed Scheme.
- 5.11.24 From this area the Proposed Scheme would appear much closer in context to the settled valley landscape and the other wind turbines and overhead power lines in the view (albeit that these are smaller in scale). Operational wind energy development is also visible to the south from this western part of the LCA and the Proposed Scheme would not be uncharacteristic as a result.
- 5.11.25 Taking all of this into account the magnitude of change is considered to be Low for this LCA.

Significance of Effect

- 5.11.26 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Minor and Not Significant**.

Cumulative Assessment (consented scenario)

- 5.11.27 Theoretically visible consented schemes include Llwyncefn Farm, Nant-y-Gwyddon, Pant y Wal Extension 2, Abergorki, Upper Ogmere and Rhigos Road. These consented schemes are to the south and have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

- 5.11.28 The Mynydd Carn y Cefn application is visible from the western part of this LCA in the distance to the east as small blade tips. Whilst in the same part of the view as the Proposed Scheme it would be barely discernible from this location due to distance and limited visibility. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

- 5.11.29 The scoping schemes of Abertillery, Manmoel, Mynydd Llanhilleth and Mynydd Maen would appear to the east in the distant backdrop of the Proposed Scheme. The Twyn Hywel Energy Park would appear to the south extending across the southern horizon. When considering the introduction of the Proposed Scheme to this scenario, the level of change to key characteristics is considered broadly similar to the assessment against the operational / under construction baseline, largely due to the distance of the cumulative schemes in relation to the closer proximity of the Proposed Scheme. The magnitude of change is therefore considered to be Low resulting in a **Minor and Not Significant** effect in this scenario.

BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr

Baseline

- 5.11.30 This LCA lies at the southern edges of the BBNP stretching between the Taf Fechan valley to the east and the Clydach Gorge to the west. The key landscape characteristics of this LCA are summarised in the BBLCA as follows:
- *‘A north-facing scarp formed by Carboniferous Limestone; the moors to the south having a thin cover of Twrch Sandstone and displaying karstic features including cliffs, caves, shake holes and limestone pavement. Area of lowermost South Wales Coal Measures sandstones (‘Farewell Rock’) and mudstones in the east.*
 - *An elevated plateau-like landform, mostly above 400m ASL. From high ground, horizons appear low and smooth.*
 - *Boggy ground and springs forming the sources of several rivers. Few waterbodies, including small upland pools and Llangyndir reservoir.*
 - *Land use almost entirely open grazing on unenclosed common land. Extensive quarries (no longer worked), and small area of plantation on southern edge.*
 - *An open landscape with no field boundaries and very few trees.*
 - *Semi-Natural Habitats of Principal Importance to Wales including dry dwarf shrub heath, marshy grassland, unmodified blanket bog, modified blanket bog, acid/ neutral flush and limestone cliff habitats.*
 - *A concentration of prehistoric archaeological sites, including numerous Cairns on high ground, plus more recent archaeology associated with quarrying.*
 - *Very limited settlement, but views to settlement in the Usk valley to the north, and other development (e.g. roads, pylons) beyond the southern boundary of the National Park.*
 - *An exceptionally open landscape, with subtle changes in texture and seasonal colour resulting from variations in moorland vegetation.’*

5.11.31 There are no operational turbines within this LCA. There are however many operational turbines visible to south from elevated parts of this LCA including the closest of these within around 5 km at the Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; St Merryn Meat Factory and Pengarnddu Industrial Estate. Others turbines are more distant and include the Pen-y-fan Industrial Estate; Cruglwyn; Pen Y Fan Ganol Farm; Bedlwyn Farm; Oakdale; Gelli-wen Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Bryn Ysgawen Farm; Cefn Bach Farm; Groesfaen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; and Mynachdy Farm as well as the more distant wind farms at Mynydd Portref and extension and Taff Ely. Operational wind energy development to the south-west also includes the wind farms at Ffoch Nest; Bwllfa Farm; Ferndale (Penrhys); Pant y wal and extension; Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwllfa; Pen Y Cymoedd; Fynnon Oer; Maesgwyn & Extension; Mynydd y Gwair; Mynydd y Betws; Perthigwynion Farm; and Mynydd Y Gwrhyd.

5.11.32 Viewpoints within this LCA include – Viewpoints 8 Cefn yr Ystrad and 19 B4560, Cefn Pwll-coch.

Sensitivity

5.11.33 This LCA lies at the edges of the BBNP. This LCA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets): Visual and Sensory - Majority area - BRCKNVS372 Mynydd Llangynidr and Mynydd Llangattock (High). Other areas - BLNGWVS399 mynydd llangynidr (High); MNMTHVS008 Glangattwg Mountain (High); BRCKNVS908 Cwm Carneilw (Moderate); BLNGWVS993 Clydach valley (Moderate); MNMTHVS001 Clydach Scree Slopes (Moderate). Taking this into account, value is considered to be Medium-High.

5.11.34 Historic Landscape – BRCKNHL133 Mynydd Llangynidr (Outstanding); BLNGWHL007 HAA 7 Mynydd Llangattwg (Moderate); BLNGWHL010 HAA 10 Clydach Fieldscape North (High); MNMTHHL030 Clydach Gorg (Outstanding).

5.11.35 This LCA has some capacity to absorb the change of the type proposed without diminishing its key characteristics or special landscape qualities due to the large scale and simple landform of the receiving landscape which lies immediately to the south. The relatively close proximity to the Proposed Scheme in parts of this LCA increases susceptibility to change and the widespread operational wind turbines within the landscapes to the south moderate susceptibility as the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium-High resulting in a Medium-High sensitivity when combined with value.

Magnitude of Change

5.11.36 Views to the north, east and west from this LCA include views of the taller mountains such as Pen y Fan and Corn Du within the Central Beacons; The Black Mountain and Forest Fawr to the west and The Black Mountains and Sugar Loaf to the east. From this LCA these distinctive skylines to the Central Beacons and wider upland landscapes within the BBNP would be unaffected by the Proposed Scheme.

- 5.11.37 The view south towards the Site from this LCA is across the extensive moorland plateau of the LCA and/or of the neighbouring moorland of the site area. The view to the south beyond the plateau also includes views of the settled valleys landscape and the ridges that orientate north-south that define the valleys. Electricity pylons, open cast mining and quarries are a feature of the valleys landscape to the south. Settlement is largely located in the valleys and so tends to be lower elevated, from parts of this LCA connecting areas of settlements can be seen along the A465 road corridor.
- 5.11.38 The introduction of the Proposed Scheme, whilst intensifying the presence of existing development would not appear uncharacteristic in views south from this LCA.
- 5.11.39 Taking all of this into account, the magnitude of change within this LCA is considered to be Medium-High for the area of the LCA that is within close proximity (around 3 km from the northernmost proposed turbines). For other parts of this LCA that have visibility of the Proposed Scheme the magnitude of change is considered to be Medium-Low.

Significance of Effect

- 5.11.40 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Major and Significant** effect for a localised area of the LCA and a **Moderate Not Significant** effect in other areas of this LCA.

Cumulative Assessment (consented scenario)

- 5.11.41 Theoretically visible consented schemes seen from elevated parts of this LCA include Unit 18 and 19 Rassau Industrial Estate; land at Graig-yr-hufen road; Graig Fatha Farm; Llwynceyn Farm; Taf Ely Repowering; Nant-y-Gwyddon; Abergorki; Upper Ogmores; Foel Trawsnant and Rhigos Road. These consented schemes are to the south and east and will only very slightly add to the cumulative backdrop of turbine development already seen in the view. These consented schemes would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

- 5.11.42 Theoretically visible application schemes seen from elevated parts of this LCA include Silent Valley; Mynydd Carn-y-Cefn and Foel Trawsnant S73. Silent Valley and Foel Trawsnant S73 would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. Mynydd Carn-y-Cefn would add turbines to the view southeast within the same context as Pen Bryn Oer and Cruglwyn. These application schemes are distant from this LCA and will only very slightly add to the cumulative backdrop of turbine development already seen in views. It is considered therefore that they will have minimal cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of

change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

5.11.43 Scoping schemes visible from elevated parts of this LCA include - West Monmouthshire Golf Club; Abertillery; Penrhyn Farm; Penrhyn Farm 2, Hafodarthan; Hafodarthan Farm; Manmoel; Mynydd Llanhillieth; Mynydd Maen; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the east, southeast and south and would appear to visually connect across the ridges that are formed by the valleys landscape found to the south of this LCA and intensify the cumulative influence of wind farm development in relation to this LCA. When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development and the contribution of the Proposed Scheme to this situation and spread of development slightly increases the level of change. On balance it is considered that the magnitude of change within this scenario is considered to be Medium-High for the area of the LCA that is within close proximity (around 3 km from the northernmost proposed turbines) and Medium for other areas. This results in **Moderate-Major and Significant** effects for a localised 3 km area with **Moderate and Significant** effects in other areas of this LCA for this scenario.

HOV LCA13 - Upland moorland between Taff and Rhymney Valleys

Baseline

5.11.44 This LCA is described in HOVSCS as a '*marginal upland landscape. The boundary has been determined by combining the historical marginal area with upland moorland / grassland type. Upland landscape outside the boundary here has grazed fields.*'

5.11.45 Key characteristics highlighted within HOVSCS are summarised as follows:

- *'Large scale landscape. Upland gently undulating broad ridges between valleys.*
- *Upland grazing and moorland dominates. Very little built development in the area.*
- *Broad ridge tops have a smooth profile. Unit provides the setting for valley landscapes and their villages/towns. Some human access but limited to roads and footpaths.*
- *Exposed upland landscape with gently undulating landform and no cover. There are attractive and detractive views in and out of the area. Given the elevated position there are views from and into the valley bottoms and to uplands across valleys and beyond. The northern end of the unit is particularly affected by extraction.*
- *Few receptors. Residents, road users and walkers. Distant views to and from BBNP. Unit overlooks Merthyr Tydfil Landscape of Historic Interest to the west and includes a small area of the designation. Also overlooks and includes Gelli-gaer Common Landscape of Historic Interest, numerous SAMs possibly prehistoric, Roman and Medieval.*
- *Some sense of remoteness but also accessible by minor roads that appear well used.'*

5.11.46 The northern parts of this LCA are dominated by the Ffos-y-fran opencast workings and quarry at Garth Fawr. The landscape in this area is disturbed and has large amounts of spoil deposits some of which have formed distinctive flat topped hill mounds which can be seen from many places in the local context of Merthyr Tydfil and the Site. There are no operational turbines within this LCA. There are however many operational turbines visible from elevated parts of this LCA including: St Merryn Meat Factory; Pengarnddu Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; Former Tech Board; Rassau Industrial Estate; Cruglwyn; Bedlwyn Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Gelli-wen Farm; Pen Y Fan Ganol Farm; Oakdale; Cefn Bach Farm; Pen-y-fan Industrial Estate; Groesfaen Farm; Bryn Ysgawen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; Mynydd Portref and extension; Mynachdy Farm; Taff Ely; Ffoch Nest; Pant y wal and extension; Bwllfa Farm; Ferndale (Penrhys); Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwllfa; Pen Y Cymoedd; Maesgwyn & Extension; and Mynydd y Gwair.

5.11.47 Viewpoints within this LCA include - Viewpoints 13 Fochriw and 16 Pen Garnbugail.

Sensitivity

5.11.48 Central parts of this LCA lie within SLA 18 Gelligaer and SLA 31 Gelligaer & Craig Fargod and eastern parts are within the Northern Rhymney Valley VILL. Value is considered to be Medium-High. This LCA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets): Visual and Sensory - CYNONVS361 Rhoslas (Moderate evaluation); CYNONVS605 Cefn Y Brithdir (High evaluation); MRTHRVS858 Gelligaer Common (High evaluation); MRTHRVS355 Ffos-y-fran Merthyr Upper East Flank (Low evaluation). Historic Landscape - CYNONHL831 Gelligaer Common (Outstanding); MRTHRHL014 HL014 Cefn-y-Fan (Outstanding); MRTHRHL015 HL015 Gelligaer Common (west) (Outstanding); CynonHL005 Cefn y Brithdir (High); MRTHRHL010 HL010 Graweth (Moderate); MRTHRHL008 HL008 East Merthyr (Low).

5.11.49 This LCA has some capacity to absorb the change of the type proposed without diminishing its key characteristics or special landscape qualities due to separation from the Proposed Scheme and the large scale and simple landform of the receiving landscape within which it would be seen to the north. The widespread operational wind turbines in the view also moderate susceptibility as the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium-Low.

5.11.50 When Value and Susceptibility are combined, sensitivity is considered to be Medium.

Magnitude of Change

5.11.51 The ZTV shows that theoretical visibility is relatively widespread across northern parts of this LCA reducing to patches on elevated north facing ridges in southern areas.

5.11.52 Factors that increase the magnitude of change are:

- change to the experience of the landscape character of the LCA resulting from addition of large scale wind turbines to the north;

- the Proposed Scheme would add further development to the existing spread of wind energy development currently visible from the LCA;
- the Proposed Scheme turbines would create a new focus on the broad upland plateau that forms the horizon to the north; and
- the Central Beacons are visible from parts of this LCA within a similar context to that of the Proposed Scheme.

5.11.53 Factors that decrease the magnitude of change are:

- the change to key characteristics would be minimal from areas of the LCA to the south where theoretical visibility is of lesser extent;
- where visibility occurs, the Proposed Scheme would be seen beyond the large scale industrial activity of the opencast workings and quarries which forms an industrial context to this LCA, which is often experienced at close range in areas to the north;
- the Proposed Scheme would appear to sit clearly within the larger upland landscape to the north which is of a relatively simple broad upland landscape form;
- Whilst the Proposed Scheme would appear on the same skyline as the more distant Brecon hills and mountains from this LCA, the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits would not encroach on their distinct form as they appear in a different part of the skyline;
- the presence of existing wind turbines in views from this LCA means that the proposed turbines would not be introducing elements that are uncharacteristic; and
- for lower elevated parts of the LCA to the north, the presence of existing tall structures on and either side of the upland plateau such as the electricity lines and turbines, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to this view.

5.11.54 Taking all of this into account, the experience of the key characteristics of the LCA would only be affected to a small extent and the magnitude of change is predicted to be Medium-Low.

Significance of Effect

5.11.55 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Minor and Not Significant**.

Cumulative Assessment (consented scenario)

5.11.56 Theoretically visible consented schemes seen from elevated parts of this LCA include Unit 18 and 19 Rassau Industrial Estate, Land at Graig-yr-hufen Road; Graig Fatha Farm; Llwyncefn Farm; Taff Ely Repowering; Pant y Wal Extension 2, Nant-y-Gwyddon; Upper Ogmores, Abergorki; Melin Court; and Rhigos Road. These consented schemes have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

- 5.11.57 Theoretically visible application schemes seen from elevated parts of this LCA include limited visibility of the Silent Valley turbine and the Mynydd Carn y Cefn application to the east. Mynydd Carn y Cefn further spreads and intensifies the visual effect experienced from this view. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered similar to the assessment against the operational / under construction baseline, largely due to the separation between the Proposed Scheme and Mynydd Carn y Cefn and its appearance within close context to existing turbines. The magnitude of change is therefore considered to be medium-low resulting in a **Moderate-Minor and Not Significant** effect in this scenario.

Cumulative Assessment (scoping scenario)

- 5.11.58 Scoping schemes visible from this LCA would include – Penrhyn Farm; Penrhyn Farm 2; West Monmouthshire Golf Club; Manmoel; Abertillery; Mynydd Llanhilleth; Hafodarth; Hafodarth Farm; Mynydd Maen; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the east and south and would appear to visually connect across the ridges that are formed by the valleys landscape. These schemes also provide visual linkage between the operational, and application schemes in the view to the east. The introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the east. The cumulative magnitude of change is considered to be Medium resulting in a **Moderate and Not Significant** effect.

HOV LCA16 - Rhymney Valley from Rhymney to Bargoed

Baseline

- 5.11.59 This LCA is described in HOVSCS as *‘This long linear landscape unit is the valley and hillside landscapes that are associated with the Afon Rhymney and include the areas of settlement in the valley bottom as well as the slopes of the hillside above. The unit boundary incorporates some of the top of the slope into narrow Afon Sirhowy Valley to the east.’*
- 5.11.60 Key characteristics highlighted within HOVSCS are summarised as follows:
- *‘Medium scale landscape. Valley landscape extending north south.*
 - *Settled valley bottom with a variety of development types. Remainder is a combination of grazed slopes, upland valleys and plateau.*
 - *No distinct skylines. Valley setting for development and approaches to Rhymney and Bargoed.*
 - *Variations across the unit. Busy in the valley bottom along major transport route (A469) but quieter on the valley sides.*
 - *Enclosed valley bottoms with views up and down the valley interrupted by built form. Higher up the steep valley sides the landscape is more open and there are views across the valley and to the uplands.*
 - *The upland areas adjacent have views down into this unit.*

- *Few receptors. Residents, road users and walkers. Rhymney Valley Ridge walk (promoted route) on the west valley ridge. No views to / from landscape and cultural heritage features.*
- *Busy landscape that in the main is easily accessible and not particularly remote.'*

5.11.61 Operational turbines within this LCA include Pen Bryn Oer, Bedlwyn Farm, Pen-yr-heol Farm and Gelli-wen Farm. Operational wind turbines visible within close proximity to this LCA include St Merryn Meat Factory, Pengarnddu Industrial Estate, Tafarnaubach, Former Tech Board, Rassau Industrial Estate, Penrhiwgwaith Farm, Groesfaen Farm and Cefn Bach Farm. Other more distant operational wind energy developments visible from this LCA include Castell Llwyd Farm, Mynydd Portref Extension, Taff Ely, Ffoch Nest, Pant y wal and Extension, Mynachdy Farm and Cefn Fforest Farm.

5.11.62 Viewpoints within this LCA include - Viewpoints 2 A465 / Heads of the Valleys Road, 4 A469 / Bute Town (NCN 468), 7 Rhymney and 22 PRow (Bedwellty FP 28).

Sensitivity

5.11.63 North eastern parts of this LCA lie at the edges of SLA 23 Upper Rhymney Valley and parts of the LCA around Rhymney settlement lie within the Northern Rhymney Valley VILL. Southern parts of the LCA near Bargoed also lie at the edges of SLA 18 Gelligaer albeit that there is no visibility from this area. These local designations occur at the edges of the LCA or where visibility of the surrounding landscape is limited by other landscape elements, the majority of the LCA is not designated for its special qualities and value is considered to be Medium for this LCA.

5.11.64 This LCA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets): Visual and Sensory - CYNONVS209 West of Rhymney (Moderate evaluation); CYNONVS193 Rhymney (Low evaluation); CYNONVS716 East of Rhymney (Moderate evaluation); CYNONVS785 Parc Cwm Darran (Moderate evaluation); CYNONVS144 Pentraepod (Moderate evaluation); CYNONVS864 New Tredegar (Low Evaluation); CYNONVS308 N. of Bargoed (Moderate evaluation); CYNONVS114 Blackwood (Low Evaluation); and CYNONVS143 Llanfabon (Moderate evaluation). Historic Landscape – CYNONHL701 Rhymney Valley (High); CYNONHL483 Rhymney Hill (Moderate); CYNONHL885 Bedwellite (Moderate).

5.11.65 This LCA has capacity to absorb the change of the type proposed without diminishing its key characteristics or special landscape qualities due to separation from the Proposed Scheme and the large scale and simple landform of the receiving landscape within which it would be seen to the north. The operational wind turbines experienced from this LCA also moderate susceptibility as the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium-Low.

5.11.66 When Value and Susceptibility are combined, sensitivity is considered to be Medium.

Magnitude of Change

5.11.67 The ZTV shows that theoretical visibility is relatively widespread across much of this LCA. However, actual visibility towards the site and of the Proposed Scheme from the valley floor of this LCA is limited by intervening vegetation and urban elements. This limits the visibility of the Proposed Scheme to the northern area of the LCA and elevated valley sides that have north facing views free from intervening vegetation.

5.11.68 Factors that increase the magnitude of change are:

- change to the experience of the landscape qualities resulting from addition of large scale wind turbines to the north;
- the Proposed Scheme would add further development to the existing spread of wind energy development currently visible from this LCA;
- the Proposed Scheme turbines would create a new focus on the broad upland plateau that forms the horizon to the north; and
- the Central Beacons are visible from elevated parts of this LCA within a similar context to that of the Proposed Scheme.

5.11.69 Factors that decrease the magnitude of change are:

- the change to key characteristics would be minimal from areas of the LCA on the valley floor where visibility is limited by intervening landscape elements, particularly in the area of the LCA to the south of Rhymney;
- the settled and vegetated nature of this LCA north of Rhymney further limits visibility of the Proposed Scheme;
- in northern parts of the LCA where visibility occurs the Proposed Scheme turbines are set back from the scattered settlement visible in the view and would not appear to encroach on it as a result;
- where visibility occurs, the Proposed Scheme would appear to sit clearly within the larger upland landscape to the north which has a rough textured moorland landcover and is of a relatively simple broad upland landscape form considered suitable for wind energy development of the type proposed;
- whilst the Proposed Scheme would appear on the same skyline as the more distant Brecon hills and mountains from elevated parts of the LCA, the Proposed Scheme would not encroach on the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits as they appear in a different part of the skyline or are seen as diminutive and distant features;
- the presence of existing wind turbines in views from this LCA means that the proposed turbines would not be introducing elements that are uncharacteristic; and
- for the northern reaches of the LCA which is lower elevated, the presence of existing tall structures on and either side of the upland plateau such as the electricity lines, industrial units and turbines that align with the A465 road corridor, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to views from this area of LCA.

5.11.70 Taking all of this into account, the experience of the landscape characteristics of this LCA would be affected to a small extent for the majority of the LCA to the south of Rhymney and to a greater extent to the north of Rhymney. The magnitude of change is predicted to be Low to the south of Rhymney and Medium-Low for the area to the

north of Rhymney where the changes to key characteristics are experienced at closer range.

Significance of Effect

- 5.11.71 The effect for this LCA resulting from the introduction of the Proposed Scheme is considered to be **Minor and Not Significant** for the area to the south of Rhymney and **Moderate-Minor and Not Significant** for the area north of Rhymney.

Cumulative Assessment (consented and application scenarios)

- 5.11.72 The consented turbines at Unit 18 and 19 Rassau Industrial Estate will appear as a small blade tip to the east from this LCA, close to the operational Rassau Industrial Estate turbine. Mynydd Carn-y-Cefn application would appear to the east, to a limited degree, amongst other operational turbines in particular the Cruglwyn turbines. These consented and application turbines would have little influence on the cumulative baseline situation due to their limited visibility and close context to other operational schemes. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

- 5.11.73 Theoretically visible scoping schemes from elevated parts of this LCA include Penrhyn Farm; Penrhyn Farm 2; Abertillery and Manmoel. The introduction of these scoping schemes would further add to the cumulative spread of development to the east, particularly Manmoel which is located on a neighbouring ridge to the east. The introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the east, particularly for southern parts of the LCA. The magnitude of change is therefore predicted to be Medium-Low for all areas of this LCA resulting in a **Moderate-Minor and Not Significant** effect.

HOV LCA17 - Upland north of the Heads of the Valleys corridor

Baseline

- 5.11.74 The Proposed Scheme is located within this LCA. It is described in HOVSCS as ‘*the upland landscape north of the Heads of the Valleys Road (A465)*’ and incorporates the head of the Rhymney ‘*which have field systems around them in contrast to the surrounding open moorland.*’ ‘*The unit is a buffer between the BBNP to the north and development in the Heads of the Valleys road corridor to the south.*’
- 5.11.75 Key characteristics highlighted within HOVSCS are summarised as follows:
- *‘Large scale to vast landscape with smaller areas of medium scale.*
 - *Varied upland topography with rolling undulating landform.*
 - *Very little settlement, mainly concentrated on Heads of the Valleys road corridor and along small upland valleys.*
 - *Skyline is smooth with few focal points. Two single medium scale wind turbines in the area interrupt the skyline from certain vantage points. The unit is adjacent to the BBNP and part of the setting of the BBNP.*

- *Views of the unit from the Bannau Brycheiniog to the north. Few receptors. Residents, road users and walkers. Visitors to the BBNP.*
- *Intervisible with BBNP. Unit provides setting for BBNP and is a buffer between the developed Heads of the Valley road corridor and BBNP.*
- *Merthyr Tydfil Landscape of Historic Interest at the west end of the unit'*
- *Sense of remoteness along north boundary with the BBNP away from the Heads of the Valley road corridor.'*

5.11.76 The area of this LCA described in HOVSCS is larger than the area included in this LVIA due to the more recent characterisation study for Torfaen and Blaenau Gwent which supersedes HOVSCS. As a result, it is only the western half of this LCA description that applies and for example - the area assessed does not include the upland valley of the Sirhowy or Clydach Gorge. Key characteristics noted in HOVSCS that relate to the western area of this LCA are therefore not included.

5.11.77 There are no operational turbines within this LCA. There are however many operational turbines visible to south from elevated parts of this LCA including the closest of these - Former Tech Board; Rassau Industrial Estate; Tafarnbach Industrial Estate; Pen Bryn Oer; St Merryr Meat Factory and Pengarnddu Industrial Estate. Others turbines are more distant and include the Pen-y-fan Industrial Estate; Cruglwyn; Pen Y Fan Ganol Farm; Bedlwyn Farm; Oakdale; Gelli-wen Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Bryn Ysgawen Farm; Cefn Bach Farm; Groesfaen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; and Mynachdy Farm as well as the more distant wind farms at Mynydd Portref and extension and Taff Ely. Operational wind energy development to the south-west also includes the wind farms at Ffoch Nest; Bwllfa Farm; Ferndale (Penrhys); Pant y wal and extension; Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwllfa; Pen Y Cymoedd; Fynnon Oer; Maesgwyn & Extension; Mynydd y Gwair; Mynydd y Betws; Perthgwynion Farm; and Mynydd Y Gwrhyd.

Sensitivity

5.11.78 The value of this LCA is considered to be Medium-High. This LCA is within the Morlais and Cwm Taff Fechan and Upper Rhymney Valley SLAs and its northern edges form the boundary of the BBNP.

5.11.79 This LCA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets):

- The western half of the LCA including the site area - MRTHRVS313 Merthyr North Flank (Moderate); CYNONVS361 Rhoslas (Moderate); MRTHRHL009 HL009 Pen March (High); CYNONHL866 Blaen Rhymni (Moderate); CYNONHL706 Pen March (Moderate).
- The western edges of the LCA – MRTHRHL003 HL003 Taff Fechan valley (High); MRTHRVS288 Taff Fechan (High); MRTHRHL019 HL019 Twynau Gwynion (High)

5.11.80 This LCA is a large scale landscape dominated by simple land cover such as large areas of undulating grassland and moorland. The overall upland character is typified by these characterising elements which is particularly evident in contrast with the more settled and lower lying landscape to the south and it is considered that this LCA is an appropriate receiving landscape for wind energy development. The baseline

wind farm influence located along the Heads of the Valleys road corridor and southern edges of the LCA reduces susceptibility to change as turbines are not uncharacteristic to the LCA. The proximity of the LCA to the BBNP increases susceptibility to change. On balance, the susceptibility of this LCA to the Proposed Scheme is Medium-High.

5.11.81 The combination of value and susceptibility results in a sensitivity of Medium-High.

Magnitude of Change

5.11.82 The ZTV shows that theoretical visibility is extensive across this LCA with areas of reduced theoretical visibility in the west where topography drops sharply into the valley of Cwm Taf Fechan at Pontsticill.

5.11.83 Factors that increase the magnitude of change are:

- Change to the experience of the landscape character of the LCA resulting from the addition of large scale wind turbines and associated infrastructure within it;
- The Proposed Scheme would increase the influence of wind energy development across the LCA;
- The potential reduction in open moorland character within the character type; and
- The level of Proposed Scheme construction activity experienced within this LCA.

5.11.84 Factors that decrease the magnitude of change are:

- the Proposed Scheme would appear to sit clearly within a large scale upland landscape which has a rough textured moorland landcover and is of a relatively simple broad upland landscape form considered suitable for wind energy development of the type proposed;
- the Proposed Scheme turbines are set back from the scattered properties and settlements which lie at the edges of this LCA and would not appear to encroach on settled areas as a result;
- the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits are not evident from the western plateau of this LCA where the site is located.
- the presence of existing wind turbines in close context to this LCA means that the Proposed Scheme would not be introducing elements that are entirely uncharacteristic, albeit at a larger scale than currently experienced; and
- for the southern reaches of the LCA which is lower elevated, the presence of existing tall structures on and either side of the upland plateau such as the electricity lines, industrial units and turbines that align with the A465 road corridor, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to views from this area of LCA.

5.11.85 Taking these factors into account the magnitude of change for this LCT is considered to be High-Medium.

Significance of Effect

5.11.86 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Major and Significant**.

Cumulative Assessment (consented and application scenarios)

5.11.87 The consented turbines at Unit 18 and 19 Rassau Industrial Estate will appear as a small blade tip to the east from this LCA, close to the operational Rassau Industrial Estate turbine. Mynydd Carn-y-Cefn application would appear to the east, to a limited degree, amongst other operational turbines in particular the Cruglwyn turbines. These consented and application turbines would have little influence on the cumulative baseline situation due to their limited visibility and close context to other operational schemes. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

5.11.88 Theoretically visible scoping schemes from elevated parts of this LCA include Penrhyn Farm; Penrhyn Farm 2; Abertillery and Manmoel. The introduction of these scoping schemes would further add to the cumulative spread of development to the east, particularly Manmoel which is located on a neighbouring ridge to the east. However, the magnitude of change is predicted to be Medium-High in this scenario resulting in a **Moderate-Major and Not Significant** effect in this scenario.

BGTC LCA 4 - Trefil and Carno

Baseline

5.11.89 The Proposed Scheme is located to the east of this LCA. Key characteristics highlighted within SCSBGT are summarised as follows:

- Scale - Large scale open landscape – exposed upland.
- Landform - Undulating landscape with multiple small river valleys. Includes artificial landform relating to A465.
- Landcover - Development focused on A465 corridor, beyond this largely pastoral open moorland, includes several reservoirs.
- Built environment - Away from the A465 corridor the area is largely unpopulated. Also includes the SM Afon Sirhowy hut circle, Trefil tramway and 16th Century Listed farmhouse, Milgatlw, evidence of historic settlement.
- Skylines and settings - An undulating landscape without distinctive skylines, although these are undeveloped.
- Movement - Away from the A465 corridor human activity is occasional.
- Visibility, quality of views - An unenclosed landscape with extensive attractive views available, but to a low number of receptors.
- Views in/out - Limited views in and out of the area.
- Typical receptors - Limited numbers of residential receptors and recreational visitors on footpaths and open access land. Workers in quarries and industrial estates. Frequent views from A465
- Scenic quality and character - High scenic quality with strong landscape character and integrity.

5.11.90 There are no operational turbines within this LCA. There are however many operational turbines visible to south from elevated parts of this LCA including the closest of these - Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; St Merryon Meat Factory and Pengarnddu Industrial

Estate. Others turbines are more distant and include the Pen-y-fan Industrial Estate; Cruglwyn; Pen Y Fan Ganol Farm; Bedlwyn Farm; Oakdale; Gelli-wen Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Bryn Ysgawen Farm; Cefn Bach Farm; Groesfaen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; and Mynachdy Farm as well as the more distant wind farms at Mynydd Portref and extension and Taff Ely. Operational wind energy development to the south-west also includes the wind farms at Ffoch Nest; Bwllfa Farm; Ferndale (Penrhys); Pant y wal and extension; Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwllfa; Pen Y Cymoedd; Fynnon Oer; Maesgwyn & Extension; Mynydd y Gwair; Mynydd y Betws; Perthgwynion Farm; and Mynydd Y Gwrhyd.

Sensitivity

5.11.91 The value of this LCA is considered to be Medium-High. This LCA is within the Trefil & Garnlydan Surrounds SLA and its northern edges form the boundary of the BBNP.

5.11.92 This LCA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets):

- BLNGWVS399 Mynydd Llangynidr (High); BLNGWVS214 Nant Trefil (Moderate); BLNGWVS307 Carno Forest (Moderate); BLNGWHL001 HAA 1 Trefil Ddu (High); BLNGWHL002 HAA 2 Nant Trefil Quarry (High); BLNGWHL005 HAA 3 Trefil (High); BLNGWVS352 Trefil (High); BLNGWHL007 HAA 7 Mynydd Llangatwg (Moderate); BLNGWHL003 HAA 4 Rassau Industrial Estate (Low).

5.11.93 This LCA is a large scale landscape dominated by simple land cover such as large areas of undulating grassland and moorland. The overall upland character is typified by these characterising elements which is particularly evident in contrast with the more settled and lower lying landscape to the south and it is considered that this LCA is an appropriate receiving landscape for wind energy development. The baseline wind farm influence located along the Heads of the Valleys road corridor and southern edges of the LCA reduces susceptibility to change as turbines are not uncharacteristic to the LCA. The proximity of the LCA to the BBNP increases susceptibility to change. On balance, the susceptibility of this LCA to the Proposed Scheme is Medium-High.

5.11.94 The combination of value and susceptibility results in a sensitivity of Medium-High.

Magnitude of Change

5.11.95 The ZTV shows that theoretical visibility is extensive across this LCA with areas of reduced theoretical visibility in the Sirhowy upper valley (Nant Trefil), including the Trefil area and around Carno reservoir where topography drops sharply.

Factors that increase the magnitude of change are:

- Change to the experience of the landscape character of the LCA resulting from the addition of large scale wind turbines and associated infrastructure to the west;
- The Proposed Scheme would increase the influence of wind energy development across the LCA; and
- The level of Proposed Scheme construction activity experienced within the neighbouring LCA.

Factors that decrease the magnitude of change are:

- the Proposed Scheme would appear to sit clearly within the larger upland landscape to the west which has a rough textured moorland landcover and is of a relatively simple broad upland landscape form considered suitable for wind energy development of the type proposed. This large scale upland is a contiguous feature across this LCA and the host LCA HOV 17 to the east;
- away from the large scale plateau landscape, the change to key characteristics within the valleys that cross the LCA would be minimal as a result of reduced visibility;
- the Proposed Scheme turbines are set back from the scattered properties and settlements which lie at the edges of this LCA and would not appear to encroach on settled areas as a result;
- the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits would appear in a different part of the skyline to the Proposed Scheme when viewed from this LCA;
- the presence of existing wind turbines in close context to this LCA (and the host LCA HOV 17) means that the Proposed Scheme would not be introducing elements that are entirely uncharacteristic, albeit at a larger scale than currently experienced;
- eastern parts of this LCA are more distant and separated by the upper valley of the Sirhowy, moderating the influence the Proposed Scheme would have on key characteristics; and
- for the southern reaches of the LCA which is lower elevated, the presence of existing tall structures on and either side of the upland plateau such as the electricity lines, industrial units and turbines that align with the A465 road corridor, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to views from this area of LCA.

5.11.96 Taking these factors into account the magnitude of change for this LCT is considered to be High-Medium locally to approximately 3 km the east of the Proposed Scheme. The magnitude would reduce to Medium in other parts of this LCT that have visibility (east of the Trefil).

Significance of Effect

5.11.97 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Major and Significant** effect for a localised area of the LCA (to approximately 3 km the east of the Proposed Scheme) and a **Moderate and Not Significant** effect in other areas of this LCA (east of Trefil).

5.11.98 The significant effect also applies to the same localised area of LANDMAP aspect area BLNGWVS399 Mynydd Llangynidr to approximately 3 km the east of the Proposed Scheme.

Cumulative Assessment (consented scenario)

5.11.99 Theoretically visible consented schemes seen from elevated parts of this LCA include Unit 18 and 19 Rassau Industrial Estate; land at Graig-yr-hufen road; Graig Fatha Farm; Llwynceyn Farm; Taf Ely Repowering; Nant-y-Gwyddon; Abergorki; Upper Ogmores; Foel Trawsnant and Rhigos Road. These consented schemes are to the south and east and will only very slightly add to the cumulative backdrop of turbine development already seen in the view. These consented schemes would have little

cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

5.11.100 Theoretically visible application schemes seen from elevated parts of this LCA include Silent Valley; Mynydd Carn-y-Cefn and Foel Trawsant S73. Silent Valley and Foel Trawsant S73 would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. Mynydd Carn-y-Cefn would add turbines to the view southeast. These application schemes are distant from this LCA and will only very slightly add to the cumulative backdrop of turbine development already seen in views. It is considered therefore that they will have minimal cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

5.11.101 Scoping schemes visible from elevated parts of this LCA include - West Monmouthshire Golf Club; Abertillery; Penrhyn Farm; Penrhyn Farm 2, Hafodarthan; Hafodarthan Farm; Manmoel; Mynydd Llanhillieth; Mynydd Maen; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the east, southeast and south and would appear to visually connect across the ridges that are formed by the valleys landscape found to the south of this LCA and intensify the cumulative influence of wind farm development in relation to this LCA. When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development and the contribution of the Proposed Scheme to this situation and spread of development slightly increases the level of change. On balance it is considered that the magnitude of change within this scenario is considered to be High-Medium locally to approximately 3 km the east of the Proposed Scheme and Medium in other parts of this LCT that have visibility (east of the Trefil). This results in a **Moderate-Major and Significant** effect for a localised area of the LCA (to approximately 3 km the east of the Proposed Scheme) and due to the increased cumulative influence of scoping schemes a **Moderate and Significant** effect in other areas of this LCA (east of Trefil).

HOV LCA18 – Mynydd Bedwellte and associated upland

Baseline

5.11.102 This LCA is described in HOVSCS as an *‘Upland landscape type located to the west of Tredegar overlooking the town. Generally open grazed landscape with few field boundaries and scattered built form. The unit provides the upland setting for Tredegar and Rhymney.’*

5.11.103 Key characteristics highlighted within HOVSCS are summarised as follows:

- *'Vast to large scale landscape.*
- *Broad ridge of upland between valleys.*
- *Simple upland moorland and grazed landscape between Tredegar and Rhymney incorporating upper valley sides.*
- *Very little built development in unit.*
- *Distinctive open skyline. Cairns and the Cefn Golau cholera cemetery, seen from valleys on either side. Upland setting for neighbouring settled valleys.*
- *Secluded place with some human access. A minor road crosses the area and there are farms on lower slopes.*
- *Upland landscape with few trees or buildings and extensive views out of the area and into the area. This elevated area is visible from other uplands in the study area and from some distant vantage points in the BBNP.*
- *Few receptors. Residents, road users and walkers.*
- *Panoramic views across to other uplands to the west, and north to [Bannau Brycheiniog], & into valley from Cefn Golau.*
- *Overall, there are remote parts to this unit away from the road. Isolated in places.'*

5.11.104 The operational turbines of Pen Bryn Oer and Penrhiwgwaith Farm are within this LCA, with Pen-yr-heol Farm and Bedlwyn Farm turbines at its edges. There are also many operational turbines visible to north and west from elevated parts of this LCA including the Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; St Merryn Meat Factory and Pengarnddu Industrial Estate in close proximity. Others turbines are more distant and include the Pen-y-fan Industrial Estate; Cruglwyn; Pen Y Fan Ganol Farm; Oakdale; Gelli-wen Farm; Penrhiwgwaith Farm; Bryn Ysgawen Farm; Cefn Bach Farm; Groesfaen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; and Mynachdy Farm as well as the more distant wind farms at Mynydd Portref and extension and Taff Ely. Operational wind energy development to the south-west also includes the wind farms at Ffoch Nest; Bwlfa Farm; Ferndale (Penrhys); Pant y wal and extension; Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwlfa; Pen Y Cymoedd; Fynnon Oer; Maesgwyn & Extension; Mynydd y Gwair; Mynydd y Betws; Perthigwynion Farm; and Mynydd Y Gwrhyd.

5.11.105 Viewpoint 9 - Rhymney Common is within this LCA.

Sensitivity

5.11.106 This LCA overlaps with the local level landscape designations of the Upper Rhymney Valley SLA, Mynydd Bedwellty, Rhymney & Sirhowy Sides SLA and the Northern Rhymney Valley VILL and value is considered to be Medium-High.

5.11.107 This LCA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets): Visual and Sensory - CYNONVS144 Pentrapeod (Moderate Evaluation), CYNONVS716 East of Rhymney (Moderate Evaluation), BLNGWVS688 Mynydd Bedwellte (High Evaluation), CYNONVS352 Bryn-oer Patch (Moderate Evaluation). Historic Landscape - CYNONHLL483 Rhymney Hill (Moderate); BLNGWHL026 HAA 26 Rhymney Hill (High); BLNGWHL027 HAA 27 Bedwellte Fieldscape (High); BLNGWHL036 HAA 36 Mynydd Bedwellte (High).

5.11.108 This LCA has some capacity to absorb the change of the type proposed without diminishing its key characteristics or special landscape qualities due to separation from the Proposed Scheme and the large scale and simple landform of the receiving landscape within which it would be seen to the north-west. Quarries and operational wind turbines within and to the north of the LCA and in wider views, moderate susceptibility and the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium.

5.11.109 When Value and Susceptibility are combined, sensitivity is considered to be Medium-High.

Magnitude of Change

5.11.110 The ZTV shows that theoretical visibility is found on north-west facing slopes and parts of the plateau top of this upland ridge LCA. Areas of reduced or no visibility occur on east or south facing slopes or in lower elevated sections of the ridge such as the low point that lies between Tredegar and Rhymney. The closest area of visibility is on Rhymney Common at the northern end of the upland ridge.

5.11.111 Factors that increase the magnitude of change are:

- Change to the experience of the landscape character of the LCA resulting from the addition of large scale wind turbines to the north;
- The Proposed Scheme would increase the influence of wind energy development to the LCA at a larger scale than currently experienced, intensifying the influence of wind energy development; and
- Turbine tracks and electrical and control building compound would be visible from this LCA adding to the visual change experienced.

5.11.112 Factors that decrease the magnitude of change are:

- the Proposed Scheme would appear to sit clearly within the larger upland landscape to the north of the LCA which has a rough textured moorland landcover and is of a relatively simple broad upland landscape form considered suitable for wind energy development of the type proposed;
- the Proposed Scheme turbines are set back from the scattered properties and settlements which are found along the edges of the southern parts of the SLA and would not appear to encroach on settled areas as a result;
- the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits would appear beyond the Upper Rhymney Valley and in a different part of the skyline than the Proposed Scheme;
- the presence of existing wind turbines within the southern part of the SLA and in close context to the northern part means that the Proposed Scheme would not be introducing elements that are entirely uncharacteristic, albeit at a larger scale than currently experienced; and
- the presence of existing tall structures to the north of this LCA such as the electricity lines, industrial units and turbines that align with the A465 road corridor, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to views from this LCA.

5.11.113 Taking these factors into account the magnitude of change for this LCA is considered to be Medium-Low.

Significance of Effect

5.11.114 The effect for this LCA resulting from the introduction of the Proposed Scheme to the north is considered to result in a **Moderate Not Significant** effect.

Cumulative Assessment (consented scenario)

5.11.115 Theoretically visible consented schemes seen from this LCA include Unit 18 and 19 Rassau Industrial Estate; land at Graig-yr-hufen road; Graig Fatha Farm; Llwynceyn Farm; Taf Ely Repowering; Upper Ogmores; Nant-y-Gwyddon; Abergorki; and Rhigos Road. These consented schemes would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

5.11.116 Theoretically visible application schemes seen from this LCA include Silent Valley and Foel Trawsant S73. These application schemes have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

5.11.117 Theoretically visible application schemes seen from this LCA include Penrhyn Farm and Penrhyn Farm 2 turbines which would appear to the east. These turbines would have little influence on the cumulative baseline situation due to their close context to operational schemes that are located within the LCA. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect for this scenarios.

RHPG - 37. Cyfarthfa Castle

Baseline

5.11.118 Cyfarthfa Castle is a castellated mansion house that is located within Merthyr Tydfil on the south-west facing slopes of the River Taff. The house dates back to 1825 and the surrounding park and gardens were laid out over the subsequent 50 years and have developed since that time. The park and gardens are also of historic interest for their proximity and association with the ironworks on the opposite side of the River Taff.

5.11.119 The parkland today is open to the public and the site is a popular visitor location with the castle now a museum and art gallery. The parkland has formal gardens, a lake, children's play area, tennis courts and a model railway set within mature estate woodlands that surround the castle and parkland.

5.11.120 Due to the south-west facing slopes on which the castle and designated landscape is located views out tend to be west facing, with views north west to the upland

landscape of the BBNP. A meadow area which occupies the most elevated parts of the designated parkland to the east is more visually contained to the east by the western side of the Pen y Darren area of Merthyr Tydfil and to the west by mature estate woods and avenue trees that separate the meadows.

- 5.11.121 The operational turbines at Perngarnddu Industrial Estate and St Merryn Meat Factory are visible to the east from this designated landscape. Viewpoint 11 is located within the meadows area of the parkland.

Sensitivity

- 5.11.122 Cyfarthfa Castle RHPG is a national landscape designation and value is considered to be High. This RHPG overlaps with LANDMAP Visual and Sensory aspect area MRTHRVS588 Cyfarthfa Park which has a LANDMAP evaluation of High and Historic Landscape aspect area MRTHRHL018 HL018 Cyfarthfa Castle which has an evaluation of Outstanding.

- 5.11.123 The ZTV shows that views towards the Proposed Scheme are restricted to the elevated meadows within the parkland to the east of the RHPG which is away from the key views west from the parkland or towards the BBNP to the north-west. From this area of parkland the existing turbines in the view moderates susceptibility as turbines are not entirely uncharacteristic in the view east and susceptibility is considered to be Medium.

- 5.11.124 The combination of value and susceptibility results in a sensitivity of Medium-High.

Magnitude of Change

- 5.11.125 As described in above the ZTV shows that visibility of the Proposed Scheme is limited from the RHPG and is restricted to an area of the parkland to the east in the meadows which is elevated and enclosed by trees and suburban edges of Merthyr Tydfil. Where visible, all six of the Proposed Scheme turbines would appear in views at around 4 km to the north-east of the RHPG above the roofline of intervening settlement.

- 5.11.126 Whilst this area of parkland forms an important landscape edge for the RHPG there is no intervisibility between this area and the core of the estate where the Castle and the key features of the landscape are located on the west facing slopes. Therefore, whilst there is visibility of the Proposed Scheme from this elevated area, it is important to note that the vast majority of the RHPG would not be affected by the Proposed Scheme.

- 5.11.127 Where visibility does occur, the Proposed Scheme would appear in a part of the view that is not particularly scenic and which contains existing turbines (albeit at a smaller scale than proposed).

- 5.11.128 Taking this into account, the magnitude of change for the RHPG as a result of the Proposed Scheme is considered to be Low.

Significance of Effect

- 5.11.129 The effect for this designated area resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Minor and Not Significant**.

Cumulative Effect (consented, application and scoping)

5.11.130 No consented, application or scoping schemes would be visible from this RHPG and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in these scenarios.

SLA - 23. Upper Rhymney Valley

Baseline

5.11.131 Appendix 1 to the Caerphilly County Borough LDP (2010) draws together 'Primary Landscape Qualities and Features' of the SLA using the key aspects of LANDMAP as its basis. These are summarised as follows:

'Cultural Landscapes

It is a simple, open landscape with a number of recent regeneration projects in the area, primarily in the form of the improved A465 corridor, which has both increased in scale and size.

- *An important example of industrial heritage, with areas of reclaimed land and spoil tips. There are examples of various historic and contemporary human occupation and exploitation in the form of prehistoric monuments, redundant industrial workings and transport systems.*

Landscape Habitats

- *Despite largish areas of improved grassland being present there are also large areas of valuable grassland present. There is a good mixture of marshy, neutral and acid grasslands. Areas of semi-improved and unimproved grassland are fragmented within the wider improved grassland landscape. Uniform improved grassland is present resulting from reclamation of former mine workings.*
- *Upland river corridor and enclosed upland pasture. Also riparian woodland / scrub.*

Geological Landscape

- *It exhibits the results of glaciation and forms the northern edge of the pennant sandstone outcrop that underpins the South Wales coalfield. With broad, moderately steep-sided valleys controlled by south-dipping mud dominated coal measures (upper carboniferous). Valley floor contains alluvium and glacial sand / gravel.*
- *Numerous derelict mine workings, shafts, adits, colliery waste tips and partially reclaimed opencast workings present within and immediately adjoining the landscape, which gives it a particularly industrial feel and character.*

Visual and Sensory

- *Strong visual links with the [Bannau Brycheiniog].*
- *Views of the upland area are extensive and very open with minimal field boundaries and patterns. Adjacent upland areas dominate views into the landscape.*
- *Strong underlying feel of industrial past. Industrial remnants include old railway sidings and earthworks.*
- *Overhead pylons are visual detractors, and the A465 has both noise and movement impacts.*
- *Area is currently predominantly used as rough grazing and agriculture.*

Historical Landscapes

- *An extensive area of unenclosed open moorland, forming the easternmost outline of Merthyr Common, which has remained relatively, unchanged since the 19th Century, in spite of encroachment by industrial extraction activity, in particular lime and ironstone quarries.*
- *The area contains numerous water management features that form part of the extensive remains of Dowlais Free Drainage System. There are also quarries associated with the Dowlais Ironworks, which together with the water management features represent a significant concentration of 19th Century industrial water-management features of considerable historical importance.'*

5.11.132 The operational turbines of Pen Bryn Oer are within this SLA. There are also many operational turbines visible to south from elevated parts of this SLA including the Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; St Merryn Meat Factory and Pengarnddu Industrial Estate in close proximity. Others turbines are more distant and include the Pen-y-fan Industrial Estate; Cruglwyn; Pen Y Fan Ganol Farm; Bedlwyn Farm; Oakdale; Gelli-wen Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Bryn Ysgawen Farm; Cefn Bach Farm; Groesfaen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; and Mynachdy Farm as well as the more distant wind farms at Mynydd Portref and extension and Taff Ely. Operational wind energy development to the south-west also includes the wind farms at Ffoch Nest; Bwllfa Farm; Ferndale (Penrhys); Pant y wal and extension; Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwllfa; Pen Y Cymoedd; Fynnon Oer; Maesgwyn & Extension; Mynydd y Gwair; Mynydd y Betws; Perthigwynion Farm; and Mynydd Y Gwrhyd.

5.11.133 Viewpoints in this SLA include 1 - PRow (Gelligaer FP 101), 2 - A465 / Heads of the Valleys Road, 4 - A469 / Bute Town (NCN 468), 7 – Rhymney and 9 - Rhymney Common.

Sensitivity

5.11.134 The Upper Rhymney Valley SLA is a local level landscape designation and value is considered to be Medium-High.

5.11.135 This SLA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets): Much of the northern half of the SLA including the site area overlaps with CYNONVS361 Rhoslas (Moderate) CYNONHL706 Pen March (Moderate); CYNONHL866 Blaen Rhymni (Moderate). Other aspect areas in the southern half of the SLA include - CYNONVS716 East of Rhymney (Moderate); CYNONVS193 Rhymney (Low); CYNONVS352 Bryn-oer Patch (Moderate); CYNONHL483 Rhymney Hill (Moderate).

5.11.136 This designation has some capacity to absorb the change of the type proposed. The overall upland character of large parts of this SLA, including the site area to the north-west, is typified by these characterising elements which is particularly evident in contrast with the more settled and lower lying landscape to the south and it is considered that this SLA is an appropriate receiving landscape for wind energy development. Quarries and operational wind turbines within and at the edges of the SLA and in wider views, moderate susceptibility and the Proposed Scheme would not be viewed as entirely uncharacteristic. The proximity of the northern part of the

SLA to the BBNP increases susceptibility to change. On balance susceptibility is considered to be Medium-High.

5.11.137 When Value and Susceptibility are combined, sensitivity is considered to be Medium-High.

Magnitude of Change

5.11.138 The ZTV shows that theoretical visibility is extensive across this SLA with only very small patches of reduced visibility.

5.11.139 Factors that increase the magnitude of change are:

- Change to the experience of the landscape character of the SLA resulting from the addition of large scale wind turbines and associated infrastructure within it;
- The Proposed Scheme would increase the influence of wind energy development across the SLA;
- The potential reduction in open moorland character within the SLA; and
- The level of Proposed Scheme construction activity experienced within this SLA.

5.11.140 Factors that decrease the magnitude of change are:

- the Proposed Scheme would appear to sit clearly within the larger upland landscape to the north of the SLA which has a rough textured moorland landcover and is of a relatively simple broad upland landscape form considered suitable for wind energy development of the type proposed;
- away from the large scale plateau landscape, the change to key characteristics within valley would be minimal as a result of reduced visibility;
- the Proposed Scheme turbines are set back from the scattered properties and settlements which are found along the edges of the southern parts of the SLA and would not appear to encroach on settled areas as a result;
- the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits are not evident from the northern part of this SLA where the site is located and from southern parts where these summits are visible, the distant Brecon Hills and mountains would appear beyond the upper Rhymney valley and in a different part of the skyline than the Proposed Scheme;
- the presence of existing wind turbines within the southern part of the SLA and in close context to the northern part means that the Proposed Scheme would not be introducing elements that are entirely uncharacteristic, albeit at a larger scale than currently experienced; and
- the presence of existing tall structures to the south of the upland plateau such as the electricity lines, industrial units and turbines that align with the A465 road corridor, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to views from this area of SLA.

5.11.141 Taking these factors into account the magnitude of change for this SLA is considered to be Medium-High locally (the area of SLA to the north of the A465 road corridor). The magnitude would reduce to Medium-Low in other parts of this SLA to the south that have visibility.

Significance of Effect

5.11.142 The effect for this SLA resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Major and Significant** effect for a localised area of the SLA and a **Moderate and Not Significant** effect in other areas of this SLA.

Cumulative Assessment (consented and application scenarios)

5.11.143 The consented turbines at Unit 18 and 19 Rassau Industrial Estate will appear as a small blade tip to the east from this SLA, close to the operational Rassau Industrial Estate turbine. Mynydd Carn-y-Cefn application would appear to the east, to a limited degree, amongst other operational turbines in particular the Cruglwyn turbines. These consented and application turbines would have little influence on the cumulative baseline situation due to their limited visibility and close context to other operational schemes. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

5.11.144 Theoretically visible scoping schemes from elevated parts of this SLA include Penrhyn Farm; Penrhyn Farm 2; Abertillery and Manmoel. The introduction of these scoping schemes would further add to the cumulative spread of development to the east, particularly Manmoel which is located on a neighbouring ridge to the east. The introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the east, particularly for southern parts of the SLA. When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development and the contribution of the Proposed Scheme to this situation and spread of development slightly increases the level of change within the local area of the Proposed Scheme with a more notable increase to the south. Taking this into account the magnitude of change in this scenario is considered to be Medium-High locally and Medium in other areas. This results in a **Moderate-Major and Significant** effect for a localised area of the SLA (north of the A465 road corridor) and due to the increased cumulative influence of scoping schemes a **Moderate and Significant** effect in other areas of this SLA.

SLA - 33. Nant Morlais and Cwm Taff Fechan

Baseline

5.11.145 The Background Paper⁶ describes the Special / Valued landscape qualities and features as follows:

- *'A distinct and unique defensive character deriving from Morlais Castle, occupying an impressive, strategically important hilltop location which has been fortified since the Iron Age and which played an extremely important role in the Welsh Wars of the mid to late 13th century.'*

⁶ Merthyr Tydfil County Borough Council - Special Landscape Areas background paper 2018. The background paper includes proposed SLAs which for this SLA includes the area of Cyfarthfa Castle. The replacement LDP, adopted in 2020 however does not include the Cyfarthfa Castle area and it is not therefore included in the LVIA or in the baseline description.

- *Culturally significant because of the range and variety of human influence on the landscape: 13th century Morlais Castle obscuring the hillfort; radical landscape change due to minerals extraction; a rare culturally significant rich mixture of remains of man's influence on the landscape.*
- *Remote but influenced by proximity to the town. The area is of exposed upland character with moorland rising to 530m. The Visual and Sensory character is generally bleak and open with long views.*
- *The area is bounded by the steep sided gorge of the Taff Fechan below the quarries of Morlais Hill complete with native woodlands copses and fields that emerge from the edge of the gorge.*
- *The Taff Fechan valley is an enclosed wooded gorge with the mature deciduous woodland and many attractive intimate spaces. A small scale water course with many large boulders and rock platforms adding sights and sounds of the river. Important routes through include the Taff Trail. Focal points include the Pontsarn Viaduct and other smaller scale bridges. Disused quarries above the gorge add to the strong sense of place.'*

5.11.146 There are no operational turbines within this SLA. There are however operational turbines visible to east from elevated parts of this SLA including Pengarnddu Industrial Estate; St Merryn Meat Factory; Tafarnaubach Industrial Estate; and Pen Bryn Oer. Operational wind energy development to the south-west also includes the wind farms at Ffoch Nest; Bwlfa Farm; Ferndale (Penrhys); Pant y wal and extension; Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwlfa; and Pen Y Cymoedd.

5.11.147 Viewpoints in this SLA include 3 - Pant, Merthyr Tydfil (NCN 46) and 6 - Pant Station, Brecon Mountain Railway.

Sensitivity

5.11.148 The Nant Morlais and Cwm Taff Fechan SLA is a local level landscape designation and value is considered to be Medium-High.

5.11.149 This SLA overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets): The vast majority of this designation overlaps with LANDMAP Visual and Sensory aspect area MRTHRVS313 Merthyr North Flank (Moderate) and Historic Landscape aspect area MRTHRHL009 HL009 Pen March (High). Other Visual and Sensory aspect areas include the narrow valley aspect areas of BRCKNVS372 Mynydd Llangynidr and Mynydd Llangattock (High); MRTHRVS393 Taff Fawr (High) and the urban area of MRTHRVS122 Merthyr Tydfil (low) along with Historic Landscape aspect areas of MRTHRHL019 HL019 Twynau Gwynion (High); MRTHRHL003 HL003 Taff Fechan valley (High); MRTHRHL021 HL021 Morlais Quarries (High); MRTHRHL003 HL003 Taff Fechan valley (High); MRTHRHL002 HL002 Garn Ddu (Outstanding); MRTHRHL001 HL001 Taff Fawr valley (Moderate).

5.11.150 This designation has some capacity to absorb the change of the type proposed. The key characteristics and special landscape qualities with higher LANDMAP evaluation are not found within the same geographic area as the Proposed Scheme which has a larger scale and more simple landscape characteristic than other parts of this SLA. Quarries and operational wind turbines at the edges of the SLA and in wider views, moderate susceptibility and the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium.

5.11.151 When Value and Susceptibility are combined, sensitivity is considered to be Medium-High.

Magnitude of Change

5.11.152 The ZTV shows that theoretical visibility is found on elevated parts of this SLA, particularly in eastern areas close to the Proposed Scheme. The ZTV also shows that the valley of Cwm Taff Fechan would have reduced visibility due to topography and in these areas of theoretical visibility wooded valley sides would limit any actual visibility.

5.11.153 Factors that increase the magnitude of change are:

- change to the experience of the special / valued landscape qualities resulting from addition of large scale wind turbines to the east;
- the Proposed Scheme would add further development to the existing spread of wind energy development currently visible from the elevated areas of the SLA;
- the Proposed Scheme turbines would create a new focus on the broad upland plateau that forms the horizon to the east.
- The potential reduction in open moorland character within the eastern portion of the SLA; and
- The level of Proposed Scheme construction activity experienced within eastern parts of this SLA.

5.11.154 Factors that decrease the magnitude of change are:

- the change to key characteristics would be minimal from lower elevated areas of the SLA to the west where visibility is limited. These lower elevated areas to the west form the focus of special landscape qualities and features described in the background report;
- where visibility occurs on elevated areas, the Proposed Scheme would appear to sit clearly within the larger upland landscape to the east which is of a relatively simple broad upland landscape form considered suitable for wind energy development of the type proposed;
- for the southern reaches of the SLA which is lower elevated, the presence of existing tall structures on and either side of the upland plateau such as the electricity lines, industrial units and turbines that align with the A465 road corridor, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to views from the eastern area of the SLA;
- the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits are not evident from the elevated eastern parts of this LCA where the site is located. Further to the west, where these summits are visible, the Proposed Scheme would appear in a different part of the skyline than the distant Brecon Hills and mountains and so would not encroach upon the distinctive views of the BBNP; and
- the presence of existing wind turbines in close context to this SLA means that the Proposed Scheme would not be introducing elements that are entirely uncharacteristic, albeit at a larger scale than currently experienced.

5.11.155 Taking these factors into account the magnitude of change for this SLA is considered to be High-Medium locally (approximately 1 km to the south and west from the

Proposed Scheme turbines). The location of the Proposed Scheme at the eastern edges of this SLA is within a large scale landscape context and separated from the majority of special / valued landscape qualities that are also higher evaluated in LANDMAP. As a result, the magnitude of change for other areas of this SLA to the west is considered to be Low.

Significance of Effect

5.11.156 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Major and Significant** effect for a very localised area of the SLA (around 1km) and a **Moderate-Minor and Not Significant** effect in other areas of this SLA.

Cumulative Assessment (consented scenario)

5.11.157 Theoretically visible consented schemes of Abergorki and Upper Ogmre will be seen to the south from this SLA. These consented schemes would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Effect (application and scoping)

5.11.158 No consented or application schemes would be visible from this SLA and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in these scenarios.

VILL - C. Northern Rhymney Valley

Baseline

5.11.159 Appendix 2 to the Caerphilly County Borough LDP (2010) describes the Primary landscape qualities and features of this VILL as follows:

- *'The visual character of the VILL is a predominantly upland and open area. Distinctive rocky hillside with rock outcrops, upper valley sides and views across the Rhymney valley give it a strong upland character, occasionally limited by topography and / or vegetation.'*
- *The upland sense of place is complicated by urban edges and visual detractors (pylons) but increases with elevation and views out. Stonewalls are the usual boundary treatment in the area.*
- *Surrounding the VILL is a complex mix of broadleaf / coniferous woodland. Adjacent to the Nant Bargod Rhymni, Parc Cwm Darran is a very scenic area with high quality traditional buildings and good facilities in excellent repair.*
- *Scattered rural settlements and farms are the predominant built form in the area. Evidence of industrial and mining throughout the VILL.*
- *Wind noise is a dominant sensory feature, which evokes particular experiences of exposure and wildness on the upland areas.'*

5.11.160 There are no operational turbines within this designation. There are however many operational turbines visible from elevated parts including: St Merryn Meat Factory;

Pengarnddu Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; Former Tech Board; Rassau Industrial Estate; Cruglwyn; Bedlwyn Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Gelli-wen Farm; Pen Y Fan Ganol Farm; Oakdale; Cefn Bach Farm; Pen-y-fan Industrial Estate; Groesfaen Farm; Bryn Ysgawen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; Mynydd Portref and extension; Mynachdy Farm; Taff Ely; Ffoch Nest; Pant y wal and extension; Bwlfa Farm; Ferndale (Penrhys); Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwlfa; Pen Y Cymoedd; Maesgwyn & Extension; and Mynydd y Gwair.

5.11.161 Viewpoints within this LCA include - Viewpoint 13 Fochriw.

Sensitivity

5.11.162 The Northern Rhymney Valley VILL is a local level landscape designation and value is considered to be Medium-High. This designation overlaps with the following LANDMAP Visual and Sensory and Historic Landscape aspect areas (LANDMAP evaluation in brackets): Visual and Sensory - CYNONVS361 Rhoslas (Moderate); CYNONVS785 Parc Cwm Darran (Moderate); CYNONVS605 Cefn Y Brithdir (High); CYNONVS716 East of Rhymney (Moderate); and CYNONVS352 Bryn-oer Patch (Moderate). Historic Landscape - CYNONHL483 Rhymney Hill (Moderate); CYNONHL701 Rhymney Valley (High); CynonHL005 Cefn y Brithdir (High); CYNONHL602 Nant Bargod Rhymni (High); CYNONHL885 Bedwellte (Moderate).

5.11.163 This designation has some capacity to absorb the change of the type proposed without diminishing its key characteristics or special landscape qualities due to separation from the Proposed Scheme and the large scale and simple landform of the receiving landscape within which it would be seen to the north. The widespread operational wind turbines in the view also moderate susceptibility as the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium-Low.

5.11.164 When Value and Susceptibility are combined, sensitivity is considered to be Medium.

Magnitude of Change

5.11.165 The ZTV shows that theoretical visibility is relatively widespread across much of this designated landscape. However, actual visibility to the north and towards the Site from central lower elevated parts of the designated landscape to the south and surrounding Rhymney are often limited by intervening vegetation and urban elements in the landscape. Key areas of visibility of the Proposed Scheme are therefore limited to elevated north facing slopes and ridges to the east and west of the Rhymney valley.

5.11.166 Factors that increase the magnitude of change are:

- change to the experience of the landscape qualities resulting from addition of large scale wind turbines to the north;
- the Proposed Scheme would add further development to the existing spread of wind energy development currently visible from the elevated areas of the VILL;
- the Proposed Scheme turbines would create a new focus on the broad upland plateau that forms the horizon to the north; and
- the Central Beacons are visible from elevated parts of this VILL within a similar context to that of the Proposed Scheme.

5.11.167 Factors that decrease the magnitude of change are:

- the change to key characteristics would be minimal from areas of the VILL to the south and surrounding Rhymney where visibility is limited;
- where visibility occurs on elevated areas, the Proposed Scheme would appear to sit clearly within the larger upland landscape to the north which is of a relatively simple broad upland landscape form;
- Whilst the Proposed Scheme would appear on the same skyline as the more distant Brecon hills and mountains from the VILL, the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits would not encroach on their distinct form as they appear in a different part of the skyline;
- the presence of existing wind turbines in views from this VILL means that the proposed turbines would not be introducing elements that are uncharacteristic; and
- for the northern reaches of the VILL which is lower elevated, the presence of existing tall structures on and either side of the upland plateau such as the electricity lines and turbines, creates a developed landscape context that moderates the influence that the Proposed Scheme would bring to this view.

5.11.168 Taking all of this into account, the experience of the landscape qualities of the VILL would only be affected to a small extent and the magnitude of change is predicted to be Medium-Low.

Significance of Effect

5.11.169 The effect for this VILL resulting from the introduction of the Proposed Scheme is considered to be **Moderate-Minor and Not Significant**.

Cumulative Assessment (consented and application scenarios)

5.11.170 The consented turbines at Unit 18 and 19 Rassau Industrial Estate will appear as a small blade tip to the east from this VLL, close to the operational Rassau Industrial Estate turbine. Mynydd Carn-y-Cefn application would appear to the east, to a limited degree, amongst other operational turbines in particular the Cruglwyn turbines. These consented and application turbines would have little influence on the cumulative baseline situation due to their limited visibility and close context to other operational schemes. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

Theoretically visible scoping schemes from elevated parts of this VLL include Penrhyn Farm; Penrhyn Farm 2; Abertillery and Manmoel. The introduction of these scoping schemes would further add to the cumulative spread of development to the east, particularly Manmoel which is located on a neighbouring ridge to the east. The introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the east. The magnitude of change is therefore predicted to be Medium-Low for this VLL resulting in a **Moderate-Minor and Not Significant** effect.

LANDMAP Historic Landscape aspect area MRTHRHL004 - Morlais

Baseline

5.11.171 This aspect area lies to the east of Merthyr Common between the northern edges of Merthyr Tydfil settlement and the Taf Fechan river.

5.11.172 The LANDMAP citation describes this aspect area as *'an important, diverse landscape with defensive, domestic and funerary features dating to the prehistoric and medieval periods. The aspect area is dominated by the prominently sited remains of Morlais Castle, occupying a strategic hilltop location that has been fortified since the Iron Age. The pattern of fieldscape and dispersed settlement has remained largely intact, although the expansion of quarrying and landscaping activity associated with a modern golf course have detracted slightly from its coherence'*.

5.11.173 The key historic attributes within this landscape include

- *'the prehistoric medieval defensive, domestic and funerary features and the relict post-medieval fieldscape'.*
- *'largely well preserved, although there have been losses due to the expansion of quarrying activity during the late 19th -20th century and the establishment of a modern golf course'.*
- *'Surviving components include a relict field system and possible prehistoric enclosure on Morlais Hill, the probable remains of a Bronze Age ring cairn on Merthyr Tydfil golf course and the important 13th century Clare stronghold of Morlais Castle'.*

5.11.174 Views from this aspect area include views north to the Central Beacons and south to the Valleys landscape across the urban landscape of Merthyr Tydfil. Foreground views are dominated by the golf course, the rough textured grassland that covers Morlais Hill or the wooded edges to this aspect area, at the settlement edge or along the Taf Fechan river to the north.

5.11.175 There are no operational turbines located within this aspect area but there are large numbers of turbines and turbine groupings visible to the south including the large developments at Mynydd Bwlfa and Pen Y Cymoedd. The closest turbines are at St Merryn Meat Factory and Pengarnddu Industrial Estate, which are visible to the east.

Sensitivity

5.11.176 Taking account of the overall Outstanding LANDMAP evaluation, value is assessed as High. The Proposed Scheme is located in an upland landscape to the east of this aspect area separated by a wooded valley. It has some capacity to absorb the change of the type proposed without diminishing its key characteristics due to the large scale and simple landform of the receiving landscape which lies to the east. The widespread operational wind turbines within the landscapes to the south moderate susceptibility as the Proposed Scheme would not be viewed as entirely uncharacteristic. On balance susceptibility is considered to be Medium-Low resulting in a Medium sensitivity when combined with value.

Magnitude of Change

- 5.11.177 From this aspect area the topography of the landscape on which the site is located appears simple in form, gradually falling in elevation to the south. The proposed turbines would appear at the edges of the BBNP beyond a broad upland ridgeline which is scarred by the remnant quarry faces associated with the disused quarries of Baltic, Twynau Gwynion and Tyle Haidd. It is notably less undulated than the dramatic views to the north of the Central Beacons.
- 5.11.178 Views to the north from this aspect area include views of the taller mountains such as Pen y Fan and Corn Du within the Central Beacons which would be unaffected by the Proposed Scheme. From this area the Proposed Scheme would appear much closer in context to the settled valley landscape and the other wind turbines and overhead power lines in the view (albeit that these are smaller in scale). Operational wind energy development is also visible to the south from this aspect area and the Proposed Scheme would not be uncharacteristic as a result. The Proposed Scheme would therefore intensify the existing view of modern features and is not considered to detract further from its coherence.
- 5.11.179 Taking all of this into account the magnitude of change is considered to be Low for this aspect area.

Significance of Effect

- 5.11.180 The effect for this character area resulting from the introduction of the Proposed Scheme is considered to be **Minor and Not Significant**.

Cumulative Assessment (consented scenario)

- 5.11.181 Theoretically visible consented schemes include Llwyncefn Farm, Nant-y-Gwyddon, Pant y Wal Extension 2, Abergorki, Upper Ogmere and Rhigos Road. These consented schemes are to the south and have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

- 5.11.182 The Mynydd Carn y Cefn application would be visible in the distance to the east as small blade tips. Whilst in the same part of the view as the Proposed Scheme it would be barely discernible from this location due to distance and limited visibility. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

- 5.11.183 The scoping schemes of Abertillery, Manmoel, Mynydd Llanhilleth and Mynydd Maen would appear to the east in the distant backdrop of the Proposed Scheme. The Twyn Hywal Energy Park would appear to the south extending across the southern horizon. When considering the introduction of the Proposed Scheme to this scenario, the level of change to key characteristics is considered broadly similar to the assessment

against the operational / under construction baseline, largely due to the distance of the cumulative schemes in relation to the closer proximity of the Proposed Scheme. The magnitude of change is therefore considered to be Low resulting in a **Minor and Not Significant** effect in this scenario.

5.12 Assessment of Effects on Views

Introduction

- 5.12.1 Effects on views are the changes to views experienced by people that result from the introduction of the Proposed Scheme. As described in the baseline overview, the assessment of effects on views includes effects on people at representative viewpoints and on principal visual receptors (i.e. groups of people in settlements, motorists on roads or users of recreational routes). The following preliminary assessment identifies which of these views and visual receptors may experience significant effects and therefore which require to be assessed in full. A detailed baseline description is provided separately within the assessment section for each viewpoint and visual receptor identified as requiring more detailed assessment.

Preliminary Assessment of Effect on Views

Viewpoints

- 5.12.2 Viewpoint locations are listed in **Table 5.12** below and shown in conjunction with the blade tip ZTV on **Figures 5.11a and 5.11b** and at a detailed scale in the visualisations in **Figures 5.24- 5.49 (Volume 3)**.
- 5.12.3 Visualisations have been prepared to meet the requirements of NatureScot (Visual Representation of Windfarms Version 2.2, December 2017). It should be noted that the 53.5 degree photomontage view does not always include a view of key existing wind farms in the view. It is important therefore that the 90 degree baseline panoramas provided are reviewed alongside the 53.5 degree photomontages when reviewing the visualisations, so that these existing wind farms are properly taken into account.
- 5.12.4 **Table 5.12** identifies the distance to the nearest turbine, the horizontal field of view theoretically occupied by the Proposed Scheme and numbers of turbine blades and hubs in the Proposed Scheme that are theoretically visible at each viewpoint based on the blade, hub and horizontal ZTVs shown on **Figures 5.11, 5.12 and 5.13 (Volume 3)**.

Table 5.12: Viewpoint Theoretical Visibility Summary

VP No	Viewpoint Name	Nearest proposed turbine (km)	Theoretical Horizontal Field of View (°)	Turbines Theoretically Visible	
				Blades	Hubs
1	PRoW (Gelligaer FP 101)	0.9	34	6	6
2	A465 / Heads of the Valleys Road	1.2	42.2	6	6
3	Pant, Merthyr Tydfil (NCN 46)	1.4	36.3	6	5
4	A469 / Bute Town (NCN 468)	1.9	25.3	6	6
5	Pontsticill	2.1	3.7	2	1
6	Pant Station, Brecon Mountain Railway	2.1	24.7	6	5

VP No	Viewpoint Name	Nearest proposed turbine (km)	Theoretical Horizontal Field of View (°)	Turbines Theoretically Visible	
				Blades	Hubs
7	Rhymney	2.6	17.5	6	6
8	Cefn yr Ystrad	2.7	26.7	6	6
9	Rhymney Common	3.4	13.3	6	6
10	Trefil	3.8	13.1	6	3
11	Cyfartha Park	4.4	13.6	6	6
12	Trefechan	4.6	11.9	6	5
13	Fochriw	4.6	13.1	6	6
14	Tredeggar, Deighton Playing Fields	5.0	8.3	6	4
15	Garn Ddu	5.2	8.5	6	6
16	Pen Garnbugail	6.7	9.9	6	6
17	Cefn Manmoel (Sirhowy Valley Walk)	7.7	5.6	6	6
18	Beacons Way (Craig Y Fan Ddu)	7.8	8.1	6	6
19	B4560, Cefn Pwll-coch	8.3	6.5	6	6
20	Mynydd Carn-y-cefn	9.6	4.7	6	6
21	A4059	10.4	4.5	6	6
22	PRoW (Bedwellty FP 28)	11.2	5.3	6	6
23	A4233 Meardy Rd	12.1	5.3	6	6
24	Pen y Fan	12.5	4.7	6	6
25	Black Mountains, Pen Cerrig-calch	17.3	3.6	6	6
26	Sugar Loaf	19.9	2.8	6	6

5.12.5 All viewpoints are assessed in detail within the LVIA apart from:

- Viewpoint 14 Tredeggar, Deighton Playing Fields, which despite having theoretical visibility of the Proposed Scheme has an extremely limited view of the turbines due to intervening woods on the enclosing ridgeline above the settlement.
- Viewpoint 25 Black Mountains, Pen Cerrig-calch and Viewpoint 26 Sugar Loaf. For both of these viewpoints it is considered that there is no potential for significant effects due to the cumulative baseline viewed to the west within the same part of the view as the Proposed Scheme combined with distance which limits the influence of further wind energy development on the existing view.

Principal visual receptors

5.12.6 The principal visual receptors in the Study Area are shown on **Figures 5.6, 5.7 and 5.8** and with the Proposed Scheme blade tip ZTV on **Figures 5.17, 5.18 and 5.19 (Volume 3)**. **Tables 5.13, 5.14 and 5.15** identify which of the principal visual

receptors have the potential to undergo significant effects (including cumulative effects), and which of them do not require further detailed assessment.

Table 5.13: Preliminary Assessment of Settlements

(As described in section 5.8 smaller settlements are only considered within a 10 km area)

Status – Potential for significant effects and included in detailed assessment	
Receptor	Comment
Rhymni / Rhymney	Theoretical visibility of the Proposed Scheme extends across the majority of this settlement on the west facing slopes of the Rhymney River. Much of the settlement is west facing and away from northern views towards the Proposed Scheme. The more elevated areas of this settlement are found to the north which are closest to the Proposed Scheme. Potential for significant effects is limited to elevated areas of the settlement with unobstructed views to the north. Assessed at Viewpoint 7.
Merthyr Tudful / Merthyr Tydfil	Extensive theoretical visibility from large areas of the settlement which is in relatively close proximity to the Proposed Scheme. Assessed at viewpoints 3, 11 and 12 and also within Technical Appendix 5.4 as RVAA receptors at Pant and Dowlais.
Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment	
Receptor	Comment
Tredegar	Theoretical visibility is found in northern parts of this settlement. The built up and wooded nature of the urban environment and immediate surrounds has a limiting effect on views from this settlement. See Viewpoint 14.
Status – Limited level of influence to the defining characteristics, due to limited / restricted or distant visibility of the Proposed Scheme, such that there is no potential for significant effects and not included in detailed assessment	
Glyn Ebwy / Ebbw Vale, Brynmawr / Bryn-Mawr, Nantyglo, Bargoed / Bargod, Y Coed Duon / Blackwood, Ystrad Mynach, Pontllanfraith, Trecceln / Newbridge, Pontypridd, Caerffili / Caerphilly, Llanilltud Fawr / Llantwit Major.	
Status – No theoretical visibility of the Proposed Scheme. No potential for significant effects and not included in detailed assessment.	
Aberdā,R / Aberdare, Y Blaenau / BlainaAberpennar / Mountain Ash, Treharris, Abertyleri / Abertillery, Crughywel / Crickhowell, Abercynon, Ferndale, Blaenavon, Aberhonddu / Brecon, Treorci / Treorchy, Abersychan, Rhondda, Treherbert, Tonypandy, Abercarn, Glyn-Nedd / Glyn-Neath, Porth, Y Fenni / Abergavenny, Pont-Y-Pwl / Pontypool, Talgarth, Rhisga / Risca, Cwmbrā,N, Pontycymer, Llantrisant, Talbot Green, Ystradgynlais, Maesteg, Brynbuga / Usk, Pencoed, Casnewydd / Newport, Caerllion / Caerleon, Y Gelli Gandryll / Hay-On-Wye, Pen-Y-Bont Ar Ogwr / Bridgend, Castell-Nedd / Neath, Caerdydd / Cardiff, Pontardawe, Y Bont-Faen / Cowbridge, Port Talbot, Llanymddyfri / Llandovery, Penarth, Llanfair-Ym-Muallt / Builth Wells, Llanwrtyd Wells, Trefynwy / Monmouth, Barri / Barry, Porthcawl, Rhydaman / Ammanford, Cil-Y-Coed / Caldicot.	

Table 5.14: Preliminary Assessment of transportation routes

Status – Potential for significant effects and included in detailed assessment	
Receptor	Comment
A465	Potential for significant effects due to theoretical visibility that occurs from west of Merthyr Tydfil, along the Heads of the Valleys to Beaufort to the east. Assessed at Viewpoint 2 and in sequential assessment.
A4060	Continuous visibility from an elevated section of road to the south of Dowlais, included in sequential assessment.
A4059	Potential for significant effects due to an area of theoretical visibility on an elevated section of the road to the west of Centref Reservoir within the BBNP. Assessed at Viewpoint 21.
A4233	Potential for significant effects due to an area of theoretical visibility on an elevated section of the road to the west of the Aberdare settlement. Assessed at Viewpoint 23.
A469	Potential for significant effects due to the direct facing area of theoretical visibility within relatively close proximity near Bute Town. Assessed at Viewpoint 4. Other sections of this road further to the south have patches of theoretical visibility, however, roadside trees and vegetation limit views towards the Proposed scheme such that there are no further sections with potential for significant effects.
B4560	Potential for significant effects due to an area of theoretical visibility on an elevated section of the road to the north of Rassau within the BBNP. Assessed at Viewpoint 21.
Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment	
Receptor	Comment
A4281, A4048, A4047	Whilst theoretical visibility occurs for long sections of these roads the roadside trees and vegetation at the edges of settlement when passing through Beaufort, Rassau and northern parts of Tredegar limits actual visibility. Where visible, the Proposed Scheme would be seen in glimpsed views, at speed and at distance. It is considered therefore that there is no potential for significant effects.
B4257	Roadside trees and vegetation at the edges of the Rhymney settlement or buildings within the settlement itself, limits actual visibility. Where visible, the Proposed Scheme would be seen in glimpsed views or views filtered through tree branches, no potential for significant effects.
B4256	The ZTV shows theoretical visibility on the elevated section of road that crosses the southern flank of Rhymney Hill. The Proposed Scheme would be seen in oblique and distant views and it is considered that there is no potential for significant effects.

Status – Limited level of influence to the defining characteristics, due to limited / restricted or distant visibility of the Proposed Scheme, such that there is no potential for significant effects. And not included in detailed assessment	
M4, A4046, A4049, A4050, A4054, A4055, A4061, A4068, A4069, A4102, A4107, A4109, A4160, A4221, A4226, A4231, A438, A467, A470, A472, A479, A48	B4246, B4248, B4251, B4254, B4255, B4263, B4265, B4266, B4267, B4270, B4276, B4293, B4347, B4350, B4511, B4594
Bristol – Swansea Railway Cardiff – Ebbw Vale Railway Cardiff – Rhymney Railway	Cardiff to Merthyr Tydfil / Aberdare / Treherbert Railway
Status – No theoretical visibility of the Proposed Scheme. No potential for significant effects and not included in detailed assessment	
Newport – Hereford Railway Pontypool and Blaenavon Railway Swansea – Llandrindod and Glamanan Spur Railway Dulas Valley / Vale of Neath Railways	B4181, B4223, B4230, B4233, B4235, B4236, B4237, B4239, B4240, B4242, B4245, B4252, B4261, B4262, B4264, B4268, B4269, B4273, B4275, B4278, B4280, B4281, B4282, B4283, B4285, B4286, B4287, B4290, B4291, B4294, B4344, B4348, B4349, B4351, B4352, B4358, B4434, B4471, B4478, B4486, B4487, B4488, B4489, B4512, B4519, B4520, B4521, B4522, B4524, B4558, B4562, B4564, B4567, B4591, B4595, B4596, B4598, B4599, B4600, B4601, B4602, B4603, B4622, B4625, B5444
M48, A40, A4042, A4043, A4051, A4058, A4063, A4064, A4065, A4067, A4072, A4077, A4078, A4079, A4093, A4106, A4111, A4112, A4119, A4136, A4143, A4161, A4215, A4217, A4222, A4223, A4229, A4230, A4232, A4234, A4241, A449, A466, A468, A473, A474, A48(M), A481, A4810, A482, A483	

Table 5.15: Preliminary Assessment of recreational routes

Status – Potential for significant effects and included in detailed assessment	
Receptor	Comment
Beacons Way	Theoretical visibility is found to the north on an elevated section within the Bannau Brycheiniog on the 'horseshoe' ridge which is elevated with south facing slopes and summits. Further distant visibility is found to the west on the Fan Llia ridge and Pant Mawr plateau and to the east on the western slopes of the Black Mountains. Assessed at viewpoints 18 – Craig Y Fan Ddu and 24 – Pen y Fan and included in sequential assessment.
Cambrian Way	Theoretical visibility is found on short sections within the Bannau Brycheiniog which are elevated on south facing slopes and summits including the Pen y Fan Horseshoe and Black Mountains. Other parts of this route have distant or limited visibility. Visual effects considered in detail at viewpoints 18 – Craig Y Fan Ddu and 24 – Pen y Fan. See also additional wireline B - Mynydd Cefn-y-Gyngon.
Rhymney Valley Ridgeway Footpath	The theoretical visibility found on the northern sections of this route between Cefn y BIRTHDIR and the Industrial Estate south of Bute Town has the potential for significant visual effects. Assessed at Viewpoint 13 and included in sequential assessment. See also additional wireline C - Cefn y BIRTHDIR.
Sirhowy Valley Walk	Theoretical visibility is found on the section of this route that crosses the ridge between Tredegar and Ebbw Vale. Assessed at Viewpoint 17 which is located on the same section of the ridge.
Status – Considered further in preliminary assessment but found to have no potential for significant effects and not included in detailed assessment	
Taff Trail	Theoretical visibility on the Taff Trail is limited to - built up areas at the western edges of Merthyr Tydfil; the well wooded eastern edges of Trefechan and Morlais Park; and the wooded banks of Pontsticill Reservoir. Where visibility is possible from these sections of the trail therefore, actual visibility is limited. The overall extent of visibility of the Proposed Scheme is also limited to these sections within around 5 km of the Proposed Scheme. Taking these factors into account it is considered that the Proposed Scheme does not have the potential to significantly affect the Taff Trails. The closest viewpoint to the Taff Trail is viewpoint 5 at Pontsticill.
Status – Limited level of influence to the defining characteristics, due to limited / restricted or distant visibility of the Proposed Scheme, such that there is no potential for significant effects. And not included in detailed assessment	
Offas Dyke Trail, Wales Coast Path, Three Rivers Ride, Herefordshire Trail, Wye Valley Walk, Valeways Millennium Heritage Trail, St Illtyd's Walk, Gower Way	
Status – No theoretical visibility of the Proposed Scheme. No potential for significant effects and not included in detailed assessment.	
Usk Valley Walk	

Summary of Preliminary Assessment on Views

Viewpoints

5.12.7 The preliminary assessment has identified the following viewpoints required to be assessed in detail within the LVIA:

- 1 PRoW (Gelligaer FP 101)
- 2 A465 / Heads of the Valleys Road
- 3 Pant, Merthyr Tydfil (NCN 46)
- 4 A469 / Bute Town (NCN 468)
- 5 Pontsticill
- 6 Pant Station, Brecon Mountain Railway
- 7 Rhymney
- 8 Cefn yr Ystrad
- 9 Rhymney Common
- 10 Trefil
- 11 Cyfartha Park
- 12 Trefechan
- 13 Fochriw
- 15 Garn Ddu
- 16 Pen Garnbugail
- 17 Cefn Manmoel (Sirhowy Valley Walk)
- 18 Beacons Way (Craig Y Fan Ddu)
- 19 B4560, Cefn Pwll-coch
- 20 Mynydd Carn-y-cefn
- 21 A4059
- 22 PRoW (Bedwellty FP 28)
- 23 A4233 Meardy Rd
- 24 Pen y Fan

Principal Visual Receptors

5.12.8 The preliminary assessment has identified the following principal visual receptors required to be assessed in further detail within the LVIA:

- Rhymni / Rhymney - Assessed at Viewpoint 7.
- Merthyr Tudful / Merthyr Tydfil - Assessed at viewpoints 3, 11 and 12 and also within Technical Appendix 5.4 as RVAA receptors at Pant and Dowlais.
- A465 - Assessed at Viewpoint 2 and included in sequential assessment.
- A4060 - included in sequential assessment.
- A4059 - Assessed at Viewpoint 21.
- A4233 - Assessed at Viewpoint 23.
- A469 - Assessed at Viewpoint 4.
- B4560 - Assessed at Viewpoint 21.

- Beacons Way – Assessed at viewpoints 18 and 24 and included in sequential assessment.
- Cambrian Way - Assessed at viewpoints 18 and 24.
- Rhymney Valley Ridgeway Footpath - Assessed at Viewpoint 13 and included in sequential assessment.
- Sirhowy Valley Walk - Assessed at Viewpoint 17

Detailed Assessment of Effect on Views

Table 5.16: Viewpoint – 1 PRow (Gelligaer FP 101)

Baseline Conditions			
Baseline Description			
This viewpoint is located at the end of the track and the gate that leads to PRow (Gelligaer FP 101) via Twyn yr Arian. PRow FP 101 connects the minor road that runs parallel to the Heads of the Valleys Road with the upper Rhymney valley. Other than the small stand of trees and scrub vegetation close to the viewpoint, the immediate foreground view is predominantly of the moorland grassland that covers the site area and much of the surrounding site context. By contrast, views to the east through the nearby trees and across the upper Rhymney valley include a patchwork of field compartments of improved grassland separated by rougher areas and further small stands of trees providing some limited shelter. The elevation and south facing aspect of this area means that views to the south across the heads of the valleys road corridor is possible, albeit that from this location on the PRow, the shelter provided by the nearby trees and scrub also limits these views to glimpses between the trees. The operational turbines at Pen Bryn Oer and Tafarnaubach can be seen in the view across the Rhymney valley to the south east, through these trees. Overhead electricity lines and pylons also cross the landscape in views to the east and south-east. The more distant operational turbines of Cruglwyn, Bedlwyn Farm, Pen-yr-heol Farm, Penrhiwgwaith Farm and Gelli-wen Farm are obscured by scrub vegetation that lies close to the viewpoint.			
Receptor type	Value	Susceptibility	Sensitivity
Recreational Walkers	This viewpoint is within the Upper Rhymney Valley SLA and value is considered to be Medium-High.	Recreational walkers on this PRow will have an appreciation of the surrounding landscape and will be focussed on views, however, notable views are focussed away from the Proposed Scheme and susceptibility is slightly reduced as a result. Taking this into account susceptibility is considered to be Medium-High.	Medium-High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 0.9 km to the nearest turbine to the north-west of the viewpoint; - All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform and proximity of turbines; - Turbine 4 appears notably larger than the others in the group due to its closer proximity; and - The proposed turbines theoretically occupy 34 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: Change in the view resulting from the addition of wind turbines within close proximity to the viewpoint;			

- Given its short length and overall proximity to the Proposed Scheme, the majority of this PRow would be affected to a similar degree to the viewpoint; and - The Proposed Scheme would increase the perception of wind energy development in the view and bring wind energy development closer to viewers. Factors that decrease the magnitude of change are: - The view to the north and north-east from this location is not particularly scenic, particularly when considered against the view to the east across the Upper Rhymney Valley itself; - Existing tall structures such as electricity pylons and wind turbines slightly moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in the view; - The rougher textured moorland landcover of the view towards the Proposed Scheme provides a larger scale upland landscape context considered suitable for wind energy development of the type proposed; and - The views to the south and south-east across the Upper Rhymney Valley and Heads of the Valleys landscape would be unaffected by the Proposed Scheme. The magnitude of change for the Proposed Scheme is considered to be High.
Significance of Effect
The effect on recreational walkers at this viewpoint is considered to be Major and Significant. Whilst the viewpoint is not particularly susceptible to change, it is within close proximity to the Proposed Scheme which would introduce large scale features that would be visible from much of this PRow.
Cumulative Assessment
Cumulative Assessment (consented and application scenarios)
No consented or application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in these scenarios.
Cumulative Assessment (scoping scenario)
A blade tip of Penrhyn Farm and West Monmouthshire Golf Club turbines would appear to the east in between nearby trees. Abertillery, Manmoel, and Twyn Hywel Energy Park are obscured by intervening trees from this location. These scoping developments would have little influence on the cumulative baseline situation due to their limited visibility. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect.

Table 5.17: Viewpoint - 2 A465 / Heads of the Valleys Road

Baseline Conditions
Baseline Description
This viewpoint is located on the A465 Heads of the Valleys Road. The road is a busy dual carriageway which serves as a key connecting route for settlements in the area as well as a connection to south-west Wales from the valleys. The viewpoint itself is located close to the layby on the eastbound carriageway overlooking the minor road and Bridleway Gelligaer BR 103 that passes under the A465. This section of the Heads of the Valleys Road passes close to the site and the moorland grassland of the site area rises up above this road and occupies much of the view to the north resulting in a simple landscape pattern of rough grassland with occasional scrubby trees. The

view to the north is also simple in its topography with the landform of the site area forming a gently domed horizon which spans 180 degrees. Views to the east and west are along the busy road corridor and contain road signage, fences, barriers, telegraph poles, wind turbines, overhead electricity lines and pylons. The view to the south-west is contained in the middle distance by a further area of undulated grassland which the overhead electricity lines cross. The view to the south-east is more distant and includes a partial view along the Rhimney Valley. The operational turbines at the St Merryn Meat Factory and Pengarnddu Industrial Estate are seen to the west above the edges of the site area. The operational turbines at Pen Bryn Oer and Tafarnaubach can be clearly seen in the view east along the carriageway with the Former Tech Board and Rassau Industrial Estate turbines only just visible beyond the Tafarnaubach turbine. Two blade tips of the Cruglwyn scheme are also seen to the east. To the south-east operational turbines at Bedlwyn Farm, Pen-yr-heol Farm and Penrhiwgwaith can be seen in the distance (albeit that Pen-yr-heol Farm is obscured by a pylon tower in this view).

Receptor type	Value	Susceptibility	Sensitivity
Road users	This viewpoint is not within any landscape designated areas. Value is considered to be medium-low.	The A465 is a busy road and motorists are likely to be travelling at speeds of around 60-70 mph. Road users only have oblique views towards the site which are only available for a short duration. Susceptibility may be increased for motorists stopped in laybys, however, in this instance they are more likely to appreciate views south-east which are away from the Site. Taking all of this into account susceptibility is considered to be Low.	Medium-Low
Recreational receptors on BR 103		Recreational receptors will have a greater appreciation of the surrounding landscape. For the short section of BR 103 to the north of the A465 that the viewpoint overlooks, the view is relatively enclosed and views of the surrounding landscape are more limited than sections to the south of the carriageway. On more elevated sections that allow similar views to the viewpoint location, receptors are likely to appreciate views south-east which are away from the Site. Taking all of this into account susceptibility is considered to be Medium-High.	Medium

Assessment (including operational and under construction cumulative sites)

Description of change:

- The proposed turbines would be visible at 1.2 km to the nearest turbine to the north of the viewpoint;
- All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform and proximity of turbines;
- The proposed turbines theoretically occupy 42.2 degrees of the view.

Magnitude of Change

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of large scale wind turbines within close proximity to the viewpoint; and
- The Proposed Scheme would introduce wind energy development in the view north increasing the existing influence of development seen at relatively close proximity to the east and west within the context of the Heads of the Valley road corridor.

Factors that decrease the magnitude of change are:

- The view to the north from this location is unremarkable with the Site containing few landscape features and an overall simple and gently domed horizon;
- The rougher textured moorland landcover of the view north towards the Proposed Scheme provides a larger scale upland landscape context considered suitable for wind energy development of the type proposed;
- Whilst varied in the amount of tower visibility, the overall layout appears to form a cohesive group of turbines that follows the overall shape of the upland landform of the Site;
- The more scenic view south-east along the Rhymney Valley would be unaffected by the Proposed Scheme; and
- Existing tall structures such as electricity pylons and wind turbines within close visual context, moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in this view.

The magnitude of change for the Proposed Scheme is considered to be Medium-High.

Significance of Effect

The effect on recreational receptors represented by this viewpoint is considered to be **Moderate and Significant**. The effect on road users represented by this viewpoint is considered to be **Moderate and Not Significant**. Whilst the Proposed Scheme is within close proximity, reflected in the Medium-High magnitude of change, the receptor is not particularly sensitive to change.

Cumulative Assessment

Cumulative Assessment (consented and application scenarios)

The consented turbines at Unit 18 and 19 Rassau Industrial Estate will appear as a small blade tip to the east from this location, close to the operational Rassau Industrial Estate turbine. The blade tips of Mynydd Carn-y-Cefn application would appear to the east amongst other operational turbines in particular the Cruglwyn turbines. These consented and application turbines would have little influence on the cumulative baseline situation due to their limited visibility and close context to other operational schemes. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect for these scenarios.

Cumulative Assessment (scoping scenario)

Penrhyn Farm and Penrhyn Farm 2 turbines would appear to the east amongst the existing overhead line towers. Abertillery and Manmoel would appear to the southeast between the existing Pen Bryn Oer and Mynydd Carn-y-Cefn application with the Manmoel turbines sitting higher on the ridge than Mynydd Carn-y-Cefn and Abertillery. The introduction of these scoping schemes would further add to the cumulative spread of development to the east, particularly Manmoel. The introduction of Manmoel further spreads and intensifies the visual effect experienced from this view. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered similar to the assessment against the operational / under construction baseline, this is due to the scale of the Proposed Scheme and its contribution to the changed view and the multiple facets of the view occupied by wind turbines in this scenario for which the Proposed Scheme would be a part of.

The cumulative magnitude of change is therefore considered to be Medium-High resulting in a **Moderate and Significant** effect for recreational receptors and a **Moderate and Not Significant** effect for road users.

Table 5.18: Viewpoint - 3 Pant, Merthyr Tydfil (NCN 46)

Baseline Conditions			
Baseline Description			
The viewpoint represents a close proximity view towards the Proposed Scheme from the edges of Pant, a northern suburb of Merthyr Tydfil. The NCN 46 at this location is an uneven metalled track which the rear gardens of nearby properties of Pant back onto. The track takes the route of a dismantled railway and garden fences line one side of the track and a small embankment lines the other side. Evidence of fly-tipping was noted during site work, particularly at the access point from Pant. The view to the south-west is restricted by the close proximity of properties. In the view north-east towards the site, the landscape is simple in pattern with improved grassland landcover in the foreground and rougher moorland grassland closer to the horizon, a transition which alludes to the larger scale upland landscape context beyond where the Proposed Scheme would be located. The nearby properties at the north-east edges of Pant share a similar view, however, properties further into the residential area of Pant are of lower elevation and views towards the site would be limited by neighbouring (more elevated) properties and / or may not have views in the direction of the Site. Overhead electricity lines cross the foreground landscape with the closest line carried on tall pylon towers and an adjacent line on wooden poles. A Telecommunication mast is also visible to the south-east of this viewpoint as well as the Pengarnddu electricity substation.			
Receptor type	Value	Susceptibility	Sensitivity
Residents	This viewpoint is not located within any landscapes designated for their scenic quality, however, views will be valued by local residents. Value is considered to be Medium.	The viewpoint represents a close proximity view towards the Proposed Scheme. Residents of nearby properties will likely share a similar view albeit from their rear windows or rear gardens. Susceptibility is considered to be High for residents.	High
Recreational receptors on NCN46		Recreational receptors will have an appreciation of the surrounding landscape from this section of NCN46, however, the Proposed Scheme is located at an oblique angle to the route, which is in itself on a slight cutting with a rough metalled track. Cyclists are therefore more likely to be focussed on the track at this section than on the wider view. Taking all of this into account susceptibility is considered to be Medium for cyclists.	Medium
Assessment (including operational and under construction cumulative sites)			
Description of change:			

- The proposed turbines would be visible at 1.4 km to the nearest turbine to the east of the viewpoint;
- All of the Proposed Scheme turbines are theoretically visible from this location:
- 1 turbine would be theoretically visible as an extremely small blade tip which from this location is obscured by Blaen Morlais farm.
- Of the remaining 5 turbines, 2 turbines would be visible as top of towers and hubs close to the horizon and the other 3 would have approximately two thirds of towers visible;
- The proposed turbines theoretically occupy 36.3 degrees of the view.

Magnitude of Change

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of large scale wind turbines within close proximity to the viewpoint;
- The proximity and scale of the turbines in comparison to the property at Blaen Morlais which acts as a scale indicator, close to the horizon; and
- The Proposed Scheme would introduce wind energy development in the view east where there is currently none visible.

Factors that decrease the magnitude of change are:

- The view to the east from this location is not particularly scenic and is crossed by overhead electricity lines with pylons situated in close proximity;
- The landscape is simple in pattern with improved grassland landcover in the foreground and rougher moorland grassland closer to the horizon, this indicates the larger scale upland landscape context beyond where the Proposed Scheme would be located. A landscape considered suitable for wind energy development of the type proposed;
- Whilst varied in the amount of tower visibility, the overall layout appears to form a cohesive group of turbines that is evenly spaced (albeit with two turbines closely overlapping);
- Existing electricity lines that cross the view and the presence of electricity pylons / poles, masts and a substation within close visual context, bring an industrial character to this view and so moderating the effect of the Proposed Scheme which lies beyond it; and
- Whilst the Proposed Scheme would appear in relatively close context to Blaen Morlais Farm in this view, the closest turbine has only blade and hub visibility and does not therefore appear overly prominent in relation to the view of the property and does not diminish the scale of the property or intervening landscape.

The magnitude of change for the Proposed Scheme is considered to be Medium.

Significance of Effect

The effect on residential receptors represented by this viewpoint is considered to be **Moderate-Major and Significant**. Whilst the magnitude of change is found to be of a medium level the higher sensitivity of residents at this location results in a significant effect. The effect on cyclists at this viewpoint is considered to be **Moderate and Not Significant** as result of their lower sensitivity.

Cumulative Assessment

Cumulative Assessment (consented, application and scoping scenarios)

No consented, application or scoping schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in these scenarios.

Table 5.19: Viewpoint - 4 A469 / Bute Town (NCN 468)

Baseline Conditions			
Baseline Description			
The viewpoint represents a relatively close proximity view towards the Proposed Scheme from the entrance to Bute Town. Bute Town consists of three rows of 2 storey terraced properties, with several larger properties to the north and east of terraces, it also has a school and playpark. The viewpoint has been selected to represent a worst-case view for residents within Bute Town as it is free from the screening potential of trees within the gardens and open space of the settled area and on the roadside of the A465 further to the north and also from other buildings within the settled area itself. The viewpoint also represents users of the A469 particularly northbound for whom the site appears in the direction of travel as they pass the entrance to Bute Town. The views from this location to the west, north and east are relatively contained, either by the settlement itself or by the embankments of the A465 to the north or the reservoir to the west. Views to the south are more open and views along the Rhymney Valley with the valley sides gradually disappearing into the distance provide a focal point and scenic quality to the view south. The view north-west towards the site is a view between the reservoir embankment and across the A465 road corridor. The landscape of the site is not apparent in this view. The properties at Lakeside Farm can be seen sitting below the A465 road corridor. Streetlights, telegraph poles and overhead electricity lines and pylon towers cross the view to the north-west. There are no operational turbines apparent from this location.			
Receptor type	Value	Susceptibility	Sensitivity
Residents	This viewpoint is within the Upper Rhymney Valley SLA and views will be valued by local residents. Value is considered to be Medium - High	The viewpoint represents a relatively close proximity view towards the Proposed Scheme from the entrance to Bute Town. Residents of nearby properties will likely share a similar view from their properties depending on their orientation. Susceptibility is considered to be High for residents.	High
Road users		The A469 is a busy road and motorists are likely to be travelling at speeds of around 50-60 mph. Road users are facing towards the site when northbound however, the view is only available for a short duration due to surrounding screening. Taking this into account susceptibility is considered to be Low.	Medium-Low
Assessment (including operational and under construction cumulative sites)			
Description of change: • The proposed turbines would be visible at 1.9 km to the nearest turbine to the north-west of the viewpoint; • All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform and proximity of turbines; • The proposed turbines theoretically occupy 25.3 degrees of the view.			
Magnitude of Change			

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of large scale wind turbines within close proximity to the viewpoint;
- The proximity and scale of the turbines in comparison to the property at Lakeside Farm which acts as a scale indicator in the same visual context as the Site; and
- The Proposed Scheme would introduce wind energy development in the view north-west where there is currently none visible.

Factors that decrease the magnitude of change are:

- The view of the landscape to the north and north-west is curtailed by the various embankments and roadside trees that intervene and dominated by the A469 road corridor. It is not particularly scenic and is crossed by overhead electricity lines pylon towers situated in close proximity;
- Whilst varied in the amount of tower visibility, the overall layout appears to form a cohesive group of turbines that is evenly spaced (albeit with two turbines closely overlapping);
- Electricity lines and pylons that intervene in the view towards the Site, sit in front of the Proposed Scheme with pylons at appearing at approximately the same relative scale due to a foreshortening effect. This effect tends to moderate the magnitude of change as it provides a recognisable scale comparison, of existing infrastructure which appears similar or taller in height than that which is proposed;
- The more scenic view south-east along the Rhymney Valley would be unaffected by the Proposed Scheme; and
- Whilst the Proposed Scheme would appear in relatively close context to Lakeside Farm in this view, the property is set within its own context of surrounding trees separating it from the A465 and the site area on which the turbines are located. This prevents any immediacy to the visual relationship between these elements and the property retains its own visual setting as a result.

The magnitude of change for the Proposed Scheme is considered to be Medium.

Significance of Effect

The effect on residential receptors represented by this viewpoint is considered to be **Moderate-Major and Significant**.

The effect on road users at this viewpoint is considered to be **Moderate-Minor and Not Significant** as result of their lower sensitivity.

Cumulative Assessment

Cumulative Assessment (consented, application and scoping scenarios)

No consented, application or scoping schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in these scenarios.

Table 5.20: Viewpoint – 5 Pontsticill

Baseline Conditions			
Baseline Description			
Pontsticill is a ribbon settlement located on the west side of the Pontsticill valley to the south of the reservoir. The viewpoint represents a relatively close proximity view towards the Proposed Scheme from an elevated position within the centre of Pontsticill on Vaynor Road close to the Butchers Arms. There are properties behind and further west that are as elevated as the viewpoint which share a similar open view to the east. Views to the north and south are along the Taf Fechan valley within the visual context of the settlement. The valley floor is much lower elevated, well wooded and obscured from view by nearby properties and localised landform. The main focus for views from properties within Pontsticill is however along and across the valley the eastern sides of which rise up high above the settlement. The eastern sides of the valley have a complex pattern of woodland, pastoral fields, upland grazing and rocky outcrops which are remnant quarry faces within the disused quarries of Baltic, Twynau Gwynion and Tyle Haidd. The foreground view is across the rooftops of nearby properties lower down the valley with telegraph poles and wires crossing the view to the east. There are no operational turbines apparent from this location.			
Receptor type	Value	Susceptibility	Sensitivity
Residents	This viewpoint is within the Bannau Brycheiniog National Park and views will be valued by local residents. Value is considered to be High	The viewpoint represents a relatively close proximity view towards the Proposed Scheme from an elevated point within the settlement. Residents of nearby properties will likely share a similar view from their properties depending on their orientation. Susceptibility is considered to be High for residents.	High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 2.1 km to the nearest turbine to the east of the viewpoint; - Only two Proposed Scheme turbines would be visible from this location, one as a blade tip and the other as top of tower with hub close to the horizon; - The proposed turbines theoretically occupy 3.7 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint; and - The Proposed Scheme would introduce wind energy development in the view east where there is currently none visible. Factors that decrease the magnitude of change are: - Only two turbines would be visible from this settlement each of which has limited visibility due to intervening landform;			

- The visible turbines would be seen within close context to the strip of upland and rock faces of disused quarries which provides an underlying upland landscape context for the Proposed Scheme; - The position and limited visibility of the turbines above this upland horizon gives the appearance of the turbines being set well back into the upland beyond this immediate ridge, which in turn prevents any sense of encroachment on the valley landscape below; and - Views along the Pontsticill valley to the north and south would be unaffected by the Proposed Scheme. The magnitude of change for the Proposed Scheme is considered to be Low.
Significance of Effect
The effect on residential receptors represented by this viewpoint is considered to be Moderate-Minor and Not Significant .
Cumulative Assessment
Cumulative Assessment (consented, application and scoping scenarios)
No consented, application or scoping schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in these scenarios.

Table 5.21: Viewpoint - 6 Pant Station, Brecon Mountain Railway

Baseline Conditions			
Baseline Description			
This viewpoint is located in the car park close to the main building at Pant Station. The Brecon Mountain Railway is a steam locomotive that takes visitors from Pant to Torpantau along part of the railway that ran between Merthyr Tydfil and Brecon before it closed in 1964. The station also has a shop and tearoom for visitors. From this location there are distant views south along the minor road towards the distinctive landform of the Ffos-y-fran quarry but otherwise views are relatively contained either by localised landforms, the valley sides or surrounding trees. A series of spoil heaps associated with the disused Morlais Castle Quarries are found opposite the station to the west alluding to the industrial heritage of this location and the railway. The viewpoint is located in position where the view towards the Proposed Scheme to the east is least obscured by intervening trees, woods and landform. A similar view would be found on the southern end of the station platform, albeit with increased tree screening aligned with the derelict property at Blaen y Garth. The view east towards the Site is across the embankments of the disused railway that would have passed the edges of Pant (a different part of which is now the NCN46), several electricity lines cross this view with wooden poles and pylon towers scattered across the undulated small fields with scrubby trees and post and wire boundaries. The Gas Distribution Station to the north of Garth occupies a large part of the visible horizon in the view east. The blade tip of the turbine at Pengarnddu Industrial Estate is theoretically visible from this location but is obscured by trees that edge the car park.			
Receptor type	Value	Susceptibility	Sensitivity

Visitors	This viewpoint is within SLA 33 Morlais and Cwm Taff Fechan and views will be valued by visitors. Value is considered to be Medium-High	Visitors to the Bannau Brycheiniog Railway will be doing so largely to experience the vintage steam train but will also be using the railway to experience unique views from the railway of the BBNP. The industrial context of the Station as described in the baseline lower susceptibility at the station, which is not representative of more scenic views elsewhere on the railway journey into the BBNP. Taking this into account, susceptibility to change is considered to be Medium-Low.	Medium
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 2.1 km to the nearest turbine to the east of the viewpoint; - All six of the turbines are theoretically visible, three as top of turbine towers with hubs close to the horizon, one as a very small blade tip and two as top half of towers visible; - Intervening trees and vegetation obscure the blade tip from view and reduces the amount of visibility for other turbines in the view; - From this precise location, turbines 1 and 2 are obscured by nearby trees and whilst it is appreciated that these may be more visible from a different part of the car park, turbines 3, 5 and 6 would then be obscured by different trees, resulting in only 2-3 turbines being visible at any one time from this location; - The proposed turbines theoretically occupy 24.7 degrees of the view (which in reality would only be 10-15 degrees of the view taking account of nearby screening).			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint; and - The Proposed Scheme would introduce wind energy development in the view east where there is currently none visible. Factors that decrease the magnitude of change are: - Only two to three turbines would actually be visible from this location taking account of the nearby screening from trees; - The viewpoint photography was captured in winter months when trees were not in leaf and the level of screening from these trees and within the landscape beyond would be substantially greater in summer months when visitor numbers at the station are likely to be at their highest; - The visible turbines would be seen within close context to the Gas Distribution Station which occupies a large part of the horizon in this view; - Overhead electricity lines cross the landscape to the east which combined with the Gas Distribution Station provides a infrastructural development context to the strip of land visible through the trees to the east; and - Views along the Pontsticill valley to the south would be unaffected by the Proposed Scheme. The magnitude of change for the Proposed Scheme is considered to be Low.			

Significance of Effect
The effect on visitors represented by this viewpoint is considered to be Minor and Not Significant .
Cumulative Assessment
Cumulative Assessment (consented, application and scoping scenarios)
No consented, application or scoping schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in these scenarios.

Table 5.22: Viewpoint - 7 Rhymney

Baseline Conditions			
Baseline Description			
The settlement of Rhymney sits at the head of the Rhymney valley to the south of the A465 road corridor and the tributaries that feed the Rhymney River. The settlement is spread out along the valley in a north-south orientation largely to the east of the A469. The viewpoint location is located in an elevated part of the settlement at its northern edges. Whilst the viewpoint itself has views across the A465 Heads of the Valleys Road towards the Site, views from properties in the immediate vicinity have less direct views towards the Site and tend to be orientated to the west. There are properties set further back from the edge of the settlement that do have direct facing views to the north, however, these properties do not share the same elevated view across the upper Rhymney valley as the viewpoint location. The foreground view is across the woods and trees that follow the Rhymney River along with a series of small field compartments that have a mix of scrub, rough pasture and improved grassland. Scattered properties and Bute Town are nestled into this context of trees and small field compartments. The A645 road corridor cuts across the view to the north separating the more settled landscape found to the south with the upland grassland of the site area to the north. Overhead electricity lines cross the view, following the road corridor and the pylon towers break the skyline to the north. The Pengarnddu Industrial Estate can be seen to the north-west on the horizon along with the operational turbines at the Pengarnddu Industrial Estate and St Merryrn Meat Factory.			
Receptor type	Value	Susceptibility	Sensitivity
Residents	This viewpoint is not located within any landscapes designated for their scenic quality, however, views will be valued by local residents. Value is considered to be Medium.	The viewpoint represents a relatively close proximity view towards the Proposed Scheme from an elevated point within the settlement. Residents of nearby properties will have a more oblique view towards the Site as a result of their orientation, however it is recognised that other properties set further back do have direct facing views. Susceptibility is therefore considered to be High for residents.	Medium-High
Assessment (including operational and under construction cumulative sites)			

Description of change: • The proposed turbines would be visible at 2.6 km to the nearest turbine to the north-west of the viewpoint; • All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform and proximity of turbines; • Turbine tracks would be visible from this location; • The proposed turbines theoretically occupy 17.5 degrees of the view.
Magnitude of Change
Factors that increase the magnitude of change are: • Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint; • Turbine tracks would be visible from this location adding to the visual change experienced; and • The Proposed Scheme would introduce further wind energy development in the view north of a larger scale than currently experienced, intensifying the influence of wind energy development. Factors that decrease the magnitude of change are: • The rougher textured moorland landcover of the site area in the view provides a large scale upland landscape context considered suitable for wind energy development of the type proposed; • Whilst the turbines are of a large scale, they would not diminish the scale of the upland grassland of the site area; • The Proposed Scheme turbines are set back from the scattered settlement visible in the view and would not appear to encroach on it as a result; and • Existing tall structures such as electricity pylons and wind turbines slightly moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in the view. The magnitude of change for the Proposed Scheme is considered to be Medium-High.
Significance of Effect
The effect on residential receptors represented by this viewpoint is considered to be Moderate-Major and Significant.
Cumulative Assessment
Cumulative Assessment (consented, application and scoping scenarios)
No consented, application or scoping schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in these scenarios.

Table 5.23: Viewpoint - 8 Cefn yr Ystrad

Baseline Conditions			
Baseline Description			
This viewpoint is located at the southern edges of the BBNP on an elevated rocky ridge known as Cefn yr Ystrad, the viewpoint location itself is found close the highest point on that ridge near a Carn y Bugail. The large quarry at Cwar yr Ystrad is immediately to the north of this viewpoint which has cut away large sections of the northern slopes of the Cefn yr Ystrad ridge. OS mapping and aerial photography for the area shows several footpaths that cross the plateau, however, these were not evident during the site visit. Carn y Bugail and Garn Felen are notable due to their elevation making them focal points for the area. The viewpoint location is closest to Carn y Bugail, as this provides the most open view to the south. The view to the north, east and west is across the plateau with the taller mountains such as Pen y Fan and Corn Du appearing above the intermediate horizon created by the plateau and creating a notable focus for views to the north towards the Central Beacons. The view south towards the Site is across an extensive moorland plateau which has occasional rocky outcrops and scree. The view to the south beyond the plateau also includes views of the settled valleys landscape and the ridges that orientate north-south that define the valleys. Electricity pylons, open cast mining and quarries are a feature of the valleys landscape to the south. Settlement is largely located in the valleys and so tends to be lower elevated, from this location connecting areas of settlements can be seen to the south-east along the A465 road corridor. From this location views along the Rhymney valley are also possible due to the orientation of the valley to the viewpoint, this creates a focus for views to the south. There are many operational turbines visible to south including the closest of these within around 5 km at the Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; St Merryn Meat Factory and Pengarnddu Industrial Estate. Others turbines are more distant and include the Pen-y-fan Industrial Estate; Cruglwyn; Pen Y Fan Ganol Farm; Bedlwyn Farm; Oakdale; Gelli-wen Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Bryn Ysgawen Farm; Cefn Bach Farm; Groesfaen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; and Mynachdy Farm as well as the more distant wind farms at Mynydd Portref and extension and Taff Ely. Operational wind energy development to the south-west also includes the wind farms at Ffoch Nest; Bwllfa Farm; Ferndale (Penrhys); Pant y wal and extension; Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwllfa; Pen Y Cymoedd; Fynnon Oer; Maesgwyn & Extension; Mynydd y Gwair; Mynydd y Betws; Perthigwynion Farm; and Mynydd Y Gwrhyd.			
Receptor type	Value	Susceptibility	Sensitivity
Recreational Walkers	This viewpoint is within the Bannau Brycheiniog National Park and Value is considered to be High	Recreational walkers will have an appreciation of the surrounding landscape and will be focussed on views, however, notable views are focussed away from the Proposed Scheme towards Pen y Fan and the Central Beacons and susceptibility is slightly reduced as a result. Taking this into account susceptibility is considered to be Medium-High.	Medium-High
Assessment (including operational and under construction cumulative sites)			
Description of change:			

- The proposed turbines would be visible at 2.7 km to the nearest turbine to the south of the viewpoint;
- All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform and proximity of turbines;
- Some of the tracks would be visible from this viewpoint; and
- The proposed turbines theoretically occupy 26.7 degrees of the view.

Magnitude of Change

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint; and
- The Proposed Scheme would increase the perception of wind energy development in the view and bring wind energy development closer to viewers.

Factors that decrease the magnitude of change are:

- The scenic views to the north across the BBNP and to the south along the Rhymney valley would be unaffected by the Proposed Scheme;
- The rougher textured moorland landcover of the extensive plateau occupying the foreground and middle distance of the view provides a large scale upland landscape context considered suitable for wind energy development of the type proposed; and
- Existing wind turbines and wind farms moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in the view, albeit within closer proximity.

The magnitude of change for the Proposed Scheme is considered to be Medium-High.

Significance of Effect

The effect on recreational walkers at this viewpoint is considered to be **Moderate-Major and Significant**. Whilst the viewpoint is not particularly susceptible to change, it has a high value which increases the visual sensitivity. The viewpoint is within close proximity to the Proposed Scheme which increases the magnitude of change.

Cumulative Assessment

Cumulative Assessment (consented scenario)

Theoretically visible consented schemes include Unit 18 and 19 Rassau Industrial Estate; land at Graig-yr-hufen road; Graig Fatha Farm; Llwynceyn Farm; Taf Ely Repowering; Nant-y-Gwyddon; Abergorki; Upper Ogmor; Foel Trawsant and Rhigos Road. These consented schemes are to the south and will only very slightly add to the cumulative backdrop of turbine development already seen in the view. It is considered therefore that they will have minimal cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

Theoretically visible application schemes include Silent Valley; Mynydd Carn-y-Cefn and Foel Trawsant S73. Silent Valley and Foel Trawsant S73 would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. Mynydd Carn-y-Cefn would add turbines to the view southeast within the same part of the view as Pen Bryn Oer and Cruglwyn. These application schemes are distant and will only very slightly add to the cumulative backdrop of turbine development already seen in the view. It is considered therefore that they will have minimal cumulative influence on the baseline situation either due to them appearing within a

similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

Scoping schemes visible from this viewpoint include - West Monmouthshire Golf Club; Abertillery; Penrhyn Farm; Penrhyn Farm 2, Hafodarthan; Hafodarthan Farm; Manmoel; Mynydd Llanhillieth; Mynydd Maen; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the east, southeast and south and would appear to visually connect across the ridges that are formed by the valleys landscape. These schemes also provide visual linkage between the operational, and application schemes in the view to the southeast. The introduction of these schemes would notably intensify the cumulative influence of wind farm development in the view to the southeast. The introduction of these scoping schemes further reinforces the backdrop of existing wind turbines and wind farms within which the Proposed Scheme would not be entirely uncharacteristic in the view. However, when considering the introduction of the Proposed Scheme to this scenario, the contribution of the Proposed Scheme to the changed view and its position within the backdrop of cumulative schemes also increases the effect. On balance, the level of change is considered to be similar to the assessment against the operational / under construction baseline. The cumulative magnitude of change is therefore considered to be Medium-High resulting in a **Moderate-Major and Significant** effect.

Table 5.24: Viewpoint - 9 Rhymney Common

Baseline Conditions			
Baseline Description			
This viewpoint is located on the wide shoulder of Rhymney Hill which is the northern most hill on the ridge of hills that separates Rhymney valley from the Sirhowy valley. The viewpoint sits close to a network of informal paths that cross Rhymney Hill and can be accessed from Rhymney to the west via a short and steep walk up the hill. The viewpoint provides a wide and elevated view from the south-west to north-west along the Rhymney valley and also along the A465 Heads of the Valleys road. The view north-west towards the Site is across the rooftops of northern Rhymney, the woods and trees that follow the Rhymney River along with field compartments that have a mix of scrub, rough pasture and improved grassland. Scattered properties and Bute Town are nestled into this context of trees and small field compartments and the reservoir at Bute Town is clearly visible from this location along with its steep sided banks. The A645 road corridor cuts across the view to the north separating the more settled landscape found to the south with the upland grassland of the site area to the north. Overhead electricity lines cross the view, following the road corridor. The Pengarnddu Industrial Estate can be seen to the north-west on the horizon. Operational turbines in the view include Pen y Cymoed wind farm, Pengarnddu Industrial Estate and St Merryn Meat Factory turbines to the west; Tafarnaubach Industrial Estate to the north and Pen Bryn Oer in very close proximity to the north-east.			
Receptor type	Value	Susceptibility	Sensitivity
Recreational	This viewpoint is located within Caerphilly SLA 23 - Upper Rhymney Valley and value is	Recreational walkers will have an appreciation of the surrounding landscape and will be focussed on views, however, notable views are focussed away from the Proposed Scheme and susceptibility is reduced by the extremely close proximity of the Pen Bryn Oer turbines. Taking this	Medium

	considered to be Medium-High.	into account susceptibility is considered to be Medium-Low.	
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 3.4 km to the nearest turbine to the north-west of the viewpoint; - All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform and proximity of turbines; - Turbine infrastructure including tracks and the electrical and control building compound would be visible from this location; - The proposed turbines theoretically occupy 13.3 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint; - Turbine tracks and the electrical and control building compound would be visible from this location adding to the visual change experienced; and - The Proposed Scheme would introduce further wind energy development in the view north-west of a larger scale than currently experienced, intensifying the influence of wind energy development. Factors that decrease the magnitude of change are: - The rougher textured moorland landcover of the site area in the view provides a large scale upland landscape context considered suitable for wind energy development of the type proposed; - Whilst the turbines are of a large scale, they would not diminish the scale of the upland grassland of the site area; - The Proposed Scheme turbines are set back from the scattered settlement and edges of Rhymney visible in the view and would not appear to encroach on it as a result; - Existing tall structures such as electricity pylons and wind turbines moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in the view; and - The addition of the Proposed Scheme to the baseline view that includes these operational wind turbines would intensify the influence of wind energy in the successive view but is not considered to lead to substantial cumulative interactions that would further increase the magnitude of change. The magnitude of change for the Proposed Scheme is considered to be Medium.			
Significance of Effect			
The effect on recreational receptors represented by this viewpoint is considered to be Moderate and Significant. The view from this location is not particularly sensitive however the degree of change is sufficiently large enough to trigger a significant effect.			
Cumulative Assessment			
Cumulative Assessment (consented scenario)			
The consented Upper Ogmere wind farm will appear in the far distance to the southwest of this view within the context of the existing Pant y wal and extension scheme. This consented scheme			

will have little influence on the cumulative baseline situation due to limited visibility, distance and close context to operational schemes. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect for this scenarios.
Cumulative Assessment (application scenario)
No application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in this scenario.
Cumulative Assessment (scoping scenario)
The scoping stage Penrhyn Farm and Penrhyn Farm 2 turbines would appear behind the nearby turbine of Pen Bryn Oer to the east. These turbines would have little influence on the cumulative baseline situation due to their close context to operational schemes that are far closer in the view to the east. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect for this scenarios.

Table 5.25: Viewpoint - 10 Trefil

Baseline Conditions			
Baseline Description			
Trefil is a small settlement at the head of the Sirhowy Valley to the north-west of Tredegar. The Trefil Quarries are still in use and are a key feature of the setting of Trefil to the north of the settlement. The valley is steep sided and upland in feel within the context of the settlement, creating a sense of separation from the more settled areas to the south along the A465 Heads of the Valleys road and in Tredegar. The viewpoint itself is located on Railway Terrace where properties are located high on the eastern valley sides. Views to the east and north are limited by topography and the quarry workings, views to the south are elevated and along the upper Sirhowy valley towards Rhymney Hill and the Pen Bryn Oer wind turbines. Views west towards the Site have an enclosed feel due to the wide horizon of steep sloping upland moorland that dominates at higher elevation. The moorland slopes give way to small fields of grazing land associated with properties on the opposite side of the valley, some of which have shelterbelt planting and outbuildings clustered on the lower slopes. Operational turbines are seen to the south and in addition to Pen Bryn Oer, include the following - Tafarnbach Industrial Estate; Bedlwyn Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; and Cruglwyn.			
Receptor type	Value	Susceptibility	Sensitivity
Residents	This viewpoint is within Blaenau Gwent SLA 8 - Trefil and Garnlydan Surrounds and views will be valued by local residents. Value is considered to be Medium-High	The viewpoint represents a relatively close proximity view towards the Proposed Scheme from an elevated point within the settlement. Residents of nearby properties will likely share a similar view from their properties depending on their orientation. Existing wind turbine moderate the susceptibility to a degree. Susceptibility is considered to be Medium-High for residents.	Medium-High
Assessment (including operational and under construction cumulative sites)			
Description of change:			

• The proposed turbines would be visible at 3.8 km to the nearest turbine to the west of the viewpoint; • All six of the Proposed Scheme turbines would be visible from this location, however, intervening landform obscures much of the turbine visibility such that three turbines would only be visible as blade tips, one would be appear as hub on the horizon and two would be seen as top of towers and hubs close to the horizon; • The proposed turbines theoretically occupy 13.1 degrees of the view.
Magnitude of Change
Factors that increase the magnitude of change are: • Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint; and • The Proposed Scheme would introduce wind energy development in the view west where there is currently none visible. Factors that decrease the magnitude of change are: • Turbine visibility is limited from this location with only two turbine towers visible due to intervening landform; • The limited visibility of the turbines gives a sense of separation between the Proposed Scheme and the viewpoint; • The visible parts of the turbines would be seen above the context of a broad ridge of upland moorland which provides an underlying upland landscape context for the Proposed Scheme; • The position and limited visibility of the turbines above this upland horizon gives the appearance of the turbines being set well back into the upland beyond this immediate ridge, which in turn prevents any sense of encroachment on the valley landscape below; and • Views along the Sirhowy valley to the south would be unaffected by the Proposed Scheme. The magnitude of change for the Proposed Scheme is considered to be Medium-Low.
Significance of Effect
The effect of residential receptors represented by this viewpoint is considered to be Moderate and Not Significant.
Cumulative Assessment
Cumulative Assessment (consented and application scenarios)
No consented or application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in these scenarios.
Cumulative Assessment (scoping scenario)
Scoping schemes visible from this viewpoint include the Penrhyn Farm and Penrhyn Farm 2 turbines at close proximity; Twyn Hywel Energy Park in the distance beyond the existing Pen Bryn Oer and Manmoel in the same part of the view as Cruglwyn. These schemes would appear to the south in alignment with the key view along the valley. The introduction of these schemes would notably intensify the cumulative influence of wind farm development in the view to the south in this scenario. When considering the introduction of the Proposed Scheme to this scenario, the further extended backdrop of existing wind turbines and wind farms within which the Proposed Scheme would not be entirely uncharacteristic in the view, moderates the level of change. However, the contribution of the Proposed Scheme to this changed view and the perception of wind turbines within multiple facets of the view, for which the Proposed Scheme also contributes to, increases the level of change. On balance, the level of change is considered to increase compared to the assessment against the operational / under construction baseline.

The cumulative magnitude of change is therefore considered to be Medium resulting in a **Moderate and Significant effect**.

Table 5.26: Viewpoint - 11 Cyfartha Park

Baseline Conditions			
Baseline Description			
Cyfarthfa Park is located within Merthyr Tydfil on the south-west facing slopes of the River Taff. This viewpoint represents visitors to the parkland and nearby residents in this elevated part of Merthyr Tydfil. The parkland is open to the public and is a popular visitor location with the castle now a museum and art gallery. The parkland has formal gardens, a lake, children’s play area, tennis courts and a model railway set within mature estate woodlands that surround the castle and parkland. Due to the south-west facing slopes on which the castle and designated landscape is located, views out tend to be west facing, with views north west to the upland landscape of the BBNP. The viewpoint is located within a meadow area which occupies the most elevated parts of the designated parkland to the east within an area of theoretical visibility of the Proposed Scheme. This area is more visually contained than other west facing parts of the parkland by both the western side of the Pen y Darren area of Merthyr Tydfil to the east and also by mature estate woods and avenue trees that surround and separate the meadows. The view towards the Site is across the foreground meadow and a horizon of rooftops created by the Gurnos residential area of Merthyr Tydfil. Operational turbines in the view include Pengarnddu Industrial Estate and St Merryn Meat Factory to the east above the roofline of Gurnos and PenyBryn.			
Receptor type	Value	Susceptibility	Sensitivity
Visitors	This viewpoint is located within the Cyfarthfa Castle RHPG and views will also be valued by nearby residents. Value is considered to be High.	The viewpoint represents a relatively close proximity view towards the Proposed Scheme from an elevated point within the parkland. Visitors are likely to have an appreciation of surrounding views, however, the view to the east from the Parkland is away from the key views west from the parkland or towards the BBNP to the north-west. The existing turbines in the view moderates susceptibility as turbines are not entirely uncharacteristic in the view. Taking all of this into account, susceptibility is considered to be Medium for visitors.	Medium-High
Residents		The viewpoint represents a relatively close proximity view towards the Proposed Scheme from an elevated point within the settlement. Residents of nearby properties will likely share a similar view from their properties depending on their orientation. The existing turbines in the view moderates susceptibility as turbines are not entirely uncharacteristic in the view. Susceptibility is considered to be Medium-High for residents.	High
Assessment (including operational and under construction cumulative sites)			
Description of change:			

- The proposed turbines would be visible at 4.4 km to the nearest turbine to the north-east of the viewpoint;
- All six of the Proposed Scheme turbines would be visible from this location, one as a blades with hub close to the horizon and the other five with varying degree of towers visible;
- The Proposed Scheme turbines would appear as a relatively cohesive grouping;
- The proposed turbines theoretically occupy 13.6 degrees of the view.

Magnitude of Change

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint;
- The Proposed Scheme turbines would appear immediately above the roofline of nearby properties at a larger scale than the intervening urban landscape that intervenes;
- The Proposed Scheme would introduce wind energy development in the view north-east of a larger scale than currently experienced to the east, intensifying the influence of wind energy development.

Factors that decrease the magnitude of change are:

- The Proposed Scheme would appear in a part of the view that is not particularly scenic;
- The Proposed Scheme would only occupy a relatively small amount of the available view;
- Whilst appearing above the nearby roofline at a larger scale, the proposed turbines would be seen as background features to this intervening roofline due to natural perspective and as such would not result in distortions of scale when viewed together; and
- The presence of existing turbines slightly moderates the influence that the Proposed Scheme would bring to this view.

The magnitude of change for the Proposed Scheme is considered to be Medium.

Significance of Effect

The effect for visitors to the parkland is considered to be **Moderate and Not Significant**. Whilst the viewpoint has a Medium-High sensitivity for visitors, the magnitude of change is not considered to be at a high enough level to trigger a significant effect and key views within the parkland would be unaffected by the Proposed Scheme.

The effect for residential receptors represented by this viewpoint is considered to be **Moderate-Major and Significant** (this significant effect applies to the nearby properties which would share similar elevated views in the Gurnos area of Merthyr Tydfil).

Cumulative Assessment

Cumulative Assessment (consented, application and scoping scenarios)

No consented, application or scoping schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in these scenarios.

Table 5.27: Viewpoint - 12 Trefechan

Baseline Conditions			
Baseline Description			
Trefechan is a small settlement to the north-west edges of Merthyr Tydfil. The settlement is located on the north and west valley sides of Taf Fechan. Eastern parts of the settlement have more limited views due to lower elevation and surrounding woods, however, western parts are more elevated and as a result have more open views to the south and east. The viewpoint location is within an area of open space in the centre of the settlement which has elevated views to the south and east, including towards the Site. The view from this location is an approximate 120 degree panorama which spans from the north east along the Taf Fechan valley to the south across the A465 road corridor and the built up areas of Gurnos and Pen y Garn within northern Merthyr Tydfil. The view towards the site to the east is across the rooftops of lower elevated properties in eastern Trefechan. Beyond the settlement, pastoral fields surrounded by woodlands field boundary trees can be seen between the properties and street trees. The horizon is a gently sloping ridgeline containing a mix of disused quarry faces, scrubby trees and overhead electricity lines to the east which gradually blends with the lower elevated treeline of Bunker's Hill and Gyrnos Woods. Operational turbines in the view include Pengarnddu Industrial Estate and St Merryn Meat Factory both of which are located at 4.4 km to the east.			
Receptor type	Value	Susceptibility	Sensitivity
Residents	This viewpoint is not located within any landscapes designated for their scenic quality, however, views will be valued by local residents. Value is considered to be Medium.	The viewpoint represents a relatively close proximity view towards the Proposed Scheme from an elevated point within the settlement. Residents of nearby properties will likely share a similar view from their properties depending on their orientation. Susceptibility is considered to be High for residents.	Medium-High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 4.6 km to the nearest turbine to the east of the viewpoint; - All six of the Proposed Scheme turbines would be visible from this location, one as a blade tip, five as top of tower with hub close to the horizon and one as top half of tower; - The proposed turbines theoretically occupy 11.9 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines within relatively close proximity to the viewpoint; and - The Proposed Scheme would introduce further wind energy development in the view east of a larger scale than currently experienced, intensifying the influence of wind energy development.			

Factors that decrease the magnitude of change are: • The visible turbines would be seen within close context to the rock faces of disused quarries and away from the more pastoral landscape elements of the view; • The position and limited visibility of the turbines above the intervening ridgeline gives the appearance of the turbines being set well back beyond this immediate ridge; • The presence of existing tall structures on this ridgeline such as the electricity lines and turbines, in addition to the disused quarries, provides a developed landscape context that moderates the influence that the Proposed Scheme would bring to this view; and • This intervening ridge therefore provides a sense of separation from the Proposed Scheme setting development back from it and preventing any sense of encroachment on the settled landscape below the ridge and in the foreground view. The magnitude of change for the Proposed Scheme is considered to be Medium-Low.
Significance of Effect
The effect of residential receptors represented by this viewpoint is considered to be Moderate and Not Significant. Whilst the viewpoint has a Medium-High sensitivity, the magnitude of change is not considered to be at a high enough level to trigger a significant effect. This is largely due to the limited visibility resulting from the intervening ridgeline but also as a result of the developed context of the view.
Cumulative Assessment
Cumulative Assessment (consented scenario)
Theoretically visible turbine at Land at Graig-yr-hufen Road is screened by vegetation and no other consented schemes are visible. As a result, there is no cumulative change and No Effect in this scenario.
Cumulative Assessment (application scenario)
No application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in this scenario.
Cumulative Assessment (scoping scenario)
Theoretically visible Twyn Hywel Energy Park turbines are largely obscured by intervening trees from this location. This scoping development would therefore have little influence on the cumulative baseline situation due to limited visibility. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect.

Table 5.28: Viewpoint - 13 Fochriw

Baseline Conditions
Baseline Description
Fochriw is a small settlement to the south-west of Rhymney. It is located at the head of the Nant Bargod Rhymni valley and is nestled between the upland ridges located either side of this shallow and wooded valley. The viewpoint itself is located to the north of the settlement where the most open views towards the site area are found close to the route of the Rhymney Valley Ridgeway Footpath. Properties in this northern area share similar views to the viewpoint, however, other parts of this settlement are lower elevated with more restricted views towards the Site.

The view north towards the Site is wide and much of it is dominated by the large area of upland plateau that intervenes, which also creates a gently domed horizon. This large moorland plateau exemplifies this particular area of upland moorland which very clearly characterises the area (and the settlement edge) as being in an expansive and large scale landscape. Drystone walling is found at the edges of the settlement as can be seen in the foreground. Views across the Rhymney valley from this location provide a visual focus both to the north-east and south-east. In the view to the north-west overhead electricity lines cross the landscape disappearing behind the intervening plateau to the north and then reappearing in the distant context of the A465 road corridor and northern edges of the Rhymney settlement. A wooden pole electricity line also crosses the view to the north eventually punctuating the horizon before disappearing behind it. The operational turbine at Tafarnaubach Industrial Estate (4.5 km) and Pen Bryn Oer (3.5 km) can be seen to the north-east at the edges of the Rhymney settlement.

Receptor type	Value	Susceptibility	Sensitivity
Residents	This viewpoint is not located within any landscapes designated for their scenic quality, however, views will be valued by local residents and recreational receptors. Value is considered to be Medium.	The viewpoint represents a relatively open view towards the Proposed Scheme from an elevated point at the settlement edge. Residents of nearby properties will likely share a similar view from their properties depending on their orientation. Susceptibility is considered to be High for residents.	Medium-High
Recreational Receptors		Recreational receptors will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is considered to be Medium-High.	Medium-High

Assessment (including operational and under construction cumulative sites)

Description of change:

- The proposed turbines would be visible at 4.6 km to the nearest turbine to the north of the viewpoint;
- All six of the Proposed Scheme turbines would be visible from this location as top half of tower and blades sweeping behind the horizon; and
- The proposed turbines theoretically occupy 13.1 degrees of the view.

Magnitude of Change

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of large scale wind turbines within 4.6 km of the settlement edge; and
- The Proposed Scheme would introduce further wind energy development in the view north of a larger scale than currently experienced, intensifying the influence of wind energy development.

Factors that decrease the magnitude of change are:

- The visible turbines would be seen within the context of a large scale upland plateau that has a simple and expansive upland character, considered suitable for wind energy development of this type;
- The presence of existing tall structures on and either side of the upland plateau such as the electricity lines and turbines, provides a developed landscape context that moderates the influence that the Proposed Scheme would bring to this view;

- The position and partial visibility of the turbines due to the intervening plateau provides a degree of visual separation from the Proposed Scheme, moderating the influence that they have on the viewpoint and the settlement; and - Much of the settlement has a more restricted view towards the site and the Proposed Scheme would be less visible as a result. The magnitude of change for the Proposed Scheme is considered to be Medium-Low.
Significance of Effect
The effect on residential and recreational receptors represented by this viewpoint is considered to be Moderate and Not Significant. Whilst the viewpoint has a Medium-High sensitivity, the magnitude of change is not considered to be at a high enough level to trigger a significant effect. This is largely due to the limited visibility resulting from the intervening plateau but also as a result of the developed context of the view.
Cumulative Assessment
Cumulative Assessment (consented and application scenarios)
No consented or application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in these scenarios.
Cumulative Assessment (scoping scenario)
The scoping schemes of Penrhyn Farm, West Monmouthshire Golf Club and Manmoel would be visible to the east from this location. These scoping developments add to the extent of wind energy development visible on surrounding ridgelines increasing the influence of wind turbine development on this location, in particular the Manmoel turbines to the east. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered to increase compared to the assessment against the operational / under construction baseline. The magnitude of change is therefore considered to be medium resulting in a Moderate and Significant effect in this scenario.

Table 5.29: Viewpoint - 15 Garn Ddu

Baseline Conditions
Baseline Description
Garn Ddu is to the west of the site within BBNP, between the valleys of Taf Fechan and Cwm Taf. This viewpoint is located on the path that crosses the broad summit area of Garn Ddu. It is easily accessed by a short walk from the layby and picnic area on the A470 at the Llwyn-onn Reservoir within the Cwm Taf valley. The view is panoramic with views towards the Brecon's to the north and across lower elevated uplands to the east south and west. The landscape pattern is simple in most parts of the view which is largely moorland and grassland with small patches of improved grassland. Occasional blocks of woodland appear within the context of neighbouring valleys which are out of view due to line of sight. Indeed, the upland landscape in all directions appears as a series of disparate layers due to these surrounding valleys that are hidden from view and thus exaggerating the successive layering of the different upland areas visible. To the east, the topography of the landscape is notably less undulated and the broad shoulder of upland on which the Site is located appear simple in form, gradually falling in elevation to the south. This broad upland shoulder to the east has within it several rocky outcrops which are remnant quarry faces associated with the disused quarries of Baltic, Twynau Gwynion and Tyle Haidd.

The operational turbines at St Merryn Meat Factory and Pengarnddu Industrial Estate are clearly visible at around 6.5 km to the east. Other more distant operational turbines are less clear in the view east include - Cruglwyn; Bedlwyn Farm; Pen-yr-heol Farm; Oakdale; Pen Y Fan Ganol Farm; Penrhiwgwaith Farm; and Pen-y-fan Industrial Estate. Castell Llwyd Farm and Tyle Cwrth to the south east are only visible as blade tips. Operational wind energy development to the south includes the extensive wind farm grouping of Pen Y Cymoedd (12.8 km); Mynydd Bwllfa (12.3 km); and Maerdy (13.7 km). It is appreciated that these operational schemes are not clearly apparent in the visualisation photography at this location due to low cloud, however, they are apparent in other viewpoint photography from other more distant viewpoints.

More distant operational developments include - Mynachdy Farm; Ferndale (Penrhys); Bwllfa Farm; Llynfifi Afan Renewable Energy Park; Ffoch Nest; and Pant y wal and extension to the south and Maesgwyn & Extension and Mynydd y Gwair to the west.

Receptor type	Value	Susceptibility	Sensitivity
Hill Walkers	This viewpoint is within the Bannau Brycheiniog National Park and value is considered to be High	Hill walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is moderated by the existing wind energy development in the panorama, including east towards the site. Susceptibility is considered to be Medium-High.	Medium-High

Assessment (including operational and under construction cumulative sites)

Description of change:

- The proposed turbines would be visible at 5.2 km to the nearest turbine to the east of the viewpoint;
- All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform; and
- The proposed turbines theoretically occupy 8.5 degrees of the view.

Magnitude of Change

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of wind turbines to the east; and
- The Proposed Scheme would increase the perception of wind energy development in the view and bring wind energy development closer and at a larger scale than currently experienced;

Factors that decrease the magnitude of change are:

- The upland to the east is of a relatively simple landscape form and pattern that gradually falls towards to the south. The Proposed Scheme would appear on this simple upland horizon and would not diminish its broad scale;
- This viewpoint illustrates the large scale upland context of the Site and surrounding landscape (including the viewpoint location), which is considered suitable for wind energy development of the type proposed;
- The existing level of visible wind energy development is extensive in views from this location, spanning much of the view to the south and includes turbines visible close to the Proposed Scheme. The Proposed Scheme would therefore not be introducing development which is entirely uncharacteristic, albeit at a larger scale than the existing development; and
- The views to the north towards the Brecon's would be unaffected by the Proposed Scheme.

The magnitude of change for the Proposed Scheme is considered to be Medium.

Significance of Effect
The effect on hill walkers at this viewpoint is considered to be Moderate and Significant . The viewpoint is within the BBNP and has a Medium-High sensitivity and the magnitude of change is considered to be at a high enough level to trigger a significant effect. The effect is of borderline significance due to the cumulative context of the view and the site area appearing as a broad and large scale upland landscape which forms a suitable receiving landscape for the Proposed Scheme.
Cumulative Assessment
Cumulative Assessment (consented scenario)
Theoretically visible consented schemes include Llwyncefn Farm, Nant-y-Gwyddon, Pant y Wal Extension 2, Abergorki, Upper Ogmere and Rhigos Road. These consented schemes are to the south and have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Negligible and Not Significant cumulative effect.
Cumulative Assessment (application scenario)
The Mynydd Carn y Cefn application is visible in the distance to the east as small blade tips. Whilst in the same part of the view as the Proposed Scheme it would be barely discernible from this location due to distance and limited visibility. As a result, the cumulative magnitude of change is considered to be Negligible resulting in a Minor and Not Significant cumulative effect.
Cumulative Assessment (scoping scenario)
The scoping schemes of Abertillery, Manmoel, Mynydd Llanhilleth and Mynydd Maen would appear to the east in the distant backdrop of the Proposed Scheme. The Twyn Hywal Energy Park would appear to the south extending across the southern horizon. Whilst these scoping developments further spread and slightly intensify the visual effect experienced from this view, when considering the introduction of the Proposed Scheme to this scenario, the level of change is considered similar to the assessment against the operational / under construction baseline, largely due to the distance of the cumulative schemes in relation to the closer proximity of the Proposed Scheme. The magnitude of change is therefore considered to be medium resulting in a Moderate and Significant effect in this scenario.

Table 5.30: Viewpoint - 16 Pen Garbugail

Baseline Conditions
Baseline Description
Pen Garbugail is to the south of the site on an elevated part of Gelli-gaer Common to the south of Fochriw. A minor road cuts across this hill to the south of the summit and a new car park has been created to allow visitors a short and easy walk along a grassy path to the summit. The view from the top is panoramic with views towards the Brecon's to the north and across the neighbouring valleys landscapes to the east, west and south. The view to the north towards the Site is across the shoulder of the Gelligaer Ridge which drops down into the Ffos-y-fran opencast workings and quarry at Garth Fawr. A large amount of fly tipping has taken place on the summit which is scattered across the foreground view. The landscape in this area is disturbed and has large amounts of spoil deposits some of which have formed distinctive flat topped hill mounds which can be seen from many places in the local context of Merthyr Tydfil

and the Site. Beyond this the site area forms part of a large exposed upland that has a simple moorland / grassland character with very few features. An overhead line passes to the south of this upland, marking the position of A465 Heads of the Valleys road corridor, which is out of view. Beyond the upland of the Site the larger hills and mountains of the Brecon's can be seen in the distance with the scalloped ridges of Corn Du and Pen y Fan immediately behind the Ffos-y-fran open cast spoil.

There is a large number of operational wind energy developments visible from this location, including: St Merryn Meat Factory; Pengarnddu Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; Former Tech Board; Rassau Industrial Estate; Cruglwyn; Bedlwyn Farm; Penrhiwgwaith Farm; Pen-yr-heol Farm; Gelli-wen Farm; Pen Y Fan Ganol Farm; Oakdale; Cefn Bach Farm; Pen-y-fan Industrial Estate; Groesfaen Farm; Bryn Ysgawen Farm; Tyle Cwrth; Castell Llwyd Farm; Cefn Forest Farm; Tir Cook Farm; Mynydd Portref and extension; Mynachdy Farm; Taff Ely; Ffoch Nest; Pant y wal and extension; Bwllfa Farm; Ferndale (Penrhys); Llynfifi Afan Renewable Energy Park; Maerdy; Mynydd Bwllfa; Pen Y Cymoedd; Maesgwyn & Extension; and Mynydd y Gwair.

Receptor type	Value	Susceptibility	Sensitivity
Recreational Walkers	This viewpoint is within SLA - 31. Gelligaer & Taf Bargoed and value is considered to be Medium-High	Recreational walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is moderated by the existing wind energy development in the panorama and the close range industrial activity associated with the opencast working and quarrying. Susceptibility is considered to be Medium.	Medium-High

Assessment (including operational and under construction cumulative sites)

Description of change:

- The proposed turbines would be visible at 6.7 km to the nearest turbine to the north of the viewpoint;
- All of the Proposed Scheme turbines would be visible from this location to turbine base;
- Proposed Scheme infrastructure would be visible at distance including tracks and the electrical and control building compound;
- The proposed turbines theoretically occupy 9.9 degrees of the view.

Magnitude of Change

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of wind turbines to the north;
- The Proposed Scheme turbines would break the horizon of a skyline that includes the more distant hills and mountains of the Brecon's; and
- The Proposed Scheme would increase the perception of wind energy development in the view at a larger scale than currently experienced.

Factors that decrease the magnitude of change are:

- The upland to the north is of a relatively simple landscape form and pattern and the Proposed Scheme would appear on this simple upland horizon and would not diminish its broad scale;
- This viewpoint illustrates the large scale upland context of the site and surrounding upland landscape which is considered suitable for wind energy development of the type proposed;
- The Proposed Scheme would be seen beyond the large scale industrial activity of the opencast workings and quarries which form close range industrial features;

- Whilst the Proposed Scheme would appear on the same skyline as the more distant Brecon hills and mountains, the distinctive Corn Du and Pen y Fan scalloped ridges and jagged summits are in a different part of the view north and the Proposed Scheme would not encroach on their distinct form; and
- The existing level of visible wind energy development is extensive in views from this location, spanning much of the panoramic view in all directions. The Proposed Scheme would therefore not be introducing development which is uncharacteristic, albeit at a larger scale than the existing development.

The magnitude of change for the Proposed Scheme is considered to be Medium.

Significance of Effect

The effect on recreational walkers at this viewpoint is considered to be **Moderate and Significant**. The viewpoint has a Medium-High sensitivity and the magnitude of change is considered to be at a high enough level to trigger a significant effect.

The effect is of borderline significance due to the cumulative context of the view and close range industrial activity related to the opencast workings but also due to the site area appearing as a broad and large scale upland landscape in this view which forms a suitable receiving landscape for the Proposed Scheme.

Cumulative Assessment

Cumulative Assessment (consented scenario)

Visible consented schemes include Unit 18 and 19 Rassau Industrial Estate, Land at Graig-yr-hufen Road; Graig Fatha Farm; Llwyncefn Farm; Taff Ely Repowering; Pant y Wal Extension 2, Nant-y-Gwyddon; Upper Ogmere, Abergorki; Melin Court; and Rhigos Road. These consented schemes have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

Visible application schemes include a blade tip of the Silent Valley turbine and the Mynydd Carn y Cefn application to the east. Mynydd Carn y Cefn further spreads and intensifies the visual effect experienced from this view. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered similar to the assessment against the operational / under construction baseline, largely due to the separation between the Proposed Scheme and Mynydd Carn y Cefn and its appearance within close context to existing turbines. The magnitude of change is therefore considered to be medium resulting in a **Moderate and Significant** effect in this scenario.

Cumulative Assessment (scoping scenario)

Scoping schemes visible from this viewpoint include – Penrhyn Farm; Penrhyn Farm 2; West Monmouthshire Golf Club; Manmoel; Abertillery; Mynydd Llanhilleth; Hafodarthan; Hafodarthan Farm; Mynydd Maen; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the east and south and would appear to visually connect across the ridges that are formed by the valleys landscape. These schemes also provide visual linkage between the operational, and application schemes in the view to the east. The introduction of these schemes would notably intensify the cumulative influence of wind farm development in the view to the east. When considering the introduction of the Proposed Scheme to this scenario, the contribution of the Proposed Scheme to the changed view and its position to the north within the context of multiple facets of the view occupied by other schemes in the baseline of this scenario increases the effect. The cumulative magnitude of change is therefore considered to be Medium-High resulting in a **Moderate-Major and Significant** effect.

Table 5.31: Viewpoint - 17 Cefn Manmoel (Sirhowy Valley Walk)

Baseline Conditions			
Baseline Description			
This viewpoint is located on the Manmoel Ridge on a section of the Sirhowy Valley Walk which runs along the ridge. The view from this location is elevated across the Sirhowy Valley and the settlement of Tredegar which spreads out across the valley floor and up the valley sides. The track is wide and can be easily accessed from the car park at St James's Reservoir. The tracks in this area are often populated by dirt bikes which bring an aggressive background noise to the landscape context of this location. The view towards north-west towards the site is across a foreground of hill slope and plantation forestry which wraps around the reservoir. Beyond this is the lightly wooded and settled valley which rises up towards the ridgeline that forms the western side of the Sirhowy Valley the northernmost end of which is Rhymney Hill. The upland of the site is only seen as a thin slither behind Rhymney Hill although other parts of the upland plateau are more visible to the north including the upland that surrounds the upper Rhymney valley and the upland that lies either side of Trefil and the upper Sirhowy valley. The distinctive flat topped hill mounds associated with the Ffos-y-fran opencast workings are visible to the west and beyond the upland of the upper Sirhowy valley the jagged summits of Corn Du and Pen y Fan can be seen in the distance. Operational wind energy developments visible from this location, include: Maerdy; Ffynnon Oer; Mynydd Bwlfa; Pen Y Cymoedd; Maesgwyn & Extension; St Merryn Meat Factory; Pengarnddu Industrial Estate; Tafarnaubach Industrial Estate; and Pen Bryn Oer. Pen Bryn Oer is situated immediately in front of the upland on which the site is located.			
Receptor type	Value	Susceptibility	Sensitivity
Recreational Walkers	This viewpoint is within SLA – 2. Cefn Manmoel and value is considered to be Medium-High	Recreational walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is moderated by the existing wind energy development in the panorama. Susceptibility is considered to be Medium-High.	Medium-High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 7.7 km to the nearest turbine to the north-west of the viewpoint; - All of the Proposed Scheme turbines would be visible from this location with the majority of towers visible; - Parts of the Proposed Scheme infrastructure would be visible at distance including tracks associated with the most elevated turbines; - The proposed turbines theoretically occupy 5.6 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: Change in the view resulting from the addition of wind turbines to the north-west;			

- The Proposed Scheme turbines would break the horizon of a skyline that includes the more distant hills and mountains of the Brecon's;
- The potential cumulative effect of the close visual relationship between the Proposed Scheme and the Pen Bryn Oer turbines; and
- The Proposed Scheme would increase the perception of wind energy development in the view at a larger scale than currently experienced.

Factors that decrease the magnitude of change are:

- The upland strip in the distant landscape to the north and north-west is of a relatively simple landscape upland form and the Proposed Scheme would not diminish its broad scale;
- This viewpoint illustrates the large scale upland context of the site and surrounding upland landscape which is considered suitable for wind energy development of the type proposed;
- The Proposed Scheme would appear set back and distant to the more immediate landscape context of the settled Sirhowy valley;
- Whilst the Proposed Scheme would appear on the same skyline as the more distant Brecon hills and mountains, the distinctive Corn Du and Pen y Fan jagged summits are in a different part of the view north and the Proposed Scheme would not encroach on their distinct form; and
- The Proposed Scheme would not be introducing development which is uncharacteristic, due to the existing level of wind energy development in views towards the site and in the surrounding landscape to the north and north-west.

The magnitude of change for the Proposed Scheme is considered to be Medium-Low.

Significance of Effect

The effect on recreational walkers at this viewpoint is considered to be **Moderate and Not Significant**. Whilst the viewpoint has a Medium-High sensitivity, the magnitude of change is not considered to be at a high enough level to trigger a significant effect. This is due to distance, and cumulative context but also is due to the upland context of the location of the site which is set back from the more immediate settled valley in the foreground view.

Cumulative Assessment

Cumulative Assessment (consented scenario)

Visible consented schemes include Abergorki and Melin Court which will be visible as blade tips beyond a distant horizon to the west and Upper Ogmores which will appear in the distance to the southwest. These consented schemes have little cumulative influence on the baseline situation and the cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

No application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in this scenario.

Cumulative Assessment (scoping scenario)

The presence of existing wind energy development in views from this location moderates the effect of the Proposed Scheme as it would not be entirely uncharacteristic in the view and the Manmoel scheme, which is in very close proximity to this location, is considered to further amplify the moderating effect of turbines within the baseline of this scenario. When considering these factors and the introduction of the Proposed Scheme to this scenario, the level of change is considered to reduce compared to the assessment against the operational / under construction and consented baseline. The cumulative magnitude of change is therefore considered to be low in this scenario resulting in a **Moderate-Minor and Not Significant** effect.

Table 5.32: Viewpoint - 18 Beacons Way (Craig Y Fan Ddu)

Baseline Conditions			
Baseline Description			
This viewpoint is located within the BBNP on Craig y Fan Du which is an elevated ridge to the south-east of Pen y Fan on the southernmost point of the ridge that coalesces around the central Beacons to create the Horseshoe of scalloped ridges. From this location the view to the north is obscured by the landform of Craig y Fan Du itself, views to the east and west include long views across the wider landscape of the BBNP including to Sugar Loaf in the east and the long plateaux of Fan Fawr and Fan Llŷa to the west. Views to the south includes an elevated view across the Talybont and Taf Fechan forested valleys and the wooded valley sides that follow the Pentwyn and Pontsticill Reservoirs. Beyond these valleys the north facing slopes of an intervening ridge (Cefn yr Ystrad) forms a broad upland that separates the landscape of the BBNP from the valleys landscape further to the south. The cut rock faces of the disused Cwar yr Ystrad quarry form a large and distinct feature across this ridge that breaks the otherwise smooth texture of the moorland plateau. Ffos y Fran opencast mine is a large feature clearly visible beyond this ridge. The west side of Merthyr Tydfil is visible to the south-west of this viewpoint with other signs of settlement generally obscured by intervening landform. The valleys to the south are not easily distinguished from the ridges that separate them, the exception to this is for the Taff Valley due to line of sight directly along this valley which extends the focus of the view along the Taf Fechan further into the distant view south past the western edges of Merthyr Tydfil. Operational turbines in the view south and south-west include the Rassau Industrial Estate; Cruglwyn; Pen Y Fan Ganol Farm; Bryn Ysgawen Farm; Cefn Bach Farm; Tyle Cwrth; Castell Llwyd Farm; Tir Cook Farm; Cefn Forest Farm; Grange; Mynydd Portref and extension; Ferndale (Penrhys); Bwllfa Farm; Ffoch Nest; Pant y wal and extension; Maerdy; Llynfifi Afan Renewable Energy Park; Mynydd Bwllfa; Pen Y Cymoedd; Fynnon Oer; Swansea Bay Wastewater Works; and Maesgwyn & Extension.			
Receptor type	Value	Susceptibility	Sensitivity
Hill Walkers	This viewpoint is within the Bannau Brycheiniog National Park and value is considered to be High	Hill walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is slightly moderated by the existing wind energy development in the panorama, including south towards the site. Susceptibility is considered to be Medium-High.	High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 7.8 km to the nearest turbine to the south of the viewpoint; - All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform. Three turbines with hubs close to the horizon and three with top half of towers visible; and - The proposed turbines theoretically occupy 8.1 degrees of the view.			
Magnitude of Change			

Factors that increase the magnitude of change are:

- Change in the view resulting from the addition of further wind turbines to the south; and
- The Proposed Scheme would increase the perception of wind energy development in the view and bring wind energy development closer and at a larger scale than currently experienced.

Factors that decrease the magnitude of change are:

- The upland plateau beyond which the Proposed Scheme would be located is of a relatively simple landscape form and pattern that creates an intermediate horizon between the BBNP and the valleys landscape further to the south;
- The Proposed Scheme would appear central to this intermediate upland horizon in the distant view south, would occupy a relatively small amount of the panorama to the south and would not diminish its broad scale;
- The quarried rock faces visible beneath the upland plateau on which the Site is located, provide a notable transitional visual marker between the scenic upland valleys and ridges that lie within the heart of BBNP and the man modified uplands at the edges of the BBNP;
- Whilst the Taf valley can be distinguished in this distant view, the other uplands that surround the valleys appear to merge into a broad upland from this view. The Proposed Scheme would appear relatively central to this broad upland context;
- The Proposed Scheme would not encroach upon the views to the south-west along the Taf Valley and would be set back from the wooded valleys of Talybont and Taf Fechan such that it would not diminish their setting or disrupt their more intimate scale; and
- The existing level of visible wind energy development in views from this location spans much of the view to the south and includes turbines visible close to the Proposed Scheme. The Proposed Scheme would therefore not be introducing development which is entirely uncharacteristic, albeit at a larger scale than the existing development.

The magnitude of change for the Proposed Scheme is considered to be Medium-Low.

Significance of Effect

The effect on hill walkers at this viewpoint is considered to be **Moderate and Significant**. The effect is borderline significant and whilst the underlying broad upland context of the receiving landscape is a moderating factor, the Proposed Scheme is close enough for a significant effect to occur to this High sensitivity receptor within the BBNP.

Cumulative Assessment

Cumulative Assessment (consented scenario)

Theoretically visible consented schemes include land at Graig-yr-hufen road; Llwynceyn Farm; Graig Fatha Farm; Taf Ely Repowering; Nant-y-Gwyddon; Pant y Wal Extension 2; Abergorki; Upper Ogmores; Rhigos Road; Foel Trawsant and Melin Court. These consented schemes would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

Visible application schemes include Silent Valley and Foel Trawsant S73 as barely discernible features in the distant view and would have little cumulative influence. Mynydd Carn y Cefn would appear to the southeast in the same part of the view as smaller turbines of Cruglwyn and Pen y Fan Ganol Farm and it is considered that it would have minimal cumulative interaction with the Proposed Scheme due to distance and the small amount of the view affected. The

cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (scoping scenario)

Scoping schemes visible from this viewpoint include – West Monmouthshire Golf Club; Abertillery; Hafodarthan; Hafodarthan Farm; Manmoel; Mynydd Llanhilleth and Mynydd Maen. These schemes would appear on the horizon to the southeast extending and intensifying the influence of the Mynydd Carn y Cefn scheme. The Twyn Hywel Energy Park would appear to the south and the Proposed Scheme would be located within the same part of the view south. The introduction of these schemes would notably intensify the cumulative influence of wind farm development in the view to the southeast and south. When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development and the contribution of the Proposed Scheme to this situation and spread of development increases the level of change. The cumulative magnitude of change is considered to be Medium resulting in a **Moderate-Major and Significant** effect.

Table 5.33: Viewpoint - 19 B4560, Cefn Pwll-coch

Baseline Conditions			
Baseline Description			
This viewpoint is located within the BBNP on the B4560 which is an elevated scenic route between the Heads of the Valleys Road corridor and the Usk valley near Llangynidr. The road crosses the broad upland area that defines the southern edges of the BBNP across large areas of moorland between the summits of Mynydd Llangynidr and Mynydd Llangatwg. Views to the east and west are across the broad upland and are largely of the expansive moorland that unfolds into the distance. Views to the north from this location are limited by the landform of the plateau itself, however, more open views to the Bannau Brycheiniog are found a little further north where the views towards the Site are not as unrestricted. Views to the south from this location offer a wide panorama across the valleys landscape and in particular the view along the Sirhowy and Ebbw valleys to the south-east. The view south-west towards the site area is across the southern edges of the broad upland plateau with the forestry and existing wind farms of Hirwaun Common creating a distant horizon beyond the western edges of the plateau. There are many operational turbines visible to south-west including Pen-y-fan Industrial Estate; Oakdale; Pen Y Fan Ganol Farm; Cruglwyn; Gelli-wen Farm; Bedlwyn Farm; Pen-yr-heol Farm; Penrhiwgwaith Farm; Cefn Bach Farm; Former Tech Board; Ffoch Nest; Pen Bryn Oer; Rassau Industrial Estate; Pant y wal and extension; Bwllfa Farm; Ferndale (Penrhys); Llynfifi Afan Renewable Energy Park; Tafarnaubach Industrial Estate; Maerdy; Mynydd Bwllfa; Pengarnddu Industrial Estate; St Merryn Meat Factory; and Pen Y Cymoedd.			
Receptor type	Value	Susceptibility	Sensitivity
Road users	This viewpoint is within the Bannau Brycheiniog National Park and value is considered to be High	The B4560 is an elevated and scenic route which is narrow and winding in places with motorists are likely to be travelling at speeds of around 40-60 mph. Road users at this location are focused on the road although would have direct facing elevated views across the valleys landscape to the south. Susceptibility may be increased for motorists stopped in laybys, however, the elevated views of the valleys or towards the Bannau	Medium-High

		Brycheiniog forms the key focus. Taking all of this into account susceptibility is considered to be Medium.	
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 8.3 km to the nearest turbine to the south-west of the viewpoint; - All six of the Proposed Scheme turbines would be visible from this location with almost all of the towers visible; and - The proposed turbines theoretically occupy 6.5 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines at the edges of the BBNP; and - The Proposed Scheme would increase the perception of wind energy development in the view and bring wind energy development closer to viewers. Factors that decrease the magnitude of change are: - The scenic views to the north across the BBNP and to the south across the valleys landscape would be unaffected by the Proposed Scheme; - The view to the south-west from this location is not particularly scenic, particularly when considered against the view to the south across the valley landscape; - The rougher textured moorland landcover of the extensive plateau occupying the foreground and middle distance of the view provides a large scale upland landscape context considered suitable for wind energy development of the type proposed; - The scale of the Proposed Scheme turbines appears similar to the Pen Bryn Oer and Rassau Industrial Estate turbines, this is due to perspective and greater distance of the larger Proposed Scheme turbines compared to closer and smaller existing turbines. Nevertheless, this similarity does add to the familiarity of similar scaled development in relation to the overall broad scale of the surrounding landscape and so reduces the magnitude of change; and - Existing wind turbines and wind farms moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in the view. The magnitude of change for the Proposed Scheme is considered to be Low.			
Significance of Effect			
The effect on road users at this viewpoint is considered to be Moderate-Minor and Not Significant. Whilst the viewpoint is not particularly susceptible to change, it has a high value which increases the visual sensitivity. The magnitude of change is however considered to be of a low level due to distance and upland context resulting in a Not Significant effect.			
Cumulative Assessment			
Cumulative Assessment (consented scenario)			
Visible consented schemes include Llwynceyn Farm; Unit 18 and 19 Rassau Industrial Estate; Pant y Wal Extension 2; Upper Ogmoredale and Abergorki. These consented schemes would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude			

of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect.
Cumulative Assessment (application scenario)
Three blade tips of the Mynydd Carn y Cefn application would be visible to the south. This application scheme would have little cumulative influence on the baseline situation due to its limited visibility and distance. The cumulative magnitude of change is considered to be Negligible resulting in a Minor and Not Significant cumulative effect.
Cumulative Assessment (scoping scenario)
Scoping schemes visible from this viewpoint include – Abertillery; Mynydd Llanhilleth; Mynydd Maen; Hafodarth; Hafodarth Farm; West Monmouthshire Golf Club; Manmoel; Twyn Hywel Energy Park; Penrhyn Farm and Penrhyn Farm 2. Whilst the introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the south, the Proposed Scheme would appear to the west, away from this increased cumulative influence. When considering the introduction of the Proposed Scheme to this scenario, therefore, the level of change is considered to be broadly similar to that of the assessment against the operational and under construction baseline. The cumulative magnitude of change is considered to be Low resulting in a Moderate-Minor and Not Significant effect.

Table 5.34: Viewpoint - 20 Mynydd Carn-y-Cefn

Baseline Conditions
Baseline Description
This viewpoint is located on the ridge that connects the high points of Mynydd Carn-y-Cefn and Cefn yr Arail and that lies between Ebbw River and Ebbw Fach valleys to the west and east respectively. The viewpoint location is on a track that leads from Ebbw valley to the ridge on a west facing part of the ridge plateau to the south of the Mynydd Carn-y-Cefn summit. The views to the south are along the undulating ridgeline and to the east are restricted by foreground aspects of the ridge plateau. The distinctive flat topped hill mounds associated with the Ffos-y-fran opencast workings are visible in the distance to the west within the same part of the view as the Perngarnddu industrial estate which is visible beyond Rhymney Hill. The view to the north is dominated in the foreground by the Ebbw Vale settlement which spreads around the wide valley floor of the Ebbw River with the settled context extending to Tredegar, Rassau and Beaufort which connect along the Heads of the Valley road. Beyond this settled context lie the broad uplands of the southern edges of the BBNP and the jagged summits of Corn Du and Pen y Fan can be seen beyond as part of the Central Beacons ridge in the distance. The view north-west towards the Site is across successive hill ridges including Cefn Manmoel and Rhymney Hill. Ebbw Vale extends up the eastern slopes of Cefn Manmoel giving it a settled character which surrounds the northern shoulder of the ridge which is edged by woods before giving way to the grassland of the ridge. Operational wind energy developments visible from this location, include: Oakdale; Pen Y Fan Ganol Farm; Pen-y-fan Industrial Estate; Bryn Ysgawen Farm; Tyle Cwrth; Castell Llwyd Farm; Gelli-wen Farm; Groesfaen Farm; Cruglwyn; Cefn Bach Farm; Cefn Fforest Farm; Penrhiwgwaith Farm; Mynydd Portref Extension; Taff Ely; Pen-yr-hoel Farm; Mynydd Portref; Mynachdy Farm; Tir Cook Farm; Ffoch Nest; Ferndale (Penrhys); Pant y wal Extension; Llynfi Afan Renewable Energy Park; Maerdy; Ffynnon Oer; Mynydd Bwlfa; Pen Y Cymoedd; Maesgwyn & Extension; Mynydd y Betws; Mynydd y Gwair; Mynydd Y Gwrhyd; Perthigwynion Farm; St Merryn Meat Factory; Pengarnddu Industrial Estate; Pen Bryn Oer; Tafarnbach Industrial Estate; and Rassau Industrial Estate.

Pen Bryn Oer is situated immediately in front of the upland on which the site is located.			
Receptor type	Value	Susceptibility	Sensitivity
Recreational Walkers	This viewpoint is within SLA – 6. Mynydd Carn-y-Cefn & Cefn yr Arail and value is considered to be Medium-High	Recreational walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is moderated by the existing wind energy development in the panorama. Susceptibility is considered to be Medium-High.	Medium-High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 9.6 km to the nearest turbine to the north-west of the viewpoint; - All of the Proposed Scheme turbines would be visible from this location with the majority of towers visible; - Parts of the Proposed Scheme infrastructure would be visible at distance including tracks associated with the most elevated turbines; - The proposed turbines theoretically occupy 4.7 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines to the north-west; - The Proposed Scheme turbines would appear on the horizon of a skyline that includes the more distant hills and mountains of the Brecon's; - The potential cumulative effect of the close visual relationship between the Proposed Scheme and the Pen Bryn Oer turbines; and - The Proposed Scheme would increase the perception of wind energy development in the view at a larger scale than currently experienced. Factors that decrease the magnitude of change are: - The upland strip in the distant landscape to the north-west is of a relatively simple upland form and the Proposed Scheme would not diminish its broad scale; - This viewpoint illustrates the large scale upland context of the site and surrounding upland landscape which is considered suitable for wind energy development of the type proposed; - The Proposed Scheme would appear distant and separated from the foreground view of Ebbw Vale which creates a settled context within the immediate and lower elevated context of the view to the north-west; - Whilst the Proposed Scheme would appear on the same skyline as the more distant Brecon hills and mountains, the distinctive Corn Du and Pen y Fan jagged summits are in a different part of the view north and the Proposed Scheme would not encroach on their distinct form; and - The Proposed Scheme would not be introducing development which is uncharacteristic, due to the existing level of wind energy development in views towards the site and in the surrounding landscape to the north and north-west. The magnitude of change for the Proposed Scheme is considered to be Low.			

Significance of Effect
The effect on recreational walkers at this viewpoint is considered to be Moderate-Minor and Not Significant . Whilst the viewpoint has a Medium-High sensitivity, the magnitude of change is considered to be at a low level. This is largely due to distance and cumulative context but also is due to the upland context of the location of the site.
Cumulative Assessment
Cumulative Assessment (consented scenario)
Consented schemes visible to the west would include - Land at Graig-yr-hufen Road; Graig Fatha Farm; Taff Ely Repowering; Llwynceilyn Farm; Pant y Wal Extension 2; Nant-y-Gwyddon; Abergorki, Upper Ogmere and Melin Court. These consented schemes have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The consented turbines at Unit 18 and 19 Rassau Industrial Estate will appear to the north within the same industrial context as the existing Rassau Industrial Estate turbine in a different part of the view to the Proposed Scheme and will also have little cumulative influence on the baseline situation. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect.
Cumulative Assessment (application scenario)
Application schemes visible from this location would include – Mynydd Carn-y-Cefn; Silent Valley and Rhiwfelin Fach. The application scheme at Silent Valley is for a single turbine, the blade of which would appear above the ridgeline approximately 1.2 km to the south of the viewpoint. Mynydd Carn-y-Cefn would also appear to the south further along the same ridge that the viewpoint is located on. These turbines would bring wind development closer to the viewpoint and intensify the experience of wind development in the view, however, they would appear in a different direction and baseline context to the Proposed Scheme. The level of change is therefore broadly similar to that of the assessment against the operational and under construction baseline. The cumulative magnitude of change is considered to be Low resulting in a Moderate-Minor and Not Significant effect.
Cumulative Assessment (scoping scenario)
Scoping schemes visible from this viewpoint include – Manmoel; Penrhyn Farm; Penrhyn Farm 2; Abertillery; Mynydd Llanhilleth; Mynydd Maen; Hafodarth; Hafodarth Farm; and Twyn Hywel Energy Park. Manmoel is a close proximity and large feature in the view to the west. Whilst the Proposed Scheme would form part of an increased awareness of wind turbine development from this view, the introduction of these schemes, particularly Manmoel in the foreground of the Proposed Scheme, further reinforces the existing wind turbines context within which the Proposed Scheme would not be entirely uncharacteristic in the view. On balance, the level of change is considered to slightly reduce less as a result of these factors, however, the magnitude of change rating is still considered to be the same as assessed against the operational baseline. The cumulative magnitude of change is therefore considered to be Low resulting in a Moderate-Minor and Not Significant effect.

Table 5.35: Viewpoint - 21 A4059

Baseline Conditions			
Baseline Description			
This viewpoint is located on the A4059 within the BBNP on an elevated part of this remote road that crosses the eastern edges of Forest Fawr. The Centref Reservoir and the A470 follows the much lower elevated Taf Fawr valley to the east. Taf Fawr is forested on its valley sides large areas of which are visible from this viewpoint restricting views into the closest parts of the Taf Fawr valley to the east. The view to the south includes a distant view along Taf Fawr, past the settled landscape of Merthyr Tydfil and along the southern valley of the Taff River beyond. The Taff Trail follows Taf Fawr and the Taff River much of which is forested. The views from this location are of an exposed upland landscape apart from the A4059 road itself and the multiple wind farms that occupy the horizon to the south. Views to the north are scenic and include the steep sided slopes of Corn Du and Fan Fawr which together creates a distinctive 'v' shaped valley that cuts through the central beacons along the valley of the Taff and Tarrell. Towards the site, to the south-east, the view is unremarkable and consists of a broad upland created by the eastern slopes of Taf Fawr which has scalloped shaped plantation forestry rising up its slopes almost meeting the horizon. The Pen Y Cymoedd wind farm is visible as wide array of turbines to the south-west. Other operational turbines visible to south include Penrhiwgwaith Farm; Pen-yr-heol Farm; Pengarnddu Industrial Estate; St Merryn Meat Factory; Ferndale (Penrhys); Ffoch Nest; Mynydd Bwllfa; Llynfifi Afan Renewable Energy Park; and Fynnon Oer.			
Receptor type	Value	Susceptibility	Sensitivity
Road users	This viewpoint is within the Bannau Brycheiniog National Park and value is considered to be High	The A4059 is an elevated and scenic route which has several long straight sections and long curves with relatively clear line of sight, motorists are likely to be travelling at speeds of around 50-60 mph. Road users at this location are focused on the road although also have elevated views across the expansive moorland of Forest Fawr. Taking all of this into account susceptibility is considered to be Medium.	Medium-High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 10.4 km to the nearest turbine to the south-east of the viewpoint; - All six of the Proposed Scheme turbines would be visible from this location with varied amounts of tower visibility including one turbine with its hub close to the horizon; and - The proposed turbines theoretically occupy 4.5 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines at the edges of the BBNP to the south of this viewpoint; - The Proposed Scheme would potentially create a new visual focus to the south-east; and			

- The Proposed Scheme would increase the perception of wind energy development in the view and bring wind energy development closer to viewers.

Factors that decrease the magnitude of change are:

- The scenic views to the north and east across the BBNP would be unaffected by the Proposed Scheme;
- The Proposed Scheme would appear on the distant upland horizon to the south-east which is not particularly scenic with foreground forestry obscuring an otherwise elevated view of the Taff Valley;
- The moorland covered distant upland beyond the foreground and midground of forestry provides a large scale upland landscape context considered suitable for wind energy development of the type proposed; and
- Existing wind turbines and wind farms moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in the view.

The magnitude of change for the Proposed Scheme is considered to be Low.

Significance of Effect

The effect on road users at this viewpoint is considered to be **Moderate-Minor and Not Significant**. Whilst the viewpoint is not particularly susceptible to change, it has a high value which increases the visual sensitivity. The magnitude of change is however considered to be of a low level due to distance and upland context resulting in a Not Significant effect.

Cumulative Assessment

Cumulative Assessment (consented scenario)

Visible consented schemes would include Land at Graig-yr-hufen Road, Llwynceilyn Farm, Upper Ogmere and Melin Court. These consented schemes will have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

No application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in this scenario.

Cumulative Assessment (scoping scenario)

Visible scoping schemes would include Mynydd Maen and Twyn Hywel Energy Park. Mynydd Maen would appear in the same part of the view as the Proposed Scheme as very small blade tips which at 31 km would be barely visible. These scoping schemes will have little cumulative influence on the baseline situation due to limited visibility and distance and the cumulative interaction with the Proposed Scheme is minimal. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Table 5.36: Viewpoint - 22 PRoW (Bedwellty FP 28)

Baseline Conditions			
Baseline Description			
This viewpoint is located on the ridge between the Rhymney and Sirhowy valleys to the north of the edges of the Bargoed settlement. It is an elevated viewpoint on a minor road that runs along the west facing slopes of the ridge which has views along the Rhymney valley to the north-west and south-west. The western section of the PRoW (Bedwellty FP 28) crosses this minor road and also follows the west facing ridge slopes before dropping down to New Tredegar. There are two properties immediately to the south of the viewpoint which share a similar outlook along the Rhymney valley as the viewpoint. This elevated location offers wide views across the settled landscape to the south as the Rhymney valley opens up across Bargoed, Blackwood and Pontllanfraith. Views to the north-west and towards the site are more narrow, with the steep sided slopes of the Rhymney valley framing the broad upland plateau of the site in the distant view. The outline of the Corn Du and Pen y Fan summit ridges can be seen as isolated peaks beyond this broad plateau in the far distance. The distinctive form of the Central Beacons ridgeline is substantially obscured by the broad upland of the site and the visible parts of the Corn Du and Pen y Fan summits appear distant and diminutive within the wider context of the view. Views to the east are restricted by the ridge which is rough grassland common land within the immediate context of the viewpoint. Views west are to the ridge on the opposite side of the Rhymney valley which has scattered tree / scrub vegetation on its slopes and distinctive manmade spoil on the horizon from previous quarrying activity. There are several turbines and turbine clusters in close proximity to this viewpoint including Gelli-wen Farm, Bedlwyn Farm, Pen-yr-heol Farm and Penrhiwgwaith Farm to the north on the same ridge and Groesfaen Farm and Cefn Bach Farm on the ridge to the west of the Rhymney valley. The large television mast on the ridge above New Tredegar is also clearly visible to the north-west. Other more distant operational wind energy developments visible from this location include: Castell Llwyd Farm; Mynydd Portref Extension; Taff Ely; Ffoch Nest; Pant y wal and Extension; Mynachdy Farm; Cefn Fforest Farm; and Pengarnddu Industrial Estate.			
Receptor type	Value	Susceptibility	Sensitivity
Recreational Walkers	This viewpoint is not located within or close to any landscapes designated for their scenic quality. Value is considered to be Medium-Low.	The viewpoint represents a distant view towards the Proposed Scheme. Recreational walkers will have an appreciation of the surrounding landscape, however, susceptibility is slightly moderated by the existing wind energy development in close proximity and in the wider panorama. Susceptibility is considered to be Medium-High.	Medium
Residents		The viewpoint represents a distant view towards the Proposed Scheme. Residents of nearby properties will share a similar view from their properties as the viewpoint and susceptibility is moderated by the existing wind energy development in close proximity and in the wider panorama. Susceptibility is considered to be Medium-High for residents.	Medium

Assessment (including operational and under construction cumulative sites)
Description of change: - The proposed turbines would be visible at 11.2 km to the nearest turbine to the north-west of the viewpoint; - All of the Proposed Scheme turbines would be visible from this location with the majority of towers visible; - The Proposed Scheme access track infrastructure would be visible at distance; - The proposed turbines theoretically occupy 5.3 degrees of the view.
Magnitude of Change
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines in a view to the north-west; - The Proposed Scheme turbines would appear on the horizon of a skyline that includes the more distant hills and mountains of the Brecon's; - The upland of the site area and southern edges of the BBNP is framed by the sides of the Rhymney valley in views north-west and the Proposed Scheme would form a new focus in that view; and - The Proposed Scheme would increase the perception of wind energy development in the distant view. Factors that decrease the magnitude of change are: - The upland in the distant landscape to the north-west, framed by the side of the Rhymney valley, is of a relatively simple upland form and the Proposed Scheme would not diminish its broad scale; - The Proposed Scheme would appear distant and separated from the foreground view of the Rhymney valley which creates a settled context within the lower elevated valley landscape to the north-west; - Whilst the Proposed Scheme would occupy the same part of the skyline appear as the distant Brecon's, the distinctive form of the Central Beacons ridgeline is substantially obscured by the broad upland of the site and the visible parts of the Corn Du and Pen y Fan summits appear distant and diminutive within the wider context of the view; and - The Proposed Scheme would not be introducing development which is entirely uncharacteristic, due to the existing level of wind energy development in close views towards the site and in the surrounding landscape to the north and west. Whilst the viewpoint is distant to the Proposed Scheme and not entirely uncharacteristic due to surrounding closer proximity wind turbines, it would appear in a view framed by the steep sides of the Rhymney valley slightly increasing the magnitude of change. The magnitude of change for the Proposed Scheme is therefore considered to be Medium-Low.
Significance of Effect
The effect on recreational walkers and residents at this viewpoint is considered to be Moderate-Minor and Not Significant. The viewpoint is not particularly sensitive to change and the magnitude of change is not considered to be at a high enough level to trigger a significant effect.
Cumulative Assessment
Cumulative Assessment (consented scenario)
Consented schemes visible to the southwest include - Land at Graig-yr-hufen Road; Graig Fatha Farm; Taff Ely Repowering; Llwynceilyn Farm; Pant y Wal Extension 2 and Upper Ogmere. These consented schemes have little cumulative influence on the baseline situation either due to

limited visibility, to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect.
Cumulative Assessment (application scenario)
No application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and No Effect in this scenario.
Cumulative Assessment (scoping scenario)
Visible scoping schemes would include Manmoel in close proximity to the northeast which would extend the spread of existing turbines on this ridge and Twyn Hywel Energy Park to the south which would introduce a large feature on the plateau that forms the backdrop to the Bargoed settlement. In itself this scenario increases the awareness of turbine development in views from this location and although the Proposed Scheme would appear in a different view direction, it would be part of this increased influence. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered to increase compared to the assessment against the operational / under construction baseline. The magnitude of change is therefore considered to be medium resulting in a Moderate and Not Significant effect in this scenario.

Table 5.37: Viewpoint - 23 A4233 Meardy Rd

Baseline Conditions			
Baseline Description			
This viewpoint is located on the A4233 road that runs between Meardy and Aberdare. The road crosses the upland of Rhos gwaur which has steep sides into the valleys of the Afon Cynon to the east and the Afon Rhondda Fach to the west. The road is busy with few stopping places but has a layby on the winding route up from Aberdare where the viewpoint is located. The view to the south-west is restricted by the steeply sloping landform. Views to the north, east and south east provide open and dramatic views across the broad valley of the Afon Cynon including across Aberdare and the surrounding settled landscape that follows the valley floor and the A4059 to Hirwaun. Pen y Fan and Corn Du can be seen in the distance in the view north beyond the well wooded valley and distant forestry plantations. The view to the north-east towards the site is across the settled valley floor with settlement stretching high onto the eastern valley sides, giving way to large pastoral fields and blocks of forestry and woodland. The horizon to the north-east is an upland ridge (Mynydd Aberdar) that is made up of upland grassland and forestry plantations. There are two masts situated on the top of this ridge. Operational development visible from this location includes Mynydd Bwllfa and Pen Y Cymoedd in close proximity to the north-west. Whilst operational turbines at the St Merryn Meat Factory and Pengarnddu Industrial Estate are theoretically visible they are obscured from view by the forestry that sits on the Mynydd Aberdar ridge.			
Receptor type	Value	Susceptibility	Sensitivity

Road users	This viewpoint is within the Rhondda Cynon Taf SLA 56 - Hirwaun Common, Cwm Darea & Cwm Aman and value is considered to be Medium-High.	The A4233 is a busy and winding road and motorists are likely to be travelling at speeds of around 30-50 mph. Road users at this location are therefore focused on the road and views of the surrounding landscape would be fleeting and only available in the direction of the site for a short duration. Susceptibility may be increased for motorists stopped in laybys, however, the elevated views of the valley floor form the key focus. Taking all of this into account susceptibility is considered to be Medium-Low.	Medium
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 12.1 km to the nearest turbine to the north-east of the viewpoint; - All of the Proposed Scheme turbines are theoretically visible from this location including all hubs and top half of towers; - In reality, the turbines are obscured by the forestry on the intervening ridgeline such that four of the turbines would only be visible as blade tip and the other two screened to top of tower; - The proposed turbines theoretically occupy 5.3 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of wind turbines to the north-east appearing above the ridgeline of Mynydd Aberdar; and - The Proposed Scheme would introduce wind energy development in the view north-east adding to the existing influence of development seen at relatively close proximity to the north-west. Factors that decrease the magnitude of change are: - Visibility of the turbines is limited from this location due to the intervening ridgeline of Mynydd Aberdar and the forestry that sits on the ridge; - The Proposed Scheme is in the distant view beyond the immediate context of the Afon Cynon valley; - The valley landscape stretches to the north and south-east creating an expansive and elevated view across a settled and well wooded valley floor and the Proposed Scheme turbines would appear as small elements in a clearly separate landscape context; and - Existing wind turbines within close visual context, moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in this view. The magnitude of change for the Proposed Scheme is considered to be Low.			
Significance of Effect			
The effect on road users is considered to be Minor and Not Significant .			
Cumulative Assessment			
Cumulative Assessment (consented and application scenarios)			

No consented or application schemes would be visible from this viewpoint and therefore no cumulative interaction occurs. As a result, there is no cumulative change and **No Effect** in these scenarios.

Cumulative Assessment (scoping scenario)

Visible scoping schemes would include the blade tips of Mynydd Maen and the Twyn Hywel Energy Park scheme in the distance at the head of the valley to southeast. These scoping schemes will have little cumulative influence on the baseline situation due to them appearing in a different part of the view from the Proposed Scheme, limited visibility and distance as such the cumulative interaction with the Proposed Scheme is minimal. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Table 5.38: Viewpoint - 24 Pen y Fan

Baseline Conditions
Baseline Description
Pen y Fan is the most elevated Mountain in the BBNP and a focus for visitors and hill walkers in the area. The horseshoe ridge that is often used as a means of ascent or to extend a walk to neighbouring summits has Pen y Fan at its centre. The views from Pen y Fan are dramatic and offer a wide range of scenic views across the Bannau Brycheiniog and to lower lying neighbouring landscapes including other upland areas of the BBNP such as the neighbouring Fforest Fawr and Black Mountain to the west and the Black Mountains to the east. The view north across Brecon and the undulated farmed landscape of southern Powys is particularly eye catching due to the sharp contrast in elevation between the summit and this lower lying landscape which occupies much of the view from the north-west to north-east. The view south is across the steep moorland slopes and well defined ridgelines in the foreground to mid distance including the Craig Fan Du and Gwaun Taf to the south-west and the Craig Cwm Cynwyn and Gwaun Perfedd to the south-east (the horseshoe). The upland to the south is predominantly moorland grassland with blocks of woodlands and forest within the upland valleys that separate the often steep sided hill slopes. The valley of Taf Fechan stretches into the distance from the Neuadd Reservoirs below the summit, through the Taf Fechan Forest and along the wooded valley sides that follow the Pentwyn and Pontsticill Reservoirs. Beyond the steeper sided slopes of the horseshoe, the upland forms an intervening ridge separating the more remote upland of the BBNP from the settled valleys further to the south. The cut rock faces of the disused Cwar yr Ystrad quarry and the quarries above Pontsticill break the otherwise smooth texture of the moorland plateau on this ridge. The larger settlements of Ebbw Vale, Merthyr Tydfil and Aberdare are visible beyond but close to this wide intervening ridge. Ffos y Fran opencast mine is a large feature clearly visible within the context of Merthyr Tydfil. The valleys can be distinguished in this distant view but is clearest for the Taff Valley due to line of sight directly along this valley from the summit which extends the focus of the view along the Taf Fechan further in the distant view south. The Mouth of the Severn can be seen in the far distance in periods of very good visibility. There are many operational turbines visible to south-east including the Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; Cruglwyn; Oakdale; Pen-y-fan Industrial Estate; Pen Y Fan Ganol Farm; Gelli-wen Farm; Penrhiwgwaith Farm; Bedlwyn Farm; Pen Bryn Oer; Pen-yr-heol Farm; Cefn Bach Farm; Bryn Ysgawen Farm; Pengarnddu Industrial Estate; Groesfaen Farm; Tyle Cwrth; St Merryn Meat Factory; Castell Llwyd Farm; Cefn Forest Farm; and Tir Cook Farm. To the south includes The Grange; Mynachdy Farm; Mynydd Portref and extension; Ferndale (Penrhys); Taff Ely; Ffoch Nest; Bwlfa Farm; Pant y wal and extension; Maerdy; Mynydd Bwlfa; Llynfifi Afan Renewable Energy Park; Pen Y Cymoedd; and Fynnon

Oer. To the south-west include Maesgwyn & Extension; Mynydd y Gwair; Mynydd y Betws; Perthigwynion Farm; and Mynydd Y Gwrhyd.			
Receptor type	Value	Susceptibility	Sensitivity
Hill Walkers	This viewpoint is within the Bannau Brycheiniog National Park and value is considered to be High	Hill walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is slightly moderated by the existing wind energy development in the panorama, including south towards the site. Susceptibility is considered to be Medium-High.	High
Assessment (including operational and under construction cumulative sites)			
Description of change: - The proposed turbines would be visible at 12.5 km to the nearest turbine to the south of the viewpoint; - All of the Proposed Scheme turbines would be visible from this location (including all hubs) with a varying degree of tower visibility due to the intervening landform; and - The proposed turbines theoretically occupy 4.7 degrees of the view.			
Magnitude of Change			
Factors that increase the magnitude of change are: - Change in the view resulting from the addition of further wind turbines to the south; and - The Proposed Scheme would increase the perception of wind energy development in the view and bring wind energy development closer and at a larger scale than currently experienced; Factors that decrease the magnitude of change are: - The upland plateau beyond which the Proposed Scheme would be located is of a relatively simple landscape form and pattern that creates an intermediate horizon between the BBNP and the valleys landscape further to the south; - The Proposed Scheme would appear central to this intermediate upland horizon in the distant view south, would occupy a relatively small amount of the panorama to the south and would not diminish its broad scale; - The quarried rock faces visible in the distance, beneath the upland plateau on which the Site is located, provide a notable transitional visual marker between the scenic upland valleys and ridges that lie within the heart of BBNP and the man modified uplands at the edges of the BBNP; - Whilst the Taf valley can be distinguished in this distant view, the other uplands that surround the valleys appear to merge into a broad upland from this view. The Proposed Scheme would be backclothed by this broad upland; - The Proposed Scheme would not encroach upon the views to the south-west along the Taf Valley and would be set back from the wooded valley of Taf Fechan such that it would not diminish its setting or disrupt its more intimate scale; and - The existing level of visible wind energy development is extensive in views from this location, spanning much of the view to the south and includes turbines visible close to the Proposed			

Scheme. The Proposed Scheme would therefore not be introducing development which is entirely uncharacteristic, albeit at a larger scale than the existing development. The magnitude of change for the Proposed Scheme is considered to be Low.
Significance of Effect
The effect on hill walkers at this viewpoint is considered to be Moderate - Minor and Not Significant. Whilst the viewpoint is within the BBNP and has a High sensitivity, the magnitude of change is considered to be at a low level. This is largely due to distance and the underlying broad upland context of the receiving landscape in the view south within an extensive operational wind energy context to the south of the BBNP.
Cumulative Assessment
Cumulative Assessment (consented scenario)
Visible consented schemes from this location will include Unit 18 and 19 Rassau Industrial Estate; land at Graig-yr-hufen road; Graig Fatha Farm; Llwynceyn Farm; Taf Ely Repowering; Pant y Wal Extension 2; Nant-y-Gwyddon; Abergorki; Upper Ogmere; Rhigos Road; Foel Trawsnant and Melin Court. These consented schemes will only very slightly add to the cumulative backdrop of turbine development already seen in the view. It is considered therefore that they will have minimal cumulative influence on the baseline situation either due to distance and them appearing within a similar context to the extensive operational schemes. The cumulative magnitude of change is therefore considered to be Negligible resulting in a Minor and Not Significant cumulative effect.
Cumulative Assessment (application scenario)
Visible application schemes would include Silent Valley and Foel Trawsnant S73. These application schemes would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. Mynydd Carn y Cefn application would appear to the east of a cluster of operational turbines, extending the influence of turbines development in this part of the view, albeit only forming a small feature of the distant view. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered to be broadly similar to the assessment against the operational / under construction baseline. The magnitude of change is therefore considered to be low resulting in a Moderate-Minor and Not Significant effect in this scenario.
Cumulative Assessment (scoping scenario)
Scoping schemes visible from this viewpoint would include – West Monmouthshire Golf Club; Abertillery; Mynydd Maen; Mynydd Llanhilleth; Hafodarth; Hafodarth Farm; Manmoel; Penrhyn Farm; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the south extending and intensifying the influence of the operational, consented and application schemes in the view. The introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the south. When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development and the contribution of the Proposed Scheme to this situation and spread of development slightly increases the level of change, albeit that this is moderated by distance. The cumulative magnitude of change is considered to be Medium-Low resulting in a Moderate and Not Significant effect.

A465 – Sequential Route Assessment

Baseline and sensitivity

- 5.12.10 The A465 is a busy dual carriageway which serves as a key connecting route for settlements in the area as well as a connection to southwest Wales from the valleys. It is a busy road corridor and contains road infrastructure such as road signage, fences and barriers and has close views of other nearby infrastructure such as telegraph poles, wind turbines, overhead electricity lines and pylons. The road also passes through urban areas including in close proximity to several industrial estates such as at Rassau, Tafarnaubach, Pengarnddu and Hirwaun. Whilst the assessment was carried out prior to the completion of the A465 road improvements, it is considered that the findings of this sequential assessment would also apply as the route follows the same broad corridor.
- 5.12.11 The ZTV shows that theoretical visibility occurs on the road between Beaufort to the east and Hirwaun to the west of the site area. The potential view of the Proposed Scheme from this road varies due to differing landscape or urban context of the route as well as the direction of travel and can be split into clearly defined sections as follows:
- Beaufort to Tafarnaubach
 - Tafarnaubach to Pengarnddu
 - A470 roundabout to Pengarnddu
 - Hirwaun to A470 roundabout
- 5.12.12 Whilst some sections pass close to the edges or through small areas of locally designated SLAs, the majority of the route is not within designated landscape. Value is considered to be Medium overall. The A465 is a busy road and motorists are likely to be travelling at speeds of around 60-70 mph. Road users only have oblique views towards the site which are only available for a short duration. Susceptibility may be increased for motorists stopped in laybys close to the site, however, in this instance they are more likely to appreciate views south-east, away from the Proposed Scheme. Taking all of this into account susceptibility is considered to be Low which when combined with value results in a Medium – Low sensitivity.

Magnitude of Change

- Beaufort to Tafarnaubach – Views towards the Proposed Scheme are limited to westbound road users. The road on this section is often in cutting with high retaining walls to the north, overhead bridges and roadside trees limiting views. The road crosses undulated terrain, however, and occasional views towards the Proposed Scheme are available on elevated sections near the Crown Business Park and the Clydach River crossing. Where visible the Proposed Scheme turbines would be seen within the context of closer turbine development at Rassau, Tafarnaubach and Pen Bryn Oer. The Proposed Scheme would intensify this view of wind energy development but would do so at distance and would only be viewed for very short durations where intervening landscape elements do not obscure views towards the Proposed Scheme. Magnitude of change for this section of route is considered to be Low.
- Tafarnaubach to Pengarnddu - Views towards the Proposed Scheme would be experienced by road users travelling eastbound and westbound. The road

passes close to the south of the site area and Viewpoint 2 is located close to the layby on the eastbound carriageway. Views to the north from this section of the A465 are occupied by the simple landscape pattern of rough grassland with occasional scrubby trees found along connecting minor roads and tracks. Views to the south from this section of road are distant and more open, particularly to the south-east along the Rhymney valley. Existing tall structures such as electricity pylons and wind turbines within close visual context, moderate the effect of the Proposed Scheme as it would not be entirely uncharacteristic in this view. Whilst the view to the north is unremarkable from this section of route, the Proposed Scheme would introduce large scale wind energy development at relatively close proximity, increasing the existing influence of development seen to the east and west within the context of the Heads of the Valley road corridor. The scenic view south would be unaffected. Magnitude of change for this section of route is considered to be Medium – High.

- A470 roundabout to Pengarnddu - Views towards the Proposed Scheme are limited to eastbound road users. This section of the route skirts around the northern edges of Merthyr Tydfil. It has some steep gradients and is often tree lined limiting views of surrounding residential areas from the road and also views of the road from nearby properties. There is however an elevated section with more open views across the landscape to the north-east near the Gurnos area of Merthyr Tydfil. From this stretch of road the Proposed Scheme turbines would be seen within the context of closer turbine development at St Merryn Meat Factory and Pengarnddu and within the context of the Pengarnddu industrial estate. The Proposed Scheme would intensify this view of wind energy development introducing larger turbines to the upland backdrop beyond. The view of the Proposed Scheme would be limited to this elevated short stretch of road near Gurnos and so would only be visible for a relatively short duration. Magnitude of change for this section of route is considered to be Medium.
- Hirwaun to A470 roundabout - Views towards the Proposed Scheme are limited to eastbound road users. The ZTV shows theoretical visibility on the section of route that passes through Hirwaun and between the east facing elevated slopes of Bryn y Gwyddel and the A470 roundabout. At Hirwaun the actual visibility towards the Proposed Scheme is limited by the roadside planting and built-up areas that intervene. On the east facing elevated slopes of Bryn y Gwyddel, the views from the A465 are at times relatively open, including towards the Proposed Scheme. From this stretch of road the Proposed Scheme would increase the perception of wind energy development on the eastern upland horizon. Signs of open cast mining are also visible on this distant horizon. The Proposed Scheme lies beyond the settled areas of northern Merthyr Tydfil, including Trefechan which is clearly identifiable in the view. The upland to the east is of a relatively simple landscape form and pattern that gradually falls towards the south. The Proposed Scheme would appear on this simple upland horizon and would not diminish its broad scale or the settled landscape below. Magnitude of change for this section of route is considered to be Medium-Low.

5.12.13 On the overall section of A465 assessed, the magnitude of change would vary depending on the degree of visibility, distance from the Proposed Scheme and the level of screening provided by intervening vegetation, localised topography such as road embankments or built form in the closely intervening context of the road. A higher magnitude of change is predicted on the closest parts of the route to the

Proposed Scheme where screening is minimal (between Tafarnaubach and Pengarnddu) this is considered to be of a Medium – High magnitude of change. Sequential magnitude of change on other sections of the route is affected by the degree of existing development in the view and the amount of landform / forestry screening and ranges between Medium to Low.

Significance of Effect

- 5.12.14 The effect on road users on the section of A465 between Tafarnaubach and Pengarnddu is considered to be **Moderate and Not Significant**. Whilst the Proposed Scheme is within close proximity, reflected in the Medium-High magnitude of change, the receptor is not particularly sensitive to change. On other sections of the route the effect on road users is considered to be **Minor and Not Significant**.

Cumulative Assessment (Consented and Application Scenario)

- 5.12.15 Both the consented and application schemes would have little influence on the cumulative baseline situation due to limited visibility and close context to other operational schemes. The consented turbines at Unit 18 and 19 Rassau Industrial Estate would appear close to the operational Rassau Industrial Estate turbine and add slightly to the intervening baseline view of wind energy development when westbound on the eastern sections of the A465. The only visible application scheme from the route is Mynydd Carn-y-Cefn which has limited visibility on the parts of the route close to the Proposed Scheme. Whilst this scheme would add to the awareness of turbine development to the south of the route the cumulative interaction with the Proposed Scheme is minimal due to its limited visibility. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (Consented and Application Scenario)

- 5.12.16 Several scoping schemes would be visible from this route including – West Monmouthshire Golf Club; Penrhyn Farm; Penrhyn Farm 2; Abertillery; and Manmoel. The introduction of these scoping schemes would further add to the cumulative spread of development to the south and intensify the visual effect experienced from this route.
- 5.12.17 When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development to the south and the contribution of the Proposed Scheme to the increased visibility of wind turbine development along the route slightly increases the level of change to parts of the route to the east of the Proposed Scheme where these scoping schemes are more readily experienced. For the section of route between Tafarnaubach and Pengarnddu the level of change is considered to remain broadly similar to the assessment against the operational / under construction baseline, this is due to the scale of the Proposed Scheme and its contribution to the changed view and the multiple facets of the view occupied by wind turbines in this scenario for which the Proposed Scheme would be a part of.
- 5.12.18 Taking all of this into account, the cumulative magnitude of change is predicted to be medium-high between Tafarnaubach and Pengarnddu and medium on other affected sections. This results in a **Moderate and Not Significant** effect between

Tafarnaubach and Pengarnddu and a **Moderate-Minor and Not Significant** effect for other affected sections.

A4060 - Sequential Route Assessment

Baseline and sensitivity

- 5.12.19 The A4060 is a dual carriageway which links the A470 at the southern edges of Merthyr Tydfil with the A465 Heads of the Valleys road at Pengarnddu. This road is located on the west facing lower slopes of Merthyr Common with the eastern edges of the Merthyr Tydfil settlement to the west and the Ffos y fran opencast workings and Dowlais Great Tip to the east. It is a busy road corridor and contains road infrastructure such as road signage, fences, barriers and lighting columns. The southern section of the road between the Goat Mill Road and A470 roundabouts is bounded by roadside trees and strips of woodland, views to the surrounding landscape are therefore limited.
- 5.12.20 This route is not within a designated landscape and has limited scenic interest. Value is considered to be Low. The A4060 is a busy road and motorists are likely to be travelling at speeds of around 60-70 mph. Road users would have direct facing views towards the site from sections of the northbound carriageway. Taking all of this into account susceptibility is considered to be medium which when combined with value results in a Medium – Low sensitivity.

Magnitude of Change

- 5.12.21 Views towards the Proposed Scheme are limited to northbound road users and to the section of road north of the Goat Mill Road roundabout due to the screening effect of roadside trees on the southern section of the road. Roadside trees continue along the western edges of the road to the north of Goat Mill Road, although the views to the east across the open cast are more open and views towards Pengarnddu are in line with the direction of the northbound carriageway for some sections. The view of the Proposed Scheme would therefore be direct facing where visibility is not interrupted or filtered by the roadside trees that follow the northbound carriageway. From this stretch of road the Proposed Scheme would increase the perception of wind energy development on the upland horizon seen in the distant backdrop of the wide carriageway in views north, appearing behind the St Merryn Meat Factory and Pengarnddu turbines. The Proposed Scheme would be larger in scale than the existing turbines and as such would introduce a more notable focus for road users. Magnitude of change for this route is considered to be Medium.

Significance of Effect

- 5.12.22 The effect on road users on the A4060 is considered to be **Moderate-Minor and Not Significant**. The effect is limited to the northern section of the road and for northbound road users only.

Cumulative Assessment (Consented, Application and Scoping Scenarios)

- 5.12.23 There are no consented, application or scoping schemes visible from the A4060. There is no cumulative magnitude of change and **no effect** as a result.

Beacons Way sequential assessment

Baseline and sensitivity

- 5.12.24 The Beacons Way is a long distance walking route that stretches across the BBNP from Llangadog and Bethlehem at the north-western edges of the BBNP to Abergavenny at the south-eastern edges of the BBNP. The route is 159 km in length and offers varied walking across the hills, mountains, ridges and plateaus as well as linking these elevated sections through the settlements and valleys found within the BBNP. The route is well advertised with various guide books available and information on the BBNP website, however, not all sections are waymarked or have clear tracks, particularly across moorlands.
- 5.12.25 The ZTV shows that potential visibility of the Proposed Scheme from this route varies. The BBNP website has split the route into eight sections that can be walked in a day and in order to consider the variation along the route, this assessment has followed the same order of route sections, which are listed as follows:
- Abergavenny to Llanthony
 - Llanthony to Crickhowell
 - Crickhowell to Llangynidr
 - Llangynidr to Storey Arms
 - Storey Arms to Craig-y-Nos
 - Craig-y-Nos to Llanddeusant
 - Llanddeusant to Carreg Cennen Castle
 - Carreg Cennen Castle to Bethlehem
- 5.12.26 There are no operational turbines located within the BBNP but there are large numbers of turbines and turbine groupings visible from elevated parts of the landscape that fringes the BBNP to the south. The closest of these include the Former Tech Board; Rassau Industrial Estate; Tafarnaubach Industrial Estate; Pen Bryn Oer; Pengarnddu Industrial Estate; St Merryn Meat Factory; Mynydd Bwlfa and Pen Y Cymoedd. Viewpoints on this route include – Viewpoints 24 Pen y Fan and 18 Beacons Way (Craig Y Fan Ddu).
- 5.12.27 This route is within the BBNP and value is considered to be High. Recreational walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is moderated by the existing wind energy development in views to the south as the Proposed Scheme would not be entirely uncharacteristic. Taking this into account susceptibility is considered to be Medium-High which when combined with value results in an overall High sensitivity.

Magnitude of Change

- Abergavenny to Llanthony – The ZTV shows theoretical visibility of the Proposed Scheme is limited to the two peaks on this section of the route (Yr Ysgryd Fawr and Hatterrall Hill). The Proposed Scheme would be viewed in the distance as small features beyond the hill profiles of the Black Hills and Sugar Loaf. Other parts of this section would be unaffected. Magnitude of Change is considered to be Negligible for this section.

- Llanthony to Crickhowell - The ZTV shows theoretical visibility of the Proposed Scheme is limited to two elevated stretches of moorland near to Crug Mawr and Crug Hywel to the north east of Crickhowell. The Proposed Scheme would be viewed in the distance from these areas. Other parts of this section would be unaffected. (see also visualisation for viewpoint 25 which is to the north of this section of route at a similar distance). Magnitude of Change is considered to be Low for this section.
- Crickhowell to Llangynidr - The ZTV shows theoretical visibility of the Proposed Scheme is limited to the lower slopes of Pen Cerrig Calch (see also visualisation for viewpoint 25 which is at the summit of this hill), and Cefn Moel to the north of Bwlch. Other parts of this section would be unaffected. When the blade tip ZTV is compared with the Hub ZTV it is clear that only blade tips would be visible from the majority of the affected part of the route section. Magnitude of Change is considered to be Low for this section.
- Llangynidr to Storey Arms – The ZTV shows limited theoretical visibility is found on the lower slopes of Tor y Foel, where blade tips would be viewed at distance. The ZTV also shows more extensive visibility across the Central Beacons on the ridges of Craig y Fan Ddu, Craig Cwm Cynwyn and Craig Cwm Sere encompassing the connected summits of Cribyn, Pen y Fan and Corn Du. Visibility does not extend down the route on the western slopes of Corn Du towards the Storey Arms. Viewpoint 24 Pen y Fan and 18 Craig Y Fan Ddu are assessed in the main chapter as having a medium-low magnitude of change which resulted in a significant visual for viewpoint 18 but not for viewpoint 24 due to the increased distance from the receptor. Please refer to the specific viewpoint assessments for more detail. Overall the magnitude of change for this section is considered to be Medium-Low.
- Storey Arms to Craig-y-Nos – The ZTV shows theoretical visibility on the broad summits of Fan Llia and Maen Madoc at around 16-17 km to the north-west of the Proposed Scheme (wireline G is located on Fan Fawr to the east of this area at a similar distance). A further area of visibility is found on the moorland of Pant Mawr at around 18-20 km from the Proposed Scheme. The operational turbines of Mynydd Bwllfa and Pen Y Cymoedd are visible at 11 km to the south of this area. The magnitude of change for this section is considered to be Low.
- Craig-y-Nos to Llanddeusant and Llanddeusant to Carreg Cennen Castle – from these sections of route there are two limited patches of visibility on the ridges of Fan Hir and Esgair Hir to the south of Llanddeusant at distances of between 25-31 km. The magnitude of change is considered to be negligible.
- Carreg Cennen Castle to Bethlehem – There is no visibility on this section of the route and therefore no magnitude of change.

5.12.28 The assessment shows that on the Beacons Way the magnitude of change resulting from the Proposed Scheme would vary depending on the degree of visibility, distance from the Proposed Scheme and the context of cumulative wind developments found to the south of the BBNP. For the majority of sections a Low to Negligible magnitude is assessed in areas that have visibility. A higher magnitude of change is predicted on the closer parts of the route to the Proposed Scheme in the Central Beacons where wider spread visibility is found on the ridges and peaks around Pen y Fan, however, this would still only result in a Medium-Low magnitude of change. This is due to distance, the underlying broad upland context of the receiving landscape and an extensive operational wind energy context to the south of the BBNP.

Significance of Effect

- 5.12.29 The effect on recreational receptors on the Beacons Way (Llangynidr to Storey Arms) within the Central Beacons is considered to be **Moderate and Not Significant**. Whilst it is appreciated that the detailed assessment for viewpoint 18 Craig y Fan Ddu is assessed as moderate and significant on its own, this represents only a short part of the central section of the route and sequentially the effect is less intense on other parts of the Central Beacons. The effect on other sections of the route ranges from **Moderate-Minor to Minor and Not Significant**.

Cumulative Assessment (Consented Scenario)

- 5.12.30 On the basis of assessments carried out for viewpoints 18 and 24, it is considered that the consented developments will have minimal cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant** cumulative effect.

Cumulative Assessment (application scenario)

- 5.12.31 Visible application schemes would include Silent Valley and Foel Trawsant S73. These application schemes would have little cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The Mynydd Carn y Cefn application would appear within the same context as an existing cluster of operational turbines, extending their influence on this route, albeit only forming a small feature of the distant view. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered to be broadly similar to the assessment against the operational / under construction baseline. The magnitude of change is therefore considered to be medium-low for the section of route in the Central Beacons and Low to Negligible for other sections of the route. This results in an effect of **Moderate and Not Significant** for the section of route in the Central Beacons and **Moderate-Minor to Minor and Not Significant** for other sections.

Cumulative Assessment (scoping scenario)

- 5.12.32 Scoping schemes visible would include – West Monmouthshire Golf Club; Abertillery; Mynydd Maen; Mynydd Llanhilleth; Hafodarth; Hafodarth Farm; Manmoel; Penrhyn Farm; and Twyn Hywel Energy Park. These schemes would appear on the horizon to the south extending and intensifying the influence of the operational, consented and application schemes in views from elevated parts of this route. The introduction of these schemes would intensify the cumulative influence of wind farm development in the view to the south. When considering the introduction of the Proposed Scheme to this scenario, this increased backdrop of turbine development and the contribution of the Proposed Scheme to this situation and spread of development slightly increases the level of change. Taking this into account the magnitude of change within the Central Beacons ranges from between medium (within the area around viewpoint 18) to medium-low (other elevated sections of the

Central Beacons). On balance the sequential magnitude of change is considered to be Medium for the Central Beacons and Low for other sections of the route.

- 5.12.33 This results in an effect of **Moderate-Major and Significant** effect for the section of route in the Central Beacons and **Moderate-Minor and Not Significant** for other sections.

Rhymney Valley Ridgeway Footpath sequential assessment

- 5.12.34 The Rhymney Valley Ridgeway Footpath is a long distance walking route that follows the elevated ridges surrounding the large settled areas of Caerphilly and Blackwood in a wide circular route and also stretches along the ridge to the west of the Rhymney Valley as far north as Bute Town. It offers varied walking across the hills and ridges connecting through settlements and valleys of this area of southwest Wales.
- 5.12.35 There are operational turbines and turbine groupings visible in close proximity along this route including Castell Llwyd Farm, Groesfaen Farm, Cefn Bach Farm, Gelli-wen Farm, Penrhiwgwaith Farm, Pen-yr-heol Farm, Bedlwyn Farm, Pen Bryn Oer, Tafarnaubach Industrial Estate, St Merryn Meat Factory and Pengarnddu Industrial Estate. Viewpoints on this route include Viewpoint 13 at Fochriw and wireline only Viewpoint C at Cefn y Brithdir. This route crosses various locally designated SLAs and value is considered to be Medium-High. Recreational walkers will have an appreciation of the surrounding landscape and will be focussed on views. Susceptibility is slightly moderated by the existing wind energy development in views as the Proposed Scheme would not be entirely uncharacteristic. Taking this into account susceptibility is considered to be Medium-High which when combined with value results in an overall Medium-High sensitivity.

Magnitude of Change

- 5.12.36 Views towards the Proposed Scheme from the wide circular section of the route are limited to several elevated ridges which are distant from the Proposed Scheme (between 15 km and 26 km from the nearest Proposed Scheme turbine. The Magnitude of change for this southern section of the route is considered to range between low and negligible.
- 5.12.37 The ZTV shows that for the northern section of the route that runs along the ridge to the west of the Rhymney River, that theoretical visibility is consistently found between Cefn y Brithdir and Bute Town. In views from this northern section of the route, the Proposed Scheme would introduce further wind energy development in the view north of a larger scale than currently experienced, intensifying the influence of wind energy development. The Proposed Scheme would be seen within the context of a large-scale upland plateau that has a simple and expansive upland character and the presence of existing tall structures on and either side of the upland plateau such as the electricity lines and turbines, provides a developed landscape context that moderates the influence that the Proposed Scheme would bring to views from this route. The change in the view resulting from the Proposed Scheme on this section of the route would vary depending on distance. The magnitude of change between Cefn y Brithdir and the moorland near the Rhymney Industrial estate north of Fochriw is considered to be Medium-Low. North of this area is considered to have a Medium magnitude of change.

Significance of Effect

- 5.12.38 The effect on recreational receptors on the northernmost section of this route (Moorland near Rhymney Industrial Estate to Bute Town) is considered to be **Moderate and Significant**. The effect on the section of route between Cefn y Brithdir and Rhymney Industrial Estate is considered to be **Moderate and Not Significant**. Effects on other sections of the route ranges from **Moderate-Minor to Minor and Not Significant**.

Cumulative Assessment (Consented and Application Scenario)

- 5.12.39 It is considered that the consented and application developments will have minimal cumulative influence on the baseline situation either due to them appearing within a similar context to the extensive operational schemes and/or due to distance. The cumulative magnitude of change is therefore considered to be Negligible resulting in a **Minor and Not Significant cumulative effect**.

Cumulative Assessment (scoping scenario)

- 5.12.40 Scoping developments would not be visible from the northernmost section of this route and from the moorland near Rhymney Industrial Estate would have limited visibility of the scoping schemes that are to the south and east. Within the context of Fochriw and south to Cefn y Brithdir, scoping developments would add to the extent of wind energy development visible on surrounding ridgelines increasing the influence of wind turbine development on this location, in particular the Manmoel turbines to the east. When considering the introduction of the Proposed Scheme to this scenario, the level of change is considered to increase for the section between Fochriw and Cefn y Brithdir compared to the assessment against the operational / under construction baseline. No cumulative change and **No Effect** is predicted for northern parts of the route. However, the magnitude of change is considered to be medium Fochriw and Cefn y Brithdir resulting in a **Moderate and Significant** effect in this scenario for this localised section of the route, which would also extend the degree of sequential effect along the route when taken together with the significant effect predicted for the northernmost section of route against the operational baseline.

5.13 Summary

Landscape Effects

- 5.13.1 The LVIA has assessed the potential for significant landscape and visual effects over a 45 km Study Area. The Proposed Scheme is located on an upland landscape (HOV LCA 17 Upland north of the Heads of the Valleys corridor) which has an overall large scale and upland characteristics considered to be suitable for wind farm development.
- 5.13.2 The areas of grassland required to be removed in the construction and operation of the Proposed Scheme would be very limited in relation to the total area on the site, elsewhere within the HOV LCA 17 Upland north of the Heads of the Valleys corridor and also when considered alongside the large areas of grassland in the wider

landscape. The physical landscape effects of the Proposed Scheme on this landscape element is considered to be Minor and not significant.

- 5.13.3 The LVIA has found that significant landscape character effects would be localised and contained to the landscape character of the site area and immediately surrounding upland landscape. Significant effects would occur within the host character area HOV LCA 17 Upland north of the Heads of the Valleys Corridor. Significant effects would also occur within BGTC LCA 4 Trefil and Carno to a localised area of around 3 km to the east of the Proposed Scheme turbines and within BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr, within 3 km of the northernmost turbine of the Proposed Scheme.
- 5.13.4 Localised Significant effects also apply to the LANDMAP Visual and Sensory aspect area BRCKNVS372 Mynydd Llangynidr and Mynydd Llangattock and historic landscape aspect area BRCKNHL133 Mynydd Llangynidr that correspond to the same portions of HOV LCA 17 Upland north of the Heads of the Valleys Corridor, BGTC LCA 4 Trefil and Carno and BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr that experience significant character effects.
- 5.13.5 Such significant effects would arise largely due to the close proximity and clear visibility of the Proposed Scheme but also take account of the interaction with the visibility and potential cumulative effects with other existing turbines in this area, in particular at St Merryn Meat Factory, Pengarnddu Industrial Estate, Pen Bryn Oer and Tafarnaubach which are closest to the Proposed Scheme.
- 5.13.6 At greater distances, the effect on landscape character would not be significant due to - the level of screening from intervening landform such as upland ridgelines and interconnecting hills that combine to contain or limit the degree of visibility of the Proposed Scheme from the wider landscape; screening by other landscape elements such as shelterbelt and woodland planting within surrounding valleys; screening within settled area due to the urban build up of areas or wooded settlement edges; reduction in magnitude of change through distance from LCAs; and industrial elements within the baseline landscape (such as extensive wind energy development, mineral extraction, and electricity infrastructure) which moderates the effect on particular LCAs where it intervenes or forms part of the underlying characteristic of an area.
- 5.13.7 Localised significant effects are found for SLA - 23 Upper Rhymney Valley and SLA - 33 Nant Morlais and Cwm Taff Fechan in the upland area which corresponds with the same area of HOV LCA 17 Upland north of the Heads of the Valleys corridor that experiences significant effects. All other landscape designations in the Study Area were also found to be not significant, including other areas of SLA and VILL. There would be no significant effects on the special qualities of the BBNP, with the exception of an area of approximately 3 km at the southern edges of the BBNP within BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr for SQ1 and SQ8 which would experience Moderate level Significant effects due to the closer proximity of the Proposed Scheme, see **Technical Appendix 5.3, (Volume 4)**.

Visual Effects

- 5.13.8 The assessment of effects on views is informed by a series of 26 agreed viewpoints that were selected to represent visibility from a range of receptors throughout the

Study Area. The visual assessment has found significant effects at 6 viewpoint locations, as follows:

- A Major Significant Visual Effect was found for: Recreational receptors at Viewpoint 1 PRoW (Gelligaer FP 101)
- A Moderate-Major Significant Effect was found for: Residential receptors at Viewpoint 3 Pant, Merthyr Tydfil; Viewpoint 4 A469 / Bute Town; Viewpoint 7 Rhymney; Viewpoint 11 Cyfartha Park; and recreational receptors at Viewpoint 8 Cefn yr Ystrad;
- A Moderate Significant Effect was found for: Recreational receptors at Viewpoint 2 A465 / Heads of the Valleys Road; Viewpoint 15 Garn Ddu; Viewpoint 16 Pen Garnbugail; and Viewpoint 18 Beacons Way (Craig Y Fan Ddu).

- 5.13.9 The significant visual effects are largely as a result of closer proximity views from higher sensitivity receptors. This is particularly relevant for some settled parts of the study area which are in relatively close proximity to the Proposed Scheme and have unobstructed views towards it. Significant visual effects are assessed for residential receptors at viewpoint 11 (4.4 km) within Merthyr Tydfil, however, the majority of significant visual effects are found to be much closer at up to 3 km from the nearest Proposed Scheme turbine.
- 5.13.10 Significant sequential effects are found on the northernmost section of the Rhymney Valley Ridgeway Footpath. Other sections of this route and other routes in the study area are assessed as Not Significant.
- 5.13.11 Significant visual effects extend to around 8 km on the southernmost area of the Brecon horseshoe at Craig Y Fan Ddu (viewpoint 18) but would not be significant at greater distances. Sequential effects on the Beacons Way are found to be Not Significant. More localised significant visual effects are also found within the southern plateau edges of the BBNP, which extend to around 3 km to the north of the Proposed Scheme turbines (as represented by Viewpoint 8 Cefn yr Ystrad).
- 5.13.12 Whilst the RVAA has assessed 19 of the 54 properties within the Study Area to have Significant visual effects, the Proposed Scheme will not lead to the 'Residential Visual Amenity Threshold' being reached. Therefore, none of the effects assessed have the potential to be overbearing in respect of the visual amenity of residents at the property. See also **Technical Appendix 5.4, (Volume 4)**.
- 5.13.13 Significant effects are predicted for representative night time Viewpoint 18 Beacons Way (Craig Y Fan Ddu) as a result of the 2000cd scenario reducing to not significant for the 200cd scenario (in reality, it is extremely unlikely that 2,000cd will ever be experienced at its full intensity as it will only operate when visibility is reduced by climatic conditions). For the other representative viewpoints, the effect is assessed as not significant. The overall effect of the Proposed Scheme turbine lights on the Dark Sky Reserve is considered to be Not Significant. See also **Technical Appendix 5.5, (Volume 4)**.

Common Land

- 5.13.14 The common land within the site area known as Gelligaer and Merthyr Common has been considered in **Technical Appendix 5.7, (Volume 4)**, of this chapter in relation

to landscape and visual considerations relevant to the deregistering and offered replacement land proposed. **Technical Appendix 5.7** concludes that whilst there would be localised significant landscape and visual effects resulting from the Proposed Scheme the overall experience and enjoyment of the Gelligaer and Merthyr Common would not be disrupted to an unacceptable level.

Cumulative Effects

- 5.13.15 The Proposed Scheme would not result in significant landscape or visual effects with the consented and application cumulative schemes included in the LVIA. There are no consented or application cumulative wind energy developments in close proximity to the Proposed Scheme.
- 5.13.16 Where consented cumulative schemes are visible from key landscape and visual receptors, they would appear within a context and backdrop of existing wind energy development, substantially limiting their cumulative influence when considering the additional effect of the Proposed Scheme. None of the key landscape and visual receptors are assessed as having significant cumulative effects in the consented scenario.
- 5.13.17 When considering the application scenario Mynydd Carn y Cefn intensifies the cumulative influence experienced in parts of the study area and a significant visual effect is found at viewpoint 16 Pen Garnbugail as a result of the addition of the Proposed Scheme to this scenario.
- 5.13.18 When considering the Scoping scenario, the cumulative influence of further wind farm development within the study area results in additional significant landscape and visual effects in this cumulative scenario, including for BBNP LCA7; BBNP LCA9; HOV LCA17; BGTC LCA 4; SLA – 23; Viewpoints 2, 8, 13, 16 & 18; Beacons way and Rhymney Valley Ridgeway Footpath. Significant effects would also occur in this scenario for the BBNP for SQ1 and SQ8 within BBNP LCA9 (within 3 km) and would also occur for SQ 5 within BBNP LCA 7. As described in the cumulative development baseline, the effects identified in this scoping scenario are considered as being less likely to arise than the application stage and consented scenarios, as it is possible that scoping stage projects will not ultimately be developed in the form set out at Scoping, or may not gain consent or become operational, which reduces the likelihood of scoping stage scenario effects arising in full.

Conclusion

- 5.13.19 The assessment has identified that the significant landscape and visual effects of the Proposed Scheme would be contained within a relatively limited area local to the Site and immediate landscape and visual context that surrounds it. Landscape character effects are assessed to occur within a maximum of 3 km from the nearest turbine of the Proposed Scheme. Significant visual effects have been identified as occurring out to a range of 8 km within the BBNP, however the majority of significant visual effects are contained within around 3 km of the nearest Proposed Scheme turbines. In landscape and visual terms, it is considered that there is scope for wind farm development within the broad upland landscape of the HOV LCA 17 Upland north of the Heads of the Valleys corridor.
- 5.13.20 There are a number of factors which have influenced this finding, as follows:

- The Proposed Scheme is relatively compact and contained within a single upland landscape plateau which is surrounded by the larger hills of the BBNP and results in a ZTV that is not widespread, particularly within areas beyond approximately 10 km;
- The Proposed Scheme turbine layout has been designed to minimise significant effects on landscape and visual receptors by setting turbines back from the Heads of the Valleys settled landscape and by arranging the turbines in a compact layout which for most views appears as a cohesive and consistently spaced grouping of turbines;
- The compact nature of the layout also results in a relatively small horizontal field of view when viewing the Proposed Scheme from the wider landscape context. Views from within the BBNP tend to show the Proposed Scheme as a relatively small component of the very wide skyline formed by the broad upland plateau on which it is located; and
- The Proposed Scheme is consistently viewed as occupying a small part of a larger upland either as a backdrop to the South Wales Valleys landscape in views to the north or as part of an intervening broad upland plateau with the valleys landscape beyond in views from the north within the BBNP.

5.13.21 On this basis, it is considered that the landscape is capable of accommodating the Proposed Scheme and that wider landscape and visual effects are relatively limited in extent and severity.

Table 5.39: Effects Summary

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
Physical Landscape Effects									
Grassland	Medium-Low	Low	Minor and Not Significant	N/A	N/A	N/A	N/A	N/A	N/A
Landscape Character Effects									
BBNP LCA7 - Central Beacons	High	Medium-Low	Moderate and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate and Not Significant	Medium-Low	Moderate and Significant
BBNP LCA8 - Talybont and Taff Reservoir Valleys	Medium	Low	Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Low	Minor and Not Significant
BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr	Medium - High	Medium – High (localised 3 km to north of Proposed Scheme turbines)	Moderate-Major and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium – High	Moderate-Major and Significant
		Medium-Low (other areas)	Moderate and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate and Not Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
HOV LCA13 - Upland moorland between Taff and Rhymney Valleys	Medium	Medium-Low	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate-Minor and Not Significant	Medium	Moderate and Not Significant
HOV LCA16 - Rhymney Valley from Rhymney to Bargoed	Medium	Medium-Low (north of Rhymney)	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate-Minor and Not Significant
		Low (south of Rhymney)	Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate-Minor and Not Significant
HOV LCA17 - Upland north of the Heads of the Valleys corridor	Medium-High	Medium-High	Moderate-Major and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-High	Moderate-Major and Significant
BGTC LCA 4 - Trefil and Carno	Medium-High	Medium-High (localised 3 km to east of Proposed Scheme turbines)	Moderate-Major and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-High	Moderate-Major and Significant
		Medium (east of Trefil)	Moderate and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium	Moderate and Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
HOV LCA18 - Mynydd Bedwellte and associated upland	Medium-High	Medium-Low	Moderate and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant
Landscape Designations									
Bannau Brycheiniog National Park Special Qualities (BBNP LCA7 - Central beacons)	High	Low (SQ 1)	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate and Not Significant
		Medium – Low (SQ 5)	Moderate and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate and Significant
		Low (SQ 8)	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Low	Moderate-Minor and Not Significant
Bannau Brycheiniog National Park Special Qualities (BBNP LCA8 - Talybont and Taff Reservoir Valleys)	Medium-High	Low (SQ 1&8)	Moderate Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Low	Moderate Minor and Not Significant
		Negligible (SQ 5)	Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant
Bannau Brycheiniog		Medium – High	Moderate and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium – High	Moderate and Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
National Park Special Qualities (BBNP LCA9 - Mynyddoed Llangatwg and Llangynidr)	Medium-High	(SQ 1&8 localised area within 3 km)							
		Medium-Low to Low (SQ 5 and SQ 5&8 other areas)	Moderate-Minor to Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low to Low	Moderate-Minor to Minor and Not Significant
RHPG - 37. Cyfarthfa Castle	Medium-High	Low	Moderate-Minor and Not Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
SLA - 23. Upper Rhymney Valley	Medium-High	Medium-High (north of the A465)	Moderate-Major and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-High	Moderate-Major and Significant
		Medium-Low (other areas)	Moderate and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium	Moderate and Significant
SLA - 33. Morlais and Cwm Taff Fechan	Medium-High	Medium-High (1 km south and west)	Moderate-Major and Significant	Negligible	Minor and Not Significant	No Change	No Effect	No Change	No Effect

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
		Low (other areas)	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	No Change	No Effect	No Change	No Effect
VILL - C. Northern Rhymney Valley	Medium	Medium-Low	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate-Minor and Not Significant
LANDMAP Historic Landscape aspect area MRTHRHL004 – Morlais	Medium	Low	Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Low	Minor and Not Significant
Visual Effects									
1. PRoW (Gelligaer FP101)	Medium-High	High	Major and Significant	No Change	No Effect	No Change	No Effect	Negligible	Negligible and Not Significant
2. A465 / Heads of the Valleys Roads	Recreation al receptors on BR 103: Medium	Medium-High	Moderate and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-High	Moderate and Significant
	Road Users: Medium-Low	Medium-High	Moderate and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-High	Moderate and Not Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
3. Pant, Merthyr Tydfil (NCN 46)	Residents: High	Medium	Moderate-Major and Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
	Recreational receptors on NCN46: Medium		Moderate and Not Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
4. A469 / Bute Town (NCN 468)	Residents: High	Medium	Moderate-Major and Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
	Road users: Medium-Low		Moderate-Minor and Not Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
5. Pontsticill	High	Low	Moderate-Minor and Not Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
6. Pant Station, Brecon Mountain Railway	Medium	Low	Minor and Not Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
7. Rhymney	Medium-High	Medium-High	Moderate-Major and Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
8. Cefn yr Ystrad	Medium-High	Medium-High	Moderate-Major and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium-High	Moderate-Major and Significant
9. Rhymney Common	Medium	Medium	Moderate and Significant	Negligible	Minor and Not Significant	No Change	No Effect	Negligible	Minor and Not Significant
10. Trefil	Medium-High	Medium-Low	Moderate and Not Significant	No Change	No Effect	No Change	No Effect	Medium-Low	Moderate and Not Significant
11. Cyfartha Park	Visitors: Medium-High	Medium	Moderate and Not Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
	Residents: High		Moderate-Major and Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
12. Trefechan	Medium-High	Medium-Low	Moderate and Not Significant	No Change	No Effect	No Change	No Effect	Negligible	Minor and Not Significant
13. Fochriw	Medium-High	Medium-Low	Moderate and Not Significant	No Change	No Effect	No Change	No Effect	Medium	Moderate and Significant
15. Garn Ddu	Medium-High	Medium	Moderate and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium	Moderate and Significant
16. Pen Garnbugail	Medium-High	Medium	Moderate and Significant	Negligible	Minor and Not Significant	Medium	Moderate and Significant	Medium-High	Moderate-Major and Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
17. Cefn Manmoel (Sirhowy Valley Walk)	Medium-High	Medium-Low	Moderate and Not Significant	Negligible	Minor and Not Significant	No Change	No Effect	Low	Moderate-Minor and Not Significant
18. Beacons Way (Craig Y Fan Ddu)	High	Medium-Low	Moderate and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium	Moderate-Major and Significant
19. B4560, Cefn Pwll-coch	Medium-High	Low	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Low	Moderate-Minor and Not Significant
20. Mynydd Carn-y-cefn	Medium-High	Low	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Low	Moderate-Minor and Not Significant	Low	Moderate-Minor and Not Significant
21. A4059	Medium-High	Low	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	No Change	No Effect	Negligible	Minor and Not Significant
22. PRow (Bedwellty FP 28)	Medium	Medium-Low	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	No Change	No Effect	Medium	Moderate and Not Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
23. A4233 Meardy Rd	Medium	Low	Minor and Not Significant	No Change	No Effect	No Change	No Effect	Negligible	Minor and Not Significant
24. Pen y Fan	High	Low	Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Low	Moderate-Minor and Not Significant	Medium-Low	Moderate and Not Significant
A465 Sequential Route	Medium-Low	Medium-High (between Tafarnaubach and Pengarnddu)	Moderate and Not Significant	Negligible	Negligible and Not Significant	Negligible	Negligible and Not Significant	Medium-High	Moderate and Not Significant
		Medium to Low (other sections)	Minor and Not Significant	Negligible	Negligible and Not Significant	Negligible	Negligible and Not Significant	Medium	Moderate-Minor and Not Significant
A4060 Sequential Route	Medium-Low	Medium	Moderate-Minor and Not Significant	No Change	No Effect	No Change	No Effect	No Change	No Effect
Beacons Way Sequential Route	High	Medium-Low (Central	Moderate and Not Significant	Negligible	Minor and Not Significant	Medium-Low	Moderate and Not Significant	Medium	Moderate-Major and Significant

Receptor	Receptor Sensitivity	Operational / Under Construction Scenario		Consented Cumulative Scenario		Application Cumulative Scenario		Scoping Cumulative Scenario	
		Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect	Cumulative Magnitude of Change	Significance of Effect
		Beacons section)							
		Low to Negligible (Other sections)	Moderate-Minor to Minor and Not Significant	Negligible	Minor and Not Significant	Low to Negligible	Moderate-Minor to Minor and Not Significant	Low	Moderate-Minor and Not Significant
Rhymney Valley Ridgeway Footpath Sequential Route	Medium-High	Medium (North of Rhymney Industrial Estate)	Moderate and Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	No Change	No Effect
		Negligible to Medium-Low (Other sections)	Minor to Moderate-Minor and Not Significant	Negligible	Minor and Not Significant	Negligible	Minor and Not Significant	Medium	Moderate and Significant

5.14 References

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