

7 LANDSCAPE AND VISUAL

7.1 Introduction

7.1.1 This Chapter reports the likely significant effects of the Proposed Development in terms of landscape character and visual amenity in the context of the Site and surrounding area. It considers the likely significant effects of construction, operation and the decommissioning of the Proposed Development on landscape and visual receptors.

7.1.2 This Chapter (and its associated figures and appendices) is not intended to be read as a standalone assessment and reference should be made to the front end of this ES (Chapters 1 – 6), as well as the final chapters, Residual Effects and Cumulative Effects (Chapter 23 and 24 respectively).

7.2 Legislation, Policy and Guidance

7.2.1 The relevant legislation, policy and guidance are listed below, with details provided in Appendix 7.1: Planning Policy.

Legislative Framework

7.2.2 The applicable legislative framework is summarised in Table 7.1.

Table 7.1: UK Policy and Legislation	
Act Name	Date of Enactment
Countryside and Rights of Way (CROW) Act	2000
The National Parks and Access to the Countryside Act	1949

Planning Policy

7.2.3 The applicable planning policy is summarised in Table 7.2 and Table 7.3.

Table 7.2: National Planning Policy	
Planning Policy	Date of Adoption
Planning Policy Wales (PPW) Edition 12	Feb 2024
Future Wales – The National Plan 2040	Feb 2021
Technical Advice Note (TAN) 8	2005

7.2.4 The proposed development is wholly within Caerphilly County Borough Council (CCBC). A further 6 local authorities and the Bannau Brycheiniog National Park Authority (BBNPA) either partially or fully fall within the 20km study area.

Table 7.3: Local Planning Policy		
Local Authority	Planning policy	Date of adoption
Blaenau Gwent County Borough Council (BGCBC)	Local Development Plan (LDP) 2006 -2021	November 2012
Caerphilly County Borough Council (CCBC)	LDP 2006 -2021	November 2011
Bannau Brycheiniog National Park Authority (BBNPA)	LDP 2007 - 2022 Landscape and Development SPG	December 2013 June 2014
Rhondda Cynon Taf County Borough Council (RCTCBC)	LDP 2006 - 2021 The Historic Built Environment SPG	March 2011 March 2011
Powys County Council (PCC)	LDP 2011 – 2026	June 2017
Merthyr Tydfil County Borough Council (MTCBC)	LDP 2016 - 2031	January 2020

Guidance

7.2.5 The applicable guidance is summarised as follows:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition. Landscape Institute with the Institute of Environmental Management and Assessment (2013);
- Assessing the Cumulative Impact of Onshore Wind Energy Developments, NatureScot (March 2021);
- Siting and Designing Wind Farms in the Landscape, Version 3, NatureScot (formally known as Scottish National Heritage), (2017);
- Visual Representation of Wind Farms, Version 2.2, NatureScot (February 2017);
- Natural Resources Wales (NRW) Guidance Note 046, 'Using LANDMAP in Landscape and Visual Impact Assessments, (LVIA),' NRW (January 2021);
- Assessing Landscape Value Outside National Designations -Technical Guidance Note 02/21, Landscape Institute (2021); and

- Planning Guidance for Smaller Scale Wind Turbine Development Landscape and Visual Impact Assessment Requirements, Prepared by Gillespies LLP for The Heads of the Valleys Landscape Officers and Planners with support from The South Wales Landscape Liaison Group (April 2015).

7.3 Assessment Methodology and Significance Criteria

Scope of the Assessment

- 7.3.1 Landscape effects associated with a development relate to changes to the fabric, character and quality of the landscape as a resource and how it is experienced. This requires consideration of the character of the landscape, the elements and features that it contains, and any value attached to the landscape (whether formally or informally).
- 7.3.2 Landscape assessment studies:
- direct effects upon specific landscape elements, especially prominent and eye-catching features;
 - change in character, which is the distinct, recognisable and consistent pattern of elements that creates distinctiveness and a sense of place;
 - subtle effects that contribute towards the experience of intangible characteristics such as tranquillity, wildness and cultural associations; and
 - effects on designated landscapes, conservation sites, and other acknowledged special areas of interest.
- 7.3.3 Visual effects relate closely to landscape effects, but they concern changes in views and visual amenity. Visual assessment concerns people's perception and response to changes in visual amenity. Effects may result from new landscape elements that cause visual intrusion or new features that obstruct views across the landscape.
- 7.3.4 Both landscape and visual effects can be adverse, beneficial or neutral, short, medium or long term, permanent or temporary, reversible or irreversible, direct (an effect that is directly attributable to the proposed development) or indirect (effects resulting indirectly from the development as a consequence of the direct effects), and cumulative, relating to additional changes that may arise when the proposed development is considered in conjunction with other similar developments.

Effects Not Considered within the Scope

- 7.3.5 It is not possible to enter the curtilage of private properties without residents' agreement and therefore the assessments are made from the nearby roads and footpaths.
- 7.3.6 Cultural Heritage and Archaeological receptors are excluded from this LVIA, although designations such as Registered Parks and Gardens are considered in terms of their contribution to landscape character and/or visual amenity where they are visitor destinations. Impacts on their cultural heritage and setting is addressed in Chapter 09: Heritage and Archaeology.

Extent of the Study Area

Wind Farm Study Area

- 7.3.7 An initial Study Area of a 45km radius from the outermost turbines was considered, as recommended in the NatureScot guidance 'Visual Representation of Windfarm Guidance'. For the purpose of this assessment, this initial 45km study area will be referred to as the 45km radius Study Area and is shown in drawing 007.
- 7.3.8 Due to the topography, potential visibility of the Proposed Development is largely within a 20km radius, with a more limited area of potential visibility up to and beyond 45km. Where theoretical visibility is shown on the bare ground Zone of Theoretical Visibility (ZTV) (drawing 007) and beyond 20km, visibility will likely be further limited by a combination of distance and/or intervening built form and woodland or forestry.
- 7.3.9 As identified in GLVIA3, LVIAs should focus on the likely significant effects of the proposed development, therefore, after the above review of the ZTV, a reduced study area of 20km has been used for effects upon landscape character, landscape designations and visual amenity.

Solar Farm Study Area

- 7.3.10 On review of the ZTV, the LVIA will focus on an area within a 5km radius of the outermost edge of the solar panels for effects upon landscape character, landscape designations and visual amenity.

Cumulative Study Area

- 7.3.11 In accordance with GLVIA3, paragraph 7.5 and NatureScot guidance on Assessing Cumulative Impacts of Onshore Wind Energy Developments (2021), paragraph 33, the

cumulative assessment in this LVIA focuses on any likely reasonably foreseeable significant cumulative impacts.

7.3.12 The cumulative assessment considers the additional changes to the landscape character and visual amenity caused by the Proposed Development in conjunction with other similar developments.

7.3.13 Through a combination of topography and visibility of the Proposed Development it is considered that the likelihood of significant cumulative effects between the Proposed Development in addition to any cumulative windfarm developments beyond approximately 20km of the Proposed Development is very unlikely. Therefore, all cumulative windfarm developments that lie beyond 20km have been excluded from the cumulative assessment and have not been considered further.

7.3.14 It is also considered that the likelihood of significant cumulative effects between the Proposed Development in addition to any cumulative Solar PV developments beyond approximately 10km of the Proposed Development is very unlikely. Therefore, all cumulative Solar PV developments that lie beyond 10km have been excluded from the cumulative assessment and have not been considered further.

Consultation Undertaken to Date

7.3.15 Table 7.4 provides a summary of the consultation activities undertaken in support of the preparation of this Chapter.

Table 7.4: Summary of Consultation Undertaken to Date			
Organisation	Individual(s)	Meeting Date and other forms of Consultation	Summary of Outcome of Discussion
Caerphilly County Borough Council	Richard Bryan	Email dated 7 th December 2023	A reduced study area of 20km for the wind turbines is considered acceptable. A 5km study area for the solar farm is also acceptable but a 10km study is required for cumulative. Both photomontages and wireframes will be required for all

Table 7.4: Summary of Consultation Undertaken to Date			
Organisation	Individual(s)	Meeting Date and other forms of Consultation	Summary of Outcome of Discussion
			<p>viewpoints located within CCBC.</p> <p>Two suggested viewpoint locations were relocated, and four additional viewpoint locations were added.</p> <p>A more detailed ZTV covering 20km study area was recommended.</p>
Bannau Brycheiniog National Park Authority	Lisa Hughes	Letter dated 28 th November 2023	Several additional viewpoints were suggested.
Blaenau Gwent County Borough Council	Helen Hinton	Letter dated 18 th December 2023	<p>It was recommended that the viewpoint locations be significantly expanded to illustrate the development relative to the DNS submissions of</p> <p>DNS/3239181 - Manmoel Wind Farm;</p> <p>DNS/3270299 - Mynydd Carn-y-Cefn Wind Farm and DNS CAS-02504-M9J3F4 - Mynydd Bedwellte.</p>

Table 7.4: Summary of Consultation Undertaken to Date			
Organisation	Individual(s)	Meeting Date and other forms of Consultation	Summary of Outcome of Discussion
Natural Resources Wales	Ryan Rees	Letter dated 18 th December 2023	<p>As part of the preliminary assessment and site survey it was recommended that areas of the Black Mountains and Fforest Fawr outside of the 20km study area are considered.</p> <p>It was advised that cumulative ZTVs be prepared to inform and justify an appropriate CLVIA study area, and refined for the CLVIA.</p> <p>Additional viewpoints were requested.</p> <p>A nighttime photomontage was requested and an assessment of the impacts on dark skies within the BBNP.</p>

Assessment Methodology

7.3.16 The detailed LVIA methodology is presented in Appendix: 7.2 Methodology and is in accordance with 'Guidelines for Landscape and Visual Impact Assessment: Third Edition' (Landscape Institute and IEMA, (2013) ('GLVIA3').

7.3.17 In summary, the assessment involves the following key stages:

- Establish the baseline conditions; the landscape character and visual context of the receiving environment and their sensitivity to change;
- Evaluate the magnitude of change likely as a result of the Proposed Development, both during construction and in operation on visual amenity and the landscape;
- Evaluate the cumulative magnitude of change likely as a result of the Proposed Development in conjunction with other similar existing or future developments, both during construction and in operation on visual amenity and the landscape resource;
- Assess the significance of landscape and visual effects considering the sensitivity of resources and the magnitude of change; and
- Assess the cumulative significance of landscape and visual effects considering the sensitivity of resources and the magnitude of change.

7.3.18 The sensitivity of the landscape and visual receptors is determined by considering the receptor value and the susceptibility of the receptor to the change proposed.

Value

7.3.19 The value of a landscape is often based on its designation or recognition through national or local consensus and its quality including cultural associations, scenic or aesthetic qualities. Although the absence of a landscape designation should not rule out an area being defined as important. Such locations may be of local value, informed by local cultural or natural heritage records, works of art or levels of use.

Susceptibility

7.3.20 Landscape susceptibility considers the ability of the receptor to accommodate the proposed change and the resulting consequences on the maintenance of the baseline situation.

7.3.21 Susceptibility and value can be combined in different ways although it is generally accepted that a combination of high value and high susceptibility is expected to result in the highest sensitivity, whereas a low value and low susceptibility is likely to result in the lowest level of sensitivity. As noted in GLVIA3, there can be a complex relationship between the value attributed to a landscape and its susceptibility to

change. This is particularly important when considering change in designated landscapes.

7.3.22 The value attributed to visual amenity relates to the level of recognition of the view, from highly celebrated nationally known views to views of no particular recognition. Susceptibility to the proposed change for visual receptors relates to the location of the person and their activities, such as residents at home being highly susceptible, to low or negligible susceptibility for people using indoor facilities where the surrounding view is irrelevant to their activity.

7.3.23 As with landscape, value and susceptibility can be combined in several different ways to form a judgement about the visual sensitivity of a given receptor. Visual receptors considered highly susceptible to the proposed change are normally considered to be of high sensitivity unless there are features associated with the value of the view that lead to a reduction in sensitivity.

Magnitude of change

7.3.24 The magnitude of landscape and visual change depends upon a combination of factors. These include including:

- The size, scale and nature of change;
- The geographical extent of the change; and
- Its duration and reversibility.

7.3.25 As with sensitivity, combining the assessment of the above aspects together requires careful consideration and professional judgement.

Significance Criteria

7.3.26 Professional judgement is used to combine sensitivity and magnitude to gauge the level of effect and determine whether it is significant or not with a clear justification for the overall judgement.

7.3.27 Table 7.5 below, provides general guidance on the inter-relationship between the magnitude of change and the sensitivity of a receptor. This matrix is used as a framework and guide for consistency only, it is not used as a prescriptive formula. The level of effect (and therefore significance) will vary depending on specific

circumstances, the type and scale of the development proposed and the baseline context.

Table 7.5 Significance Matrix					
		Magnitude			
		High	Medium	Low	Negligible
Sensitivity	High	Server or Substantial	Substantial to Moderate or Moderate	Moderate or Moderate to Slight	Slight to Imperceptible or Imperceptible
	Medium	Substantial to Moderate	Moderate	Moderate to Slight	Imperceptible
	Low	Moderate	Moderate to Slight	Slight	Imperceptible
	Negligible	Imperceptible	Imperceptible	Imperceptible	Imperceptible

7.3.28 Using professional judgement, effects that are deemed to be significant for the purposes of this assessment are those that are assessed as being of moderate or greater, while those less than moderate are deemed to be non-significant.

Nature of Effect

7.3.29 Effects can be beneficial or adverse and, in some cases, neutral (neither beneficial nor adverse).

7.3.30 The aim of this assessment is to provide an objective assessment of the relationship between the proposed development and the landscape in which it would be located and seen. As part of this it is also important to consider the nature of the proposed change in the context of the key characteristics of the landscape. As large, engineered structures being added to the landscape, it is unlikely that a beneficial nature of effect would be found, but neutral effects could occur where it is considered the Proposed Development does not change the defining characteristics of the landscape.

7.3.31 For the purposes of this assessment and to ensure this LVIA assesses the worst-case scenario, all effects are considered to be adverse, unless stated otherwise.

Cumulative Assessment

- 7.3.32 The assessment of cumulative effects is essentially the same as for the assessment of the stand-alone landscape and visual effects. The level of landscape and visual effect is determined by assessing the combination of sensitivity of the landscape or visual receptor and the magnitude of change. Although, it should be noted that the cumulative assessment is the result of the addition of the proposed development to the identified cumulative baseline.
- 7.3.33 The cumulative assessment considers the developments status and assessment scenarios as the following:
- **Operational** = operational windfarms/ solar farms. These are included as part of the baseline assessment on which the main LVIA assessment is undertaken;
 - **Consented** = windfarms/ solar farms that have gained consent and not built or are consented and in-construction. These are included as part of the Future Baseline within the main LVIA assessment; or
 - **In planning** = windfarms/ solar farms at application stage and the subject of appeal. These are considered within the Cumulative Assessment.
- 7.3.34 Operational windfarms and Solar PV are considered as part of the baseline and are assessed as such within the LVIA. There are 35 operational windfarms within the study area, of which the turbines at Pengarnddu Industrial Estate and Pen Bryn Ore are the closest.
- 7.3.35 The consented and in-construction windfarms form the future baseline. There are 12 consented windfarm developments within the Study Area, of which Valley Heights Filling Station turbine to the west is the closest.
- 7.3.36 The 'in planning scenario' will assess all windfarm developments at the application stage, including those at appeal against the windfarm baseline and future baseline. There is a level of uncertainty in predicting potential changes as a result of application stage developments as these may or may not be built. There are currently six application windfarms within the Study Area. Pen March is the closest sitting 8 km north-west of the Site, the rest are all beyond 5km from the Proposed Development.
- 7.3.37 Scoping stage windfarm developments within the Study Area have been shown on drawing 045 for reference but generally have not been considered further due to

design uncertainty at the pre application stage and the possibility that only some or none of these pre applications will progress onto full applications.

- 7.3.38 Cumulative Solar PV developments within the Study Areas are shown on drawing 051 for reference but generally have not been considered further as they are so few and far between it is considered that there will be no cumulative affects as a result of the addition of the proposed development to the solar farm current and future baseline. Due to the nature and scale of the wind turbine element of the proposed development is considered that any and all cumulative impacts will be a result of the turbines alone.
- 7.3.39 These cumulative drawings include all existing, consented and application and scoping wind and Solar PV developments as of 24th January 2024.

Visualisations and Wireline

- 7.3.40 Visualisation have been produced in accordance with SNH's Guidance on Visual Representation of Windfarms. A total of 21 visualisations have been produced, showing the potential view following construction of the Proposed Development. Below is a list of viewpoints visualisations have been produced for:

- Viewpoint 1: Bute Town
- Viewpoint 2: Upper Rhymney
- Viewpoint 3: Rhymney South
- Viewpoint 4: Fochriw
- Viewpoint 5: Merthyr Common
- Viewpoint 6: Pant Y Ffawydd
- Viewpoint 9: A465 / Heads of the Valleys Road
- Viewpoint 10: Rhymney Common
- Viewpoint 11: Abertywswwg
- Viewpoint 12: Coed Y Moeth Common
- Viewpoint 13: B4560 Baeufort Road to Llangynidr
- Viewpoint 16: The Blorange
- Viewpoint 17: Table Mountain, Cambrian Way and Beacons Way
- Viewpoint 18: Mynydd Llangyidr
- Viewpoint 20: Corn Du/Penyfan
- Viewpoint 21: Mynydd Aberdar

- 7.3.41 Cumulative Wirelines have been produced for all 21no. viewpoints and residential properties/groups.

ZTV mapping and viewpoints

7.3.42 A desk-based analysis was carried out to determine the bare ground ZTV of the development (Drawing 007 to 009). Once this was established, a number of representative viewpoints were identified to illustrate the potential visual effects of the proposed development. 21 viewpoints are included in this LVIA, the locations of which are also shown on drawing 008.

7.3.43 The photographs were taken during several site visits in January 2024, see drawings 080 to 100. They were taken using a digital camera with a fixed 50mm lens, mounted on a stable, levelled tripod with a professional panoramic head attached. This positions the focal centre of the camera lens above the pivot of the tripod and allows the photographs to be stitched together accurately using software. The photographs illustrate views of potential receptors and show the site in the context of the surrounding landscape and settlements.

7.3.44 It should be recognised that viewpoints are provided as part of an LVIA to be representative of the potential visibility of a development from the surrounding receptors, they are not intended to illustrate every possible view of a development.

Cumulative Data

7.3.45 The cumulative assessment focuses on the cumulative windfarm developments within the Study Area. All of the cumulative developments considered in the cumulative assessment are listed in Appendix 7.3. and presented on drawing 045.

7.3.46 Cumulative data has been collected directly from the windfarm developers where possible, planning application information and from aerial photography for operational sites. Where information has not been readily available this is noted within the assessment.

7.4 Landscape Baseline

Introduction

7.4.1 This section firstly reviews the findings of the published landscape character studies relevant to the study area and the landscape designations and sensitive receptors within the study area. The site assessment then enabled a review of this published

information on site, informing a description of the existing baseline condition of the study area.

Published Strategic Landscape Character Studies

7.4.2 The following landscape character assessments provide a strategic assessment of the study area, these are mapped on drawing 011 to 023 and 049 and the following assessments cover the study area:

- National Landscape Character Areas (NLCA) as defined by Natural Resources Wales¹ ;
- LANDMAP, Natural Resources Wales².
- The Heads of the Valleys Smaller Scale Wind Turbine Development Landscape Sensitivity and Capacity Study (2015)³
- The Bannau Brycheiniog National Park Landscape Character Assessment, August 2012⁴.

7.4.3 Full details of the landscape character areas within the study area are provided in Appendix 7.5. A summary of the key ones that relate to the site are provided below.

Natural Resources Wales National Landscape Character Areas

7.4.4 The site is within NLCA 37 South Wales Valleys, with NLCA 30 Brecon Beacons & Black Mountains to the north within the 20km study area. The key characteristics of NLCA 37 are listed as:

- ***“Extensive Upland plateaux – 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.***

¹ National Landscape Character Areas by Natural Resources Wales, 2014

² LANDMAP, Natural Resources Wales

³ [Heads of the Valleys Smaller Scale Wind Turbine Development 2015](#)

⁴ [Landscape Character Assessment | Bannau Brycheiniog National Park Authority](#)

- **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.”

7.4.5 Key characteristics of NLCA 30 are listed as:

- **“The highest mountains in South Wales** - distinctive flat-topped mountains and a prominent escarpment of Devonian Old Red Sandstone, with smaller bands of Carboniferous Limestone and Millstone Grit in the south.
- **Heavily glaciated** – classic upland cirque formations, ridges, glacial lakes and moraines, over-deepened and ‘U’ shaped valleys.
- **The source of a number of rivers** - Four major rivers, the Usk, Neath, Tawe and Aman, flow generally south through the landscape, fed by fast flowing streams and waterfalls from the surrounding uplands.
- **Numerous reservoirs** - have been created forming notable landscape features. Rough moorland habitats - open, exposed, mainly sheep grazed, some commons.
- **Classic limestone scenery** – to lower parts to the south including clints, grykes and caves, the best examples in South Wales, waterfalls, stone walls and buildings. However there are also a number of old limestone quarries and associated remnant infrastructure.

- **Strong field pattern with many small fields** - pasture enclosed by stone walls at higher altitudes and in limestone areas but thick hedgerows elsewhere and in the valley bottoms, with improved pasture fields found on the lower valley slopes.
- **Large conifer blocks** - cover some valley side slopes in certain areas.
- **Bio- and geodiversity** - large parts are designated. Features include arctic-alpine cliff flora and species-rich limestone grasslands.
- **Tourism** - the Brecon Beacons National Park symbolises the iconic beauty of South Wales and attracts thousands of visitors each year.
- **Scattered, small settlements** – confined to valleys; overall the area is sparsely settled.
- **Highly tranquil** - The windswept uplands display little intrusion of modern forms. High points afford panoramic views across the area and far beyond. The area is recognised for its dark skies.”

LANDMAP

- 7.4.6 LANDMAP maps the landscape into 5 Aspect Areas. To establish a baseline this report focusses on the Visual and sensory Aspect layer, as illustrated on drawing 011 and 012. The other 4 Aspect layers for the site and study area can be found on drawings 013 and 018 to 023
- 7.4.7 Table 7.6 below summarises the Aspect Areas for each Aspect Layer in which the site is located.

Table 7.6 : LANDMAP				
Aspect Layer	Aspect Area	Unique ID	Level 3 Classification	LANDMAP Overall Evaluation
Cultural Landscape	Bridgend/Caerphilly/Rhondda	CYNONCLS025	Hillside & Scarp Slopes Mosaic	Moderate
Historic Landscape	H10 Ogmore Forest	CYNONHL633	Woodland	Low
Visual and Sensory	West of Rhymney	CYNONVS209	Hillside & Scarp Slopes Mosaic	Moderate
Geological Landscape	Uppermost Rhymney valley	CYNONGL007	Glacial mountain valley	Outstanding

Table 7.6 : LANDMAP				
Aspect Layer	Aspect Area	Unique ID	Level 3 Classification	LANDMAP Overall Evaluation
Landscape Habitat	N/A	CYNONLH109	Mosaic	Moderate

- 7.4.8 The site is located within LANDMAP Visual & Sensory, Aspect Area CYNONVS209 West of Rhymney, classified as Hillside & Scarp Slopes Mosaic (Level 3) which has an overall evaluation of Moderate, and is described as follows:

“Upper valley sides with strong upland feel-both from the strong visual link that exists and the rough grazed grassland with some small coniferous elements... Dominant character is that of an upland area but borders on settlement of Rhymney... Visual detractors include pylons on skyline to south and Capital Valley and the Heads of the Valleys industrial estates... Some noise and movement from the A465 to the north...Recent upgraded A465 increases detraction.”

Heads of the Valleys Landscape Character Areas

- 7.4.9 The Heads of the Valleys Smaller Scale Wind Turbine Development Landscape Sensitivity and Capacity Study covers the study area south of the National Park and defines Landscape Units using the LANDMAP aspect areas, these are illustrated on drawing 039. The site is located in the north of Unit 16 Rhymney Valley from Rhymney to Bargoed. The findings of the study for this unit are summarised below.

SUMMARY OF ASSESSMENT FOR UNIT 16		
LANDSCAPE		SUSCEPTIBILITY
Scale	Medium scale landscape	Medium
Landform	Valley landscape extending north south across the study area.	High
Land cover pattern	A quarter of the land use is residential with the remainder being a combination of grazed slopes, upland valleys and plateau	Medium
Built Environment	Settled valley bottom with a variety of development types.	Medium
VISUAL		
Skylines and settings	No distinct skylines. Valley setting for development and approaches to Rhymney and Bargoed	Low
Movement	Variations across the unit. Busy in the valley	Medium

	bottom along major transport route (A 469) but quieter on the valley sides.	
Visibility, key views, vistas.	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.	Medium
Intervisibility, associations with adjacent landscapes	The upland areas adjacent have views down into this unit	Medium
Types of receptors	Few receptors. Residents, road users and walkers. Rhymney Valley Ridge walk (promoted route) on the west valley ridge	High
Views to / from landscape and cultural heritage features	None apparent.	Low
AESTHETIC, PERCEPTUAL AND EXPERIENTIAL		
Scenic quality and character		Medium
Remoteness and tranquillity	Busy landscape that in the main is easily accessible and not particularly remote or accessible.	Medium
VALUE		VALUE
Landscape value	Unit includes the Upper Rhymney Valley SLA	Medium
Historic value		Medium

7.4.10 The study concluded that the unit is of high sensitivity to the very large typology *“which could adversely affect residential amenity”*. *“Although some indicators suggest this area has low to medium sensitivity the settled character of the area means that residential amenity issues are likely to arise particularly with larger development.”*

7.4.11 The study also includes guidance on siting as follows:

- *“Protect the settings of designated and other important cultural heritage features and the key views to and from these features.*
- *Consider views from the Rhymney Valley Ridgeway walk.*
- *Avoid sequential cumulative impacts from the A4049 in the valley bottom by ensuring visual separation between turbines/small groups of turbines.*
- *Ensure new access tracks do not damage historic field patterns. Replant any hedges and replace any walls affected by construction.*
- *Avoid siting wind turbines on the steep slopes and their associated tops.*
- *Maintain the natural beauty of SLAs in the area and their special qualities.*
- *Maintain the distinctive visual and sensory landscape features and characteristics of the Visually Important Local Landscape*
- *Avoid the loss of trees and woodland cover.*
- *Avoid diminishing the scale of the valley through inappropriate turbine siting.*
- *Protect the immediate setting of the towns in the valley bottom.”*

Landscape Designations and Sensitive Receptors

7.4.12 Landscape designations serve as markers reflecting the significance attributed by national and local government, as well as other agencies, to diverse landscapes. Every landscape holds inherent importance, especially for the communities residing or engaging in activities within them, and the assessment of landscape quality possesses a subjective element.

7.4.13 The landscape designations and sensitive receptors within the study area are mapped on drawing 040, 044, 047 and 063 and Appendix 7.6 provides a full description of them.

7.4.14 Situated in the northern part of the study area, the Bannau Brycheiniog National Park (BBNP) is in close proximity to the site, approximately 2.5km at its nearest point. Additionally, the Blaenavon World Heritage Site lies to the east of the study area, positioned roughly 15km away from the site. The study area also encompasses several Registered Parks and Gardens of Special Historic Interest. Among these, the Aberfan Cemetery, Garden of Remembrance, and former Tip and Slide Area are located

approximately 7.7km southwest of the site. Additionally, Bedwelty Park in Tredegar, characterized by a 19th-century landscape park, is situated approximately 3.4km to the east of the site.

- 7.4.15 The site itself is not within any locally designated areas, however, within the study area there are a number of Special Landscape Areas (SLA) the closest of which is approximately 500m north of the site, which is the Caerphilly designated SLA: Upper Rhymney Valley. As designated by Policy NH1 of the Caerphilly County Borough Local Development Plan up to 2021 – Adopted November 2010.

Landscape Character of the Study Area

Landform and drainage

- 7.4.16 The landform of the site and its immediate surroundings is shown on drawing 002. The site is on the north facing hillside northwest of Rhymney. Within 5km of the site, the landform undulates at a local level, however generally the landform rises from 294m AOD at the north-eastern corner boundary to 388m AOD at the highest point in the south-western corner. The surrounding area is sloping gradually to the northeast with undulating hillsides to the southwest with more level ground to the north-east and east. Higher ground lays to the north beyond the A465 towards Twynau Gwynion reaching 569m AOD at the highest point, and lower ground to the south-east towards Pontlloftyn.
- 7.4.17 The landform to the south-west of the site has been considerably modified by the Ffos-y-Fran opencast workings and the Trecatti landfill site. There are large overburden tips on the skyline which are prominent landform features and the opencast mine is a large open pit.
- 7.4.18 There are a number of minor streams within the sites proposed boundary. The streams all flow in a northeast direction towards the Nant Carno which is runs along the northern edge of the site boundary, the Nant Carno then flows north into Bute town Reservoir and eastwards to join the Rhymney River. There are numerous minor streams traversing the wider study area, they predominantly flow in the direction of the Rhymney River, located 200m to the east of the site, and the Sirhowey River, positioned 4km to the east of the site. Both rivers traverse through their respective valleys in a southward trajectory.
- 7.4.19 Within the range of 5km to 10km from the site, the topography exhibits undulating characteristics, exhibiting as a succession of valleys oriented towards the southeast.

The elevated features within this investigation area are situated to the north of the site, notably with Cefn Yr Ystrad reaching an elevation of 617m AOD. The overall terrain inclination is directed southward, reaching its lowest point at 210m AOD in the Rhymney Valley to the south of the site.

- 7.4.20 A myriad of minor streams and water bodies traverse the specified region of the study area, primarily exhibiting a flow pattern directed towards the River Taff, situated 5.2km to the west of the site, and the Ebbw River, positioned 6.7km to the east of the site. These rivers traverse their respective valleys in a southward orientation, ultimately converging in the direction of Caerphilly.
- 7.4.21 The broader expanse within the range of 10 to 20km surrounding the study area exhibits similar topographical features to the smaller designated zone. To the north of the site, the expansive mountain ranges of the BBNP ascend to elevations reaching up to 886m AOD at Pen-Y-Fan. The overall landform predominantly comprises valleys radiating in various directions from this elevated point. Positioned to the northeast of the site, the substantial Usk Valley extending between Brecon and Abergavenny constitutes a significant portion of the flat terrain within the BBNP, marked as the study area's lowest elevation points, reaching as low as 50m AOD. To the south of the site, akin to the 5 to 10km study area, the predominant landforms predominantly feature valleys extending in a southward direction.
- 7.4.22 In this wider area, the main forms of drainage to the west are the Affon Cynon, which converges with the River Taff 13km to the southwest of the site in Abercynon, and The Rhondda River which is 17km to the west of the site in the Rhondda valley. To the east of the site, the Ebbw Fach River and the Affon Lwyd are situated 9.6km and 15.5km away from the site, respectively. These similarly to the parallel Rhymney River, run southwards towards the Seven Estuary.

Landcover and land use

- 7.4.23 The site encompasses diverse land uses, characterised by fields hosting grazed scrub grassland in the southern and western sectors, while grazed farmland prevails in the northeastern portion. Along the northern and eastern boundaries, pockets of scrub woodland and trees are evident, exhibiting a predominantly well-established state. The eastern boundary is marked by mature woodland and trees. In immediate proximity, the Heads of the Valleys Industrial Estate is situated approximately 50m east of the site boundary. Noteworthy features within the broader landscape include

the Ffos-y-Fran opencast workings, the Trecatti landfill site, the overhead electricity transmission lines and towers just to the west of the site, the Land at Cwm Bargoed Solar Farm, located approximately 2.5km southwest of the site, and the Pen Bryn Oer Wind Farm, situated roughly 1.8km to the east, featuring three turbines.

- 7.4.24 Beyond the confines of the site and its immediate vicinity, within the 20km study area, the topography is characterized by small villages and towns nestled in the lower valleys, accompanied by undulating hills featuring pastoral and arable land. Gelli-Gaer Common, lying between the site and Pencoed to the south, constitutes a prominent geographic feature on the site's southern and western boundaries. Positioned approximately 2.5km north of the site is the BBNP, encompassing approximately one-third of the study area. This area predominantly comprises arable and agricultural fields in the lower valleys, interspersed with pockets of woodland and a network of lakes and reservoirs. The elevated terrain primarily serves grazing purposes, with a significant portion designated as open access and available to the public.

Settlements and individual properties

- 7.4.25 Within a 5km radius of the site, there exist several sizable settlements, namely Rhymney situated 300m to the east, the more substantial town of Merthyr Tydfil located 5.0km to the west, and Tredegar positioned 3.3km to the east. Surrounding these urban centres are numerous smaller settlements and villages, predominantly situated in valley bottoms. The immediate vicinity of the site accommodates several dispersed farms and individual properties, with noteworthy proximity observed in Cwm Carno Farm adjacent to the northern edge of the site boundary, Rose Cottage and Trecatti House at a distance of 0.4km from the western edge, and Gypsy Castle situated 0.3km to the north. Slightly further out are the small settlements of Bute Town, 300m from the northeast of the site, Llechryd 780m from the northeast of the site, Dowlais Top 1.7km from the west of the site and the larger town of Rhymney to the east of the site.
- 7.4.26 Extending beyond this immediate radius but still within a 10km range of the site, lay the settlements to the south of Merthyr Tydfil, such as Pentrebach and Aberfan, positioned at 5.6km and 8km from the site, respectively. To the south, approximately 10km from the site, lie the Caerphilly settlements of Bargoed and Aberbargoed. Positioned to the east and approximately 6.5km from the site is the notable

settlement of Ebbw Vale, with the smaller Brynmawr situated slightly further out at a distance of 9km.

7.4.27 In the extended scope of the 20km study area there are several noteworthy settlements. Among these, Blackwood, situated 12km to the southeast, stands out and is encircled by various smaller villages and towns. Pontypool, located 19km to the southeast, Pontypridd at a distance of 18km to the southwest, Aberdare positioned 10km to the west, and Blaenavon situated 14.5km to the east contribute to the spatial composition of the region. Numerous other smaller settlements and villages are dispersed throughout the study area, predominantly aligning with valleys that traverse in a southerly direction towards Cardiff and Newport.

7.4.28 Outside the proposed study area, but in proximity, are notable settlements such as Brecon, positioned 21km to the north, and Abergavenny, situated 21km to the east.

Transport corridors and Rights of Way

7.4.29 The A465 Heads of the Valleys Road is the main A-road which passes to the north of the site approximately 0.44km at the nearest point, connecting to this main road and providing access to the site is the A469 which goes north to south against the eastern edge of the site. Several minor roads spur from these A-roads connecting towns and local settlements to other minor roads and villages. The A470 runs through the study area 5.8km west of the site which passes Merthyr Tydfil and connects to Cardiff in the south. To the northeast of the study area lies the A40 and A479, two notable A roads that connect Abergavenny to Brecon and central Wales.

7.4.30 There is a network of public footpaths that run through and around the site. Running through the centre of the site from east to west is the RHYM/FP95 footpath which connects to the RHYM/FP91 and RHYM/FP96. To the north of the site, running along the edge of the boundary is the RHYM/BR93 Bridleway, this connects to the RHYM/BR92 which runs adjacent to the eastern boundary of the site. The Rhymney Valley Ridgeway Walk is the closest major public right of way to the site, it intersects

the eastern most edge of the site coming from the north and heads south going down to Fochriw and beyond.

7.4.31 Further afield but within the 20km study area there are a number of other notable Public Right of Ways, these include;

- Rhymney Riverside Walk - This trail connects to the Taff-Ely Ridgeway Walk at Caerphilly Common and overlaps with the Sirhowy Valley Walk in the east, passing about 200m north of the site.
- Cambrian Way – The footpath, spanning approximately 479km runs almost the length of Wales from Cardiff to Snowdonia. It is located 6k north of the site at its closest point.
- Beacons way – The Beacons Way, the official trail of the Bannau Brycheiniog National Park Authority in Wales, spans approximately 8.5km north of the site.
- Sirhowy Valley Walk – Crossing 5km east of the site, the route traverses a range of lowland and uplands and concludes near Tredegar.
- Usk Valley Walk - The Walk traverses approximately 13km northeast of the site, proceeding along the Usk valley.
- Ebbw Valley Walk- The Raven Walk, a 12-mile circular route marked on OS maps, passes approximately 7km east of the site.
- Taff Trail – The Taff Trail, spanning 5km westward, caters to pedestrians and cyclists.
- Coed Morgannwg Way - The Way, passing approximately 6km west of the site, intersects the Taff Trail at the finish.
- Iron Mountain Trail – Passing 14km to the east of the site, Two walks, Parts I & II, combine to give a 12 mile figure of eight circuit of the major sites of the Blaenavon Industrial Landscape World Heritage Site.
- Monmouthshire Way – A 116-mile circular route, traverses the ancient county of Monmouthshire and is located c.28km to the north-east of the Site.

7.4.32 In the study area, the National Cycle routes contribute to the regional cycling infrastructure. Notably, Route 46 traverses the area in an east-to-west direction, aligning with the Heads of the Valleys Road. Route 468 extends southwards, following the course of the Rhymney Valley. Additionally, a comprehensive network of other cycling routes, including Routes 465, 466, 467, and 469, further enhances the cycling connectivity within the study area.

Landscape Features

7.4.33 The main landscape features of the site are areas of scrub grassland, establishing woodland and hedgerows. Prominent landscape features of the surrounding area include a range of renewable energy developments such as a number of different wind farms to the east and west along, solar farms dotted around the valleys, along with

the electricity transmission network, the opencast and landfill workings and a few disused, reclaimed and operational quarries. Overall, within the heads of the valleys area, outside of the BBNP, there is a huge array of renewable energy and industrial developments scattered across the landscape. Within the national park, the landscape features are scarcer with tight restrictions meaning that renewable energy and other developments are a rare occurrence.

Landscape Value

7.4.34 The assessed value of both the site itself and the broader study area is deemed to be medium to high. Reference to Table 7.2.2 in Appendix 7.2 reveals that the site, characterised by established vegetation and a landform that facilitates integration into the surrounding landscape, is in a generally favourable condition. However, the site is perceived as having relatively low importance and scenic quality, with the upper fields on the site also exhibiting reasonably low quality. In the immediate vicinity, the undulating farmland and open access land contribute to some scenic value, likely to be locally appreciated. The wider study area is of higher value, primarily attributed to the presence of the National Park, neighbouring Special Landscape Area (SLA), and the Visually Important Local Landscape (VILL), all of which hold significant local or national esteem. Notably, the study area's value is further improved by the existence of a World Heritage Site.

7.5 Visual Baseline

ZTV Analysis

7.5.1 The ZTV analysis reveals that the proposed development would be theoretically visible from approximately 20% of the study area (refer to drawing 008). Therefore, the other approximate 80% of the study area would have no predicted visibility of the proposed development. However, it's crucial to note that the ZTV assessment is a 'bare-ground assessment' meaning that it doesn't consider the obstructive influence of buildings and vegetation which would reduce the theoretical visibility. For a more comprehensive understanding, viewpoint descriptions 1 to 21 offer further insights into views and visibility, see Appendix 7.4.

Views from Residential Receptors and Settlements

- 7.5.2 To the south of the site lies a cluster of towns and villages, characteristic of the densely settled South Wales Valleys. Conversely, to the north within the National Park, settlements are sparse, predominantly comprising small hamlets. This means that while most of the settlements within the study area are to the south of the site the topography limits the theoretical visibility of the proposed development for most of the settlements. This is especially true for settlements that are more than 10km from the site. Key settlements within the 20km study area that are likely to be impacted by the development include Bute Town (400m), Llechryd (800m), Rhymney (900m), Merthyr Tydfil (4.3km), Tredegar (3.8km), New Tredegar (6.2km), Ebbw Vale (6.2km) and Brynmawr (9km).
- 7.5.3 There is a large number of individual residential properties within the study area that are located outside of settlements. Primarily located outside the National Park, these homes perch on valley sides and floors within the South Wales Valleys. A subset of these dwellings, particularly those in close proximity to the site, undergo evaluation in the residential viewpoint assessment, Appendix 7.9. Given the site's openness and the distinctive presence of large wind turbines, neighbouring residential properties are likely to experience expansive views of the development.

Views from Roads

- 7.5.4 There are a large number of A and B roads within the study area. The key routes that have views towards the site include roads such as the A465 Heads of the Valleys Road which passes to the north of the site, cutting across the study area east to west connecting the towns along the northern edge of the South Wales Valleys. An equally key route, but with less views of the site, is the A470 in the Taff Valley. This road cuts through the study area to the west of the site, connecting Cardiff in the south to the town of Brecon in the north.
- 7.5.5 From these two main roads, there are a network of other A roads that traverse through the valleys connecting the settlements of the South Wales Valleys. The ones of which may experience views of the proposed development include, the Rhymney Valley A469, the Sirhowy Valley A4048 and the Ebbw Valley A4281 and A4047.
- 7.5.6 There are then further roads that that cross through the BBNP and experience views of the site. These include, the elevated A4059 to the northwest of the site, the B4560 between Beaufort and Llangynidr, and the A4077 / A40 along the Usk Valley.

Views from Public Rights of Way

- 7.5.7 There are many Public Rights of Way (PRoW) routes within the 20km study area (see drawing 047), including public footpaths, bridleways and long-distance footpaths and cycle routes. Crossing through the site are several minor footpaths, as well as the Rhymney Ridgeway long distance footpath which passes through the eastern edge of the site, adjacent to the proposed development. The development access track would follow the same route as the Rhymney Ridgeway long distance footpath through the site and would cross two of the footpaths that run through the site.
- 7.5.8 Prominent long-distance walking routes traverse the study area, offering a range of views towards the site and the proposed development. The Cambrian Way and Beacons Way intersect the BBNP, meandering across hilltops and through valleys. The Taff Trail, linking Cardiff to Brecon, navigates valleys and traverses the park's expanse. Meanwhile, the Rhymney Valley Ridgeway Footpath connects Caerphilly to Rhymney, while the Sirhowy Valley Walk spans from Newport and the Wales Coast Path to Tredegar.

Views from Bannau Brycheiniog National Park

- 7.5.9 As a nationally designated landscape, the Brecon Beacons National Park (BBNP) serves as a huge recreational receptor within the study area. While in the park, visitors may experience views of the proposed scheme while traversing its extensive network of trails, paths, hills, and routes. The park boasts numerous attractions, including activity centres, hiking trails like the renowned Brecon Way, and a heritage railway stretching from Pant Station in Merthyr Tydfil to Torpantau. The most likely places that people would experience views of the site from within the National Park, would be from the many mountain peaks that the landscape is known for.

Viewpoints

- 7.5.10 The viewpoints chosen for the assessment are strategically positioned to encompass areas of significant importance, including recognised viewpoints, designated landscapes, settlements, key routes, and attractions. Their selection aims to delineate the probable scope of significant visual impacts resulting from the Proposed Scheme. Moreover, these viewpoints represent a diverse array of landscape character areas,

offering varying perspectives in different directions and distances, ensuring a comprehensive understanding of the visual landscape context.

7.5.11 In collaboration with local councils in the study area, 21 viewpoints have been chosen for the Landscape and Visual Impact Assessment (LVIA). Visual representations of viewpoint locations in relation to the blade tip ZTV and solar farm ZTV are illustrated on drawing 008. The chosen viewpoints have then proceeded to be evaluated and assessed within Appendix 7.4 Detailed assessment of visual effects.

7.6 Future Baseline

7.6.1 The existing landscape and visual baseline of the study area is expected to change within the next few years, due to the number of in planning and consented planning applications located within the Study Area. There is also the current uncertainty over the restoration of the Ffos-y-Fran opencast workings and the ongoing Trecatti landfill site. These changes mean that the future baseline will be different to the present-day baseline described above. For the site itself, if the proposed development does not go ahead it is anticipated that the site would remain as existing.

7.6.2 All cumulative schemes considered in this LVIA can be found in Appendix 7.3 and on drawing 045.

7.7 Sensitive Receptors

7.7.1 Table 7.7 below, set out the type of sensitive receptors identified and assessed in this LVIA. For more detail, please refer to Appendix 7.5: Landscape Character and Appendix 7.6: Landscape Designations.

Table 7.7: Sensitive Receptors
<i>Landscape Receptors</i>
Landscape Character Areas (BBNP, Local and LANDMAP derived)
Bannau Brycheiniog National Park
Registered Historic Parks and Gardens
Blaenavon Industrial Landscape World Heritage Site
Special Landscape Areas
The Registered Landscapes of Outstanding and of Special Interest in Wales
Country Parks
Visually Important Landscapes
<i>Visual Receptors</i>
Residential (individual, groups and settlements)
Road Users
Bannau Brycheiniog National Park users/visitors
National Trail/Log Distance Footpath users
Local Footpath users
National Cycle Routes

Viewpoints

- 7.7.2 The viewpoints used in this assessment were 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 Development. A variety of landscape character areas, different directions and distances have also been represented in the selected views.

7.7.3 Viewpoint locations are shown along with the ZTV on drawing 008.

Table 7.8: Viewpoints				
VP	VIEWPOINT NAME	OS GRID REF	REASON FOR SELECTION	NOTES
1	Bute Town	310364.28E 209145.15N	Representative of view from settlement and footpath RHYM/FP102/1	
2	Upper Rhymney	311300.79E 208752.76N	Representative of view from settlement and footpath RHYM/RBW23/1	
3	Rhymney South	312497.94E 206781.72N	Representative of view from settlement and B-road into settlement	
4	Fochriw	310877.57E 206005.53N	Representative of view from settlement and Rumney Valley Ridgeway Walk	
5	Merthyr Common	308131.16E 204022.25N	Representative of view from common	
6	Pant Y Ffawyddden	316851E 192646N	Shows the view from a point of multiple intersecting footpaths	
7	Nantybwh	312893.47E 210904.83N	Representative of view from settlement	
8	A4059 Fan Fawr Trig Point	296985.6E 219329.6N	Representative of view from Fan Fawr summit.	



9	A465 / Heads of the Valleys Road	309088.9E 208991.43N	Representative of views experienced by users of the dualled A465	Caerphilly requested viewpoint
10	Rhymney Common	311748.32E 208417.94N	Representative of views from Rhymney Valley SLA	Caerphilly requested viewpoint
11	Abertywswwg	312588.27E 205648.06N	Representative of views from Cycle Network 684 north	Caerphilly requested viewpoint
12	Coed y Moeth Common	315962.04E 201654.64N	Representative of views from Common and PROW (Bedwellty FP 28)	Caerphilly requested viewpoint
13	B4560 Baeufort Road to Llangynidr	316452.3E 214474.39N	Users of the BBNP	BBNP requested viewpoint
14	The Chartists Cave, Cambrian Way	312298.1E 214849.7N	Users of the BBNP	BBNP requested viewpoint
15	Mynydd Llangattwg	320256.6E 214494.2N	Users of the BBNP	BBNP requested viewpoint
16	The Bloreng	326979.3E 211832.5N	Users of the BBNP	BBNP requested viewpoint
17	Table Mountain, Cambrian	322527.1E 220654.5N	Users of the BBNP	BBNP requested viewpoint

	Away and Beacons Way			
18	Mynydd Llangynidr	308807.1 213608.5	Users of the BBNP	BBNP requested viewpoint
19	Garn Ddu	302624.2 212224.67	Users of the BBNP and LCA	NRW requested viewpoint
20	Corn Du	300686.12 221132.82	Users of the BBNP and LCA	NRW requested viewpoint
21	Mynydd Aberdar	302552.98 205440.57	Context view with other cumulative schemes.	Bleanu gwent – context view with other cumulative schemes.

7.8 Limitations

7.8.1 SNH's Guidance on Visual Representation of Windfarms sets out the following visualisation limitations:

- *“Visualisations provide a tool for assessment that can be compared with an actual view in the field; they should never be considered as a substitute to visiting a viewpoint in the field.*
- *Neither photographs nor visualisations can replicate a view as seen in reality by the human eye.*
- *Visualisations are only as accurate as the data used to construct them.*
- *Visualisations can only represent the view from a single location at a particular time and in particular weather conditions.*
- *Static visualisations cannot convey the effect of turbine blade movement.”*

7.8.2 It is not possible to enter the curtilage of private residential properties therefore the assessment of potential effects on the visual amenity of residents has been carried out from nearby roads and footpaths. There were no other limitations to the study.

7.9 Potential Impacts

Potential Landscape Impacts

Construction Period – Temporary impacts

7.9.1 During the construction period there may be temporary landscape impacts from a number of sources including:

- Construction traffic movement
- construction of the site access along the track in the east of the site;
- construction vehicle movement across the site;
- presence of temporary construction compounds and stockpiles of materials;
- active change underway as installation of associated structures including wind turbines, solar panels, inverters and substations progresses; and
- construction of the private connection.

7.9.2 The construction period assessment considers the temporary effects of the construction activities. The long-term effects of the introduction of the Proposed Development are considered as operational period long term impacts, although it is acknowledged that they occur progressively during the construction period.

Operational Period – Long Term Impacts

7.9.3 The Proposed Development may give rise to long term impacts on the landscape for a number of reasons, including:

- The introduction of a wind and Solar PV development into a hill side landscape
- The introduction of security fence, access gates and security cameras
- Movement of wind turbine blades
- Turbine Aviation lighting at night
- Periodic movement of security/maintenance/operational staff
- The establishment of the proposed planting as illustrated on the Landscape Strategy Plan (dwg. BR10167-056).

Decommissioning Period – Temporary Impacts

7.9.4 Landscape impacts include:

- Decommissioning traffic movement
- presence of temporary decommissioning compounds and stockpiles of materials
- The dismantling of wind turbines and Solar PV panels
- The presence of large machinery moving across the site, with flashing lights and reversing beepers, and tall temporary structures such as cranes

- Active change underway as removal of associated structures including wind turbines, solar panels, inverters and substations progresses

Potential Visual Impacts

7.9.5 The Proposed Development may affect the visual amenity of receptors in the surrounding area in a number of ways, including:

Construction Period – Temporary Impacts

- Views of installation of wind turbines and Solar PV panels
- Views of large machinery moving across the site, with flashing lights and reversing beepers, and tall temporary structures such as cranes
- Views of construction compound and stockpiles of materials
- Views of the construction of the site access
- Floodlighting of areas for evening and morning working during the winter

Operational Period – Long Term Impacts

7.9.6 Impacts arising from the operation of the Proposed Development include:

- Views of the wind turbines and Solar PV panels
- Wind Turbine Aviation lighting at night
- Views of the new site access
- Movement of the wind turbines
- Views of security vehicle and personnel
- Introduction of new mitigation planting as illustrated on the Landscape Strategy Plan (dwg. BR10167-056)

Decommissioning Period – Temporary Impacts

7.9.7 Visual impacts include:

- Views of the dismantling of wind turbines and Solar PV panels
- Views of large machinery moving across the site, with flashing lights and reversing beepers, and tall temporary structures such as cranes
- Views of construction compound
- Floodlighting of areas for evening and morning working during the winter

7.9.8 The assessment of the operational effects principally addresses the potential effects of the wind turbines, followed by the solar panels as the wind turbines would be the

most prominent features of the development, with the most potential to result in adverse effects.

7.9.9 The impacts would be affected by the proposed timescale for the project. Residual impacts are reported, with the proposed mitigation measures, as set out below, assumed to be in place.

7.10 Assessment of Effects

7.10.1 This section of the LVIA establishes the potential effects on landscape character and visual amenity as a result of the proposed development. The assessment of the magnitude of effects and their significance is based on the criteria set out in the methodology (Appendix 7.2).

7.10.2 The assessment of effects considers the following issues:

- Direct and indirect effects on landscape character and changes to the landscape;
- Effects on the visual amenity of the study area and from the selected viewpoints;
- Potential cumulative visual effects resulting from the intervisibility with the cumulative scenario; and
- Effects during the construction, operation and decommissioning phases of the proposed development.

Assessment of Landscape Effects

Construction Effects

7.10.3 This section looks at the effects of the proposed development during the construction phase, which is expected to last for up to 6-8 months.

7.10.4 The main effects on landscape character during the construction phase of the works would be the erection of the wind turbines, with the construction effects of the solar panels contributing to a much lesser extent. Each turbine would require the stripping of vegetation and soils and construction of a permanent and temporary crane hardstanding area, and a concrete foundation as described in Chapter 5: Project Description. Access tracks will extend between each turbine and provide access to the solar farm. There will also be a construction compound. Stripping of vegetation and soils will also occur within the footprint of these elements.

7.10.5 Vegetation loss will be limited and comprise a slight reduction in the extent of areas of grassland, habitats identified and assessed in Chapter 11: Ecology. However, it is

likely that regeneration of habitats will occur in areas subject to temporary construction operations. The small loss of vegetation and soils would have a direct landscape impact, but due to the limited extent and duration, this will be low to negligible in magnitude. The sensitivity of the receptor is considered to be medium. Direct landscape effects will be of low magnitude and slight to moderate adverse (not significant).

7.10.6 The construction of the proposed development would require the use of cranes (for the wind turbines) and other construction machinery, and these are likely to be a visually prominent, though temporary feature during the construction phase of works. Within duration of the construction operations, the cranes will likely progress from one turbine location to the next and visibility will vary depending on the position of the cranes at any one-time. Indirect effects relating to these elements would extend beyond the site boundary into adjacent character areas. Impacts on landscape character within the wider study area in these instances will be similar to those assessed for the operational stage, although broadly reduced in magnitude due to the short duration (6-8 months) of the construction operations. Significant construction effects are predicted but limited to within approximately 1.5km of the Site and only from locations with open, clear views into the site. See Appendix 7.4 for detailed visual assessment.

Operational Effects

Landscape Character

7.10.7 Effects on landscape character during the operational phase of the proposed development would predominantly occur from locations within and immediately surrounding the proposed development. LCAs have been identified as being within the 20km study area and within the ZTV, subsequently requiring detailed assessment, which can be found in Appendix 7.8.

7.10.8 The assessment includes operational and under construction wind farm and solar farm developments that form part of the baseline landscape characteristics. The detailed assessment for the LCA the site fall within can be found in Table 7.9 and a summary of the remaining LCA assessments which are deemed to experience significant effects can be found in Table 7.10 below.

TABLE 7.9: ASSESSMENT FOR UNIT 16 - RHYMNEY VALLEY FROM RHYMNEY TO BARGOED

Landscape characteristic	Impact of the development	Susceptibility to the proposed change
Scale - Medium scale landscape	The larger scale of the tops of the hills along the valley are less susceptible to the proposed changes than the valley sides and bottoms which are smaller in scale. The turbines in particular would appear as large scale features above the smaller scale landscape of the valley.	Medium
Landform - Valley landscape extending north south across the study area	The landform is smoother on the tops of the hills along the valley and less susceptible to the proposed changes than the more complex landform of the valley sides and bottoms. The landform has been modified just to the west of the site (outside the unit) at the opencast site.	Medium
Land cover pattern - A quarter of the land use is residential with the remainder being a combination of grazed slopes, upland valleys and plateau	The landcover of the tops of the hills along the valley is relatively simple and less susceptible to the proposed changes than the valley sides and bottoms which have a more varied pattern, although industrial uses are part of this pattern. The solar farm in particular would add a new landcover pattern, in contrast with the tall features of the turbines.	Medium
Built Environment - Settled valley bottom with a variety of development types	The development would be seen above the built development of the valley, which includes some large industrial units. It would also be seen alongside electricity transmission lines and towers.	Medium
Skylines and settings - No distinct skylines. Valley setting for development and approaches to Rhymney and Bargoed	Skylines in the vicinity of the site are relatively simple and smooth with some modifications due to the electricity transmission lines and towers and adjacent opencast workings.	Low
Movement - Variations across the unit. Busy in the valley bottom along major transport route (A 469) but quieter on the valley sides.	There is a sense of movement in the area due to nearby roads and industrial development, which the proposed turbines would add to.	Medium
Visibility, key views, vistas - Enclosed valley	The development would be widely visible within this unit, both along the uplands	Medium

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.	and along the valley.	
Intervisibility, associations with adjacent landscapes - The upland areas adjacent have views down into this unit	The development would be visible in these views along with the electricity transmission lines and towers and adjacent opencast workings.	Medium
Types of receptors - Few receptors. Residents, road users and walkers. Rhymney Valley Ridge walk (promoted route) on the west valley ridge	The development would be widely visible within this unit, for high sensitivity visual receptors.	High
Views to / from landscape and cultural heritage features - None apparent	Limited impacts	Low
Scenic quality and character	This has already been affected by surrounding developments, the proposed development would further reduce this.	Medium
Remoteness and tranquillity - Busy landscape that in the main is easily accessible and not particularly remote or accessible.	This has already been affected by surrounding developments, the proposed development would further reduce this.	Medium
Overall susceptibility to proposed changes		Medium
Landscape value	Unit includes the Upper Rhymney Valley SLA	Medium
Sensitivity to the proposed development	Magnitude of change	Overall level of effects
Medium	Medium to high <i>Size/scale:</i> large scale change due to height of the turbines, but existing site features will be largely retained.	Moderate to substantial adverse (significant)

	<p><i>Geographical extent:</i> the development would be perceptible from the majority of this unit.</p> <p><i>Duration/reversibility:</i> The impacts would be long term but reversible.</p>	
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TABLE 7.10: SUMMARY OF SIGNIFICANT LANDSCAPE CHARACTER EFFECTS		
HEADS OF THE VALLEYS LANDSCAPE CHARACTER AREA ASSESSMENT		
Unit 13 Upland moorland between Taff and Rhymney Valleys		
Overall susceptibility to proposed changes		Medium
Landscape value	Merthyr Tydfil Landscape of Historic Interest Gelli-gaer Common Landscape of Historic Interest SLA covers approximately 15% of the unit Gelli-gaer Common SLA in Caerphilly	Medium
Sensitivity to the proposed development	Magnitude of change	Overall level of effects
Medium	<p>Medium to high</p> <p><i>Size/scale:</i> large scale change due to height of the turbines adjacent to the unit.</p> <p><i>Geographical extent:</i> the development would be perceptible from the majority of this unit, particularly in the north.</p> <p><i>Duration/reversibility:</i> The impacts would be long term but reversible.</p>	Moderate to substantial adverse (significant)
Unit 17 Upland north of the heads of the valley corridor		
Overall susceptibility to proposed changes		Medium
Landscape value	SLA covering approximately 77% of the unit: Upper Rhymney Valley SLA (Caerphilly) Trefil and Garnlydan surrounds SLA Clydach Gorge Landscape of Historic Interest at the eastern end of the unit in the BBNP.	High

	Merthyr Tydfil Landscape of Historic Interest at the west end of the unit.	
Sensitivity to the proposed development	Magnitude of change	Overall level of effects
Medium to high	<p>Medium</p> <p><i>Size/scale:</i> medium scale change due to height of the turbines adjacent to the unit, but also as this is a large unit</p> <p><i>Geographical extent:</i> the development would be perceptible from the majority of this unit, but not totally out of character due to existing turbines, pylons etc.</p> <p><i>Duration/reversibility:</i> The impacts would be long term but reversible.</p>	Moderate to substantial adverse (significant)
Unit 18 Mynydd Bedwellte and associated upland		
Overall susceptibility to proposed changes		Medium
Landscape value	Approximately 84% SLA: Mynydd Bedwellte, Rhymney Hill and Sirhowy SLA (BG) Upper Rhymney Valley SLA (Caerphilly)	Medium
Sensitivity to the proposed development	Magnitude of change	Overall level of effects
Medium	<p>Medium</p> <p><i>Size/scale:</i> Medium to large scale change due to height of the turbines over the valley.</p> <p><i>Geographical extent:</i> the development would be perceptible from the majority of this unit, particularly in the north.</p> <p><i>Duration/reversibility:</i> The impacts would be long term but reversible.</p>	Moderate adverse (significant)
Breacon Beacons National Park LCA 9 Mynyddoedd Llangatwg & Llangynidr		
Overall susceptibility to proposed changes		Low due to north facing views not being affected, and presence of existing

		development in views south meaning the development would not be uncharacteristic.
Landscape value		High
Sensitivity to the proposed development	Magnitude of change	Overall level of effects
Medium	Medium to low <i>Size/scale:</i> medium scale change due to height of the turbines in views south <i>Geographical extent:</i> the development would be perceptible from south facing areas, but not totally out of character due to existing turbines, pylons etc. North facing areas would not be affected. <i>Duration/reversibility:</i> The impacts would be long term but reversible.	Moderate adverse (significant)

7.10.9 The above areas that would experience significant effects are generally within approximately 2 to 4km to the east and west, approximately 5 to 6km to the south and up to approximately 6 to 10km to the north and north-east due to the high sensitivity of the National Park. The significant effects would mainly result from the wind farm element of the development as they would be tall, prominent structures. Significant effects resulting from the solar farm would mainly be on the site itself and from the opposite valley side to the east, as illustrated by Viewpoint 10 which is on the edge of unit 16 which the site is within.

7.10.10 All other landscape character units/areas within the 20km study area were assessed and it was concluded that none of them would experience significant effects due to a combination of distance, limited visibility and the presence of intervening features.

Landscape Designations

7.10.11 Statutory Landscape Designations generally of a high value as they have been designated for their special and unique characteristics, and in some cases this includes available views. This high value is also due to a combination of condition, the high

importance, scenic quality, rarity and there being no or limited potential for substitution.

7.10.12 The value of Non-Statutory Designations is generally medium as these areas are also designated for their special qualities and scenic nature which are valued at a local and regional level.

7.10.13 The susceptibility of the areas to the proposed changes varies depending on a number of factors such as the proximity to the development and extent of visibility. Therefore, the sensitivity varies accordingly.

7.10.14 There would be no direct landscape impacts to any of the landscape designations as the site falls outside of their extents. Therefore, impacts would be limited to views from within these designations.

7.10.15 As the Visual impact assessment (Appendix 7.4) finds, it is unlikely that there will be any significant visual effects beyond an approximate 10km radius of the Site. Therefore, all designations beyond 10km have been excluded from any further assessment. The detailed Designations Assessment can be found in Appendix 7.6 and a summary of the landscape designations which have been assessed as experiencing significant effects can be found below In Table 7.12.

Table 7.12: Summary of Detailed Landscape Designations Assessment			
Designation Name	Sensitivity to the development	Magnitude of Impact	Significance of Effect
Bannau Brycheiniog National Park (Viewpoint 8, 13, 14, 15, 16, 17, 18, 19 and 20)	Medium	Medium to Low	Moderate adverse and significant from a limited proportion of the far southern extents of the BBNP. Effects will reduce to slight or negligible (not significant) as distance between the site and the viewer increases and/or when intervening landform and built form screen all or part of the proposed development.
SPECIAL LANDSCAPE AREAS			
Upper Rhymney Valley (Viewpoint 1 and 10)	Medium	High	Moderate to substantial adverse and significant
Trefil and Garnlydan Surrounds	Medium	Medium	Moderate adverse and significant



Mynydd Bedwellty, Rhymney & Sirhowy Sides	Medium	High, reducing to low to negligible to the south	Moderate to substantial adverse and significant, reducing to slight adverse to imperceptible and not significant to the south
Gelligaer and Gelligaer and Taf Bargoed	Medium	Medium and reducing to low to negligible with distance	Moderate adverse and significant from the northern extents of the SLAs, reducing to slight adverse to imperceptible (not significant) with distance
THE REGISTERED LANDSCAPES OF OUTSTANDING AND OF SPECIAL INTEREST IN WALES			
Gelli-Gaer Common	Medium	Medium and reducing to low to negligible with distance	Moderate adverse and significant reducing to slight adverse to imperceptible (not significant) with distance

COUNTRY PARKS			
Brynbach	Medium to high	East: Negligible West: Medium	East: Imperceptible and not significant West: Substantial to moderate adverse and significant

7.10.16 The above designations that would experience significant effects are generally within 10km to the north, east and south. The significant effects would generally be a result of the wind farm element of the proposed development as they would be the more prominent structure given their height. Significant effects from the solar farm element of the proposed development would mainly be from the opposite side of the valley to the east and to the north, illustrated by Viewpoint 10, 14 and 18.

7.10.17 All other landscape designation within the 20km study area were assessed and it was concluded that none of them would experience significant effects due to a combination of distance, limited visibility and the presence of intervening features.

Decommissioning Effects

7.10.18 The decommissioning effects will be similar to those experienced during the construction phase of the proposed development; however, it is anticipated that the timescales to undertake this work will be slightly shorter with anticipated timescale of 6 months. During this period the turbine and notable solar panel foundations are expected to be removed and backfilled/reseeded, together with the removal of the turbines, wind monitoring equipment and solar panels themselves. The substation will also be dismantled, and all affected land reinstated.

7.10.19 As with the construction phase of the works, effects on landscape character will be direct, however limited to within the site boundary as work is undertaken to restore the character of the landscape to largely the conditions like which existed prior to the construction works. The only elements that will remain will be the matured

mitigation vegetation, by which time would have become an established part of the local landscape character.

- 7.10.20 From areas surrounding the site boundary and within the wider landscape, it is predicted that there will be no impacts on landscape character as the site will generally return to its baseline condition and therefore no significant effects.

Assessment of Visual Effects

Viewpoint Analysis

- 7.10.21 The significance of visual effect of the proposed development during the construction, operational and decommissioning phase, from each of the selected viewpoint locations as been assessed against the significance criteria set out in the methodology (refer to Appendix 7.2).
- 7.10.22 Wirelines and photomontages of the proposed development have been also used to aid the assessment and are provided in drawings 80 to 100.
- 7.10.23 A detailed assessment of the 21 Viewpoints assessed in this LVIA can be found in Appendix 7.4. Table 7.11 summarises the assessment of effects on visual amenity from each of the 21 viewpoints.

Table 7.11: Summary of Detailed Viewpoint Assessment			
Viewpoint	Magnitude of Impact	Significance of Effects	Significance of Nighttime effects
1 – Bute Town – high sensitivity			
Construction	Medium to low	Moderate adverse and significant	-
Operational	High	Substantial adverse and significant	-
Decommissioning	Negligible	Slight to imperceptible and non-significant	-
2 – Upper Rhymney – high sensitivity			
Construction	Medium	Moderate adverse and significant	-
Operational	High	Substantial adverse and significant	-
Decommissioning	Negligible	Slight to imperceptible and non-significant	-
3 – Rhymney South – high sensitivity			
Construction	Low	Moderate to slight adverse and not significant	-
Operational	High	Substantial adverse and significant	-
Decommissioning	Negligible	Slight to imperceptible and non-significant	-



4 – Fochriw – high sensitivity			
Construction	Low to negligible	Slight adverse and not significant	Imperceptible and non-significant effect.
Operational	High	Substantial adverse and significant	moderate to slight adverse and not significant
Decomissioning	Negligible	Imperceptible and non-significant effect.	Imperceptible and non-significant effect.
5 – Merthyr common – high sensitivity			
Construction	Low to negligible	Slight adverse and not significant	-
Operational	Medium to low	Moderate adverse and significant	-
Decomissioning	Negligible	Imperceptible and non-significant effect	-
6 -Pant Y Ffawyddden – high sensitivity			
Construction	Low to negligible	Slight to negligible adverse and not significant	-
Operational	Low to negligible	Slight to negligible adverse and not significant	-
Decomissioning	Negligible	Imperceptible and non-significant	-



7 – Waundeg – high sensitivity			
Construction	Negligible	Imperceptible and not significant	-
Operational	Low to negligible	Slight to Imperceptible adverse and not significant	-
Decommissioning	Negligible	Imperceptible and not significant	-
8 – Fan Fawr – high sensitivity			
Construction	Negligible	Imperceptible and not significant	-
Operational	Low to negligible	Slight to Imperceptible adverse and not significant	-
Decommissioning	Negligible	Imperceptible and not significant	-
9 – A465/ Heads of the Valleys Road – medium sensitivity			
Construction	Medium to low	Moderate to slight adverse and not significant	-
Operational	High	Substantial adverse and significant	-
Decommissioning	Negligible	Imperceptible and not significant	-
10 – Rhymney Common – high sensitivity			
Construction	Medium to low	Moderate adverse and significant	-

Operational	High	Substantial adverse and significant	
Decomissioning	Negligible	Imperceptible and not significant	
11 – Abertywswwg – high sensitivity			
Construction	Low	Moderate to slight adverse and not significant	-
Operational	Medium	Substantial to moderate adverse and significant	-
Decomissioning	Negligible	Imperceptible and not significant	-
12 – Coed y Moeth Common – high sensitivity			
Construction	Low to negligible	Slight adverse and non-significant level of effect	-
Operational	medium to low	Slight to moderate adverse and non-significant level of effect	-
Decomissioning	Negligible	Imperceptible and not significant	-
13 – B4560 Baeufort Road to Llangynidr – high sensitivity			
Construction	Low to negligible	Slight adverse and not significant	Imperceptible and non-significant

Operational	Medium to low	Moderate to slight adverse and not significant	moderate to slight adverse and not significant
Decomissioning	Negligible	Slight to imperceptible and not significant	Imperceptible and non-significant effect
14 – The Chartists Cave, Cambrian Way – high sensitivity			
Construction	Low to negligible	Moderate to slight adverse and not significant	-
Operational	Medium to low	Moderate adverse and significant	-
Decomissioning	Negligible	Imperceptible and not significant	-
15 – Mynydd Llangattwg – high sensitivity			
Construction	Low to negligible	Moderate to slight adverse and not significant	-
Operational	Medium to low	Moderate to slight adverse and not significant	-
Decomissioning	Negligible	Slight to Imperceptible and not significant	-
16 – The Blorengge – high sensitivity			
Construction	Negligible	Imperceptible and not significant	-
Operational	Negligible	Imperceptible and not significant	-

Decomissioning	Negligible	Imperceptible and not significant	-
17 - Table Mountain, Cambrian Away and Beacons Way – high sensitivity			
Construction	No effects	No effects	-
Operational	No effects	No effects	-
Decomissioning	No effects	No effects	-
18 - Mynydd Llangynidr – high sensitivity			
Construction	Low	Moderate to slight adverse and significant	-
Operational	Medium	Moderate adverse and significant	-
Decomissioning	Negligible	Slight to imperceptible adverse and not significant	-
19 – Carn Ddu – high sensitivity			
Construction	Low to negligible	Slight adverse and not significant	-
Operational	Medium to low	Moderate to slight adverse and not significant	-
Decomissioning	Negligible	Slight to imperceptible adverse and not significant	-

20 – Pen y Fan – high sensitivity			
Construction	Negligible	Slight to imperceptible adverse and not significant level of effect	-
Operational	Low to negligible	Slight adverse and not significant	-
Decommissioning	Negligible	Slight to imperceptible adverse and not significant	-
21 - Mynydd Aberdar – high sensitivity			
Construction	Negligible	Slight to imperceptible adverse and not significant level of effect	-
Operational	Low to negligible	Slight adverse and not significant	-
Decommissioning	Negligible	Slight to imperceptible adverse and not significant	-

7.10.24 Significant construction effects would be available from close up Viewpoints 1, 2, 3, 9 and 10, open Viewpoint 18 to the north and Viewpoint 11 to the south.

7.10.25 Viewpoints subject to significant construction effects are broadly contained within 5km of the site boundary. The main factors contributing to significant effects are open views of the construction machinery, close views of the construction machinery or the machinery occupying a focal point of the view.

7.10.26 With regards to operational effects, significant effects would be available from 10 Viewpoints (1, 2, 3, 4, 5, 9, 10, 11, 14 and 18), all of which are within 10km of the

proposed development. As with construction effects, the main factors contributing to a significant effect is the availability of close, open or focal views.

7.10.27 On decommissioning, the site will largely return to its baseline condition except for retained mitigation planting, which after 30 years would have become established and would have formed part of the baseline. Therefore, there will be no significant effects.

Residential Visual Amenity Assessment (RVAA)

7.10.28 The RVAA has been prepared to assess the likely visual effects of the proposed development on residential properties within the 2km study area, of which fall within the ZTV. The operational stage of the proposed development is considered only. The detailed RVAA can be found in Appendix 7.9.

7.10.29 RVA means: *'the overall quality, experience and nature of views and outlook available to occupants of residential properties, including views from gardens and domestic curtilage.'* (LI Technical Guidance Note 2/19).

7.10.30 Several properties/groups to the north and east of the proposed development were found to be susceptible to significant effects, however, the RVA threshold has not been reached for any of these properties/groups as for the most part, the properties main view being away from the site, the proposed development would not be incongruous with the existing situation/view and other existing notable features within the view would remain. e.g views of the BBNP to the north and of the Rhymney Valley to the south.

7.10.31 The below properties/groups have been assessed as experiencing significant effects as a result of the proposed development:

- Upper Ras Brynoer Farm and Brynoer House;
- Llechryd and properties north of the A465;
- South Rhymney;
- Rose Cottage, Trecatti House and Blaen-carno Farm;
- Gypsy Castle;
- Bute Town;
- Pond Cottage;
- Cwn - Cano Farm; and
- North Rhymney.

7.10.32 Significant effects on the above properties are broadly a result of the height of the wind turbine elements of the proposed development, its proximity and the availability of open views towards the site. Both the wind turbines and solar panel elements of the proposed development would be clearly visible at close range, with limited ways of mitigating views of the wind turbines.

7.10.33 The RVA threshold for all properties assessed in the 2km study area would not be reached as the majority of primary views are away from the site and the proposed development would only occupy part of the available view, would not be incongruous with the existing situation and other existing notable features such as views of the BBNP and Rhymney Valley would remain.

Settlements

7.10.34 A detailed assessment of all settlements that fall within 10km of the proposed development and fall within the ZTV can be found in Appendix 7.11.

7.10.35 There are only three settlements within 2km of the proposed development. Rhymney is the largest, followed by Bute Town and Dowlais Top. Both Rhymney and Bute Town will experience significant effects, as both the wind turbines and solar panel elements of the proposed development would be clearly visible at close range. The Proposed Development would introduce additional, close features to the view, although they would not be incongruous to the view, due to the existing presence of wind turbine development.

7.10.36 Dowlais Top, located to the northwest of the proposed development was the only residential property/group assessed as not experiencing significant effects. This was primarily due to intervening landform screening the majority of the turbines and the primary views being away from the site.

7.10.37 For settlements between 2 and 10km of the proposed development, only New Tredegar will experience significant effects, as it is likely that all three wind turbines will be visible in the view from this settlement up the Rhymney Valley. The Proposed Development would introduce additional features to the view, although they would not be incongruous to the view, due to the existing presence of wind turbine development.

7.10.38 The settlements of Oakwood and Abertillery lie between 10 and 20km from the proposed development and both lie within the ZTV but because of their distance

from the site, they have been excluded from the settlement assessment. Due to and intervening landforms and vegetation and the distance from the site, these settlements would be unlikely to experience any effect from the turbines and the turbines would be at such a distance that they would become a very small and likely insignificant feature on the horizon.

Roads and Public Rights of Way

7.10.39 A detailed assessment of the main roads and PRowS within 10km of the proposed development has been undertaken and can be found in Appendix 7.10.

7.10.40 For the network of PRowS passing through and immediately adjacent to the site, which include but not limited to RHYM/FP95, RHYM/BR93, RHYM/BR92 and The Rhymney Valley Ridgeway Walk, views are already influenced by the presence of the operational Pen Brn Oer wind turbines to the east of the site. The detailed assessment found that these PRowS would experience **significant adverse effects** due to the open, direct and close nature of views. It is from these footpaths that the proposed development, particularly the wind turbines would become an unavoidable and dominant new feature within the vast majority of views, although, it would not be wholly out of character.

7.10.41 Due to the nature of the landform of the Heads of the Valley area and BBNP the open and elevated areas of the valley and BBNP mountains affords open, panoramic and unobstructed views of the site. Consequently, a number of PRowS and Long Distance Trails (LDT) which pass through these areas would experience some significant views of the proposed development. Namely, parts of:

- Rhymney Valley Ridgeway Walk
 - Significant effects would generally be limited to the northern extents of this LDT; between Capel y Brithdir to the south and the A469 where the footpath starts/ends to the east of the site. This is due to its proximity to the site and the open and direct nature of views. Overall, the proposed development will influence only a small section of the overall route, and the integrity of the route along its length would remain. Where the proposed turbines are in proximity to the route, the magnitude is predicted to be too high but elsewhere it would vary from medium through to negligible. Combined with the high sensitivity of users, significance of effects will range from **substantial adverse, (significant)**, through **substantial to moderate adverse, (significant)** and reducing to minor (not significant).

- Cambrian Way
 - Due to the nature of the BBNP landform only a few short stretches of this PRow fall within the ZTV. Although, where the proposed development is visible, the proposed development would be a notable feature within the view. Only the wind turbines would be perceptible from this footpath. The proposed development would only occupy a very small proportion of the view. Overall, the magnitude has been assessed as medium to low and **moderate adverse, significant**, for the short section of the footpath where the turbines are perceptible, reducing to moderate to slight, through to imperceptible with distance.
- NCR 468
 - The ZTV illustrates that the majority of this NCR between the A465 and New Tredegar has some theoretical visibility of the proposed development. However, intervening vegetation and built form will limit visibility from a significant proportion of this NCR. Where open and clear views of the proposed development are available, the wind turbine elements will introduce new man-made features to the view. Overall, the magnitude of effects has been assessed medium, quickly reducing to medium to low through to negligible and **substantial adverse, significant** for the sections of the NCR where the turbines are perceptible, reducing to moderate adverse through to imperceptible (not significant).
- NCR 46
 - Almost the whole section of this NCR between Merthyr Tydfil and Brynmawr to the east, falls within the ZTV. As the user heads west, views of the proposed development will vary due to intervening vegetation and built form, views beyond approximately 4km are limited further again. Open views of the proposed development will generally be limited to a short stretch of the NCR north of the site, on the opposite side of the A465. The Proposed Development would not be incongruous in the view due to the existing presence of wind turbines, although it would only occupy a notable proportion of the overall view. Therefore, the magnitude of change has been assessed as high at most, reducing to medium through to negligible with distance. The combined high sensitivity and high magnitude of change will result in **substantial to moderate adverse and significant** effects, reducing to **moderate adverse (significant)** through to imperceptible (not significant).
- A465 (sections between Brynmawr to the east and Merthyr Tydfil)
 - the proposed development will be intermittently visible beyond embankments, cuttings and roadside vegetation. Views will be oblique to the direction of travel and the proposed development will be viewed in combination with other man-made vertical elements including pylons, operational wind farms, buildings and roadside infrastructure. From a short stretch of the road, north of the site the magnitude of impacts will be high and when combined with a medium sensitivity the

significance of effects in visual amenity will be **moderate adverse, significant**. From elsewhere the magnitude of impacts will be variable, ranging from medium to low or negligible and when combined with medium sensitivity, the significance of effects on visual amenity will range from moderate to slight, to slight through to imperceptible (not significant in all cases).

- A469 (northern end)
 - The proposed development will be intermittently visible beyond intervening landform and roadside vegetation, at distances of between 500m and 4.5 km. Available views will be in the direction of travel and the proposed development will be viewed in combination with other man-made vertical elements including pylons, operational wind farms, buildings, and roadside infrastructure. The magnitude of impacts will be variable, ranging from high to low or negligible and when combined with medium sensitivity, the significance of effects on visual amenity will range from **substantial adverse (significant)**, to moderate to slight through to imperceptible (not significant). The level of significance generally reduces as distance increases.

Bannau Brycheiniog National Park

7.10.42 Significant visual effects from within the BBNP are limited to the southern extents of the park. Viewpoints 8 and 13 to 20 illustrate effects from the BBNP, of which viewpoint 14 and 18 have been assessed as experiencing significant effects.

7.10.43 Both views are open, panoramic distant views towards the site and the South Wales Valleys over the southern extents of the BBNP. Both the wind turbines and solar panels would be visible in these views, although the wind turbines would be the more prominent element of the proposed development. The proposed Development would introduce additional features to the views, although they would not be incongruous to the view, due to the existing presence of wind turbine development such as Pen Bryn Oer. The proposed development would occupy a relatively small proportion of the overall view resulting in a medium and medium to low magnitude of effects. The combined high sensitivity and medium and medium to low magnitude of change will result in a **moderate adverse and significant** level of effect as the Proposed Development would be noticeable but not dominate.

7.11 Mitigation

Embedded Mitigation

- 7.11.1 Mitigation measures are required in order to avoid, reduce, remedy or compensate for any adverse effects of a development. The principle of mitigation commences with the design of a development and is an iterative process, in that measures are taken, wherever possible, to adjust the design to minimise adverse effects. This has already been undertaken by locating the development on land that is already influenced by nearby electricity distribution and transmission, and which also lies near to an existing urbanised area. It is also free from any statutory landscape designations.
- 7.11.2 Site elements including inverters and substations would be painted in colours (e.g., dark green) which will help to integrate them into the surrounding landscape.
- 7.11.3 All existing vegetation would be retained where possible and all disturbed ground will be reseeded and /or left to naturally regenerate as appropriate. The introduction of a scrub plating and hedgerow along the north and eastern extents of the solar farm will complete the mitigation.

7.12 Residual Effects

- 7.12.1 Because the mitigation for the potential landscape and visual effects of the development has been incorporated into the design of the development, the assessment of effects above has already presented the residual effects after mitigation and therefore there are no further effects to assess.
- 7.12.2 The proposed wind turbines and solar PV farm scheme is designed to be of a temporary nature, which at the end of its life would be dismantled and the site restored to its current condition. The effects of the scheme are reversible. Therefore, there would be no adverse residual landscape or visual effects.

7.13 Assessment of Cumulative Effects

- 7.13.1 Cumulative effects have been assessed as an integrated part of the assessment and can be found in their respective detailed appendices.

Landscape Character Cumulative Effects

- 7.13.2 The detailed assessment of cumulative landscape effects can be found in Appendix 7.4.
- 7.13.3 The site is located in the north of the Unit 16 Rhymney Valley from Rhymney to Bargoed. The majority of the unit is within the ZTV, with the exception of areas in the south and south-east. Viewpoints 1, 2, 3, 9, 10, 11 and 12 illustrate effects.
- 7.13.4 There are no consented, in planning or scoping schemes within this unit. Therefore, any cumulative effects would be as a result of the proposed development in conjunction with the operational schemes.
- 7.13.5 The operational Pen Bryn Oer turbines are located along the north-east boundary of the unit and the operational Gelli-Wen Farm, Pen yt Hoel Farm and Bedlwyn Farm turbines are located in the southern part of the unit. Cumulative impacts from these developments in combination with the proposed development will have a limited influence across the unit. This is due to the wide separation distance between the proposed development and all other developments both to the north-east and south. The scale of the operational developments is also limited, in terms of both their height and the number of turbines within each development. The magnitude of impacts is assessed as medium as the proposed development along with the operational Pen Bryn Oer development would frame the northern end of the unit.
- 7.13.6 The combined medium sensitivity and medium magnitude of change will result in **moderate adverse and significant** cumulative effects.
- 7.13.7 The only other landscape units within the study area to potentially experience significant cumulative effects is unit 17 Upland north of the heads of the valley corridor, which is located immediately north of the proposed development.
- 7.13.8 The operational Tafaranabach Industrial Estate Unit 29 and in planning Pen March turbines are located within the northern part of unit 17. The proposed development is likely to have a negligible direct impact on this unit as it is located outside of the unit to the south. The in-planning Pen March turbines would directly increase the influence of wind turbine development within this unit, and although not directly, the proposed development would indirectly increase the influence of wind turbine development within this unit due to its proximity. The addition of the proposed development to the operational and in planning schemes within this unit would not alter any physical

characteristic elements of the landscape but would alter the perceptual characteristics. As a result, the magnitude of impact is therefore assessed as medium.

7.13.9 The combined medium to high sensitivity and medium magnitude of change will result in **moderate to substantial and significant** cumulative effect.

Landscape Designation Cumulative Effects

7.13.10 Below is a summary of the significant cumulative effects on landscape designations. The detailed assessment can be found in Appendix 7.8.

Table 7.13: Summary of Landscape Designations Cumulative Assessment			
Designation Name	Sensitivity	Magnitude of Cumulative Impact	Significance of Cumulative Effect
SPECIAL LANDSCAPE AREAS			
Upper Rhymney Valley (Viewpoint 1 and 10)	High	Medium	Moderate adverse and significant
Mynydd Bedwellty, Rhymney & Sirhowy Sides	High	Medium	Moderate adverse and significant
THE REGISTERED LANDSCAPES OF OUTSTANDING AND OF SPECIAL INTEREST IN WALES			
Merthyr Tydfil	High	Western Area; Low to negligible Eastern Area: Medium to low	Western Area: Slight adverse and not significant Eastern Area : Moderate adverse and significant

COUNTRY PARKS			
Brynbach	High	East: Negligible West: Medium	East: Imperceptible and not significant West: moderate adverse and significant

7.13.11 The above landscape designations that would experience significant cumulative effects are generally within approximately 5km of the site. Overall, significant effects are attributed to the introduction of the in planning Pen March scheme, notably intensifying the influence of wind farm development in available views, and subsequently, when considering the Proposed Development in addition to the in planning Pen March scheme, the Proposed development would notably increase the influence of turbine development across a wider extent of views, due to its close proximity, therefore increasing effects.

7.13.12 All other landscape designation were assessed and it was concluded that none of them would experience significant cumulative effects due to a combination of distance, limited visibility and the presence of intervening features.

Visual Amenity Cumulative Effects

7.13.13 The cumulative effects on visual amenity from the 21 viewpoints as a result of the proposed development in addition to the operational, consented, in planning and scoping cumulative schemes within the 20km study area are assessed in detail in Appendix 7.4. Table 7.14 below summarises the cumulative effects from all 21 viewpoints.

Table 7.14: Summary of Viewpoint Cumulative Assessment			
Viewpoint	Sensitivity	Magnitude of Cumulative Impact	Significance of Cumulative Effects
1 – Bute Town	High	Medium to low	Moderate adverse and significant
2 – Upper Rhymney	High	High to Medium	Substantial to moderate adverse and significant
3 – Rhymney South	High	Medium	Substantial to moderate adverse and significant
4 – Fochriw	High	Medium	Substantial to moderate adverse and
5 – Merthyr common	High	Medium	Slight adverse and not significant
6 -Pant Y Ffawyddden	High	Low to negligible	Slight to negligible adverse and not significant
7 - Waundeg	High	Low to negligible	Slight to negligible adverse and not significant
8 – Fan Fawr	High	Low	Moderate to slight adverse and not significant
9 – A465/ Heads of the Valleys Road	Medium	Medium	Moderate adverse and significant
10 – Rhymney Common	High	Medium	Moderate adverse and significant

11 - Abertywswwg	High	Medium to Low	Moderate adverse and significant
12 – Coed y Moeth Common	High	Medium to Low	Moderate adverse and significant
13 – B4560 Baeufort Road to Llangynidr	High	Medium to low	Moderate adverse and significant
14 – The Chartists Cave, Cambrian Way	High	Medium to low	Moderate adverse and significant
15 – Mynydd Llangattwg	High	Low to negligible	slight adverse and not significant
16 – The Bloreng	High	Negligible	Imperceptible and not significant
17 - Table Mountain, Cambrian Way and Beacons Way	High	No effects	No effects
18 - Mynydd Llangynidr	High	Medium to low	Moderate adverse and significant
19 – Carn Ddu	High	Low	Moderate to slight adverse and not significant
20 – Pen y Fan	High	Negligible	Imperceptible adverse and not significant
21 - Mynydd Aberdar	High	Low to negligible	Slight and not significant

7.13.14 The detailed cumulative assessment for the residential properties can be found in Appendix 7.9 and 7.11. Of the eleven individual/groups of properties within the 2km study area, seven (listed below) have been assessed as experiencing significant cumulative effects.

- Upper Ras Brynoer Farm and Brynoer House;
- Llechryd and properties north of the A465;
- South Rhymney;
- Rose Cottage, Trecatti House and Blaen-carno Farm;
- Gypsy Castle;
- Bute Town; and
- Rhymney North.

7.13.15 Cumulative effects are broadly a result of the introduction of the Pen March, Manmole, Pengarnddu Industrial Estate, Abertillery and Cwmbargoed Disposal Point turbines intensifying the influence of wind farm development in views and the additional of the proposed development notably bringing wind turbine development closer to the receptor and/or increasing the spread of wind turbine development across a wider extent of the view.

7.13.16 Below is a summary of the significant cumulative effects on PRowS and Roads. The detailed assessment can be found in Appendix 7.10.

Table 7.15: Summary of PRow and Road Cumulative Assessment			
Receptor	Sensitivity	Magnitude of Cumulative Impact	Significance of Cumulative Effects
Local PRowS passing through and adjacent to the Site	High	High	Substantial adverse and significant
Rhymney Valley Ridgeway Walk	High	High through to negligible	substantial to moderate adverse and significant through to imperceptible (not significant) with distance.
Cambrian Way	High	Medium to low, through to negligible	Moderate adverse and significant through to imperceptible and not significant with distance
NCR 46	High	High, reducing to medium through to negligible	Substantial to moderate adverse and significant , reducing to imperceptible with distance
A465	Medium	High, reducing to medium through to negligible	Substantial to moderate adverse and significant , reducing to imperceptible with distance
A469	Medium	Medium to low	Moderate adverse and significant reducing to imperceptible

7.13.17 For the Rhymney Valley Ridgeway Walk and local PRowS passing through and adjacent to the Site, the visual amenity of users will be notably influenced by the presence of the proposed development due to its proximity. The proposed

development will be viewed in combination with the operation turbines at Pnengarnddu Industrial Estate, Pen Bryn Oer and Tafaranabach Industrial Estate amongst other more distant wind turbines.

7.13.18 The consented Cwmbargoed Disposal Point, Pangarddu Industrial Estate and Valley Heights Filling Station and in planning Pen March and Manmole developments are all located near the northern end of this route. These developments will increase the influence of wind farm development along the northern end of the route, however, impacts will primarily be from the proposed development as the path nears its northern most extent. When considering the Proposed Development in addition to the cumulative scenario, the detailed assessment found that the Proposed development would be perceived as an extension to the in-planning Pen March scheme from several sections of this footpath and would be a dominating feature along the path's northern extents.

7.13.19 From the Cambrian Way the introduction of the cumulative schemes identified in the detailed assessment, particularly the in-planning Pen March would notably intensify the influence of wind farm development in views already influenced by wind turbine development. When considering the Proposed Development in addition to the cumulative scenario, the Proposed development would be perceived as a standalone development and would be located in the middle ground views. Only the upper tower, hubs and blades of the proposed development will be visible due to intervening landform. Pen March would be the slightly more prominent scheme due to it being located closer to the receptor.

7.13.20 The introduction of the cumulative schemes identified in the detailed assessment would increase the influence of wind turbines within views from NCR 46, with the exception of areas screened by intervening vegetation and built form. The relatively short section of this route that passes the proposed development lends itself to close open views of the proposed development and as a result this section of the route, will primarily be impacted by the proposed development as well as the in planning turbines of Pen March rather than submitted developments located further to the east and west.

7.13.21 The cumulative schemes identified in the detailed assessment for the A465 and A469 would further increase the influence of wind turbines within views from these roads. Wind turbines would be visible in almost all direction along stretches of these

roads, with the exception of areas screened by road embankment, cutting, intervening vegetation and built form. The relatively short sections of these roads that pass the proposed development lends itself to close open views of the proposed development and as a result these sections of the road, will primarily be impacted by the proposed development as well as the in-planning turbines of Pen March to the north, rather than submitted developments located further to the east and west.

7.14 Summary and Conclusions

Construction Effects

7.14.1 The construction effects have been assessed as an integral part of the overall landscape and visual assessment. As described in paragraphs 7.10.3 to 7.10.6 above, significant landscape and visual effects would be limited to the landscape unit the site sits within and within approximately 1.5km of the proposed development and only from the site itself and locations with open, clear views into the site. Viewpoints 1, 2, 3 and 10 would potentially experience significant construction effects.

Operational Landscape Effects

7.14.2 Operational effects on landscape character have been assessed for a study area of 20km radius from the proposed development. A total of 4 landscape character areas/units were identified from where significant effects may occur.

7.14.3 Significant landscape effects were identified from:

- Unit 16 - Rhymney Valley from Rhymney to Bargoed (site falls within)
- Unit 13 Upland moorland between Taff and Rhymney Valleys
- Unit 17 Upland north of the heads of the valley corridor
- Unit 18 Mynydd Bedwellte and associated upland

7.14.4 The above four areas that would experience significant effects are generally within approximately 2 to 4km to the east and west, approximately 5 to 6km to the south and up to approximately 6 to 10km to the north and north-east due to the high sensitivity of the National Park. The significant effects would mainly result from the wind farm element of the development as they would be tall, prominent structures. Significant effects resulting from the solar farm would mainly be on the site itself and from the opposite valley side to the east.

7.14.5 Operational effects on landscape designations have also been assessed for all landscape designations which fall within the 20km study area and the ZTV. As the site

does not fall within any landscape designation, all effects will be limited to the visual amenity aspect of the designation.

7.14.6 A total of 7 landscape designations were Identified as potentially experiencing significant effects. The following landscape designations have been assessed as experiencing significant visual amenity effects:

- Bannau Brycheiniog National Park
- Upper Rhymney Valley SLA
- Trefil and Garnlydan Surrounds SLA
- Mynydd Bedwellty, Rhymney & Sirhowy Sides SLA (northern extents)
- Gelligaer and Gelligaer and Taf Bargoed SLA (northern extents)
- Gelli-Gaer Common Registered Landscapes of Outstanding and Of Special Interest in Wales
- Brynbach Country Park (western extents)

7.14.7 The above designations that would experience significant effects are generally within 10km to the north, east and south. The significant effects would generally be a result of the wind farm element of the proposed development as they would be the more prominent structure given their height. Significant effects from the solar farm element of the proposed development would mainly be from the opposite side of the valley to the east and to the north, illustrated by Viewpoint 10, 14 and 18.

Operational Visual Amenity Affects

7.14.8 In order to assess the effects on visual amenity, a total of 21 viewpoints were identified within the 20km study area. Potential significant effects were identified from 10 viewpoints, as list below:

- 1 – Bute Town
- 2 – Upper Rhymney
- 3 – Rhymney South
- 4 – Fochriw
- 5 – Merthyr common
- 9 – A465/ Heads of the Valleys Road
- 10 – Rhymney Common
- 11 – Abertywswwg
- 14 – The Chartists Cave, Cambrian Way
- 18 - Mynydd Llangynidr

7.14.9 The 21 viewpoints identified for the visual assessments were selected to illustrate typical views of receptors with the highest sensitivity and locations where potential visibility was likely to be the greatest. Of the above 10 viewpoints, 8 are located within approximately 5km of the proposed development. At such close distance, effects of this significance are to be anticipated for a development of this type.

7.14.10 Significant effects from viewpoints within the southern fringe of the BBNP (Viewpoint 14 and 18) are located within upland areas/on summits with views towards the proposed development site. Although these viewpoints are located within the BBNP and of a high sensitivity, these views are expansive and open and include several other man-made features such as pylons, communication masts and operational wind farm developments.

7.14.11 Public Rights of Way through and immediately adjacent to the site would experience significant adverse effects due to the available open and close views. It is here that the proposed development would become a dominant feature within the vast majority of views.

7.14.12 The following PRoWs, Long-Distance Trails and transport routes would experience some significant views of the proposed development.

- Rhymney Valley Ridgeway Walk;
- Cambrian Way;
- NCR 468;
- NCR 46;
- A465 (sections between Brynmawr to the east and Merthyr Tydfil); and
- A469 (northern end)

7.14.13 The above PRoWs, Long-Distance Trails and transport routes that would experience significant effects are generally within 4.5km to the north, east and south. The significant effects would generally be a result of the wind farm element of the proposed development as they would be the more prominent structure given their height. Significant effects from the solar farm element of the proposed development would mainly be from the opposite side of the valley to the east and to the north.

Operational Residential Visual Amenity Assessment

- 7.14.14 In total ten individual/groups of properties were identified and assessed as part of the RVAA. Seven of which was assessed as having the potential to experience significant visual effects. These are identified in paragraph 7.10.31 above.
- 7.14.15 Significant effects on the above properties are broadly a result of the height of the wind turbine elements of the proposed development, its proximity and the availability of open views towards the site. Both the wind turbines and solar panel elements of the proposed development would be clearly visible at close range, with limited ways of mitigating views of the wind turbines.
- 7.14.16 The RVAA also identified that the RVA threshold would not be reached for all individual/groups of properties, as the majority of primary views are away from the site and the proposed development would only occupy part of the available view, would not be incongruous with the existing situation and other existing notable features such as views of the BBNP and Rhymney Valley would remain.
- 7.14.17 For settlements within 2km of the proposed development, only Rhymney and Bute Town would experience significant effects, as both the wind turbines and solar panel elements of the proposed development would be clearly visible at close range. The Proposed Development would introduce additional, close features to the view, although they would not be incongruous to the view, due to the existing presence of wind turbine development.
- 7.14.18 For settlements between 2 and 10km of the proposed development, only New Tredegar will experience significant effects, as it is likely that all three wind turbines will be visible. The Proposed Development would introduce additional features to the view, although they would not be incongruous to the view, due to the existing presence of wind turbine development.

Cumulative Landscape Effects

- 7.14.19 Only two Landscape character areas/units were found to have the potential to experience significant cumulative effects. These are, Unit 16 Rhymney Valley from Rhymney to Bargoed in which the site is located and unit 17 Upland north of the heads

of the valley corridor which is located immediately north of the proposed development.

7.14.20 Cumulative effects for unit 16 would be a result of the proposed development in conjunction with the operational Pen Bryn Ore scheme as the introduction of the proposed development alongside Pen Bryn Ore on the opposite side of the Rhymney valley would frame the northern end of the unit.

7.14.21 The in-planning Pen March turbines would directly increase the influence of wind turbine development within unit 17, and although not directly, the proposed development would indirectly increase the influence of wind turbine development within this unit due to its proximity.

7.14.22 The following landscape designations were also found to have potential to experience significant cumulative effects.

- The Upper Rhymney Valley SLA;
- Mynydd Bedwellty, Rhymney & Sirhowy Sides SLA;
- Merthyr Tydfil Registered Landscapes of Outstanding and Of Special Interest in Wales (eastern extents); and
- Brynbach Country Park (western extents)

7.14.23 The above landscape designations are generally within approximately 5km of the site. Overall, significant effects are attributed to the introduction of the in-planning Pen March scheme, notably intensifying the influence of wind farm development in available views, and subsequently, the Proposed development would notably increase the influence of turbine development across a wider extent of views.

7.14.24 Viewpoints 1 through to 4, 9 through to 14 and viewpoint 18 were assessed as experiencing significant cumulative visual amenity effects.

7.14.25 Broadly, significant cumulative effects are limited to within approximately 10km of the proposed development and are a result of the introduction of the in-planning Pen March and Manmole schemes notably intensifying the influence of wind farm development in available views, and subsequently, the introduction of the proposed development would extend wind farm development across and wider extent of the view and/or bring wind turbine development closer to the observer due to its proximity.

Overall conclusions

- 7.14.26 The assessment has identified that the significant landscape and visual effects of the proposed development would be contained within a relatively limited area to the site and immediate landscape and visual context that surrounds it.
- 7.14.27 Significant effects are broadly a result of the wind turbine elements of the proposed development.
- 7.14.28 Significant landscape character and visual amenity effects occur within approximately 10km of the proposed development. The majority of which occur within 5km, but the availability of elevated views affords a limited number of more distant views.
- 7.14.29 Both landscape and visual effects are long term (over 10 years) and reversible. On decommissioning, all significant effects will cease, resulting in no impacts on both landscape character and visual amenity as the site will generally return to its baseline conditions.
- 7.14.30 Some significant effects on landscape character and visual amenity are typical of wind turbine developments due, mainly to their height and generally extensive visibility and the difficulties in mitigating tall structures. Given the elevated nature of the site, the valley and mountain range surroundings and large number of sensitive receptors, a limited number of significant effects is considered acceptable in terms of landscape character and visual amenity.