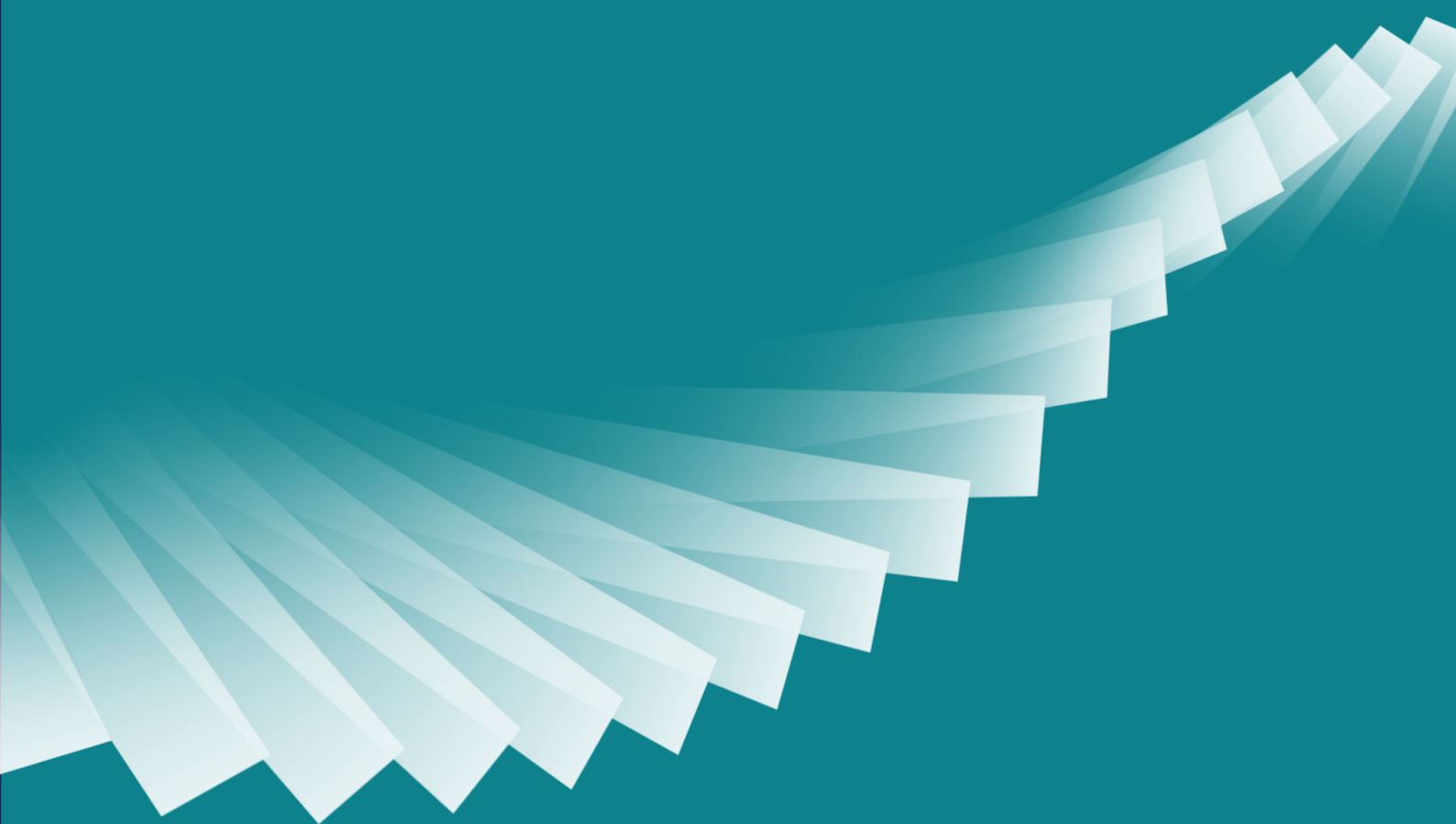




Bute Energy
Aberedw Energy Park

Environmental Statement

Chapter 5: Landscape and Visual Amenity



Chapter 5

Landscape and Visual Amenity

Introduction

5.1 This chapter considers the potential effects of the proposed Aberedw Energy Park (herein referred to as ‘the Proposed Development’) on the landscape and visual resources of the Site and the surrounding landscape and visual study areas. The specific objectives of the chapter are to describe:

- The planning context relating to landscape and visual matters;
- Consultation undertaken;
- The assessment methodology and significance criteria used in completing the assessment;
- The landscape and visual baseline;
- The mitigation measures that have been designed into the Proposed Development to minimise adverse effects; and
- The residual effects; including direct, indirect and cumulative effects.

5.2 Landscape and visual assessments are separate, although linked, processes and accordingly this chapter considers the potential effects of the Proposed Development on:

- The landscape as a resource in its own right (caused by changes to the constituent elements of the landscape, its specific aesthetic or perceptual qualities, and the character of the landscape); and
- Views and visual amenity as experienced by people (caused by changes in the appearance of the landscape).

5.3 The Landscape and Visual Impact Assessment (LVIA) has been carried out by Chartered Members of the Landscape Institute (CMLI) at LUC, who have also been involved in the early stages of the project through the provision of design advice (see **Appendix 1.1: Statement of Expertise**).

5.4 This chapter is supported by **Figures 5.1 to 5.26** which are referenced throughout the text and are contained within **Volume 2: Figures**.

5.5 The following appendices are also referred to throughout the chapter and can be found in **Volume 3: Technical Appendices**:

- Appendix 5.1: LVIA and CLVIA Methodology
- Appendix 5.2: Zone of Theoretical Visibility (ZTV) Mapping and Visualisation Methodology
- Appendix 5.3: Identification of Landscape Units and LANDMAP Aspect Areas
- Appendix 5.4: Landscape Assessment Tables
- Appendix 5.5: Visual Assessment Tables
- Appendix 5.6: Assessment of Designated Landscapes
- Appendix 5.7: Residential Visual Amenity Assessment
- Appendix 5.8: Aviation Lighting Impact Assessment

5.6 This chapter is also supported by visualisations (**Figures 5.27 to 5.59**) which are referenced throughout the text and contained within **Volume 4: Visualisations**.

Assessment Methodology

Legislation, Policy and Guidance

Legislation

5.7 Nationally important landscapes such as the Bannau Brycheiniog (Brecon Beacons) National Park (BBNP) have protection through the National Parks and Access to the Countryside Act 1949 and the Countryside and Rights of Way (CROW) Act 2000.

5.8 The European Landscape Convention (ELC), although not legislation, is a Convention of the Council of Europe and treaty between states that seeks to influence governments. It sets out the importance of protecting, managing and planning Europe's landscapes for their future prosperity. The UK Government became a signatory to the ELC in 2006.

Policy

5.9 The following policy documents are of relevance to this assessment:

- Future Wales: The National Plan 2040 (2021);
- Planning Policy Wales (PPW) Edition 12 (updated 2024);
- Powys County Council Adopted Local Development Plan (LDP) (2011-2026);
- Powys County Council Replacement Local Development Plan (RLDP) (2022-2037);
- Powys County Council Landscape Supplementary Planning Guidance (SPG) (adopted April 2019); and
- Powys County Council Renewable Energy SPG (adopted April 2019).

Guidance

5.10 This assessment is carried out in accordance with the principles contained within the Landscape Institute and the Institute of Environmental Management and Assessment (2013): Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3)¹ and the Landscape Institute's Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment (GLVIA3) - LITGN-2024-01².

5.11 This assessment has also been informed by guidance contained within the following documents:

- Design Commission for Wales (2023) Designing for Renewable Energy in Wales³;
- Landscape Institute (2019) Residential Visual Amenity Assessment (RVAA) Technical Guidance Note 2/19⁴;

¹ Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment (3rd Edition)

² [Landscape Institute \(2024\) Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment \(GLVIA3\) - LITGN-2024-01](#)

³ [Design Commission for Wales \(2023\) Designing for Renewable Energy in Wales](#)

⁴ [Landscape Institute \(2019\) Technical Guidance Note 2/19: Residential Visual Amenity Assessment \(RVAA\)](#)

- Landscape Institute (2019) Visual Representation of Development Proposals Technical Guidance Note 06/19⁵;
- Natural Resources Wales (Last updated March 2024) Using LANDMAP in Landscape and Visual Impact Assessments GN46⁶;
- NatureScot (2021) Assessing the cumulative landscape and visual impact of onshore wind energy developments⁷;
- Scottish Natural Heritage (2017) (now NatureScot) Siting and Designing Windfarms in the Landscape. Version 3a⁸;
- Scottish Natural Heritage (2017) (now NatureScot) Visual Representation of Wind Farms Guidance. Version 2.2⁹; and
- The Planning Inspectorate (Last updated March 2025) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment¹⁰.

Consultation

5.12 In undertaking the assessment, consideration has been given to the scoping responses and other consultation responses as detailed in **Table 5.1**.

⁵ [Landscape Institute \(2019\) Technical Guidance Note 06/19: Visual Representation of Development Proposals](#)

⁶ Natural Resources Wales (Last updated March 2024) LANDMAP Guidance Note 46: Using LANDMAP in Landscape and Visual Impact Assessments. Available at: <https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/using-landmap-in-landscape-and-visual-impact-assessments-gn46/?lang=en>

⁷ [NatureScot \(2021\) Guidance – Assessing the cumulative landscape and visual impact of onshore wind energy developments](#)

⁸ [NatureScot \(2017\) Siting and designing wind farms in the landscape \(Version 3a\)](#)

⁹ [NatureScot \(2017\) Visual representation of wind farms: Guidance \(Version 2.2\)](#)

¹⁰ The Planning Inspectorate (Last updated March 2025) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available at: <https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment>

Table 5.1 Consultation responses

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Natural Resources Wales 25 January 2024	Formal Scoping Consultation	Agree with the 33 km search area.	Noted. The 'search area' for the LVIA initially covered a radius of up to 33 km from the outermost turbine of the Proposed Development.
		Advised on extending the study area so that highly sensitive receptors on iconic summits in the central beacons of the BBNP (e.g. Pen y Fan, Corn Du, Cribyn, Fan y Big) are considered, and for a viewpoint from one of these summits to be included which will also represent the impact on receptors at Allt Ddu and Cefn Cyff.	The overall study area considered in the LVIA is a 28 km radius from the proposed turbines (as recommended in NRW's GN46), except for within the BBNP where it extends to the 33 km search area so that the summits referred to (i.e. Pen y Fan, Corn Du, Cribyn, Fan y Big) are included. Viewpoint 29 is from the top of Pen y Fan and is a representative view from the summits referred to, including Allt Ddu and Cefn Cyff.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
			The approach was agreed through NRW's Discretionary Planning Advice Service. NRW agreed with producing a wireline only from Pen y Fan.
		Expressed concern that significant effects on landscape character could occur beyond the 10 km area. Advised that the current approach does not accord with GN46 because: ■ LANDMAP aspect areas within the search area have not been identified (only those in the 10 km area); and ■ filtering has not been undertaken to demonstrate that a 10 km area is appropriate. Advised the retention of all Filter 3 aspect areas that are within the study area plus	The LVIA considers the effects on landscape character of non-designated areas within 15 km (originally 10 km was proposed at Scoping however Powys County Council (PCC) have requested that consideration of effects on landscape character should extend to 15 km from the proposed turbines). The filtering exercise set out in GN46 has been undertaken and the aspect areas filtered in supplement the information included in the landscape assessment (Appendix 5.4), with the landscape units (receptors) based on the Landscape Character Areas (LCAs) associated with the Powys Landscape Character Assessment (up to 15 km). Areas filtered in that fall outside 15 km and up to 33 km have been considered in Appendix 5.3 and scoped

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		aspect areas outside of the study area that might contain highly sensitive visual receptors within the search area.	out as significant landscape effects are not predicted to arise. Areas that are nationally designated for their scenic quality have been assessed up to 33 km.
		Advised that landscape character areas within the BBNP should be scoped in because the assessment of effects on the natural beauty and special qualities of the BBNP should be informed by an assessment of the effects on landscape character.	The LVIA considers effects on the landscape character and special qualities for the BBNP (up to 33 km). This includes consideration of the special qualities presented for each relevant LCA in BBNP's Landscape Character Assessment, in addition to the main special qualities in the management plan. The assessment is presented in Appendix 5.6 .
		Agree with the inclusion of the viewpoint from Hay Bluff.	Noted. Viewpoint 27 is from Hay Bluff.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		Recommend replacing the Scoping viewpoint from Twyn y Gaer with a viewpoint from Cefn Llechid in the BBNP.	Viewpoint 28 is from Cefn Llechid in the BBNP and replaces the Scoping viewpoint from Twyn y Gaer. The approach was agreed through NRW's Discretionary Planning Advice Service.
		Advise that at least one night-time viewpoint is from a location within the BBNP where dark skies are likely to be best experienced e.g. away from sources of light pollution such as settlements and roads.	Viewpoint N2 is from Hay Bluff within the BBNP. The approach was agreed through NRW's Discretionary Planning Advice Service.
		Unclear why the LVIA methodology would place greater weight on the magnitude of change over sensitivity and advise that all judgements should be clearly reasoned.	Noted. The LVIA clearly explains each judgement in the landscape assessment (Appendix 5.4) and the visual assessment (Appendix 5.5).

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		Advised that any assessment of the impacts on the special qualities of the BBNP should be informed by detailed supporting evidence, including that found in the BBNP's Landscape Character Assessment (2012), LANDMAP, and NRW's evidence on Tranquillity and Place (Report No: 569) and dark skies (Report No: 514).	Noted. The supporting evidence listed has fed into the special qualities assessment of the BBNP (see Appendix 5.6).
		Expect that the ES will explain how the findings of the LVIA have informed the design process, including the location, scale, number, siting, and layout/arrangement of the turbines.	This is addressed in the LVIA (see Section 5.7: Embedded Design Mitigation) and in Chapter 3: Site Selection and Design Strategy .
		Advised that key issues to address through the design should include:	These points are included in the design aims (see Section 5.7: Embedded Design Mitigation) and the design has considered them as far as possible while

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		■ Avoiding uneven visual densities, outlier / isolated turbines or separate groups which result in unbalanced appearance or additional effects. ■ Avoiding appearance of stacking / overlapping turbines as far as possible from key viewpoints e.g., within the BBNP. ■ Siting and designing turbines to avoid or respond to skylines experienced from key viewpoints e.g., within BBNP.	considering other environmental and technical constraints.
Powys County Council 28 February 2024	Formal Scoping Consultation	Agrees with the proposed approach, however, would like to see an assessment as to whether the colour of light-grey is the appropriate colour in such a landscape, and whether the tower should have a gradation	Design Commission for Wales's guidance on Designing for Renewable Energy in Wales (2023) states that: <i>"Colour selection forms a key part of the landscape design approach. Conventionally, a light grey or off-white colour is considered to achieve the</i>

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		of colour to make it less obtrusive in the landscape.	<i>best balance between minimising visibility and visual impacts when seen against the sky.” (Paragraph 5.4)</i> Scottish Natural Heritage (now NatureScot) guidance on Siting and Designing Windfarms in the Landscape (Version 3a, 2017) states that: <i>“the use of graded colours at the turbine base should be avoided as public perception studies have demonstrated that aesthetic unity is viewed more favourably. Graduated schemes, or turbines with colour variation, should be used with caution.” (Paragraph 2.9)</i> The proposed turbines will be a light grey semi-matt colour in line with the guidance above.
Planning and Environment	Formal Scoping Consultation	Agrees with NRW’s request on extending the study area so that highly sensitive receptors on iconic summits in the central beacons of the BBNP (e.g. Pen y Fan, Corn	The overall study area considered in the LVIA is a 28 km radius from the proposed turbines (as recommended in NRW's GN46), except for within the BBNP where it extends to the 33 km search area so

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Decisions Wales (PEDW) 05 April 2024		Du, Cribyn, Fan y Big) are considered, and for a viewpoint from one of these summits to be included which will also represent the impact on receptors at Allt Ddu and Cefn Cyff.	that the summits referred to (i.e. Pen y Fan, Corn Du, Cribyn, Fan y Big) are included. Viewpoint 29 is from the top of Pen y Fan and is a representative view from the summits referred to, including Allt Ddu and Cefn Cyff. The approach was agreed through NRW's Discretionary Planning Advice Service. NRW agreed with producing a wireline only from Pen y Fan.
		Agrees with NRW's comment that significant effects on landscape character could occur beyond the 10 km area. NRW advised that the current approach does not accord with GN46 because: ■ LANDMAP aspect areas within the search area have not been identified (only those in the 10 km area); and	The LVIA considers the effects on landscape character of non-designated areas within 15 km (originally 10 km was proposed at Scoping however Powys County Council (PCC) have requested that consideration of effects on landscape character should extend to 15 km from the proposed turbines). The filtering exercise set out in GN46 has been undertaken and the aspect areas filtered in supplement the information included in

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		■ filtering has not been undertaken to demonstrate that a 10 km area is appropriate. NRW advised the retention of all Filter 3 aspect areas that are within the study area plus aspect areas outside of the study area that might contain highly sensitive visual receptors within the search area.	the landscape assessment (Appendix 5.4), with the landscape units (receptors) based on the Landscape Character Areas (LCAs) associated with the Powys Landscape Character Assessment (up to 15 km). Areas filtered in that fall outside 15 km and up to 33 km have been considered in Appendix 5.3 and scoped out as significant landscape effects are not predicted to arise. Areas that are nationally designated for their scenic quality have been assessed up to 33 km.
		Concurs with NRW's comment that it is unclear why the LVIA methodology would place greater weight on the magnitude of change over sensitivity and advise that all judgements should be clearly reasoned.	Noted. The LVIA clearly explains each judgement in the landscape assessment (Appendix 5.4) and the visual assessment (Appendix 5.5).

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		Agrees with NRW's request that any assessment of the impacts on the special qualities of the BBNP should be informed by detailed supporting evidence, including that found in the BBNP's Landscape Character Assessment (2012), LANDMAP, and NRW's evidence on Tranquillity and Place (Report No: 569) and dark skies (Report No: 514).	Noted. The supporting evidence listed has fed into the special qualities assessment of the BBNP (see Appendix 5.6).
Powys County Council 03 May 2024	Post-scoping consultation with Enplan ¹¹ on behalf of Powys County Council	Enplan requested the consideration of the following 11 additional viewpoint locations for inclusion in the LVIA: ■ Unnamed lane, north-east of Llanbedr Hill ■ Twm Tobacco's Grave on Llandeilo Hill	The additional viewpoint locations were reviewed and considered representative of visual receptors and so have been included in the LVIA. The type of visualisation for all 29 viewpoints was agreed during a meeting (via Microsoft Teams) on 15 May 2024, as follows:

¹¹ Enplan are an external environmental consultancy and have been commissioned by PCC to provide advice in relation to landscape and visual matters.

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		■ Garth Hill ■ Open access land on Mynd ■ Llanfihangel Hill ■ Carneddau ■ Royal Welsh Show grounds ■ A470 at Aberduhonw ■ Unnamed lane at Bettws ■ A481 at Matts Common ■ Rhulen, south-east of Aberedw	■ Viewpoints 1, 3, 5, 6, 7, 9, 11, 12, 13, 14, 16, 17, 19, 20, 21, 22, 24, 25, 26, 27 and 28 are represented by a photomontage and wireline; and ■ Viewpoints 2, 4, 8, 10, 15, 18, 23 and 29 are represented by a wireline only.
Powys County Council 31 March 2025	Post-scoping consultation with Enplan on behalf of Powys County Council	N/A	Contacted Enplan to seek agreement for a dusk/ night-time viewpoint from Perthi Common but no response received. A photomontage showing the Proposed Development at night from Viewpoint N1: Perthi Common is provided in Volume 4 .

Study Area

5.13 As set out in the Scoping Report (**Appendix 2.1**), the 'search area' for the LVIA initially covered a radius of up to 33 km from the outermost turbine of the Proposed Development, as shown in **Figure 5.1**. This area is based on guidance from NRW¹² which provides this distance as a starting point for structures 176 m to 225 m tall. The NRW guidance also suggests that the starting point distance for the 'study area' is up to 28 km for structures 176 m to 225 m tall (also shown in **Figure 5.1**). The LVIA has considered all receptors likely to experience significant effects within the 28 km study area. As set out in **Table 5.1**, NRW requested that the *"highly sensitive receptors on iconic summits in the central beacons of the BBNP (e.g. Pen y Fan, Corn Du, Cribyn and Fan y Big) are considered"*. The locations of these summits are slightly beyond the 28 km study area but within the 33 km search area, and so within the BBNP the study area extends to 33 km.

5.14 Zone of Theoretical Visibility (ZTV) maps have been generated, illustrating areas from where the Proposed Development may be visible within the 33 km search area. The Proposed Development is illustrated on **Figure 5.2** and the ZTV maps follow, with **Figures 5.3a** and **b** showing the proposed wind turbine hub height ZTV and **Figures 5.4a** and **b** showing the proposed wind turbine maximum blade tip height ZTV. The proposed substation ZTV is illustrated in **Figure 5.6**. The ZTVs have been used as a tool for understanding where visual effects may occur. Receptors which are outside the ZTV will not be affected by the Proposed Development and have not been considered in this LVIA.

Desk Based Research and Data Sources

5.15 The following data sources have informed the baseline study and the subsequent assessment:

- NRW's LANDMAP maps and surveys (accessed via the NRW website¹³);
- NRW's National Landscape Character Areas (NLCAs) for Wales;

¹² Natural Resource Wales Guidance Note 46 'Using LANDMAP in Landscape and Visual Impact Assessments'

¹³ Natural Resources Wales (n.d.) LANDMAP – the Welsh landscape baseline. Available at: <https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/landmap-the-welsh-landscape-baseline/?lang=en>

- NRW's Visual Tranquillity in Wales (accessed online¹⁴);
- NRW's Dark Skies and Light Pollution in Wales (accessed via the NRW website¹⁵);
- NRW's Visible settings of Designated Landscapes and Key Views (accessed online¹⁶);
- BBNP Authority's Landscape Character Assessment¹⁷;
- Special qualities of the BBNP (as listed in 'Y Bannau: The Future - The Management Plan For Bannau Brycheiniog National Park 2023-2028'¹⁸);
- Ordnance Survey (OS) Maps 1:10000, 1:25000 and 1:50000 and readily available aerial photographs;
- OS Address Base Plus data;
- Office for National Statistics Built-up Areas Boundaries (2024);
- PCC's Local Landscape Character Assessment¹⁹;
- The Registered Landscapes of Outstanding and Special Interest in Wales (accessed via the Lle Geo Portal); and
- Terrain data used for ZTVs.

Methodological Overview

5.16 The key steps in the methodology for assessing both landscape and visual effects were as follows:

- An overall study area of 28 km radius (and 33 km within the BBNP) was defined from the outermost turbines of the Proposed Development in all directions;

¹⁴ Natural Resources Wales (2022) Tranquillity and Place: mapping tranquil places. Available at:

<https://storymaps.arcgis.com/stories/865c1876d9f64280a3dfc6e2769a46a5>

¹⁵ Natural Resources Wales (2021) New map casts light on Wales' dark skies. Available at: <https://naturalresources.wales/about-us/news-and-events/news/new-map-casts-light-on-wales-dark-skies/?lang=en>

¹⁶ Natural Resources Wales (unknown date) Visible settings of Designated Landscapes and Key Views. Available at: https://landmap-portal.naturalresources.wales/visual_settings_and_key_views_list.php

¹⁷ Brecon Beacons National Park Authority (2012) Brecon Beacons National Park Landscape Character Assessment

¹⁸ Bannau Brycheiniog National Park Authority, 2023, Y Bannau: The Future - The Management Plan For Bannau Brycheiniog National Park 2023-2028

¹⁹ Powys County Council (2022). Local Landscape Character Assessment for the Powys Local Development Plan Area

- The area in which the Proposed Development may be visible was established through ZTV mapping and field work;
- The landscape of the study area was analysed, and landscape receptors identified, in particular the landscape units (see **Appendix 5.3**) and the BBNP;
- The visual baseline was recorded in terms of the different groups of people who may experience views of the Proposed Development (visual receptors), the places where they will be affected, and the nature of views and visual amenity;
- Viewpoints representing the visual receptors were selected and agreed with relevant stakeholders (see **Table 5.1**);
- The layout and design of the wind farm was developed to reach design freeze; and,
- The significance of landscape and visual effects was judged with reference to the sensitivity of the receptor and magnitude of effect (see summary under 'Assessing Significance' below for further details).

5.17 Full details of the assessment methodology, including assessment of cumulative effects, are presented in **Appendix 5.1**. The methodologies for creating the ZTV Mapping, undertaking photography and preparing the visualisations are presented in **Appendix 5.2**.

Field Survey

5.18 Field survey work was carried out between May 2023 and April 2025, with records being made through photographs and field notes. The survey work included visits to the Site itself, as well as to all the identified viewpoints and the BBNP within the study area. Travel around the study area used public roads and Public Rights of Way (PRoWs) was also carried out to consider the potential effects on landscape character and on views. Residential properties within 2 km were viewed from publicly accessible locations to inform the Residential Visual Amenity Assessment (RVAA), contained in **Appendix 5.7**.

Assessing Significance

5.19 An assessment of landscape and visual effects requires consideration of the nature of the receptor (sensitivity of receptor) and the nature of the effect on the receptor (magnitude of change).

Sensitivity

5.20 The sensitivity of a landscape receptor to change combines professional judgements on susceptibility and value, using the principles set out in **Table 5.2** (more detailed separate tables for susceptibility and value with definitions across three levels (high, medium and low) are provided in **Appendix 5.1**).

Table 5.2 The principles of judging landscape sensitivity

	Higher	↔	Lower
Susceptibility	The landscape is less able to accommodate wind energy development without undue negative consequences to the baseline situation. Attributes (as set out below in Table 5.3) that make up the character of the landscape offer very limited opportunities for the accommodation of change without key characteristics being fundamentally altered by wind energy development, leading to a different landscape character.	↔	The landscape is more able to accommodate wind energy development without undue negative consequences to the baseline situation. Attributes (as set out below in Table 5.3) that make up the character of the landscape are more resilient to being changed by wind energy development.
Value	Landscapes with higher scenic quality, conservation interests, recreational value, cultural	↔	Landscapes of limited aesthetic qualities, low conservation interest, little recreational value, few cultural

	Higher	↔	Lower
	associations or rarity or uniqueness. Areas designated at a national level e.g. National Parks or National Landscapes (AONBs)²⁰ with national policy level protection. LANDMAP aspect areas with higher overall evaluation scores.		associations or of character that is frequent/widespread. Areas or features that are not formally designated. LANDMAP aspect areas with lower overall evaluation scores.

Table 5.3 Criteria to determine susceptibility to wind energy development

Characteristic/ Attribute	Aspects Indicating Lower Susceptibility to Wind Energy Development	↔	Aspects Indicating Higher Susceptibility to Wind Energy Development
Scale	Large scale.	↔	Small scale.
Landform	Absence of strong topographical variety, featureless, convex or flat.	↔	Presence of strong topographical variety or distinctive landform features.
Land Cover and Landscape Pattern/ Complexity	Simple. Regular or uniform.	↔	Complex. Rugged and irregular.

²⁰ AONBs in England and Wales were re-branded as 'National Landscapes' in November 2023 (although they are still referred to as AONBs in legislation and planning policy).

Characteristic/ Attribute	Aspects Indicating Lower Susceptibility to Wind Energy Development	↔	Aspects Indicating Higher Susceptibility to Wind Energy Development
Historic Landscape/ Time Depth	Absence of time depth and historic features.	↔	Presence of historic landscapes with great time depth with a high density of historic landscape features.
Settlement and Manmade Influences	Presence of contemporary structures e.g. utility, infrastructure or industrial elements.	↔	Absence of modern development. Presence of small scale, historic or vernacular settlement.
Skylines	Non-prominent/screened skylines or skylines that are less important in views. Presence of existing modern man-made features.	↔	Distinctive, undeveloped skylines. Skylines that are highly visible over large areas or exert a large influence on landscape character. Skylines with important historic landmarks.
Visibility from Adjacent Landscapes	Little visibility from adjacent designated landscape or promoted viewpoints.	↔	Visible from nationally designated landscapes. Forms an important part of a view from promoted viewpoints.
Perceptual Aspects	Presence of visible or audible signs of human activity and	↔	Remote from visible or audible signs of human activity and

Characteristic/ Attribute	Aspects Indicating Lower Susceptibility to Wind Energy Development	↔	Aspects Indicating Higher Susceptibility to Wind Energy Development
	development. Lacking in naturalness. Threatening; unattractive; noisy. High levels of light pollution/doesn't experience dark skies.		development. High levels of naturalness evident. Particularly tranquil; wild; spiritual; attractive; peaceful. Low levels of light pollution/experiences dark skies.

5.21 Visual sensitivity combines professional judgements on susceptibility and value using the principles set out in **Table 5.4** (more detailed separate tables for susceptibility and value with definitions across three levels (high, medium and low) are provided in **Appendix 5.1**).

Table 5.4 The principle of judging visual sensitivity

	Higher	↔	Lower
Susceptibility	Viewers whose attention or interest is focused on their surroundings including communities/individual residential receptors/people engaged in outdoor recreation/visitors to heritage assets or other attractions where views of the surrounding area are an important contributor to experience.	↔	People whose attention is not on their surroundings (and where setting is not important to the quality of working life) such as commuters/people engaged in outdoor sports/people at their place of work.

	Higher	↔	Lower
Value	Views recorded in management plans or guide books. Views associated with nationally designated landscapes; notable views from a National Trail or promoted route; recognised viewpoints on OS maps; or designed views (vistas) recorded in citations for historic parks, gardens/scheduled monuments etc.	↔	Views which are not documented or protected. Views which are more incidental, and less likely to be associated with somewhere people travel to or stop.

5.22 For the purposes of this assessment susceptibility and value are defined as high, medium or low. Both landscape and visual sensitivity is expressed as **high**, **medium** or **low** (or the intermediate levels of **medium-high** and **low-medium**).

Magnitude

5.23 The nature of the effect on each landscape and visual receptor, commonly referred to as its 'magnitude', is driven by the size/ scale of change to the landscape and its duration (with reversibility and geographical extent also reported). The assessment of size/scale is described as being large, medium, small or barely perceptible. Duration is determined in relation to the length of phases of the Proposed Development being either short-term (0-5 years), medium-term (5-10 years) or long-term (over 10 years). Reversibility is reported as reversible, partially reversible or not reversible. The magnitude of landscape or visual change is expressed as **high**, **medium**, **low** or **barely perceptible** (or the intermediate levels of **medium-high** and **low-medium**).

5.24 More detailed separate tables for size/ scale of effect across four levels (large, medium, small and barely perceptible) are provided in **Appendix 5.1**. The definitions for the magnitude of

change across the four levels (high, medium, low and barely perceptible) are set out below in **Table 5.5** and **Table 5.6** (as well as within **Appendix 5.1**).

Table 5.5 Definitions of magnitude of landscape change

Magnitude of Landscape Change	Definition
High	This may include: ■ An obvious (large scale) change in landscape features, characteristics and character potentially resulting in the creation of a new landscape character type; and ■ Likely to apply to obvious changes over the long or medium term, but could apply to very large changes over a short term.
Medium	This may include: ■ Discernible (medium scale) changes to landscape features, characteristics and character; and ■ Likely to apply to discernible changes over a long or medium term but could include obvious changes for a short term.
Low	This may include: ■ A perceptible but small change to landscape features, characteristics and character; and ■ Likely to apply to small changes over the long or medium term but could apply to discernible (medium scale) changes over a short term.
Barely Perceptible	This may include: ■ An imperceptible/barely perceptible change to landscape features, characteristics and character for any duration.

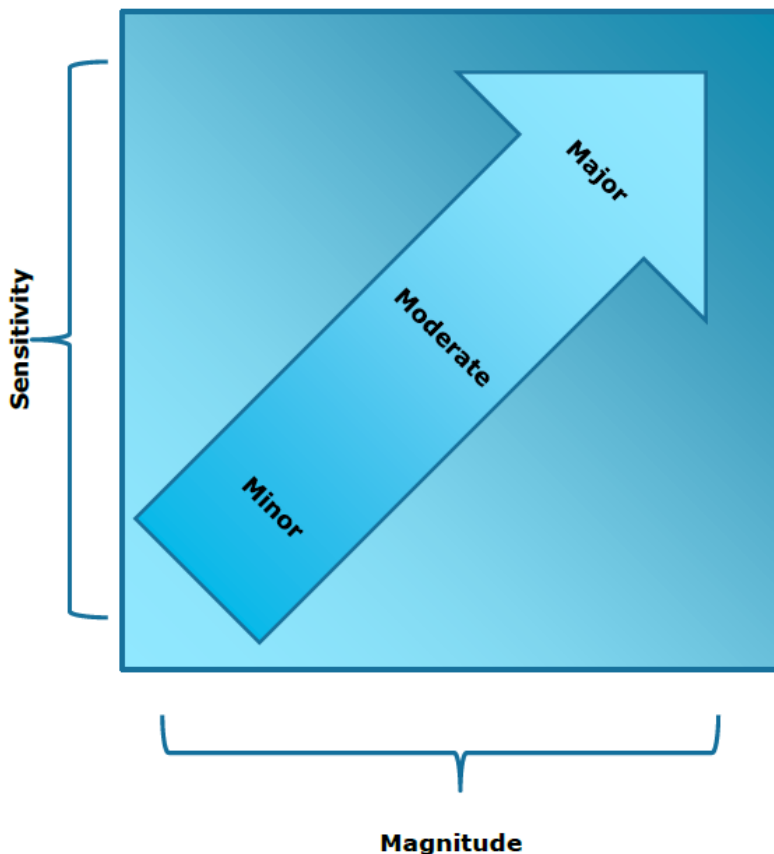
Table 5.6 Definitions of magnitude of visual change

Magnitude of Change	Definition
High	This may include: ■ A large change in available views, perhaps where the development is in close proximity in a direct line of vision, or affecting a substantial part of the view, or providing contrast with the existing view; and ■ Likely to apply to large changes over the long or medium term but could apply to very large changes over a short term.
Medium	This may include: ■ A clearly perceptible change in view, perhaps where the development is relatively close but at an oblique angle or further away in the direct line of vision, creating a distinct new element in the view; and ■ Likely to apply to clearly perceptible changes over a long or medium term but could include large changes for a short term.
Low	This may include: ■ A small change in view, perhaps where the development is at a distance or oblique angle, or where the scale of the landscape absorbs the development well; and ■ Likely to apply to small changes over the long or medium term but could apply to clearly perceptible changes over a short term.
Barely Perceptible	A change in view which is barely perceptible or may go unnoticed.

Significance

5.25 Sensitivity and magnitude are considered together, to form a judgement regarding the overall significance of effects, guided by the principles set out in the diagram below:

Diagram 5.1: Approach to judging levels of effect using sensitivity and magnitude



5.26 It should be noted that the relationship between sensitivity and magnitude is not always linear, and therefore a rigid matrix-type approach is not used. Instead, the determination of overall level of effect requires the application of professional judgement to take on board the component variables which need to be considered. All judgements are clearly explained.

5.27 Levels of effect have been identified as **major**, **moderate**, **minor** or **negligible** (or the intermediate levels of **moderate-major** and **minor-moderate**). Effects of 'moderate' and above are considered significant in the context of the EIA Regulations (and so effects of 'minor-moderate' and below are considered not significant).

Assessment Limitations

The ZTVs are based on a 'bare ground' scenario which produces a 'worst case' situation as it does not take into consideration the screening that will be provided by buildings and vegetation.

Existing Conditions

Landscape Baseline

Landscape of the Site and its immediate surroundings

5.28 The Site comprises the elevated undulating upland area of Aberedw Hill, located approximately 3 km to the east of Builth Wells, within the county of Powys, in Mid Wales.

5.29 Aberedw Hill comprises a broad hill rising to a maximum elevation of 451 m Above Ordnance Datum (AOD), its summit marked by a triangulation point. The hill is edged by steep escarpments/slopes and valleys on all sides, most prominently on the northern and western flanks. The deepest and broadest of these valleys, to the west of the Site, is that of the River Wye, above which Aberedw Hill occupies a prominent position and forms a distinguishable landform feature when viewed from the valley. The valley of the River Edw (a tributary of the River Wye flowing south-west) is located to the east and south of the Site. Several smaller, incised valleys contain watercourses that drain south from Aberedw Hill and feed into the River Edw. There are several outlying summits to the north, east, and south, including Wylfre (410 m AOD) and Llan-fraith Hill (386 m AOD).

5.30 Land cover across the Site is predominantly open bracken moorland with areas of acid dry heath/grassland and pasture and is common land. There are small areas of scrub woodland, mainly upon the incised valley slopes, and two small blocks of conifer plantation in the south. There are several scattered ponds and pools on the plateau including Llyn Cawr, Pen-waun Pool, and Blackrock Pools.

5.31 The Site is relatively void of existing man-made features, and the landscape has a sense of relative remoteness from settlement, apart from one residential property in the south of the Site at Upper Blaenmilo Farm, within the upper Milo Brook valley. The NRW map of Dark Skies and Light Pollution in Wales (**Figures 5.13a** and **b**) suggests that the Site experiences dark night skies.

5.32 There are no roads within the Site; however, it is crossed by a small number of moorland tracks providing access to and from surrounding farmsteads. There are also disused quarries across the Site.

5.33 As shown on **Figure 6.1** in **Chapter 6: Archaeology and Cultural Heritage**, the Site hosts several assets of cultural and heritage interest, including some which are designated as Scheduled Monuments. These include a prehistoric barrow cemetery, Cwmblaenerw Enclosed Long Hut and House Platforms, and the Aberedw Hill Deserted Rural Settlement, which dates from the medieval/post-medieval period. The site of the medieval Colwyn Castle is located to the north of the Site boundary, built over the remains of a Roman Fort. There are no Listed Buildings within the Site; however, there are several Grade II Listed Buildings located to the north, south and west of the Site; the nearest being the house at Maesbryncoch, located 167 m to the north-west of the Site boundary.

5.34 The Site is almost entirely open access land (common land), providing public access along with several PRowWs which cross it.

5.35 In summary, the key landscape elements / features within the Site are:

- Large-scale upland bracken moorland with heath, grassland, and pasture;
- Small streams within incised valleys, and ponds/pools on the plateau;
- Occasional small blocks and linear belts of woodland and conifer plantation;
- Heritage features of prehistoric and medieval origin, including nationally-designated assets;
- Open access common land crossed by PRowWs; and
- Sense of remoteness, with dark night skies.

Landscape of the Wider Study Area

5.36 As described earlier and shown in **Figure 5.1**, the overall study area extends to a 28 km radius from the outermost turbine of the Proposed Development (and a 33 km radius within the BBNP). This area includes the Radnorshire Hills (within which the Site is located), the Vales of Irfon and Ithon, the Upper Wye Valley, the eastern extent of the Cambrian Mountains, the Epynt plateau, the Wye and Usk Vales, and the BBNP. It also encompasses part of the West Midlands of England including the Clun and North-West Herefordshire Hills, a small area of the western extent of the Herefordshire Lowlands, and the northern extent of the Black Mountains and Golden Valley. The study area also includes a small part of the Shropshire Hills National Landscape.

5.37 Typical of this part of Wales, the study area is characterised by upland moorland hills dissected by steep sided valleys, as illustrated on **Figure 5.7**. The Site is located on an area of exposed upland plateau within part of the Radnorshire Hills, with several river valleys incising the rolling uplands which surround it. The Wye Valley lies to the west of the Site, and together with the Irthon and Ithon tributary rivers, incise large areas of upland as they flow through a narrow lowland vale between the Radnorshire Hills (northern and western parts of the study area), the eastern extents of the Cambrian Mountains (western part of the study area) and the Epynt plateau (south-western part of the study area). The narrow lowland vale is characterised by rolling pasture, small woodlands, and a patchwork of small fields enclosed by hedges and mature trees. Other, more minor, river valleys are located throughout the study area, including the Edw Valley that cuts through the Radnorshire Hills landscape, forming a narrow-incised valley immediately to the east of the Site. A shallow tributary brook valley runs perpendicular to the River Edw, in parallel with the northern boundary of the Site and south of the Gilwern Hills that rise above it.

5.38 Blocks of coniferous forestry are located throughout the study area, typically at higher elevation uplands and upper valley slopes. Uplands are generally characterised by areas of open moorland with rough grazing, including on upper valley sides, whilst a more complex farmed landscape of wood pasture exists on lower valley sides and valley floors.

5.39 Settlement is typically confined to the lower valleys with compact linear villages, together with a small number of larger nucleated, valley towns at river crossing points, including the spa towns of Builth Wells and Llandrindod Wells; their location influenced by the A470 and A483 which cross through the study area and near to the Site. Where these roads cross at Builth Wells is the location of the Royal Welsh Showground which becomes very busy throughout August. The Heart of Wales Railway Line runs through the study area, linking between the south-west of Wales and the English Midlands.

5.40 There are good opportunities for recreation throughout the study area as many of the upland areas allow for open access, and promoted routes cross the area including the Wye Valley Walk, Elan Valley Way, Heart of Wales Line Trail, and National Cycle Networks 8 and 825.

Landscape Character

National Landscape Character Areas (NLCA) - Wales

5.41 At the national level, NRW has published a series of National Landscape Character Areas (NCLAs)²¹, forming a broad landscape characterisation of Wales. The Site is almost entirely located within **NLCA 20: Bryniau Sir Faesyfed / Radnorshire Hills**²². This NLCA is described as ‘an area of gentle, smooth, upland hills’. The summary description continues:

‘Radnorshire’s topography is breathtaking and varied, with smooth, rolling, open moors, dissected by steep sided valleys with hedgerow-enclosed pastures by small rivers and streams, and ancient woodlands. Unfenced moorland roads reinforce the sense of openness and being away from the confines and pressures of other, more urbanised landscapes. The varying topography straddles the upland-lowland divide in many places, giving rise to marginal agriculture. Radnorshire, the old county name that included this area, historically had the lowest population of any of the Welsh counties. Offa’s Dyke runs through part of the area and there are a mix of English and Welsh influences to the east in this Marches landscape. It is a very rural, and in the main it is a quiet area, away from the focus of tourism, despite promotion as ‘Kilvert Country’.

5.42 The key characteristics, as stated in the profile of NLCA 20, are:

- **‘Smooth rounded moorland hills and glacially modified valleys** – Bedrock geology is that of Silurian rock, including sandstones, shales, and mudstones.
- **An undulating upland landscape** – with sinuous skylines and distant views from moor to moor.
- **Extensive sheep and cattle rearing.**
- **Minor river valleys** – such as the Ithon and Marteg, dissect the area. A lateral network of minor tributaries drains the hillsides.

²¹ National Landscape Character Areas (NLCAs). Available online at : <https://naturalresources.wales/evidence-and-data/maps/nlca/?lang=en> (accessed on 24/01/2024)

²² NLCA 20 Bryniau Sir Faesyfed / Radnorshire Hills profile. Available online at: <https://cdn.cyfoethnaturiol.cymru/media/682584/nlca20-radnorshire-hills-description.pdf?mode=pad&rnd=131550585616130000> (accessed on 24/01/2024)

- **Enclosed pasture in the valleys and lower hillsides** – with seasonally wet, deep peat soils and loams.
- **Heather dominated moorland** – occurs in the most elevated parts of the area, some recognised for red grouse.
- **A network of geometric fields of small to large scale** – defined by mixed native hedgerows interspersed with broadleaf woodland. Few extensive blocks of coniferous forestry.
- **Shelter belts** – in exposed upland and hillside locations in a few locations, at times incongruous in location and geometric shape, often coniferous.
- **Offa's Dyke** – illustrates the historic, strategic importance of this Marches landscape. Other historic elements included remnants of Medieval and post Medieval settlement, including motte and bailey castles, earthworks and moated sites.
- **Very little settlement, which is confined to the lower valleys** – the pattern is defined by compact linear villages, together with a small number of larger nucleated, valley towns at river crossing points. A comparatively low population in this former county.'

5.43 The Site and its immediate surroundings display several of the key characteristics of the NLCA, notably the undulating upland landscape of smooth rounded moorland hills, glacially modified valleys, heather dominated moorland, pasture on valley slopes, and settlement confined to the valleys.

5.44 The steep slope of the Wye Valley that forms the south-western part of the Site (excluding all of the proposed wind turbines) forms part of **NLCA 29: Dyffrynnoedd Gwy ac Wysg / Wye and Usk Vales**.

5.45 Other NLCAs within 15 km from the outermost turbines of the Proposed Development include:

- NLCA 21: Bryniau'r Canolbarth / Cambrian Mountains;
- NLCA 26: Blaenau Gwy / Upper Wye Valley;
- NLCA 27: Dyffrynnoedd Irfon ac Ieithon / The Vales of Irfon and Ithon; and

- NLCA 28: Epynt.

5.46 NLCA 30: Bannau Brycheiniog a'r Mynyddoedd Du / Brecon Beacons and Black Mountains covers the part of the BBNP that is located within the study area.

National Character Areas (NCA) - England

5.47 In England, at a national level, Natural England has published a series of National Character Areas (NCA), forming a broad landscape characterisation of England. NCAs within a 15 km radius from the outermost turbines of the Proposed Development include:

- NCA 58: Clun and North West Herefordshire Hills;
- NCA 59: Herefordshire Lowlands; and
- NCA 60: Black Mountains and Golden Valley.

5.48 The relevant NLCAs and NCAs are mapped on **Figure 5.8**.

Regional/ Local Landscape Character Assessments

5.49 At the regional/ local level, the landscape of the Site and the landscape within 15 km radius from the outermost turbines of the Proposed Development is defined in the following published landscape character assessments:

- Powys County Council (2022) Local Landscape Character Assessment for the Powys Local Development Plan Area Landscape Character Assessment Report; and,
- Herefordshire Council (2023) Herefordshire County Landscape Character Assessment.

Powys Landscape Character Assessment (2022)

5.50 The Powys Local Landscape Character Assessment²³ describes how the earlier 2008 assessment and LANDMAP has underpinned the definition of the landscape character areas: *'The original LCA (2008) drew heavily on baseline aspect area data gathered from LANDMAP, and the boundaries of the identified landscape character areas were principally derived from Visual and Sensory LANDMAP aspect areas boundaries. The current landscape character assessment adopted the boundaries of the original LCA (2008) in the first instance, although*

²³ LUC on behalf of Powys Council Powys Landscape Character Assessment (2022). Available at: <https://en.powys.gov.uk/article/13408/Replacement-Local-Development-Plan-Latest-Evidence>

these were checked and refined as appropriate using current LANDMAP data and other datasets, which was then verified by field work.' (para 2.12)

5.51 The majority of the Site (and all of the proposed wind turbines) lie within **LCA 50: Aberedw Uplands** (see **Figure 5.9a**), located in the south-east of the Powys LDP area and characterised by its '*distinctive open upland landscape*'. The key characteristics of this LCA are:

Topography, geology and drainage

- **'A series of upland hills, plateaus and ridges with a smooth and rounded profile, incised by upland brooks.**
- *At its lowest point where the LCA meets the Wye Valley, the elevation is around 200 m AOD, whereas the **upland hills frequently exceed 400 m AOD in elevation**, with the tallest, Gwaunceste Hill reaching 542 m AOD.*
- *The upland area is dominated by **late Silurian siltstones and sandstones**. These rocks have a general dip to the south-east and are often dissected by glacial and river valleys.*
- *The landscape contains **several distinctive rock outcrops** including Aberedw Rocks in the south-west of the LCA. There is a clear historic relationship to quarrying in the LCA, **with frequent disused quarries** present on the lower slopes.*

Vegetation cover

- *An area largely devoid of woodland, **with a small number of broadleaved shelterbelts scattered across the landscape** as well as small, isolated conifer blocks. Woodland is more common in the north of the area near New Radnor.*
- ***Some of the broadleaved woodlands within the landscape are of ancient semi-natural origin.** Part of Coed Aberedw SSSI designated woodland is in the west of the LCA.*

Agricultural land use and field patterns

- *The majority of this landscape comprises unenclosed, sheep-grazed, common land running along the upland ridges.*
- *In the north of the area, there is a greater presence of improved pasture fields, these tend to be large in scale and enclosed by post and wire fencing.*

Semi-natural habitats

- **Expansive areas of dry heathland heather moorland** are found at Glascwm and Gladestry Hills SSSI, comprising an upland area in the east of the LCA. The area also supports upland bird populations of conservation interest, with a notably large red grouse population.
- Llandeilo, Rhulen and Llanbedr Hills SSSI is an **expansive area of sub-montane upland** situated in the south-west of the character area, of ecological interest for its unusual moorland vegetation types.
- Important non-designated habitats include areas of **dry heathland, acid grassland and numerous upland mawn pools** which support species of national interest.

Archaeology and cultural heritage

- Early activity of likely Bronze Age origin within this area is reflected in the numerous funerary and ritual monuments including round and long barrows, cairns, a number of stone circles and standing stones (all designated as Scheduled Monuments).
- Part of the Cross Ridge Dyke Scheduled Monument crosses this area, interpreted to be an indicator of past territorial boundaries and likely to have been built in the Bronze or Iron Age. Wern Camp Hillfort is also identified as a Scheduled Monument of likely Iron Age origin.
- Medieval and late medieval features include the remains of three deserted rural medieval settlements, two platform houses and Crug Eryr Mound and Bailey Castle (designated as Scheduled Monuments).
- Post medieval to modern features designated as Scheduled Monuments include platform houses, an enclosed long hut and a deserted rural settlement.

Settlement and road pattern

- **Settlement is limited to the church settlement of Llanfihangel-nant-Melan** and a small number of isolated farmsteads on the lower reaches of the area.
- Buildings are **mixed with vernacular materials including stone, painted stone and rendered buildings**, usually nestled within lower-lying parts of the landscape.

- **Very few roads** cross this uplands area, with vast swathes only publicly accessible on foot. Where roads do occur they usually compromise minor lanes without boundary features crossing commons.
- The area is **traversed by Public Rights of Way (PRoW)** and a small part of National Cycle Route (NCN) Route 825 crosses the landscape near Glascwm.
- **The majority of the landscape is open access land** with only small areas on the lower slopes and in the north overlain with enclosed improved grazing.

Views and perceptual qualities

- The area has a strong visual relationship with the Aberedw Valley which it encircles, as well providing dramatic and long-reaching views over the adjacent lower lying areas of the Painscastle Uplands to the south and the Wye Valley to the west.
- Dramatic views to neighbouring elevated areas including the distinctive Painscastle Uplands LCA to the south-east, Radnor Forest LCA to the north and more distant views to summits within the Brecon Beacons National Park to the south-west.
- The area has a distinctly rural and exposed character with a sense of wildness.'

5.52 The LCA identifies the following aspects of the landscape to be particularly valued for their landscape character and as such, are particularly sensitive to development-led change:

- 'Rural and remote character, with a sense of wildness and tranquillity.
- Valued semi-natural habitats including extensive SSSI designated moorland habitats, with important non-designated habitats including mawn ponds.
- Valued geological features including rocky outcrops.
- Valued historic features including Scheduled Monuments indicating Bronze Age and medieval occupation.
- Recreational value and views from PRoWs and open access land.
- Expansive views from the upland landscape over the surrounding lower-lying areas and to other upland landscapes including distant views to summits within the Brecon Beacons National Park.'

5.53 Other Powys LCAs within a 15 km radius from the outermost turbines of the Proposed Development are listed below (and shown on **Figure 5.9a**):

- LCA 37: Drysgol Uplands;
- LCA 38: River Dulas Hills & Valleys;
- LCA 39: Ithon Valley;
- LCA 40: Llanbister-Penybont Uplands;
- LCA 43: Radnor Forest;
- LCA 44: Wye Valley (Rhayader to Builth Wells);
- LCA 45: Presteigne & Beggar Bush Hillsides;
- LCA 47: Bryn Glas Uplands;
- LCA 49: New Radnor Valley;
- LCA 51: Painscastle Uplands;
- LCA 52: Southern Bryn Glas Valleys;
- LCA 53: Irfon Valley;
- LCA 54: Aberedw Valley;
- LCA 55: Wye Valley (Builth Wells to Hay-on-Wye);
- LCA 56: Northern Mynydd Epynt;
- LCA 57: Mynydd Epynt;
- LCA 58: Eastern Mynydd Epynt Hills;
- LCA 59: Southern Mynydd Epynt Valleys; and
- LCA 60: Llanfilo/Bronllys Farmlands.

Herefordshire Landscape Character Assessment (2023)

5.54 The Herefordshire County Landscape Character Assessment covers the whole county of Herefordshire including areas within the Wye Valley National Landscape and Malvern Hills National Landscape. The assessment updates earlier assessments undertaken in 2009 and

2004 respectively. The landscape character assessment is intended to both inform work on policy development and development management, guiding development that is sympathetic to local character and the qualities of the landscape.

5.55 The Herefordshire LCAs²⁴ within a 15 km radius from the outermost turbines of the Proposed Development are listed below (and shown on **Figure 5.9a**):

- LCA 1c: Upper Wye – River Floodplains LCT;
- LCA 9a: North West Herefordshire Hills – Limestone Uplands LCT; and
- LCA 10b: Briley to Lyonshall LCA - Border Sandstone Hills and Farmland LCT.

LANDMAP

5.56 LANDMAP is a Geographical Information System (GIS) where landscape characteristics, qualities, sensitivities and influences are recorded and evaluated in a nationally consistent dataset. LANDMAP separates the information into five ‘aspect layers’:

- **Visual and Sensory:** Evaluates landscape characteristics and qualities that we perceive through our senses, primarily visual. This includes information on individual physical attributes of landform and land cover, and the relationship between them.
- **Historic Landscape:** Identifies the landscape characteristics and qualities which depend on key historic land uses, patterns and features.
- **Cultural Landscape:** Describes the link between people and landscape, including the way in which human activity shapes the landscape and the meaning of places to people.
- **Landscape Habitats:** Identifies habitat features and characteristics, as well as their spatial relationship with the wider landscape.
- **Geological Landscape:** Identifies the landscape qualities determined by bedrock and surface processes, such as hydrology, which control erosion and deposition.

5.57 These aspect layers are then divided into ‘aspect areas’, which form the reporting units for LANDMAP. Each aspect area is given an overall evaluation score defined as ‘outstanding’

²⁴ Herefordshire landscape Character Assessment LCT profiles. Available at: <https://www.herefordshire.gov.uk/downloads/file/25569/chapter-7-landscape-character-assessment-2023>

(important at an international or national level), 'high' (important at a regional or county level), 'moderate' (important at a local level), or 'low' (little or no importance).

5.58 As mentioned previously, LANDMAP data was used as the basis for the identification of LCA boundaries as part of the Powys and BBNP Landscape Character Assessments, informed by the geographic extents of the Visual and Sensory aspect area (VSAA).

5.59 Although LANDMAP information has already been used to inform published landscape character assessments for Powys and the BBNP, descriptive and evaluative LANDMAP information is used in this assessment to supplement the published landscape character information. This is explained further in **Appendix 5.3**. The aspect areas that cover the Site are presented below in **Table 5.7** and mapped on **Figures 5.11a to e**.

Table 5.7 LANDMAP Aspect Areas within the Site

Aspect Area	Aspect ID	Area Name	Location in the Site	Overall Evaluation	Justification
Visual and Sensory (VSAA) (see Figure 5.11a)	RDNRVS127	Upland valley, Edw & adjacent	Covers small parts in the south and east of the Site (and the proposed locations of T8, T17, Borow Pit A and B).	High	<i>“one of the finest landscapes in the region, very attractive, well composed, upland valley landform, very well defined traditional field pattern, and diversity of landcover types within a coherent structure - make a high to outstanding landscape.”</i>
	RDNRVS164	Upland moor, Glascwm Hill	Covers most of the Site (and the proposed locations of T1-7 and T9-16 and T18).	High	<i>“good example of wild, open, spacious, natural, diverse, tranquil upland moorland which is generally well managed, plus attractive views.”</i>
	RDNRVS133	Rolling hills, central south-east	Covers a small part in the north of the Site (and the	Moderate	<i>“attractive traditional pastoral landscape with strong field pattern, often with well laid hedges typifies Radnor - and results in overall</i>

Aspect Area	Aspect ID	Area Name	Location in the Site	Overall Evaluation	Justification
			proposed location of the substation).		<i>moderate values as it is not unusual or particularly distinctive.”</i>
Historic Landscape (HLAA) (see Figure 5.11b)	RDNRHL244	Aberedw Hill	Covers most of the Site (and the proposed locations of T1-7, T9-18 and Borrow Pit B).	High	<i>“Relatively rare area of unenclosed upland common with patches of undisturbed and significant archaeology.”</i>
	RDNRHL914	Edw	Covers small parts in the south and east of the Site (and the proposed locations of T8 and Borrow Pit A).	Outstanding	<i>“A large sinuous area covering entire length of the Edw valley and its tributaries. The land is enclosed with systems of irregular fields and is intensely settled and farmed and contains significant archaeological remains of all periods all of which enhances its score.”</i>
	RDNRHL235	Pentre	Covers a small part in the north of the Site (and the	Moderate	<i>“An amorphous area of mixed fields at the broad mouth of the Cnithro valley. Apart from</i>

Aspect Area	Aspect ID	Area Name	Location in the Site	Overall Evaluation	Justification
			proposed location of the substation).		<i>its field pattern however it is remarkably devoid of historical interest.”</i>
Geological Landscape (GLAA) (see Figure 5.11c)	RDNRGL43 5	Aberedw- Glascwm	Covers most of the Site (and the proposed locations of T1-18, and Borrow Pit A and B).	High	<i>“Significant upland area dominated by siltstones and sandstones of late Silurian (Ludlow-Pridoli) age, including several sites of at least regional geological significance.”</i>
	RDNRGL18 7	Penybont- Hundred House	Covers a small area in the north of the Site (and the proposed location of the substation).	Moderate	<i>“Outcrop of widespread geology; exposures of at least regional importance not currently recorded.”</i>
Landscape Habitat (LHAA)	RDNRLH04 1	N/A	Covers most of the Site (and the proposed locations	High	No justification given.

Aspect Area	Aspect ID	Area Name	Location in the Site	Overall Evaluation	Justification
(see Figure 5.11d)			of T1-7 and T9-16 and T18). .		
	RDNRLH050	N/A	Covers small parts in the south and east of the Site (and the proposed locations of T8, T17, Borow Pit A and B).	High	
	RDNRLH051	N/A	Covers a small part in the north of the Site (and the proposed location of the substation).	Moderate	

Aspect Area	Aspect ID	Area Name	Location in the Site	Overall Evaluation	Justification
Cultural Landscape (CLAA) (see Figure 5.11e)	RDNRCLS074	Upland valley, Edw & adjacent	Covers small parts in the south and east of the Site (and the proposed locations of T8, T17, Borow Pit A and B).	High	No justification given.
	RDNRCLS123	Upland moor, Glascwm Hill	Covers most of the Site (and the proposed locations of T1-7 and T9-16 and T18).	High	
	RDNRCLS080	Rolling hills, central south-east	Covers a small part in the north of the Site (and the proposed location of the substation).	Moderate	

Identifying Landscape Units for Full Assessment

5.60 For the purpose of this LVIA, the ‘landscape units’ for assessment have been based on the LCAs set out in PCC’s Local Landscape Character Assessment and the BBNP Authority’s Landscape Character Assessment. The LCAs described within these assessments are each made up of the multiple smaller LANDMAP units, which are variable according to which of the five aspects they fall within. As noted in LANDMAP GN46 *“assessors carrying out LVIA need to judge the appropriate scale of reporting for the development, which may not always be the reporting scale of LANDMAP”*.

5.61 The LCA units are considered an appropriate scale to assess the effects on landscape character as they are at a scale proportionate to the study area while reflecting distinct differences in character. LANDMAP information from the survey records is also used to further inform the LVIA. Detailed assessments have been undertaken for the landscape units within 15 km of the nearest proposed turbine as agreed with PCC (see **Table 5.1**). In addition, the LCAs covering the extents of the BBNP (up to 33 km from the outermost turbine of the Proposed Development) have also been considered.

5.62 The theoretical visibility of the Proposed Development (based on turbine hub height and blade tip height ZTVs) has been used as a preliminary means of identifying which LCAs within 15 km require assessment, and which LCAs can be scoped out of further consideration because they are unlikely to experience significant effects arising from the introduction of the Proposed Development (shown on **Figure 5.9b**). This Scoping exercise has been undertaken and is set out in **Appendix 5.3**. Given the ZTVs have been prepared on the basis of a ‘bare ground’ digital terrain model (DTM) that does not take into account the influence of screening by woodland, vegetation and buildings or other features, the theoretical visibility over-emphasises the extent of visibility of the Proposed Development and therefore represents a ‘maximum potential visibility’ scenario. LCAs with limited actual visibility within 15 km of the Site, as informed by observations made during fieldwork regarding the nature of views and screening by woodland and other features, were scoped out and not considered further within the assessment. The same process has been applied for LCAs within the BBNP (with the relevant ZTVs shown on **Figure 5.10b**).

5.63 The assessment of landscape units is presented in **Appendix 5.4**.

Designated Landscapes

5.64 The designation of landscapes indicates a recognised value placed by society on a landscape. An absence of designation does not mean an absence of landscape value; however, designations are a useful starting point for understanding landscape value.

National Landscape Designations

5.65 The Site itself does not fall within any nationally designated landscapes, however the BBNP is situated approximately 14 km from the outermost turbine (T7) of the Proposed Development, as shown in **Figure 5.12a**. The special qualities of the nationally important landscape are highlighted within the Management Plan for the BBNP - 'Y Bannau: The Future'²⁵ - and are as follows:

- **Sweeping grandeur & outstanding natural beauty:** The National Park's sweeping grandeur and outstanding natural beauty observed across a variety of harmoniously connected landscapes, including marvellous gorges and waterfalls, classic karst geology with limestone pavement, caves and sink holes, contrasting glacial landforms such as cliffs and broad valleys carved from old red sandstone and prominent hilltops with extensive views in all directions. A landscape that provides a sense of time depth and timelessness.
- **Contrasting patterns, colours & textures:** A working, living "patchwork" of contrasting patterns, colours and textures comprising well-maintained farmed landscapes, open uplands, lakes and meandering rivers, punctuated by small-scale woodlands, country lanes, hedgerows and stone walls and scattered settlements.
- **A sense of place & cultural identity:** A sense of place and cultural identity - "Welshness" - characterised by the indigenous Welsh language, religious and spiritual connections, unique customs and events, traditional foods and crafts, relatively unspoilt historic towns and villages, family farms and continued practices of traditional skills developed by local inhabitants to live and earn a living here, such as common land practices and grazing.

²⁵ - Bannau Brycheiniog National Park Authority (2023) Y Bannau: The Future - The Management Plan For Bannau Brycheiniog National Park 2023-2038. Available online: <https://future.bannau.wales/wp-content/uploads/2023/04/Y-Bannau-The-Future-1-1.pdf>

- **An intimate sense of community:** An intimate sense of community where small, pastoral towns and villages are comparatively safe, friendly, welcoming and retain a spirit of cooperation.
- **Enjoyable & accessible:** Enjoyable and accessible countryside with extensive, widespread and varied opportunities to pursue walking, cycling, fishing, water-based activities and other forms of sustainable recreation or relaxation.
- **Sounds, sights, smells & tastes:** A feeling of vitality and wellbeing that comes from enjoying the National Park's fresh air, clean water, rural setting, open land and locally produced foods.
- **Sense of discovery:** A sense of discovery where people explore the National Park's hidden secrets and stories such as genealogical histories, prehistoric ritual sites, relic medieval rural settlements, early industrial sites, local myths and legends and geological treasures from time immemorial.
- **Peace, tranquillity & darkness:** A National Park offering, dark, night time skies, peace and tranquillity with opportunities for quiet enjoyment, inspiration, relaxation and spiritual renewal.
- **Mosaic of diversity:** The geology and climate vary greatly across the Park creating an elaborate patchwork landscape rich in biodiversity. The Park hosts heathlands, grasslands and woodlands, with uplands and lowlands, natural lakes and riparian habitats. The Park contains limestone pavement and blanket bogs of international and national importance. Several endangered species survive in the Park, including some for which the Park is their furthest extent of their natural range.
- **Living landscape:** An abundance of wildlife thrives in semi-natural habitats that have been lived in and shaped by human settlement for millennia. The landscape is interlaced with ancient hedgerows bustling with life, enclosing wildlife-rich hay meadows, and primeval woodlands that cloak some steep-sided valleys. Veteran trees adorn the landscape, carrying the scars of centuries of changing dependency on their resources. Heather-dominated uplands maintained through grazing by horses, sheep and cattle are a testament to the intimate relationship between biodiversity and farming.

5.66 BBNP is also designated as an International Dark Sky Reserve. The level of dark skies within the BBNP and across the study area is illustrated in **Figures 5.13a** and **b**.

BBNP Landscape Character Assessment (2012)

5.67 The BBNP has its own Landscape Character Assessment which provides information about landscape character, special qualities (with those of relevance considered within **Appendix 5.6**), and issues of landscape change within the BBNP. Developed in accordance with the holistic approach to landscape set out in the European Landscape Convention and utilising the LANDMAP database, the document describes the landscapes within the BBNP, classifying the park into five broad Landscape Character types (LCTs), with a further subdivision into 15 LCAs.

5.68 LCAs within the BBNP and within the 33 km radius from the outermost turbines of the Proposed Development are as follows:

- LCA 1: Towy Valley Foothills;
- LCA 2: Y Mynydd Du;
- LCA 3: Fforest Fawr
- LCA 5: Western Usk Tributaries;
- LCA 6: Middle Usk Valleys;
- LCA 7: Central Beacons;
- LCA 8: Talybont and Taff Reservoir Valleys;
- LCA 9: Mynyddoedd Llangatwg & Llangynidr;
- LCA 11: Eastern Usk Valley;
- LCA 12: Skirrid And Sugar Loaf;
- LCA 13: The Black Mountains; and
- LCA 14: Wye Valley Foothills.

5.69 The Shropshire Hills National Landscape occupies land at the north-eastern edge of the study area, approximately 26 km from the outermost wind turbine of the Proposed

Development. However, there will be no visibility of the Proposed Development from the part of the Shropshire Hills National Landscape that falls within the study area, as indicated by the ZTV map (see **Figure 5.12b**), and so this was scoped out of the assessment, as noted in the Scoping Report.

Historic Landscape Designations

5.70 The Register of Landscapes of Historic Interest in Wales recognises a number of historic landscapes of national significance across Wales.

5.71 Registered Landscapes of Historic Interest are shown on **Figures 5.12a** and **b**. The nearest Registered Historic Landscapes are the Middle Wye Valley²⁶ located approximately 11.5 km to the south-east of the outermost turbine (T7) of the Proposed Development, and the Elan Valley²⁷, located approximately 18 km to the north-west of the outermost turbine (T6) of the Proposed Development. The Middle Wye Valley is considered to be of Outstanding Historic Importance, and the Elan Valley is of Special Historic Importance. Potential effects on these Registered Historic Landscapes are considered within **ES Chapter 6** where relevant, although they have also informed ‘value’ in both the landscape assessment (**Appendix 5.4**) and visual assessment (**Appendix 5.5**).

Local Landscape Designations

5.72 PCC previously designated Special Landscape Areas (SLAs)²⁸, but now recommends the use of LANDMAP to identify valued characteristics and qualities of the Powys landscape. The Landscape Supplementary Planning Guidance²⁹ recommends analysing the survey reports undertaken for each LANDMAP aspect area and these survey reports have been used to inform the judgement concerning landscape value and value of views in this LVIA.

5.73 Within the 28 km study area, only a very small part of the North-Eastern Upland SLA in Carmarthenshire (designated in the Carmarthenshire LDP 2006-2021) occurs at the south-

²⁶ Cadw (2002) Full Reports of Registered Historic Landscape – Middle Wye Valley (HLW (P) 3)

²⁷ Cadw (2001) Full Reports of Registered Historic Landscape – Elan Valley (HLW (P) 4)

²⁸ Special Landscape Areas (SLAs) are a non-statutory designation which are generated by local planning authorities to enable landscapes that are unique, exceptional, or distinctive in the local authority context to be defined

²⁹ Powys County Council (Adopted 2019) Supplementary Planning Guidance: Landscape

western edge of the study area. At this distance, there will be no significant effects on this landscape (as acknowledged in the Scoping Report) and so it has been scoped out of this LVIA.

5.74 There are no local landscape designations in the Herefordshire Adopted Core Strategy³⁰ or the Shropshire Adopted Core Strategy³¹.

Visual Baseline

Analysis of Visibility of the Proposed Development

5.75 The ZTVs in **Figures 5.3a and b** and **Figures 5.4a and b** show the theoretical visibility of the Proposed Development to a turbine hub height of 125.5 m and a turbine maximum blade tip height of 200 m respectively, and both together on **Figures 5.5a and b**. The ZTV in **Figure 5.6** shows the theoretical visibility of the substation to a maximum height of 12.35 m. The ZTVs are based on a bare ground model and do not take into account the effects of screening provided by buildings and/ or vegetation. Visibility of the Proposed Development has been verified in the field.

5.76 The ZTVs indicate theoretical visibility of the proposed turbines from areas of high ground in the Radnorshire Hills, Cambrian Mountains, the Epynt Plateau, and Black Mountains (with more limited visibility from the Clun and North West Herefordshire Hills). Theoretical visibility of turbines is also indicated from the Wye and Usk Vales, the Upper Wye Valley, the Vales of Irfon and Ithon and the Herefordshire Lowlands, as well as from the BBNP, including the north-facing slopes of the Black Mountains and Fforest Fawr. Theoretical visibility of the substation is more confined to the immediate valleys of the Cnithio Brook and Colwyn Brook and to areas of high ground in the Radnorshire Hills and the Epynt Plateau.

5.77 There are a number of existing operational or under construction wind energy developments within the study area, which are listed in **Table 5.11** and shown in **Figure 5.19**. All of these developments are included as part of the baseline for the assessment, since they are already present within the landscape and in views. They are also illustrated on **Figure 5.20**

³⁰ Herefordshire Council (Adopted 2015) Core Strategy 2011-2031

³¹ Shropshire Council (Adopted 2011) Shropshire Local Development Framework: Adopted Core Strategy

which shows a combined ZTV of the maximum blade tip heights of all operational and under construction wind energy developments with the Proposed Development.

Key Visual Receptors

5.78 Visual receptors are the people who would be affected by changes in views, and they are usually grouped by what they are doing at those places, for example:

- People within settlements (local communities) surrounding the Site;
- People travelling on railways and roads around and through the Site;
- People using open access land, walking routes and cycle routes in and around the Site for recreational purposes;
- People visiting particular attractions, promoted viewpoints (such as those depicted with a blue viewpoint symbol on the 1:50,000 OS map base) or popular hill summits; and
- People visiting and using the BBNP for recreational purposes.

People within Settlements (Local Communities)

5.79 Settlements within the study area are typically located in the valleys. The LVIA considers visual effects on the following settlements (that fall wholly or partially within the ZTV of the wind turbines - as shown on **Figures 5.14a and b**):

- Cregrina – approximately 0.8 km from the nearest turbine;
- Hundred House – approximately 1.6 km from the nearest turbine;
- Llansantffraed-in-Elwel – approximately 2.1 km from the nearest turbine;
- Franksbridge – approximately 3.3 km from the nearest turbine;
- Builth Wells – approximately 3.5 km from the nearest turbine;
- Llanelwedd – approximately 3.5 km from the nearest turbine;
- Caerwnon Park – approximately 7.1 km from the nearest turbine;
- Cilmerly – approximately 7.3 km from the nearest turbine;
- Llandrindod Wells – approximately 8 km from the nearest turbine;

- Newbridge-on-Wye – approximately 9 km from the nearest turbine; and
- Llanyre – approximately 11.1 km from the nearest turbine.

5.80 The settlements of Aberedw, Crossgates, Llandegley, Llanfihangel Rhydithon, New Radnor, Gladestry, Newchurch, Rhos-goch, Painscastle, Clyro, Hay-on-Wye, Llowes, Llanigon, Glasbury, Ffynnon Gynydd, Erwood, Gwenddwr and Llangammarch Wells do not fall within the ZTV and so have been scoped out of the LVIA, as noted in the Scoping Report.

5.81 Although the ZTV indicates theoretical visibility from some parts of Fron, Penybont, Glaswm, Boughrood, Alltmawr, Garth and Builth Road, the limited extent of the Proposed Development likely to be visible, combined with the layout of the settlements and presence of screening means wind turbines are extremely unlikely to significantly affect the visual amenity of these local communities, and therefore they have also been scoped out of the LVIA, as noted in the Scoping Report.

People Travelling on Railways and Roads

5.82 The LVIA considers the effects on sequential views experienced by road users on the key roads where theoretical visibility is indicated. Many of the roads follow valleys where visibility of the Proposed Development is reduced, but the following roads are assessed as they fall within the ZTV (as shown on **Figures 5.15a** and **b**):

- A481 – approximately 1.1 km from the nearest turbine;
- A470 – approximately 1.6 km from the nearest turbine;
- A483 – approximately 3.6 km from the nearest turbine;
- A44 – approximately 8.1 km from the nearest turbine; and
- A4081 – approximately 10.4 km from the nearest turbine.

5.83 Consideration is also given to the pattern of visibility and how this will affect views from the following minor roads:

- B4567 – approximately 1.1 km from the nearest turbine; and
- B4520 – approximately 4 km from the nearest turbine.

5.84 The Heart of Wales Railway Line passes through Garth, Cilmeri, Builth Road, Llandrindod Wells and Penybont. However, the railway line is in a cutting and is contained by

mature vegetation along the length of this route, which means all of the turbines are unlikely to be visible, and therefore this receptor has been scoped out of the LVIA, as noted in the Scoping Report.

People Using Open Access Land, Walking Routes and Cycle Routes

5.85 The LVIA considers visual effects on the following recreational assets (that fall wholly or partially within the ZTV of the wind turbines - as shown on **Figures 5.16a** and **b**):

- Open access land that falls within the ZTV, including:
 - Aberedw Hill, Llan-fraith Hill and Wylfre – which covers the Site;
 - Perthi Common, Carneddau and Gilwern Hill – approximately 1.5 km from the nearest turbine;
 - Red Hill, Rhulen Hill, Llanbedr Hill and Llandeilo Hill – approximately 2 km from the nearest turbine;
 - Little Hill³², Cefn Wylfre and Glascwm Hill – approximately 2.4 km from the nearest turbine;
 - Garth – approximately 2.7 km from the nearest turbine;
 - Gwaunceste Hill, Little Hill³², Llanfihangel Hill, Colva Hill and Mynd – approximately 5 km from the nearest turbine;
 - The Begwns – approximately 7 km from the nearest turbine;
 - Moelfre, Cefn-poeth and Comin-y-garth – approximately 7 km from the nearest turbine;
 - Llandegley Rhos – approximately 8 km from the nearest turbine; and
 - Cefn Gladwen, Cefn Llwydalit, and Cefn Clawdd – approximately 8.5 km from the nearest turbine.
- The following promoted routes:
 - National Cycle Network (NCN) Route 825 (including open access land at Hundred House Common) – approximately 1 km from the nearest turbine;

³² There are two discrete areas that are both called 'Little Hill'.

- NCN Route 8 – approximately 2.7 km from the nearest turbine;
- the Wye Valley Walk (including open access land at Banc y Celyn) – approximately 3.3 km from the nearest turbine;
- The Heart of Wales Line Trail – approximately 4 km from the nearest turbine; and
- the Elan Valley Way – approximately 14.3 km from the nearest turbine.

5.86 The Offa's Dyke Path (a National Trail) is mostly outside of the ZTV for the turbines. There are short sections of the route that fall within the ZTV (at Disgwylfa Hill and Hergest Ridge), but views will be limited to the very tips of the proposed wind turbines, seen at distances of 11 km and 14 km respectively. Given this context, effects on the visual amenity experienced by recreational users of the National Trail are unlikely to be significant, and so have been scoped out of the LVIA, as noted in the Scoping Report.

People Visiting Attractions and Promoted Viewpoints

5.87 The LVIA also considers effects on people visiting areas of interest, such as heritage features, and promoted viewpoints (such as those depicted with a blue viewpoint symbol on the 1:50,000 OS map base) – as shown on **Figures 5.17a** and **b**. These are:

- Builth Castle – approximately 3.8 km from the nearest turbine;
- Royal Welsh Showground – approximately 4.1 km from the nearest turbine; and
- The promoted viewpoint south of Cwm Graig-ddu – approximately 12.5 km from the nearest turbine.

5.88 Although the ZTV indicates theoretical visibility from Cefnlllys Castle, views will be limited to the very tips of the proposed wind turbines, seen at a distance of 9 km. At this distance, effects on the visual amenity experienced by visitors to the castle are unlikely to be significant, so have been scoped out of the LVIA as noted in the Scoping Report.

People Visiting Campsites

5.89 The LVIA also considers effects on people at the following nearby campsites (which are depicted with a blue 'camping and caravan site' symbol on the 1:50,000 OS map base) – as shown on **Figures 5.17a** and **b**:

- Fforest Fields, Mid Wales Caravan & Camping Site – approximately 0.8 km from the nearest turbine; and
- Brynchrach Caravan and Camping Site – approximately 1.8 km from the nearest turbine.

People Visiting the Bannau Brycheiniog National Park

5.90 The assessment also considers effects on people visiting popular hill summits in the BBNP up to 33 km away, including Hay Bluff (677 m AOD), Cefn Llechid (400 m AOD), Pen y Fan (886 m AOD), Corn Du (873 m AOD), Cribyn (795 m AOD) and Fan y Big (717 m AOD).

Selection of Representative Viewpoints to Inform the Assessment of Visual Receptors

5.91 Assessment viewpoints aim to provide a representation of the range of receptors who will experience changes to views, including views from settlements, points of interest and sequential views along routes. The viewpoints are all publicly accessible and include:

- Locations selected to represent the experience of different types of receptor.
- Locations at different distances to provide a representative range of viewing angles and distances (i.e. short, medium and long distance views).
- Locations which represent a range of viewing experiences (i.e. static views and points along sequential routes).
- Specific viewpoints selected because they represent promoted views or viewpoints within the landscape.
- Illustrative viewpoints chosen specifically to demonstrate a particular visual effect or specific issue (which could include restricted visibility in particular locations).

5.92 The proposed assessment viewpoint locations were agreed with Enplan (on behalf of PCC) in May 2024 and will be formally recorded in a Statement of Common Ground between PCC and the Applicant (see **Table 5.1**) and are set out below in **Table 5.8** and mapped on **Figures 5.18a** and **b**.

Table 5.8 Proposed Viewpoint Locations

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
Representative Day-time Viewpoints						
1	St David's Church, Cregrina	312340	252117	0.9	T18	Represents views experienced by the local community at Cregrina.
2	A481 at Matts Common	309216	253845	1.6	T13	Represents views experienced by road users of the A481 and recreational users of Matts Common.
3	A481 at Hundred House	311275	254464	1.7	T16	Represents views experienced by the local community at Hundred House, road users of the A481, recreational users of NCN

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						825, Hundred House Common and PRowS to the north-east, and visitors to Brynchrach Caravan and Camping Site.
4	A470 at Aberduhonw	306374	250687	1.8	T3	Represents views experienced by road users of the A470 and recreational users of PRowS to the west. Also, a proxy viewpoint for views experienced by the road users of the B4567.
5	NCN 825 near Cregrina	313423	252194	1.9	T18	Represents views experienced by recreational users of NCN

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						825 and PRowS to the east.
6	Perthi Common	309513	254674	2.4	T13	Represents views experienced by the local community at Llansantffraed-in-Elwel and recreational users of Perthi Common and PRowS to the north.
7	Twm Tobacco's Grave on Llandeilo Hill	310957	247533	2.6	T7	Represents views experienced by recreational users of open access land at Llandeilo Hill and PRowS to the south.
8	Carneddau	306616	254067	2.8	T6	Represents views experienced by recreational

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						users of open access land at Carneddau and PRowS to the north-west.
9	Garth Hill	305325	250626	2.9	T3	Represents views experienced by recreational users of open access land at Garth Hill and PRowS to the west.
10	Rhulen, south east of Aberedw	313734	249815	3.1	T18	Represents views experienced by recreational users of PRowS to the south-east.
11	Castle Bank	308755	256184	4.0	T13	Represents views experienced by recreational users of open access land at Gilwern Hills and

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						PRoWs to the north-west.
12	Wye Bridge, Builth Wells	304226	251262	4.0	T3	Represents views experienced by the local communities at Builth Wells and Llanelwedd, road users of the A470 and A483, recreational users of NCN 8 and the Wye Valley Walk, and visitors to the Royal Welsh Showground and Builth Castle.
13	Unnamed lane at Bettws	311587	256926	4.2	T16	Represents views experienced by recreational users of PRoWs to the north-east. Also, a proxy

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						viewpoint for views experienced by the local community at Franksbridge.
14	Unnamed lane, north-east of Llanbedr Hill	314468	248947	4.3	T18	Represents views experienced by recreational users of open access land at Llanbedr Hill and PRowS to the south-east.
15	Royal Welsh Showground	304043	251736	4.3	T3	Represents views experienced by visitors to the Royal Welsh Showground, road users of the A470 and A483, and by the local community at Llanelwedd.

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
16	Wye Valley Walk near Banc y Celyn	305955	246184	4.9	T1	Represents views experienced by recreational users of the Wye Valley Walk, PRowS to the south-west and open access land at Banc y Celyn.
17	NCN 8 near Cilmeri	301787	252386	6.6	T5	Represents views experienced by recreational users of NCN 8 and PRowS to the west. Also, a proxy viewpoint for views experienced by the local communities at Cilmeri and Caerwnon Park, and road users of the western

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						extent of the A483.
18	Llanfihangel Hill	318391	255264	7.5	T17	Represents views experienced by recreational users of open access land at Llanfihangel Hill and PRowS to the north-east.
19	The Begwns Roundabout	315480	244374	7.8	T7	Represents views experienced by recreational users of open access land at The Begwns and PRowS to the south-east.
20	Bridleway off A44 near Castell Crugerydd	315873	259359	8.2	T16	Represents views experienced by road users of the A44 and recreational

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						users of PRowS to the north-east.
21	Heart of Wales Line Trail at Moelfre	299909	248720	8.6	T3	Represents views experienced by recreational users of the Heart of Wales Line Trail, open access land at Moelfre and PRowS to the west.
22	Llandegley Rocks	313144	261807	9.3	T16	Represents views experienced by recreational users of the open access land at Llandegley Rhos and PRowS to the north-east.
23	Open access land on Mynd	318061	259479	9.6	T17	Represents views experienced by recreational users of the open

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						access land at Mynd and PRoWs to the north-east.
24	A4081 at Llanyre	304475	262305	11.1	T6	Represents views experienced by the local community at Llanyre and road users of the A4081. Also, a proxy viewpoint for views experienced by the local community at Llandrindod Wells.
25	Promoted viewpoint south of Cwm Graig-ddu	296419	246664	12.5	T3	Represents views experienced by visitors to the promoted viewpoint and recreational

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						users of PRowS to the south-west.
26	Elan Valley Way near Cwmwrach	312183	267087	14.3	T16	Represents views experienced by recreational users of the Elan Valley Way and PRowS to the north.
27	Hay Bluff, Bannau Brycheiniog National Park	324524	236701	19.6	T7	Represents views experienced by visitors to the BBNP. This viewpoint is the equivalent of key view 'BB25' in the BBNP's Visible settings and Key Views dataset.
28	Cefn Llechid, Bannau	294177	227575	26.9	T1	Represents views experienced by

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
	Brycheiniog National Park					visitors to the BBNP.
29	Pen y Fan, Bannau Brycheiniog National Park	301200	221582	29.6	T1	Represents views experienced by visitors to the BBNP. This viewpoint is the equivalent of key view 'BB15' in the BBNP's Visible settings and Key Views dataset.
Representative Dusk/ Night-time Viewpoints – assessed in Appendix 5.8: Aviation Lighting Impact Assessment						
N1	Perthi Common	309512	254676	2.4	T13	Represents views experienced by the local community at Llansantffraed-in-Elwel and recreational users of Perthi

VP no.	Viewpoint Location	X	Y	Approximate Distance from nearest wind turbine (km)	Nearest Proposed Turbine	Receptor / Reason for Selection
						Common at dusk/ night. Also, a proxy viewpoint for views experienced by the local community at Hundred House at dusk/ night.
N2	Hay Bluff, Bannau Brycheiniog National Park	324364	236635	19.6	T7	Represents views experienced by visitors to the BBNP and International Dark Sky Reserve at dusk/ night. This viewpoint is the equivalent of key view 'BB15' in the BBNP's Visible settings and Key Views dataset.

Relationship between Visual Receptors and Representative Viewpoints

5.93 The relationship between the visual receptors that have been assessed in this LVIA and the representative viewpoints are set out in **Table 5.9**. The assessment of visual receptors is set out in **Appendix 5.5**. Where no specific viewpoint exists, wirelines/models have been used to assess the effect on the receptor.

Table 5.9 Relationship between Visual Receptors and Representative Viewpoints

Visual Receptor Group	Visual Receptor	Representative Viewpoint(s)
People within Settlements (Local Communities)		
People within Settlements (Local Communities)	Cregrina	Viewpoint 1: St. David's Church, Cregrina
	Hundred House	Viewpoint 3: A481 at Hundred House
	Llansantffraed-in-Elwel	Viewpoint 6: Perthi Common is close by and is representative.
	Franksbridge	Viewpoint 13: Unnamed lane at Bettws can be used as a proxy
	Builth Wells	Viewpoint 12: Wye Bridge, Builth Wells
	Llanelwedd	Viewpoint 12: Wye Bridge, Builth Wells Viewpoint 15: Royal Welsh Showground
	Caerwnon Park	Viewpoint 17: NCN 8 near Cilmerly can be used as a proxy (the view from VP 17 is clearer than from Caerwnon Park)

Visual Receptor Group	Visual Receptor	Representative Viewpoint(s)
	Cilmery	Viewpoint 17: NCN 8 near Cilmery can be used as a proxy (the view from VP 17 is clearer than from Cilmery)
	Llandrindod Wells	Viewpoint 24: A4081 at Llanyre can be used as a proxy (the view from VP 24 is clearer than from Llandrindod Wells)
	Newbridge-on-Wye	No specific viewpoint (due to lack of opportunities for clear views from the settlement) - wirelines/ models have been used to assess the effect on the receptor.
	Llanyre	Viewpoint 24: A4081 at Llanyre
People Travelling along Roads		
Road Users of Main Roads	Road users of the A481	Viewpoint 2: A481 at Matts Common Viewpoint 3: A481 at Hundred House
	Road users of the A470	Viewpoint 4: A470 at Aberduhonw Viewpoint 12: Wye Bridge, Builth Wells and Viewpoint 15: Royal Welsh Showground are near to the central section of the road and are also representative.

Visual Receptor Group	Visual Receptor	Representative Viewpoint(s)
	Road users of the A483	Viewpoint 12: Wye Bridge, Builth Wells Viewpoint 15: Royal Welsh Showground is near to the central section of the road and is also representative. Viewpoint 17: NCN 8 near Cilmerly can be used as a proxy for the western extent of the road.
	Road users of the A44	Viewpoint 20: Bridleway off A44 near Castell Crugerydd
	Road users of the A4081	Viewpoint 24: A4081 at Llanyre
Road Users of Minor Roads	Road users of the B4567	Viewpoint 4: A470 at Aberduhonw can be used as a proxy
	Road users of the B4520	No specific viewpoint - wirelines/ models have been used to assess the effects on the receptor.
People Using Open Access Land, Walking Routes and Cycle Routes		
Users of Open Access Land (and users of surrounding PRowS within 5 km)	Users of the Open Access Land (Aberedw Hill, Llan-fraith Hill and Wylfre) and the PRowS on the Site	No specific viewpoint - wirelines/models have been used to assess the effects on the receptors.

Visual Receptor Group	Visual Receptor	Representative Viewpoint(s)
	Users of the Open Access Land at Perthi Common, Carneddau and Gilwern Hill (including users of PRowS to the north and north-west of the Site and within 5 km)	Viewpoint 2: A481 at Matts Common Viewpoint 6: Perthi Common Viewpoint 8: Carneddau Viewpoint 11: Castle Bank
	Users of the Open Access Land at Red Hill, Rhulen Hill, Llanbedr Hill and Llandeilo Hill (including users of PRowS to the south and south-east of the Site and within 5 km)	Viewpoint 7: Twm Tobacco's Grave on Llandeilo Hill Viewpoint 14: Unnamed lane, north-east of Llanbedr Hill Viewpoint 10: Rhulen, south east of Aberedw is representative of the lower-lying PRowS to the south-east of the Site.
	Users of the Open Access Land at Little Hill, Cefn Wylfre and Glascwm Hill (including users of PRowS to the north-east and east of the Site and within 5 km)	No specific viewpoint from the areas of open access land - wirelines/ models have been used to assess the effects on the receptors. Viewpoint 5: NCN 825 near Cregrina is representative of the lower-lying PRowS to the east of the Site.
	Users of the Open Access Land at Garth	Viewpoint 9: Garth Hill Viewpoint 4: A470 at Aberduhonw is representative of the lower-lying PRowS to the west of the Site.

Visual Receptor Group	Visual Receptor	Representative Viewpoint(s)
	(including users of PRowS to the west of the Site and within 5 km)	
	Users of the Open Access Land at Gwaunceste Hill, Little Hill, Llanfihangel Hill, Colva Hill and Mynd	Viewpoint 18: Llanfihangel Hill Viewpoint 23: Open access land on Mynd
	Users of the Open Access Land at The Begwns	Viewpoint 19: The Begwns Roundabout
	Users of the Open Access Land at Moelfre, Cefn-poeth and Comin-y-garth	Viewpoint 21: Heart of Wales Line Trail at Moelfre is close by and is representative.
	Users of the Open Access Land at Llandegley Rhos	Viewpoint 22: Llandegley Rocks
	Users of the Open Access Land at Cefn Gledwen, Cefn Llwydallt and Cefn Clawdd	No specific viewpoint - wirelines/ models have been used to assess the effect on receptors.
Users of Promoted Walking and Cycle Routes	Users of the National Cycle Network Route 825 (including users of the Open Access Land at Hundred House Common)	Viewpoint 3: A481 at Hundred House Viewpoint 5: NCN 825 near Cregrina Viewpoint 13: Unnamed lane at Bettws
	Users of the National Cycle Network Route 8	Viewpoint 12: Wye Bridge, Builth Wells

Visual Receptor Group	Visual Receptor	Representative Viewpoint(s)
		Viewpoint 17: NCN 8 near Cilmerly
	Users of the Wye Valley Walk (including users of the Open Access Land at Banc y Celyn and PRowS to the south-west of the Site within 5 km)	Viewpoint 16: Wye Valley Walk near Banc y Celyn
	Users of the Heart of Wales Line Trail	Viewpoint 12: Wye Bridge, Builth Viewpoint 21: Heart of Wales Line Trail at Moelfre
	Users of the Elan Valley Way	Viewpoint 26: Elan Valley Way near Cwmwrach
People at Visitor Attractions		
	Visitors to Builth Castle	Viewpoint 12: Wye Bridge, Builth Wells is close by and is representative.
	Visitors to the Royal Welsh Showground	Viewpoint 15: Royal Welsh Showground
	Visitors to the promoted viewpoint south of Cwm Graig-ddu	Viewpoint 25: Promoted viewpoint south of Cwm Graig-ddu
People at Campsites		
Visitors to Campsites	Visitors to Fforest Fields, Mid Wales Caravan & Camping Site	No specific viewpoint - wirelines/ models have been used to assess the effects on the receptor.

Visual Receptor Group	Visual Receptor	Representative Viewpoint(s)
	Visitors to Brynchrach Caravan and Camping Site	Viewpoint 3: A481 at Hundred House is close by and is representative.
People Visiting Popular Hill Summits in the BBNP		
Visitors to Popular Hill Summits in the BBNP	Visitors to popular hill summits in the BBNP	Viewpoint 27: Hay Bluff, Bannau Brycheiniog National Park Viewpoint 28: Cefn Llechid, Bannau Brycheiniog National Park Viewpoint 29: Pen y Fan, Bannau Brycheiniog National Park

Residential Receptors

5.94 Informed by OS AddressBase® Plus residential property data, 149 residential properties were identified within 2 km of the wind turbines, as shown in **Figure A5.7.1** of **Appendix 5.7**. The closest property is located approximately 0.7 km from the nearest turbine (P1: Upper Blaenmilo).

5.95 Residential receptors within 2 km comprise scattered properties, roadside clusters and farmsteads that surround the Site in all directions, as well as properties within and close to the small settlements of Cregrina and Hundred House. The outlook from properties varies, owing to their individual orientation, adjacent landform and intervening features (such as topography, vegetation, and other built structures).

5.96 Individual residential properties within 2 km of the turbines are considered within the RVAA, which is presented in **Appendix 5.7**.

Other Wind Energy Development

Existing Wind Energy Development

5.97 The operational and under-construction wind energy developments located within the study area are listed in **Table 5.11** and shown in **Figure 5.20** (with a combined ZTV of the maximum blade tip heights of all operational and under-construction wind energy developments and the Proposed Development). The closest operational wind energy development to the Site is the operational single turbine at Tremaen (at a distance of 1.4 km). The closest wind farm to the Site is the under-construction Hendy Wind Farm (at a distance of 7.1 km). Operational and under-construction wind energy developments have been included as part of the LVIA baseline.

Identification of Developments to be included in the CLVIA

5.98 In line with NRW's LANDMAP GN46, the scope of the assessment of cumulative landscape and visual effects included an initial search for wind energy schemes within 33 km from the Site which is the upper range of the search area recommended for structures between 176 and 225 m tall.

5.99 Single turbines within 10 km from the Site were also given consideration if they were deemed to have potential interactions which would give rise to significant cumulative effects. The criteria for the inclusion of wind energy developments within the cumulative assessment can be seen below in **Table 5.10** and ensures the study focusses on those interactions which may potentially give rise to significant cumulative effects.

Table 5.10 Criteria for wind energy developments to be considered within the CLVIA

Maximum Blade Tip Height (m)	Turbine Number	0-10 km from the Site	>10-33 km from the Site
<20	Single turbine	No	No
	More than one turbine	No	No
20-50	Single turbine	Yes	No

Maximum Blade Tip Height (m)	Turbine Number	0-10 km from the Site	>10-33 km from the Site
	More than one turbine	Yes	No (unless in groups of 10 or more)
>50	Single turbine	Yes	No
	More than one turbine	Yes	Yes

5.100 All operational, under construction, consented and in planning wind energy developments within these distances are shown below in **Table 5.11** and shown on **Figure 5.19**. These all fall under Tier 1 criteria set out in the Planning Inspectorate (Last updated March 2025) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. The approach and the list of schemes to be considered in the cumulative assessment has been agreed with PCC and PEDW as detailed in **Chapter 2: Approach to the EIA**.

5.101 This information is correct as of 28th March 2025 (the assessment cut-off date, which was the date for the decision to include/exclude cumulative schemes) and was fixed prior to progression of the cumulative assessment and finalising the Environmental Statement for statutory consultation).

Table 5.11 Wind energy development considered within the CLVIA

Wind Energy Development	Number of Turbines	Status	Approximate Distance from nearest wind turbine (km)	Maximum Blade Tip Height (m)
Operational / Under Construction				
Tremaen	1	Operational	1.4 km	27.1 m

Wind Energy Development	Number of Turbines	Status	Approximate Distance from nearest wind turbine (km)	Maximum Blade Tip Height (m)
Penllanerch	1	Operational	2.5 km	34.5 m
Upper Pengarth	1	Operational	4.8 km	41.8 m
Hendy	7	Under Construction ³³	7.1 km	110 m
Ty Gwyn Farm	1	Operational	7.4 km	35.4 m
Cefncynfal	1	Operational	16.3 km	77 m
Garreg Lwyd Hill	17	Operational	26.1 km	126.5 m
Bryn Titli	22	Operational	26.7 km	53.5 m
Llandinam	102	Operational	29.4 km	45.5 m
Consented (Tier 1)				
Garn Fach	17	Consented	26.4 km	149.9 m
Llandinam Repowering	34	Consented	29.3 km	121.2 m
Application (Tier 1)				

³³ Construction is understood to be complete and the wind farm awaits a connection to the electricity network (as of June 2025), therefore the development is considered as part of the existing baseline situation.

Wind Energy Development	Number of Turbines	Status	Approximate Distance from nearest wind turbine (km)	Maximum Blade Tip Height (m)
Nant Mithil	30	Application submitted	9.2 km	220 m
Bryngydfa	12	Application submitted	25.4 km	126.5 m

Implications of Climate Change for Existing Conditions

5.102 Climate change will have a highly influential role in the future of the landscape, including the Site and surrounding study area. Whilst there is no certainty in the exact changes which will occur, projections for the UK include:

- Temperatures are projected to increase, particularly in summer;
- Increased incidence of hot spells particularly in summer, and decrease in summer rainfall leading to a decrease in soil moisture;
- Winter rainfall is projected to increase and summer rainfall is most likely to decrease;
- Heavy rain days (rainfall greater than 25 mm) are projected to increase, particularly in winter;
- Near surface wind speeds are expected to increase in the second half of the 21st century with winter months experiencing more significant effects of winds; however, the increase in wind speeds is projected to be modest; and
- An increase in frequency and magnitude of storms throughout the UK.

5.103 The alterations in climate and conditions means the composition of vegetation and habitats is likely to alter, causing variations in landscape character. Some of these changes are likely to include:

- Increased growth of grasses and expansion of bracken within upland heathland could change the vegetation structure towards something more representative of a lowland heathland environment, therefore altering the upland character of the Site³⁴;
- Changes in vegetation composition will also apply to areas of acid grassland and purple moor grass found across the Site, again altering landscape character³⁵; and
- Areas of marshy grassland, blanket bog and wet heath will see increasing dry spells which will likely shrink their extents, altering the character of these areas. Conversely, during storm events, increased erosion and gullyng may diminish parts of these habitat^{36 37}.

5.104 Furthermore, increased temperatures and dry spells could see the risk of wildfires increase on the Site.

5.105 As climate change progresses, the demand for renewables as Wales aims to meet its net zero targets may mean additional applications for wind energy developments are made across the study area. This could also include proposals to re-power existing wind farms which will see taller and more efficient structures in the landscape.

Future Baseline in the Absence of the Proposed Development

5.106 In the absence of the Proposed Development, it is likely that land within the Site will continue under the same land use, albeit influenced by a number of ongoing forces for change such as variations in land management, drier summers and wetter winters as a result of climate change. The elevated nature of the Site and its good wind resource means that it is possible another wind farm would be proposed in this location.

Embedded Design Mitigation

5.107 The layout of the Proposed Development was developed as part of an iterative assessment and design process. An overview of the design evolution is provided in **Chapter 3**.

³⁴ Natural England (2020) Climate Change Adaptation Manual: Upland heathland

³⁵ Natural England (2020) Climate Change Adaptation Manual: Upland acid grassland

³⁶ Natural England (2020) Climate Change Adaptation Manual: Blanket bog

³⁷ Natural England (2020) Climate Change Adaptation Manual: Upland flushes, fens and swamps

The overall design strategy for the Proposed Development has aimed to provide the best balance between energy yield and minimising effects on the local and wider environment.

5.108 The design strategy from a landscape and visual perspective has been to:

- Locate wind turbines on the flatter plateau area of the Site where the landscape scale is larger;
- Set turbines back from the steeper edges of the plateau (i.e. the break of the slope), particularly the distinctive profile of the northern escarpment of Aberedw Hill which occupies a prominent position and forms a distinguishable feature above the Wye Valley;
- Avoid burial monuments, and medieval settlement remains that contribute to the time depth of the landscape of Aberedw Hill;
- Achieve as consistent a height and spacing of turbines as feasible (in light of other constraints), to achieve a well-balanced composition overall;
- Ensure no turbine is too dominant or overwhelming in the main view from a property, such that the Proposed Development could result in unacceptable living conditions for nearby communities or individual dwellings; and
- Minimise the effects of visible aviation lighting through the implementation of all available mitigation measures to reduce the number, frequency and intensity of visible lighting required.

5.109 The tracks have been designed to utilise existing track where possible, minimising the necessity for new excavation. They have also been kept away from highly visible slopes where possible. The tracks will be finished with locally sourced (where possible) cap-stone/wearing course of graded crushed rock (the adjacent grassland will be allowed to extend across the edges and middle, reducing the extent of the visibility of tracks in the landscape). The engineered appearance of any embankments will be smoothed out to ensure any landforms blend in with topography (using sinuous forms rather than straight lines) – and will be reinstated through measures such as re-seeding with locally occurring species, top-soil reuse and/or turf replacement to blend with the surroundings. Measures such as grass-reinforcement may be applied where the track widens on steeper bends and in passing places.

5.110 The onsite substation is located within the north of the Site (see **Figure 5.2**), where it will connect to the proposed Green GEN Towy Usk 132 kV overhead line³⁸. It is situated on a flat area (away from the development area of the proposed turbines), that is free of onsite constraints and along the A481 which will provide access. The substation will comprise a compound measuring 110 m x 80 m, secured with 2.5 m high palisade fencing, painted in a colour that assimilates into the winter colours found in the landscape on the Site (using the Natural Colour System), and will be agreed with PCC. A 6 m high control and operations building will be located within the substation compound and its colour will also be suitably chosen and agreed with PCC. Hardstanding and parking areas within the substation compound will be finished with locally sourced cap-stone/wearing course of graded crushed.

5.111 Two borrow pit search areas are located within the north-eastern part of the Site, north of the summit of Wylfre and either side of turbine T17. The aim has been to minimise visibility (although some visibility during construction will be inevitable) whilst ensuring that they are in suitable locations for resourcing onsite stone (as advised by the civil engineer).

Good Practice Measures

5.112 In order to minimise impacts arising from construction, the construction of turbines and associated infrastructure will follow an agreed Outline Construction Environmental Management Plan (OCEMP) (see **Appendix 4.2** for an outline plan) and Soil Management Plan (SMP) (see **Appendix 9.6** for an outline plan) which will include arrangements for implementation of various aspects of the works such as turf and soil removal, storage and replacement, and stream crossings. The OCEMP will also set out restoration of landscape earthworks, soils and surface vegetation once the construction phase is complete. Sensitive restoration of the borrow pits as set out in the Outline Borrow Pit Restoration Plan (**Appendix 4.1**) will minimise long-term visibility of these temporary interventions (once appropriate vegetation has established).

³⁸ This project will be subject to a separate DNS application – Reference: DNS CAS-02379-G1Z1J0. Information available at: [Green Gen Towy Usk \(undated\) Delivering a Positive Energy Future for Wales](#)

Micrositing

5.113 The micrositing of turbines has been restricted in certain directions, influenced by a range of technical onsite constraints as well as by the residential properties surrounding the Site that may potentially experience a greater visual effect if turbines were to be micrositied closer to them. These properties are:

- Upper Blaenmilo; and
- Penarth.

5.114 Taking these restrictions into account, any micrositing that may occur in the remaining areas (i.e. the impact of moving turbines up to 50 m) has been considered for each landscape and visual receptor and it is judged that this will not change the results reported in the LVIA.

Scope of the Assessment

Effects Scoped In

5.115 As agreed through the Scoping and consultation process with the relevant stakeholders (see **Table 5.1**), the following effects are assessed in full:

- Effects during operation on landscape character within a 15 km radius of the nearest turbine;
- Effects during operation on visual amenity, including:
 - Visual effects on people within settlements (local communities) (which were identified in the Scoping Report and are typically within a 10 km radius of the nearest turbine except for Llanyre which is approximately 11.1 km from the nearest turbine)³⁹;
 - Visual effects on people travelling along roads (which were identified in the Scoping Report and are typically within a 10 km radius of the nearest turbine);
 - Visual effects on people using open access land, walking routes and cycle routes (which were identified in the Scoping Report and are typically within a 10 km radius of the

³⁹ Individual residential properties are being dealt with separately through a Residential Visual Amenity Assessment (RVAA) which is presented in **Technical Appendix 5.7**.

nearest turbine except for the Elan Valley Walk which is approximately 14.3 km from the nearest turbine);

- Visual effects on people using walking routes and cycle routes (which were identified in the Scoping Report and are typically within a 15 km radius of the nearest turbine);
- Visual effects on people at visitor attractions⁴⁰ (which were identified in the Scoping Report and are typically within a 5 km radius of the nearest turbine except for the promoted viewpoint south of Cwm Graig-ddu which is approximately 12.5 km from the nearest turbine);
- Visual effects on people at campsites (which were identified in the Scoping Report and are typically within a 2 km radius of the nearest turbine); and
- Visual effects on people visiting popular hill summits in the BBNP up to 33 km from the nearest turbine.

- Effects during operation on the landscape character and the special qualities of the BBNP up to 33 km from the nearest turbine;
- Cumulative effects during operation on landscape character within a 15 km radius from the nearest turbine and on visual amenity;
- Cumulative effects on the special qualities of the BBNP up to 33 km from the nearest turbine;
- Effects of aviation lighting on landscape character within a 15 km radius from the nearest turbine and on visual amenity (including implications for the Bannau Brycheiniog International Dark Sky Reserve, and reference to cumulative effects where relevant); and,
- Effects on residential visual amenity (typically within a 2 km radius from the nearest turbine).

⁴⁰ Visitor attractions are notable attractions that feature in guide books or online guides – it does not cover every attraction, especially those that already form part of a receptor that is being assessed such as a local community. For example, an online search of attractions in Powys particularly highlights the Royal Welsh Show and the Brecon Beacons.

Effects Scoped Out

5.116 As agreed through the Scoping and consultation process with the relevant stakeholders (see **Table 5.1**), the following effects have been ‘scoped out’ of detailed assessment:

- Effects on landscape character beyond a 15 km radius from the nearest turbine, except for within the BBNP (the landscape reporting units for the assessment are shown in **Figures 5.9a and b** and **Figures 5.10a and b**);
- Effects on visual receptors beyond a 28 km radius from the nearest turbine (apart from people visiting popular hill summits in the BBNP up to 33 km);
- Effects on landscape and visual receptors that have no theoretical visibility of the Proposed Development (as indicated by the ZTVs in **Figures 5.3a and b** and **Figures 5.4a and b**);
- Cumulative effects during construction because it is likely that operational visual impacts will be greater than those of the construction phase in so far that any crane will not be greater in height than the tip height of an operational wind turbine. The cumulative assessment of the Proposed Development during its operational phase therefore constitutes a worst case scenario and cumulative effects of the Proposed Development during its construction phase are unlikely to be any greater;
- Cumulative effects arising from turbines beyond 33 km from the nearest proposed turbine of the Proposed Development; and
- Cumulative effects in relation to turbines under 20 m to maximum blade tip height and single turbines beyond 10 km from the nearest proposed turbine of the Proposed Development.

5.117 The effects on landscape character and visual amenity during the construction and decommissioning phases have also been ‘scoped out’ of detailed assessment as the assessment of the operational phase of the Proposed Development constitutes a worst-case scenario and impacts arising during the construction and decommissioning phases are unlikely to be any greater, particularly as the effects are temporary.

5.118 The construction phase will be short-term (lasting 15 months) and the changes arising during the construction of the Proposed Development will be primarily associated with:

- Clearance of vegetation (including dry heath, semi-improved acid grassland, improved grassland, marshy grassland, bracken, and a small amount of semi-natural broadleaf woodland – see **Chapter 7: Ecology (non-avian)** for further information);
- Presence of two temporary construction compounds (measuring 100 m x 50 m) in the north-east of the Site, including associated activity and storage of materials;
- Works to upgrade existing tracks onsite, including the access track between Craig-Lea and turbine T16 and the new internal access tracks between turbines. The permanent effects of the introduction of new tracks are considered in the assessment of operational effects;
- Quarrying of stone from two borrow pits;
- Excavations for turbine platforms (T16 and T17). The permanent presence of turbine platforms is considered in the assessment of operational effects;
- The erection by tall cranes of 18 turbines with a maximum blade tip height of 200 m (and partially built towers whilst turbines are being erected), and associated crane hardstandings. The long-term presence of crane hardstandings and turbines in the landscape is considered in the assessment of operational effects;
- Construction of the onsite substation. The long-term presence of the substation in the landscape is considered in the assessment of operational effects;
- Excavations for the cable trench to accommodate the substation connection between the development area of the turbines and the onsite substation; and
- Movement and activity of construction vehicles and machinery (including cranes) on the Site.

5.119 The decommissioning phase will also be short-term and the changes arising during the decommissioning of the Proposed Development will be primarily associated with:

- Presence of temporary laydown areas and temporary lighting;
- Presence and movement of decommissioning traffic around the Site and surrounding area;
- Removal of the substation to ground level;
- Removal of the turbines with the use of cranes;

- Removal of the crane hardstandings and other hardstanding, broken down below ground level; and
- Making cabling safe and leaving in situ.

Assessment of Effects

5.120 The assessment of effects is based on the project description as outlined in **Chapter 4: Development Description**. Unless otherwise stated, potential effects identified are considered to be negative. The residual effects will remain the same as those reported below.

Operational Effects

Sources of Effects During Operation

5.121 The main effects of the Proposed Development on landscape and visual amenity once it has been built and is operational will be as a result of:

- The presence of 18 new operational turbines (including rotating blades) up to 200 m to maximum blade tip height, present for 40 years;
- The presence of aviation lighting on the nacelles of T2, T6, T7, T10, T16 and T18;
- The presence of a new onsite substation within the north of the Site and along the A481 comprising a compound (measuring 110 m x 80 m), secured with 2.5 m high palisade fencing and including a 6 m high control building, electrical equipment, and a parking area;
- Presence of new and upgraded tracks, 6 m in width and finished with locally sourced (where possible) cap-stone/wearing course of graded crushed rock (the adjacent grassland will be allowed to extend across the edges and middle, reducing the extent of the visibility of tracks in the landscape);
- Habitat restoration and management areas and restored borrow pits as set out in the outline Habitat Management Plan (**Appendix 7.5**) and Outline Borrow Pit Restoration Plan (**Appendix 4.1**); and
- The occasional movement of maintenance vehicles.

Effects on Landscape Units During Operation

5.122 Appendix 5.4 contains detailed assessments for the ‘landscape units’ that have been considered in the LVIA. A summary, setting out those which are deemed likely to experience ‘significant’ effects as a result of the Proposed Development, is provided below. The Proposed Development is expected to remain operational for 40 years, so will be long-term, and will be mostly reversible as the turbines and substation will be dismantled and removed from the Site once the operational period has ceased, and the crane hardstanding and other hardstanding will be broken down below ground level. Only the tracks will be left in situ providing a continuation of improved access for landowners, farmers and users of the common land.

Landscape Units Directly Affected During Operation

5.123 The greatest effects during the operational phase will be on areas directly affected by the Proposed Development. This will affect the following landscape units (as shown on **Figure 5.9a**):

- Aberedw Uplands (Powys LCA 50); and
- Llanbister-Penybont Uplands (Powys LCA 40).

Aberedw Uplands LCA 50

5.124 The Aberedw Uplands landscape unit comprises a large-scale area of elevated hills, plateaux and ridges, incised by upland brooks which create a gently undulating landform. It consists of two geographically distinct areas that are separated by the Aberedw Valley, with the western part of it underlying the Site (comprising Aberedw Hill, Llan-fraith Hill, and Wylfre). The wider extents of the LCA covers areas to the south, south-east and east of the Site and extends to the north-east for approximately 12 km (from the nearest turbine). It covers a series of other hills including Gwaunceste Hill, Glascwm Hill, Little Hill, Red Hill, Llanbedr Hill and Llandeilo Hill. It is judged to have a medium susceptibility to change and a high value, resulting in a medium-high sensitivity (see **Table 1.1** in **Appendix 5.4** for details).

5.125 Direct operational effects will arise as a result of all 18 turbines, crane hardstandings, tracks, revegetated borrow pits, and part of the revegetated grid connection cable trench being introduced within this landscape unit. The turbines and infrastructure will be located within an

area of large-scale upland plateau, avoiding the steeper land, and avoiding the key environmental constraints (see **Chapter 3**). The Proposed Development will not significantly affect the heritage features noted as important characteristics of the area in the Powys Landscape Character Assessment and LANDMAP, and the landcover will largely remain between the turbines and tracks (see **Chapter 7** for further information). The Proposed Development will however increase the presence of modern man-made influence within the landscape and add built features to the skyline, affecting the sense of rurality and views over upland and adjoining valleys (including from the summits of Aberedw Hill, Llan-fraith Hill, and Wylfre). However, a sense of remoteness from populations will remain, along with other key characteristics such as the exposed upland landform of hills, plateaux and ridges, the presence of upland heathland and moorland habitats, prehistoric and medieval assets, the PRow and extensive areas of Open Access Land, and the long-ranging views across surrounding uplands, as well as distant views south to summits within the BBNP.

5.126 Nevertheless, the Proposed Development will result in a large change in the character of the area directly affected by the Proposed Development, changing this area to a wind farm landscape. The large scale of effect over a long term is judged to result in a high magnitude of change to the western part of the landscape unit that falls within the Site, which will be directly affected by the Proposed Development (including all 18 turbines) and up to 1.5 km from the turbines (including the upland plateau and summit of Aberedw Hill, as well as the summits of Llan-fraith Hill, and Wylfre), resulting in a **major (significant)** effect. The scale of effect will reduce with distance from the Proposed Development with the wind farm resulting in a medium scale of change to the perceptual (visual and sensory) character of the hill summits and slopes beyond 1.5 km that includes the north facing slopes of Llandeilo Hill, Cradle Rocks, and Rhulen Hill, and west- and south-west facing slopes of Red Hill, Glaschw Hill, and Little Hill. The medium scale of effect over a long term is judged to result in a medium magnitude of change to these slopes and summits 1.5-5 km from the turbines, resulting in a **moderate (significant)** effect on their character.

5.127 As the scale of effect reduces with distance there will be an area of overlap around the 1.5 km mark where a **moderate-major (significant)** effect will apply.

Llanbister-Penybont Uplands LCA 40

5.128 The Llanbister-Penybont Uplands is a landscape with a complex landform of low rolling hills, incised by shallow stream valleys. A small part of it covers the northern fringes of the Site, with the remaining large area extending to the north for approximately 24 km (from the nearest proposed turbine). It is judged to have high susceptibility to change and a high value, resulting in a high sensitivity (see **Table 1.2** in **Appendix 5.4** for details).

5.129 Direct operational effects will arise as a result of the substation and part of the revegetated grid connection cable trench, being introduced within this landscape unit, while the 18 turbines that are located adjacent to the landscape unit will result in indirect effects upon it. The substation will be located within a relatively flat area (away from the development area of the proposed turbines), avoiding the steeper and smaller-scale areas, and avoiding the key environmental constraints. The Proposed Development will not directly affect the heritage features noted as important characteristics of the area in the Powys Landscape Character Assessment and LANDMAP. The presence of the turbines will increase the presence of modern human development seen in views to the south from this landscape unit, affecting the perceptual (visual and sensory) character of upland areas in proximity to the Site. However, the undulating landform of hills and valleys, varied semi-natural habitats, presence of archaeological features from a range of time periods, and strong visual relationship with adjacent upland landscapes will continue to give the landscape unit its distinctive character. The proximity of the Proposed Development to the southern part of the landscape unit (less than 1 km in places) will result in a large change to the landscape character in areas within 1.5 km of the proposed turbines including the area around the Fforest Fields campsite (noting that due to the valley landform, there will be areas within 1.5 km where only the blades of some turbines will be visible). The large scale of effect over a long term is judged to result in a high magnitude of change for areas within 1.5 km of the proposed turbines, resulting in a **major (significant)** effect. The scale of effect will reduce with distance from the Proposed Development with the wind farm resulting in a medium scale of change to the perceptual (visual and sensory) character of areas 1.5-5 km from the proposed turbines, including from elevated, open common land at Perthi Common and from south-facing slopes of Carneddau/Castle Bank. This medium scale of effect over a long term is judged to result in a medium magnitude of change, resulting in a **moderate (significant)** effect.

5.130 As the scale of effect reduces with distance there will be an area of overlap around the 1.5 km mark where a **moderate-major (significant)** effect will apply.

Landscape Units Indirectly Affected

5.131 The presence of the operational components will also affect the perceptual (visual and sensory) character of some areas of the landscape around the Site. A large scale of effect to landscape character (due to changes in perceptual/visual and sensory character) is likely to occur within 1.5 km from the turbines from areas where turbines are visible, reducing to a medium scale of effect to the perceptual (visual and sensory) character of areas beyond 1.5 km and up to approximately 5 km from the turbines. The landscape units that fall within these distances are shown on **Figures 5.9a and b** and those which will experience a high and/or medium magnitude of change are set out below.

Aberedw Valley LCA 54

5.132 The landscape of the Aberedw Valley comprises the deep, steep-sided valleys of the River Edw and its associated tributaries. It is located to the south and south-east of the Site. It is judged to have high susceptibility to change and a medium value, resulting in a medium-high sensitivity (see **Table 1.3** in **Appendix 5.4** for details).

5.133 During operation there will be indirect effects as a result of up to 18 turbines being introduced in a different landscape unit immediately adjacent to this landscape unit to the west, north-west, introducing a new feature on the skyline. The Proposed Development will be seen as a prominent feature in views from the landscape unit between 0.5 km - 4.7 km to the west, affecting views from west-facing upper valley sides and hill slopes, including the *“strong visual relationship with the elevated Aberedw Uplands (LCA 50)”*, noted as a characteristic of the landscape unit in the Powys Landscape Character Assessment. However, the steep sided valley landform, mosaic of small to medium-scale pastoral fields interspersed with frequent broadleaved woodland (including nationally designated sites), evidence of early settlement (including prehistoric and medieval features), rural character, and provision of recreational access will continue to give the landscape its distinctive character. The Proposed Development will result in a large change to the perceptual (visual and sensory) character of the landscape unit within 1.5 km of the proposed turbines. The large scale of effect over a long term is judged

to result in a high magnitude of change for areas within 1.5 km of the proposed turbines, e.g. around Cregrina, resulting in a **major (significant)** effect. The scale of effect will reduce with distance from the Proposed Development with the wind farm resulting in a medium scale of change to the perceptual (visual and sensory) character of north and west facing valley slopes beyond 1.5 km from the proposed turbines. This medium scale of effect over a long term is judged to result in a medium magnitude of change, resulting in a **moderate (significant)** effect.

5.134 As the scale of effect reduces with distance there will be an area of overlap around the 1.5 km mark where a **moderate-major (significant)** effect will apply.

Wye Valley (Builth Wells to Hay-on-Wye) LCA 55

5.135 The landscape of the Wye Valley (Builth Wells to Hay-on-Wye) is a narrow valley containing the River Wye, with elevation ranging from 70 m AOD on the valley floor to 420 m AOD along the upper valley slopes. It is located immediately adjacent to the west of the Site boundary. The wider extents of the LCA incorporates the town of Builth Wells, and extends to the south and east, following the Wye Valley towards Glasbury, then north-eastwards towards Hay-on-Wye. It is judged to have medium-high susceptibility to change and a high value, resulting in a medium-high sensitivity (see **Table 1.4** in **Appendix 5.4** for details).

5.136 During operation there will be indirect effects as a result of up to 18 turbines being introduced in the adjacent landscape unit (the closest point being approximately 0.3 km to the east, north-east), introducing a new feature on the adjacent skyline. The Proposed Development will be seen in views to the east, particularly from the north-western part of the LCA (including from Builth Wells and the lower slopes of Banc y Celyn). There is no predicted visibility from across much of the eastern part of the LCA (including Glasbury and along the valley floor extending towards Hay-on-Wye). The *“distinctive views from the east of the LCA to the Black Mountains within the Brecon Beacons National Park to the south”* noted in the Powys Landscape Character Assessment as a key characteristic of the landscape unit will not be affected by the Proposed Development. The Proposed Development will increase the presence of modern human development on the skyline in views to the north and east, from west and south-western parts of the LCA, including the low-lying land around Builth Wells, and from north-east facing valley sides. However, the distinctive valley landform, mosaic of pasture fields and woodland, prehistoric and medieval historic features, scenic views (including views south to

the BBNP) and the rural character will continue to give the landscape its distinctive character. The Proposed Development will result in a large change to the perceptual (visual and sensory) character of the landscape unit within 1.5 km of the proposed turbines. The large scale of effect over a long term is judged to result in a high magnitude of change for the perceptual (visual and sensory) character of the upper north-east facing valley sides within 1.5 km of the proposed turbines, resulting in a **major (significant)** effect. The scale of effect will reduce with distance from the Proposed Development with the wind farm resulting in a medium scale of change to the perceptual (visual and sensory) character of the north-east facing valley sides beyond 1.5 km, particularly the upper slopes to the west and south of Alltmawr. This medium scale of effect over a long term is judged to result in a medium magnitude of change, resulting in a **moderate (significant)** effect.

5.137 As the scale of effect reduces with distance there will be an area of overlap around the 1.5 km mark where a **moderate-major (significant)** effect will apply.

Northern Mynydd Epynt LCA 56

5.138 The Northern Mynydd Epynt is a large-scale upland landscape with two hill summits (at Moelfre). The deep valley of the River Duhonw cuts through the east of the landscape unit which is fed by a number of tributaries which incise the surrounding uplands. It is located to the south-west of the Site, approximately 2.5 km from the nearest proposed turbine. It is judged to have high susceptibility to change and a medium value, resulting in a medium-high sensitivity (see **Table 1.5** in **Appendix 5.4** for details).

5.139 During operation there will be indirect effects as a result of up to 18 turbines being introduced in a landscape unit approximately 2.5 km to the east, north-east, and the Proposed Development will introduce a new feature on the skyline. The Proposed Development will be seen in views from the landscape unit between 2.5 km -10.5 km to the east, north-east, affecting views from hill summits and north-east facing upper valley sides, including the 'panoramic views' (noted as a characteristic of the landscape unit). The proposed turbines will increase the presence of modern human development on the skyline in views to the north-east, however, the large-scale upland landform, mosaic of small-scale pasture fields and semi-natural woodland, nucleated historic settlements, and rural character will continue to give the landscape its distinctive character. The Proposed Development will result in a medium change to the

perceptual (visual and sensory) character of the landscape unit between 2.5 km and 5 km. The medium scale of effect over a long term is judged to result in a medium magnitude of change for the perceptual (visual and sensory) character of north-east-facing valley sides and upper hill slopes between 2.5 km and 5 km, resulting in a **moderate (significant)** effect.

Mynydd Epynt LCA 57

5.140 Mynydd Epynt is a large-scale and extensive upland landscape (located to the south-west of the Site and 3.6 km from the nearest proposed turbine), comprising an elevated plateau punctuated by rolling peaks, reaching 474 m AOD. The landform is incised by the upper reaches of several river valleys, flowing south to meet the River Usk (located outside of this LCA). It is judged to have medium susceptibility to change and a medium-high value, resulting in a medium-high sensitivity (see **Table 1.7** in **Appendix 5.4** for details).

5.141 During operation there will be indirect effects as a result of 18 turbines being introduced in a landscape unit approximately 3.6 km to the east, north-east, and the Proposed Development will introduce a new feature on the skyline. It will be seen in views from the landscape unit between 3.6 km and 20 km to the north-east affecting views from east-facing upper valley sides and hill slopes, including the *“attractive views out to surrounding uplands, including from the A470”* (noted as a key characteristic of the landscape unit). The Proposed Development will increase the presence of modern human development on the skyline in views to the north-east, however, the large-scale upland plateau landform, mosaic of moorland vegetation and improved grazing pastures, sense of remoteness, and expansive views, will continue to give the landscape its distinctive character. The Proposed Development will result in a medium change to the perceptual (visual and sensory) character of the landscape unit within 5 km of the Proposed Development (including the east-facing slopes of Banc y Celyn). The medium scale of effect over a long term is judged to result in a medium magnitude of change for the perceptual (visual and sensory) character for east-facing slopes within 5 km of the Proposed Development, resulting in a **moderate (significant)** effect.

Visual Effects During Operation

5.142 **Appendix 5.5** contains detailed assessments for the visual receptors that have been considered in the LVIA. A summary, setting out those which are deemed likely to experience significant effects as a result of the Proposed Development, is provided in this section.

5.143 The Proposed Development is expected to remain operational for 40 years, so will be long-term, and will be mostly reversible as the turbines and substation will be dismantled and removed from the Site once the operational period has ceased and the crane hardstandings and other above ground infrastructure (excluding tracks) will be broken down below ground level.

People within Settlements (Local Communities)

5.144 The local communities considered in this assessment are shown on **Figures 5.14a** and **b**. They are judged to have high susceptibility to change and a medium value, resulting in a medium-high sensitivity (see the detailed assessments in **Appendix 5.5**).

5.145 Within the immediate valleys that surround the Site, parts of the local communities that occupy the valley slopes will experience medium to large changes as described below.

5.146 Where the Proposed Development will be in close proximity in a direct line of vision, or affect a substantial part of the view, or provide contrast with the existing view, the scale of visual effect is judged to be large. Where this occurs the magnitude of visual change (which takes into consideration the scale of effect and duration) is judged to be high due to a large scale of effect over a long-term. This will affect:

- The central part of Hundred House and the minor road in the north of the village (when looking south) as most of the turbines will be clearly seen, extending across approximately 55 degrees of the skyline, and the Proposed Development will be in close proximity (within approximately 1.6 km) – **major (significant)**. The changes to views are illustrated by the visualisations for **Viewpoint 3 (Figures 5.29 in Volume 4)**.
- The southern edge of Llansantffraed-in-Elwel, as most of the turbines will be seen extending across approximately 65 degrees of the skyline and the Proposed Development will be in close proximity (within approximately 2.1 km) – **major (significant)**. The changes

to the views will be similar to those illustrated by the visualisations for **Viewpoint 6 (Figures 5.32 in Volume 4)**.

5.147 From both of the areas described above, the Proposed Development will create distinct and prominent vertical elements on the hills of the Site which contributes to the landscape setting of the local communities and towards scenic views experienced from them.

5.148 From areas where the Proposed Development will result in a clearly perceptible change in views but may be slightly further away, oblique to the view or partially screened, the scale of visual effect is judged to be medium. Where this occurs the magnitude of visual change (which takes into consideration the scale of effect and duration) is judged to be medium due to a medium scale of effect over a long-term. This applies to the following parts of local communities (refer to **Appendix 6.5** for detailed assessments):

- The eastern and western parts of Hundred House because most of the turbines will create distinct vertical elements on the hills of the Site (seen within approximately 1.6 km), but intervening features will screen/ filter some of the Proposed Development, and/ or the turbines will be seen obliquely - **moderate (significant) effect**.
- The junction of a minor lane and unnamed cul-de-sac within the central part of Franksbridge because most of the turbines will create distinct vertical elements on Aberedw Hill (which provides an attractive landscape setting to the local community), extending across approximately 35 degrees of the skyline (at a distance of approximately 3.5 km), and will be seen in the direct line of vision of residents along the cul-de-sac - **moderate (significant) effect**.
- From parts of Builth Wells including Castle Road in the east, elevated areas south of the A483, east-west aligned streets in the north-west (such as Pendre and Irfon Road) and properties along the north-western settlement edge (including along Golf Links Road), because the turbines will create distinct vertical elements on Aberedw Hill (which provides an attractive landscape setting to the local community), extending across approximately 25 degrees of the skyline (at a distance of approximately 4-5 km), and in most cases will be seen in the direct line of vision of residents, although views will be partly interrupted by existing buildings, streetlights and overhead lines (mounted on wooden poles) in the foreground - **moderate (significant) effect**.

- From the Wye Bridge (A483) within Builth Wells, because views of the Proposed Development will be open and unimpeded (seen on the skyline of Aberedw Hill, which forms a backdrop to the scenic River Wye in the foreground) but will be seen obliquely by those travelling along the road or footpath (at a distance of approximately 4 km) - **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 12 (Figures 5.38 in Volume 4)**.
- The front of The Llanelwedd Arms Hotel in the south of Llanelwedd because the turbines will create distinct vertical elements on Aberedw Hill, extending across approximately 25 degrees of the skyline and seen beyond attractive foreground views of the pastoral valley floor of the River Wye (at a distance of approximately 4 km), and will generally be seen in the direct line of vision - **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 12 (Figures 5.38 in Volume 4)**.

5.149 The other local communities (Cregrina, Caerwnon Park, Cilmerly, Llandrindod Wells, Newbridge-on-Wye and Llanyre) will be affected by small or imperceptible changes in views, and these will not be significant.

People Travelling along Roads

5.150 The roads considered in this assessment are shown on **Figures 5.15a and b**. The road users are judged to have medium susceptibility to change and a medium value, resulting in a medium sensitivity (see the detailed assessments in **Appendix 5.5**).

5.151 From roads where the Proposed Development will result in a clearly perceptible change and create a distinct new element in views, but may be seen at a distance, oblique to the view or partially screened, the scale of visual effect is judged to be medium (noting that all judgements are on a sliding scale and some judgements will be at the higher end of medium (resulting in a medium-high magnitude of change) while others may be at the lower end (resulting in a low-medium magnitude of change). This applies to the following road users (refer to **Appendix 5.5** for detailed assessments):

- Road users of the A481 from the stretch in the west (between the roundabout junction with the Wyeside Enterprise Park and the junction with the B4567) and from the stretch of road in the north-east (between Llanyfrwys and Hundred House), because the turbines will be

seen in a direct line of vision at distances ranging between 2.2 km and 4.5 km - **moderate-major (significant) effect**.

- Road users of the stretch of the A481 that runs parallel with the northern edge of the Site, as the turbines (and substation) will be clearly seen, extending across approximately 60-80 degrees of the skyline, and the Proposed Development will be in close proximity (at distances of between 1.3 km and 2 km), albeit seen obliquely and in some cases intermittently - **moderate-major (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 2 (Figures 5.28 in Volume 4) and Viewpoint 3 (Figures 5.29 in Volume 4)**.
- Road users of the A470 from the stretch leaving Builth Wells in the east and near to Aberduhonw, as the turbines will be prominent in close views (seen at distances of between 1.5 km and 2.4 km) and will occupy approximately 45 degrees of the skyline, although (apart from some very brief direct views) the turbines will mostly be seen obliquely – **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 4 (Figures 5.30 in Volume 4)**.
- Road users of the A483 from the stretch between Cilmeri and Builth Wells, as although the Proposed Development will be seen at a distance of over 5 km, views of the turbines will be prolonged and seen in a direct line of vision by the road user travelling east – **moderate (significant) effect**.
- Road users of the A483 at Wye Bridge because views of the Proposed Development will be open and unimpeded (seen on the skyline of Aberedw Hill, which forms a backdrop to the scenic River Wye in the foreground) but will be seen obliquely by those travelling along the road (at a distance of approximately 4 km) - **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 12 (Figures 5.38 in Volume 4)**.
- Road users of the B4567 from the stretch between its junction with the A481 and The Hall residence as the turbines will appear prominent in oblique close views (seen at distances of between 1.3 km and 2 km) and will occupy approximately 45 degrees of the skyline - **moderate (significant) effect**. The changes to the views will be similar to those illustrated by the visualisations for **Viewpoint 4 (Figures 5.30 in Volume 4)**.

- Road users of the B4567 from the stretch between the farmstead at Coed-yr-aber and the River Edw crossing, as the turbines will be seen in direct views at distances of between 3.4 km and 4.4 km and will not be interrupted by intervening vegetation which is absent along the edge of this short stretch of road - **moderate (significant) effect**.
- Road users of the B4520 from the short stretch that travels through the village of Llanddewi'r Cwm, because there will be brief direct views north of the turbines on top of Aberedw Hill which will be framed by the historic buildings that line the road (seen approximately 5.2 km away) - **moderate (significant) effect**.

5.152 The road users of the A44 and the A4081 will be affected by small or imperceptible changes in views, and these will not be significant.

People Using Open Access Land, Walking Routes and Cycle Routes

5.153 The areas of open access land, PRoWs, promoted walking routes and cycle routes considered in this assessment are shown on **Figures 5.16a** and **b**.

5.154 Users of open access land, PRoWs and promoted walking routes are judged to have high susceptibility to change and a medium value, resulting in a medium-high sensitivity (see the detailed assessments in **Appendix 5.5**). Users of cycle routes are judged to have medium susceptibility to change and a medium value, resulting in a medium sensitivity (see the detailed assessments in **Appendix 5.5**).

5.155 Users of open access land (Aberedw Hill, Llan-fraith Hill and Wylfre) and PRoWs within the Site will experience large changes as views will include turbines, and tracks at relatively close proximity, as well as crane hardstandings. There will also be open views of the substation from a local PRoW (139/1726/2) that traverses the steep northern slope of Aberedw Hill. Turbines will be dominant within views where they surround receptors at close proximity; however, there will remain open views between the turbines so that the long-distance views across adjoining uplands can continue to be appreciated – **major (significant) effect**.

5.156 There will also be large changes to views for receptors who are outside the Site and have open views where turbines are in a direct line of vision, or affect a substantial part of the view, or and will provide contrast with the existing view. This will affect:

- Users of the open access land at Perthi Common, Carneddau and Gilwern Hill (at their summits and south-facing slopes), because the turbines will be seen extending across approximately 40-80 degrees of the undeveloped skyline and the Proposed Development will be in close proximity (seen at distances of between 1.5 km and 3.2 km) affecting the panoramic rural views. This will also apply to users of surrounding PRowWs that run in between the open access areas and traverse lower valley slopes to the north and north-west of the Site where intervening vegetation does not screen/ filter views - **major (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 2 (Figures 5.28 in Volume 4)**, **Viewpoint 6 (Figures 5.32 in Volume 4)**, **Viewpoint 8 (Figures 5.34 in Volume 4)** and **Viewpoint 11 (Figures 5.37 in Volume 4)**.
- Users of the open access land at Red Hill, Rhulen Hill, Llanbedr Hill and Llandeilo Hill (at their summits and north/ north-west facing slopes), because the turbines will be seen extending across approximately 40-50 degrees of the undeveloped skyline and the Proposed Development will be in close proximity (seen at distances of between 2.5 km and 5.5 km) affecting the panoramic rural views. This will also apply to users of surrounding PRowWs that cross the summits and traverse the slopes of the open access land, and extend further north/north-west along the lower slopes of the River Edw valley and nearer to the Site, where intervening vegetation does not screen/filter views - **major (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 7 (Figures 5.33 in Volume 4)** and **Viewpoint 14 (Figures 5.40 in Volume 4)**, as well as **Viewpoint 10 (Figures 5.36 in Volume 4)** (which is representative of the lower-lying PRowWs to the south-east of the Site).
- Users of the open access land at Little Hill, Cefn Wylfre and Glascwm Hill (at their summits and west/ south-west facing slopes), because the turbines will be seen extending across approximately 45 degrees of the undeveloped skyline and the Proposed Development will be in close proximity (seen at distances of between 2 km and 4 km) affecting the panoramic rural views. This will also apply to users of surrounding PRowWs that cross the summits and traverse the slopes of the open access land and extend further west along the lower slopes of the River Edw valley and nearer to the Site, where intervening vegetation does not screen/ filter views - **major (significant) effect**. The changes to views from the lower-lying

PRoWs to the east of the Site will be similar to those illustrated by the visualisations for **Viewpoint 5 (Figures 5.31 in Volume 4)**.

- Users of the open access land at Garth Hill (at its summit), because the turbines will be seen extending across approximately 35 degrees of the undeveloped skyline and the Proposed Development will be in close proximity (seen at a distance of approximately 2.7 km) affecting the panoramic rural views. This will also apply to users of surrounding PRoWs that traverse the lower slopes of Garth Hill, extending further east within the River Wye Valley and nearer to the Site, where intervening vegetation does not screen/ filter views - **major (significant) effect**. The changes to views are illustrated by the visualisation for **Viewpoint 9 (Figures 5.35 in Volume 4)**, as well as **Viewpoint 4 (Figures 5.30 in Volume 4)** (which is representative of the lower-lying PRoWs to the west of the Site).
- Users of NCN Route 825 where it crosses Hundred House Common (when looking south), because the turbines will be seen in direct views extending across approximately 60 degrees of the undeveloped skyline, creating distinct and prominent vertical elements on the hills, and the Proposed Development will be in close proximity (seen at a distance of between 1.6 km and 3 km) – **moderate-major (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoints 3 (Figures 5.29 in Volume 4)**.
- Users of NCN Route 825 from the stretch between Cregrina and Hundred House, because the turbines will be in close proximity (seen at a distance of between 1.1 km and 2 km), but will mostly be seen obliquely and in some cases intermittently– **moderate-major (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 5 (Figures 5.31 in Volume 4)**.

5.157 From other surrounding areas of open access land and from promoted walking and cycling routes where the Proposed Development will result in a clearly perceptible change in views but will be seen slightly further away and perhaps oblique to the view or partially screened, the scale of visual effect is judged to be medium (noting that all judgements are on a sliding scale and some judgements will be at the higher end of medium (resulting in a medium-high magnitude of change) while others may be at the lower end (resulting in a low-medium magnitude of change). This applies to the following receptor groups (refer to **Appendix 5.5** for detailed assessments):

- Users of the open access land at Gwaunceste Hill and Little Hill (from their summits and upper west-facing slopes), because the turbines will be seen extending across approximately 10-15 degrees of the undeveloped skyline and the Proposed Development will be seen at a distance of over 5 km, affecting the panoramic rural views - **moderate (significant) effect**. The changes to the views will be similar to those illustrated by the visualisations for **Viewpoint 18 (Figures 5.44 in Volume 4)**.
- Users of the open access land at Banc y Celyn (including from along the Wye Valley Walk where it traverses the open access land), because the turbines will be seen extending across approximately 25 degrees of the expansive skyline and the Proposed Development will be seen at a distance of between 3.6 km and 5.5 km, affecting the panoramic rural views - **moderate (significant) effect**. This will also apply to users of surrounding PRowS that extend from the Wye Valley Walk and those to the south-west of the Site along the lower slopes of the River Wye, where intervening vegetation does not screen/ filter views. The changes to views are illustrated by the visualisations for **Viewpoints 16 (Figures 5.42 in Volume 4)**.
- Users of NCN Route 8 from the stretch between Cmon Coch and Builth Wells, as although the Proposed Development will be seen at a distance of over 5 km, views of the turbines will be relatively prolonged and seen in a direct line of vision by cyclists travelling south-east, occupying approximately 20 degrees of the expansive skyline - **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 17 (Figures 5.43 in Volume 4)**.
- Users of the Heart of Wales Line Trail and NCN Route 825 where they travel along the Wye Bridge (A483), because views of the Proposed Development will be open and unimpeded (seen on the skyline of Aberedw Hill, which forms a backdrop to the scenic River Wye in the foreground) but will be seen obliquely by those travelling along the footpath/ cycle route (at a distance of approximately 4 km) - **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 12 (Figures 5.38 in Volume 4)**.
- Users of NCN Route 825 from the stretch between Busnant and Rhos (east of Cregina), as the turbines will briefly be seen in a direct line of vision and in close proximity (seen at a distance of approximately 2 km) but will be partly interrupted by intervening landform and

vegetation – **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 5 (Figures 5.31 in Volume 4)**.

- Users of NCN Route 825 from the stretch between Bwlch-llwyn and Franksbridge, as although the Proposed Development will be seen at a distance of over 3 km, views of the turbines will be relatively prolonged and seen in a direct line of vision by cyclists travelling south, occupying approximately 35 degrees of the expansive skyline – **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 13 (Figures 5.39 in Volume 4)**.

5.158 Other recreational users of open access land (at The Begwns, Moelfre, Cefn-poeth, Comin-y-garth, Llandegley Rhos, Cefn Gledwen, Cefn Llwydallt and Cefn Clawdd) as well as the Elan Valley Way promoted walking route, will be affected by small or imperceptible changes in views, and these will not be significant.

People at Visitor Attractions and Promoted Viewpoints

5.159 The visitor attractions considered in this assessment are Builth Castle and the Royal Welsh Showground (as shown on **Figures 5.17a and b**). Visitors to the promoted viewpoint south of Cwm Graig-ddu have also been considered but will be affected by a small change in views which will not be significant and so are not included in the summary below.

5.160 Visitors to Builth Castle are judged to have high susceptibility to change and a medium value, resulting in a medium-high sensitivity (see the detailed assessments in **Appendix 5.5**). The scale of visual effect is judged to be medium for visitors at the eastern edge of the mound at Builth Castle, as the turbines will occupy approximately 25 degrees of the undeveloped skyline and will be prominent in views (seen at a distance of approximately 3.8 km), although seen beyond buildings in the foreground – **moderate (significant) effect**. The changes to the views will be similar to those illustrated by the visualisations for **Viewpoint 12 (Figures 5.38 in Volume 4)**.

5.161 Visitors to the Royal Welsh Showground are judged to have a low susceptibility and a medium value resulting in a low-medium sensitivity (see the detailed assessments in **Appendix 5.5**). The scale of visual effect is judged to be medium for visitors within open areas at the Royal Welsh Showground, as the turbines will occupy approximately 25 degrees of the undeveloped

skyline, will be prominent on Aberedw Hill which provides an attractive landscape setting to the showground (seen at distances of between 4.1 km and 4.6 km) and in some cases will be seen in the direct line of vision of visitors (although noting that people's attention will be largely directed towards the events and activities taking place on the showground rather than the wider landscape, particularly during the annual Royal Welsh Show) – **moderate (significant) effect**. The changes to views are illustrated by the visualisations for **Viewpoint 15 (Figures 5.41 in Volume 4)**.

People at Campsites

5.162 The campsites considered in this assessment are Fforest Fields, Mid Wales Caravan & Camping Site and the Brynchrach Caravan and Camping Site (as shown on **Figures 5.17a and b**).

5.163 Visitors to the campsites are judged to have medium susceptibility to change and a medium value, resulting in a medium sensitivity (see the detailed assessments in **Appendix 5.5**).

5.164 Where the Proposed Development will be in relatively close proximity in a direct line of vision, or affect a substantial part of the view, or provide contrast with the existing view, the scale of visual effect is judged to be large. Where this occurs the magnitude of visual change is judged to be high due to a large scale of effect over a long-term. This will affect:

- Visitors within the open areas of the Fforest Fields, Mid Wales Caravan & Camping Site (including grass pitches and lakes), as the turbines will occupy approximately 110 degrees of the undeveloped skyline and will be prominent on top of Aberedw Hill in open and unimpeded views (seen at a distance ranging between 0.8 km and 1.4 km) – **moderate-major (significant) effect**.

5.165 From areas where the Proposed Development will result in a perceptible change in views but may be slightly further away, oblique to the view or partially screened, the scale of visual effect is judged to be medium (noting that all judgements are on a sliding scale and some judgements will be at the higher end of medium (resulting in a medium-high magnitude of change) while others may be at the lower end (resulting in a low-medium magnitude of change). This applies to the following receptor groups:

- Visitors within the main area of the Fforest Fields, Mid Wales Caravan & Camping Site (including hardstand pitches, the circuit road and the reception building), as the turbines will occupy approximately 110 degrees of the undeveloped skyline (seen at a distance of approximately 1.1 km) but intervening vegetation will screen/ filter some of the Proposed Development, and/ or the turbines will be seen obliquely – **moderate (significant) effect**.
- Visitors at the Brynchrach Caravan and Camping Site, as the turbines will occupy approximately 55 degrees of the undeveloped skyline (seen at a distance ranging between 1.8 km and 2 km), although static caravans and vegetation will slightly intervene – **moderate-major (significant) effect**. The changes to the views will be similar to those illustrated by the visualisations for **Viewpoint 3 (Figures 5.29 in Volume 4)**.

Assessment of Cumulative Effects

Introduction

5.166 The aim of the CLVIA has been to ‘describe, visually represent and assess the ways in which a proposed windfarm will have additional impacts when considered with other consented or proposed windfarms’ (NatureScot, 2021⁴¹).

5.167 In accordance with NatureScot guidance and Planning Inspectorate advice note⁴², this assessment has considered the following scenarios:

- **Scenario A** - the most certain cumulative scenario (which includes consented schemes alongside the existing operational/ under-construction schemes that are already in the LVIA baseline); and
- **Scenario B** - a less certain cumulative scenario (which includes undetermined planning applications alongside the schemes considered in Scenario A).

5.168 The other wind energy developments within 33 km of the Proposed Development and considered in the above cumulative assessment scenarios are detailed in **Table 5.11** above and

⁴¹ NatureScot (2021) Assessing the cumulative landscape and visual impact of onshore wind energy developments. Available at: <https://www.nature.scot/doc/guidance-assessing-cumulative-landscape-and-visual-impact-onshore-wind-energy-developments>

⁴² Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment

shown on **Figure 5.19**. The approach to the cumulative assessment in this ES is set out in **Chapter 2: Approach to the EIA**.

General Observations on Visibility of Cumulative Developments

5.169 Combined cumulative ZTVs (CZTVs) (**Figure 5.20** to **Figure 5.22**) for the Proposed Development with other wind energy developments have been prepared to show where ZTVs overlap and where cumulative effects may occur. The CZTVs consider different groupings of wind energy development as follows:

- Operational and under construction wind energy developments within 33 km (refer to **Figure 5.20**), including:
 - Tremaen – operational;
 - Penllanerch – operational;
 - Upper Pengarth – operational;
 - Hendy³³ – under construction;
 - Ty Gwyn Farm – operational;
 - Cefncynfal – operational;
 - Garreg Lwyd Hill – operational;
 - Bryn Titli – operational;
 - Llandinam – operational; and
 - Garreg Lwyd Hill – operational.
- Operational and under construction, and consented wind energy developments within 33 km (illustrating combined visibility of Scenario A schemes, refer to **Figure 5.21**), including the operational and under construction wind farms above, and:
 - Garn Fach – consented; and
 - Llandinam Repowering – consented (and which will replace the operational Llandinam).

- Operational, consented and proposed wind energy developments within 33 km (illustrating combined visibility of Scenario B schemes, refer to **Figure 5.22**), including the operational and under construction, and consented wind farms above, and:
 - Nant Mithil – proposed; and
 - Bryngydfa – proposed.

5.170 Paired ZTVs have also been prepared to illustrate where the Proposed Development may be seen in conjunction with the following wind energy developments that are at a comparable scale to the Proposed Development and within 10 km from it:

- Paired ZTV illustrating visibility of under construction Hendy Wind Farm and Proposed Development (refer to **Figure 5.23**) to provide an understanding of where Hendy currently exerts an existing influence on the landscape; and
- Paired ZTV illustrating visibility of proposed Nant Mithil Wind Farm and Proposed Development (refer to **Figure 5.24**) to provide an understanding of where Nant Mithil would exert an influence on the landscape.

Scenario A

5.171 In general, views of the Proposed Development, together with the other operational/ under-construction and consented wind energy developments will be most frequently available from the summits and flanks of the higher hills. As indicated by the combined ZTV (illustrated in **Figure 5.21**), there are many parts of the study area in which other wind energy developments, but not the Proposed Development, will be visible, and there are some areas from where no wind energy development will be visible. The areas where only the Proposed Development will be visible are areas close to the Proposed Development (including from the slopes of the Aberedw Hill upland complex, the Colwyn Brook valley around Matts Common, the lower slopes of the River Edw valley, and the valley floor of the River Wye); from within the local communities of Llanelwedd (including the Royal Welsh Showground) and Franksbridge (although where actual visibility will be limited by intervening buildings and vegetation), and from parts of the Mynydd Epynt upland area and the BBNP.

Scenario B

5.172 When considering Scenario B (which includes undetermined planning applications alongside the schemes considered in Scenario A), **Figure 5.22** indicates that there is an increase (in comparison to Scenario A) in areas of the study area in which other wind energy developments, but not the Proposed Development, will be visible, particularly within the Gilwern Brook/River Arrow valley, the Summerhill Brook valley and the River Lugg valley. There will continue to be some areas from where no wind energy development will be visible, and some of the areas where only the Proposed Development will be visible will remain (i.e. the slopes of the Aberedw Hill upland complex, the lower slopes of the River Edw valley, and the valley floor of the River Wye); and from within the local community of Llanellwedd (including the Royal Welsh Showground).

Summary of Cumulative Landscape and Visual Effects – Additional

5.173 The detailed CLVIA by receptor has assessed **additional** cumulative effects, i.e. the effect of adding the Proposed Development to a theoretical projected baseline of other built or unbuilt wind farms in Scenarios A and B. It has considered whether the effects identified against the projected baselines in scenarios A and B are different from the effects recorded in the LVIA against the existing baseline for each receptor. The results are summarised below.

Scenario A

5.174 There are two consented (but unbuilt) wind energy developments in the study area, limited to Garn Fach (17 turbines at 149.9 m maximum blade tip height) and Llandinam Repowering (34 turbines at 121.2 m maximum blade tip height), located 26.4 km and 29.3 km to the north-west of the Proposed Development respectively. The larger turbines associated with Llandinam Repowering will replace the existing operational turbines of Llandinam Wind Farm, appearing more perceptible in views whilst occupying a similar horizontal extent to the existing Llandinam scheme, and comprising two discrete clusters of turbines separated by a perceptible gap. The proposed Garn Fach Wind Farm will consolidate the two clusters of turbines formed by the consented Llandinam Repowering scheme, creating a perception of one large wind farm cluster, with turbines of comparable scale evident across a reasonably large extent of the horizon in distant views. There will be limited interaction between the Proposed Development and the two consented wind energy developments given the intervening distance between them. It is considered that the addition of the Proposed Development at Aberedw to a baseline

containing the turbines at Garn Fach and Llandinam Repowering will not result in any different effects compared to adding the Proposed Development at Aberedw to the current baseline. The total effects arising from all three developments will be no greater than the sum of their individual effects.

5.175 Overall, the detailed cumulative assessments in **Appendix 5.4** and **Appendix 5.5** indicate that schemes under Scenario A will not interact with the Proposed Development to the extent that there will be any additional cumulative effects on landscape character and on visual amenity. There will be **no additional cumulative effects over and above those set out in the primary assessment for Scenario A.**

Scenario B

5.176 There are two proposed (yet undetermined) wind energy developments within the study area as shown on **Figure 5.22**. The proposed wind energy development at Nant Mithil (30 turbines with a maximum blade tip height of up to 220 m) will be located 9.2 km to the north-east of the Proposed Development and will be the closest proposed wind energy development to the Site. Both the Proposed Development and Nant Mithil will be located within different landscape units (with the Proposed Development within Aberedw Uplands LCA 50 and Nant Mithil within Radnor Forest LCA 43); however, they will both fit into the wider pattern of operational/ under-construction wind energy developments which tend to be located within upland landscapes across the study area and already influence the landscape character of these upland areas. It is considered that the addition of the Proposed Development at Aberedw to a baseline containing the turbines at Nant Mithil will not result in any different effects compared to adding the Proposed Development at Aberedw to the current baseline given that they will both be within a similar type of landscape and at a similar scale. The total effects arising from the two developments will be no greater than the sum of their individual effects. The other proposed wind energy development at Bryngydfa (12 turbines at 126.5 m maximum blade tip height), is located 25.4 km to the north-east of the Proposed Development and will have very limited interaction with the Proposed Development.

5.177 Overall, the detailed cumulative assessments in **Appendix 5.4** and **Appendix 5.5** indicate that schemes under Scenario B will not interact with the Proposed Development to the extent that there will be any additional cumulative effects on landscape character and on visual

amenity. There will be **no additional cumulative effects over and above those set out in the primary assessment for Scenario B.**

Summary of Cumulative Landscape and Visual Effects – Total

5.178 The assessment of total cumulative effects considers the effect on landscape and views if all proposed developments, including the Proposed Development at Aberedw, are implemented when compared to the existing baseline. However, it should be noted that GLVIA3 (paragraph 7.13) recognises the uncertainties inherent in providing a judgement of total cumulative effect whereby “...*assessing combined effects involving a range of different proposals at different stages in the planning process can be very complex. Furthermore, the assessor will not have assessed the other schemes and cannot therefore make a fully informed judgment*”.

Scenario A

5.179 In terms of the total cumulative effects of cumulative schemes in Scenario A, the Proposed Development will add to the overall number of turbines in the area and will intensify the local influence of wind energy development across the central area of Powys.

5.180 Although the Proposed Development will be introduced to a landscape unit with no existing wind energy developments, Aberedw Uplands LCA 50 is an upland area similar to other upland areas that contain existing wind energy developments. Compared to the existing baseline, the Proposed Development at Aberedw alongside consented developments taken together will result in an increase in the size of turbines across the study area, with the Proposed Development at Aberedw contributing 18 turbines of 200 m, Garn Fach contributing 17 turbines of 149.9 m and Llandinam Repowering contributing 34 turbines of 121.2 m. This is likely to result in a **significant change when considered against the existing baseline (i.e. total cumulative effect)** as there will be a greater influence of wind energy development upon the landscape and because of the increase in the scale of turbines (rotor diameter and maximum blade tip height) proposed for these developments, except for Llandinam Repowering where the blade tip height of 121.2 m for all 34 turbines, is slightly lower than the existing turbines at Garreg Lwyd Hill (17 turbines at 126.5 m maximum blade tip height). However, the Proposed Development’s part in this total effect will be no greater than reported in the LVIA.

Scenario B

5.181 In addition to the developments set out in Scenario A above, other proposed (yet undetermined) developments will also contribute towards the increase in the size of turbines across the study area, with Nant Mithil contributing 30 turbines with a maximum blade tip height of up to 220 m, and Bryngydfa contributing 12 turbines of 126.5 m. These developments along with those in Scenario A and the Proposed Development at Aberedw will result in a **significant change when considered against the existing baseline (i.e. total cumulative effect)** as there will be a greater influence of wind energy development upon the landscape and because of the increase in the scale of turbines (rotor diameter and maximum blade tip height) proposed for these developments, except for Bryngydfa where the blade tip height of 126.5 m for all 12 turbines will be the same as the existing turbines at Garreg Lwyd Hill (17 turbines at 126.5 m maximum blade tip height). However, the Proposed Development's part in this total effect will be no greater than reported in the LVIA.

Summary of Cumulative Implications for the Special Qualities of the Bannau Brycheiniog National Park

Scenario A

5.182 Within 10 km of the BBNP, there will not be any operational or consented wind energy developments. The Proposed Development's contribution to the change in views from the BBNP under Scenario A will be the same as reported in the LVIA, i.e. it will be seen as a distant man-made feature over 19 km away, which will form a small component of the panoramic views experienced from elevated locations within the BBNP.

Scenario B

5.183 Within 10 km of the BBNP, there will not be any other proposed (yet undetermined) wind energy developments. The Proposed Development's contribution to the change in views from the BBNP under Scenario B will be the same as reported in the LVIA, i.e. it will be seen as a distant man-made feature over 19 km away, which will form a small component of the panoramic views experienced from elevated locations within the BBNP (albeit seen in the context of the proposed wind energy development at Nant Mithil which will appear directly behind the Proposed Development at Aberedw in some of the views to the north-west).

Implications for the Special Qualities of the Bannau Brycheiniog National Park

5.184 Appendix 5.6 contains a detailed assessment for the nationally designated landscape of the BBNP. A summary is provided in this section.

5.185 Visibility of the proposed turbines from the BBNP will be limited to upland locations facing north towards the Site (as shown on **Figure 5.10b**). The Proposed Development will be over 14 km from the boundary of the BBNP, but seen as a distant man-made feature from the slopes at a distance of over 19 km away in clear atmospheric conditions, as illustrated in the visualisations for **Viewpoint 27** (19.6 km from the nearest turbine), **Viewpoint 28** (26.9 km from the nearest turbine) and **Viewpoint 29** (29.6 km from the nearest turbine).

5.186 Although perceptible in some of the views experienced from this landscape (in clear atmospheric conditions), the Proposed Development will not detract from the diverse landscape, sweeping uplands, green valleys, dramatic waterfalls, ancient woodland, caves, forests, reservoirs or spectacular and distinctive upland landforms for which the park is designated.

Appendix 5.6 sets out an assessment of how the Proposed Development will affect the various Special Qualities of the BBNP and this indicates that the Proposed Development will be visible within part of the expansive panoramic views that are noted as one of the qualities of the BBNP but that its sweeping grandeur and outstanding natural beauty; contrasting patterns, colours & textures; sense of place & cultural identity; intimate sense of community; enjoyable & accessible countryside; vitality and wellbeing arising from the sounds, sights, smells & tastes; sense of discovery; its peace, tranquillity and darkness; mosaic of diversity and wildlife rich living landscape will remain as special qualities of the BBNP.

5.187 Overall, the presence of the Proposed Development will not fundamentally and significantly alter the key characteristics of the BBNP landscape, its special qualities or the enjoyment and opportunities for recreation associated with visiting the National Park. The introduction of the Proposed Development will not significantly adversely affect the day-time or night-time views experienced from upland locations within BBNP at distances exceeding 19 km, and the BBNP will remain an iconic landscape with exceptionally high scenic quality and a strong sense of place resulting from its elevation, dramatic and distinctive topography, and

panoramic views, as well as its historic features, cultural associations, and natural heritage value.

5.188 It is considered that the values (i.e. the special qualities) and integrity of this designated landscape will be preserved.

Residential Visual Amenity Assessment

5.189 A RVAA is contained in **Appendix 5.7**. The RVAA describes the change in view likely to be experienced by residents at the closest properties to the Proposed Development. It has been undertaken in accordance with the principles contained within the Landscape Institute's GLVIA3 and RVAA Technical Guidance Note 2/19 (LI TGN 2/19)⁴³. The approach has also been informed by numerous decisions made following public inquiries into wind energy proposals in the UK.

5.190 Residential visual amenity was a key factor in driving the design for the Proposed Development. The nearest properties were observed during fieldwork from publicly accessible locations (between September 2023 and December 2024). This was to ensure that a full understanding of views from each property and its domestic curtilage was gained to input to the design, in an iterative design/assessment process. Due to the elevated position of the Proposed Development, many of the closest properties are situated on the lower lying farmed landscape below the Aberedw Hill upland complex upon which the Proposed Development is located. Some properties closest to the Proposed Development are also located on the foot of the slopes which surround the Site and therefore their primary outlook is often directed over the surrounding landscape and away from the Site. Conversely, many of the more distant properties are situated on opposite valley slopes with their main/primary views focused towards the Proposed Development.

5.191 The RVAA sets out the methodology that has been applied including how properties within 2 km of the proposed turbines have been identified for consideration in the assessment. A total of 35 properties/property groups have been assessed. LI TGN 2/19 considers residential

⁴³ [Landscape Institute \(2019\) Technical Guidance Note 2/19: Residential Visual Amenity Assessment \(RVAA\)](#)

receptors to be of high visual sensitivity in the context of RVAA and so this sensitivity has been applied to all properties.

5.192 The following six properties/property groups are judged likely to experience a 'high' magnitude of change to views:

- **P1: Upper Blaenmilo** – as the proximity of T7 and T9 will result in the Proposed Development being a key element in views from one of the property's primary outlooks, and so the property will be affected by a large change to the scenic views.
- **Property Group 1 (P2: Penarth and P3: Penarth Bungalow)** – as the proximity of T17 in the views west, seen together with T16 and T18, will result in the Proposed Development being a key element in views, and so the property group will be affected by a large change in view.
- **P29: Lower Llatho** – as the proximity to turbines T18 and T15, will result in the Proposed Development being a key element in views from the 'rear' of the property, and so the property will be affected by a large change to views.
- **Property Group 5 (P30: Hollybush and P31: Weldon)** – as the turbines will become a key/ defining element in views west, including from gardens.
- **Property Group 16 (P77: Upper Llwyntudor and P78: Lower Llwyntudor)** - as the turbines will become a key/ defining element in views west/ south-west from the front (primary outlook) of the properties
- **P102: Pentwyn** - as the turbines will become a key/ defining element in views north from the primary outlook.

5.193 Within some of the property groups, the properties are judged to experience different levels of magnitude of change. Two of the property groups are made up of properties that are judged to experience either a 'high' or 'medium' magnitude of change. Within these two property groups, those judged likely to experience a 'high' magnitude of change to views are:

- **P65: Llanedw and P66: Brynllwyd (as part of Property Group 14)** – as the turbines will become a key/ defining element in views south-west from the front (primary outlook) of the properties.

- **P80: Hill View, P91: Croftdene, P92: Oakfield, P96: Highbury and P97: Flat, Highbury (as part of Property Group 17)** - as the turbines will become a key/ defining element in views south/ south-west from the primary outlook of the properties, including from gardens.

5.194 18 of the properties are judged to experience a 'medium' magnitude of change, and seven are judged to experience a 'low' magnitude of change. Another two property groups are made up of properties that are judged to experience either a 'medium' or 'low' magnitude of change.

5.195 All properties/property groups with a high magnitude of change were assessed in terms of potential effect on 'living conditions' by judging whether the Proposed Development will breach the Residential Visual Amenity Threshold, in accordance with LI TGN 2/19, i.e. the turbines will be so overwhelming, unpleasantly encroaching or inescapably dominant from any property so as to render the property an unpleasant place to live.

5.196 The RVAA has found that the threshold will be breached at one of the properties – at Upper Blaenmilo (P1) (which is financially involved in the Proposed Development), as due to the proximity of T7 and T9 (0.7 km and 0.8 km respectively) and the field of view occupied by the turbines around the property, it is likely that the Proposed Development could be experienced by the residents as 'unpleasantly encroaching' and/ or 'inescapably dominant' when viewed from one of the property's primary outlooks.

5.197 The RVAA has concluded that the threshold will not be breached at any of the other properties i.e. the turbines will not be so overwhelming, unpleasantly encroaching or inescapably dominant from the property so as to render the property an unattractive place to live.

Aviation Lighting Assessment

5.198 An Aviation Lighting Impact Assessment is contained in **Appendix 5.8**. The assessment sets out the background to the requirements for visible aviation lighting, followed by an assessment of landscape and visual effects arising for representative receptors within the study area.

5.199 Aberedw Energy Park Ltd ‘the Applicant’ commissioned a specialist aviation consultant (Wind Power Aviation Consultants (WPAC) Ltd) to design, in consultation with the Civil Aviation Authority (CAA) a reduced lighting scheme, which has been agreed for the Proposed Development. The reduced lighting scheme design is detailed in **Appendix 2.7** and **Appendix 5.8**, and comprises:

- Two medium-intensity ‘steady’ red (2000 candela (cd) lights on the nacelles of 6 of the 18 turbines of the Proposed Development (turbines T2, T6, T7, T10, T16 and T18) (the secondary light on each turbine is fitted for use in the event of failure of the primary light, and will not be lit concurrently);
- Infra-red lights to Ministry of Defence (MoD) specification installed on the nacelles of perimeter and central turbines (all 18 turbines) (which are not visible to the human eye); and
- Intermediate level 32 cd. lights (low-intensity) red lights are not required to be fitted on the turbines towers as part of the lighting scheme.

5.200 It is also proposed that visibility sensors are installed on appropriate perimeter turbines to measure prevailing atmospheric conditions and visibility range. Where atmospheric conditions limit visibility to distances of less than 5 km in any direction (e.g. presence of low cloud cover, rain, mist, haze or fog) the lights will be illuminated at the necessary intensity of 2000 cd (where the lights will emit a minimum average luminous intensity of 2000 cd. 0° (degrees). When horizontal meteorological visibility exceeds 5 km or greater from all sensors on the turbines, automatic dimming of the lights will occur, and they will operate in a lower reduced intensity mode of 200 cd. (the equivalent of not less than 10% of the minimum peak intensity capable illumination), and as detailed in **Appendix 2.7** it is anticipated that the proposed turbine lights at the Proposed Development will be illuminated in this reduced intensity mode for 88% of the time. As outlined in the latest good practice guidance (Scottish Government and NatureScot, 2024)⁴⁴, illumination of the lights in this reduced intensity situation, where automatic dimming is proposed, is considered to represent a reasonable and fair worst case scenario.

⁴⁴ Scottish Government and NatureScot (2024) Guidance on Aviation Lighting Impact Assessment

5.201 The luminous intensity of a 2000 cd light mounted on the turbine nacelle can also be substantially reduced at vertical angles below the horizontal plane. This mitigation is often referred to as vertical directional intensity mitigation and results in a reduction in the luminous intensity (brightness) of the light emitted by the light source from the 0° vertical angle, and substantially beyond the relatively narrow (3°) vertical beam spread, projecting horizontally from the nacelle light, between -1° to +2°. That is to say, the light will appear less bright to an observer looking up at the nacelle from below, than it will to an observer at the same elevation as the nacelle. The luminous intensity emitted at angles below -1° may also vary dependent on the specific obstacle lighting manufacturer's specification. Therefore, although the light emitted from a 2000 cd or 200 cd light source may be constant, the apparent brightness and size of the light as perceived by visual receptors (people) will vary dependent on distance, angle of view, and atmospheric conditions.

5.202 Whilst the Applicant is also committed to the implementation of vertical directional intensity mitigation, comprising the use of aviation lights that are designed to operate close to the minimum required intensities (as discussed in detail in **Appendix 5.8**), this mitigation is not relied upon in the assessment of effects arising from aviation lighting.

5.203 This mitigation, embedded in the design of many modern aviation lights, has the potential to substantially reduce the light intensity emitted in the direction of a particular viewpoint or the receptors it represents, and thus the illuminance experienced from particularly locations. However, at this stage an appropriately cautious approach has been taken to reflect the likely variations in assumed reductions in luminous intensity (brightness) which may arise in relation to aviation lights produced by different manufacturers.

5.204 As part of the assessment in **Appendix 5.8**, two representative night-time assessment viewpoints have been assessed in detail:

- Dusk/Night-time Assessment Viewpoint N1 (VP 6): Perthi Common - approximately 2.4-2.9 km to the north-west and north-east of the nearest lit turbines. This viewpoint has been selected to represent close by residents (e.g. the local community at Llansantffraed-in-Elwe) and can be used to represent other local communities who are at this distance and elevation (e.g. the local community at Hundred House). It is located upon the open access

land at Perthi Common, a small undulating upland area extending west of Llansantffraed-in-Elwel.

- Dusk/Night-time Assessment Viewpoint N2 (VP 27): Hay Bluff, Bannau Brycheiniog National Park - approximately 19.6 km to the south-west of the nearest lit turbine. It is located on the hill summit of Hay Bluff within the BBNP and IDSR. This viewpoint is representative of recreational walkers in the BBNP and IDSR but is less likely to be accessed or the views appreciated by receptors during hours of darkness due to its remote upland location.

5.205 In terms of visual effects, a **moderate (significant)** visual effect is predicted to arise for Viewpoint N1 (VP6): Perthi Common when the lights are operating in the maximum intensity scenario (2000 cd), as the introduction of the turbine lights into a largely dark baseline environment above the elevated skyline of Aberedw Hill will result in a clearly perceptible change in the view from the viewpoint and similar views experienced from nearby local communities and residential receptors within this rural landscape. However, the provision for the medium-intensity nacelle lights to be controlled by visibility sensors in order to reduce the intensity of the lights to approximately 10% of the minimum peak intensity in times of clear meteorological conditions (where visibility exceeds 5 km in all directions), will substantially reduce the perceptibility of the proposed lights and the visual effect will reduce to **minor-moderate (not significant)** in this reduced intensity scenario (200 cd.).

5.206 No significant visual effects are predicted to occur from Viewpoint N2 (VP 27): Hay Bluff, BBNP, where the lights will be seen at distances exceeding 19 km, resulting in a **minor (not significant)** visual effect in the maximum intensity scenario, reducing to **negligible (not significant)** in the reduced intensity scenario.

5.207 The assessment also provides an overall analysis of the visibility of the proposed aviation lighting. In summary, the turbine lights will appear the brightest during the maximum intensity scenario when the lights will be illuminated at their minimum peak intensity of 2000 cd. However, this scenario is predicted to occur relatively infrequently based on historical meteorological information, and the lights are predicted to operate in the reduced intensity scenario the vast majority of the time (88%).

5.208 The lights will be perceived at their brightest at locations closest to the light source. **Table 8a of Appendix 2.7** details the predicted illuminance from each viewpoint, for example, where seen from **Viewpoint 3: A481 at Hundred House** at 1.7 km from the nearest lit turbine (T16) the illuminance will be 709 μlx in the maximum intensity scenario and 70.9 μlx in the reduced intensity scenario (e.g. not less than 10% of their maximum luminous intensity). Conversely, from more distant locations such as **Viewpoint 27: Hay Bluff, Bannau Brycheiniog National Park** at 19.6 km from the nearest lit turbine (T7) the illuminance will be 5 μlx in the maximum intensity scenario and 0.5 μlx in the reduced intensity scenario (e.g. not less than 10% of their maximum luminous intensity). This is approximately equivalent to a car brake light seen at a distance of 5 km (4 μlx) in the maximum intensity scenario, or similar to a typical bright star in the sky, e.g. Orion (0.5 to 2 μlx), or fainter than a car brake light seen at a distance of 10 km (1 μlx) in the reduced intensity scenario. With vertical directional intensity mitigation in place, the reduction in the level of illuminance will be limited.

5.209 Regarding the effects on landscape character, no significant effects are anticipated. The proposed aviation lighting will introduce additional artificial lighting into the night-time landscape of the Aberedw Uplands LCA 50, within which darkness is a baseline characteristic of the upland plateau as described in the 2022 Powys LCA “*The LCA experiences dark night skies as indicated by the Natural Resources Wales (NRW) map of Dark Skies and Light Pollution in Wales*”. The introduction of the 6 visible aviation lights is predicted to give rise to a **minor-moderate (not significant)** effect on the landscape of LCA 50 at night during both the maximum and reduced intensity scenarios.

5.210 Overall, in summary, no significant effects on landscape character are predicted at night. Effects of lighting will primarily affect views rather than perceived underlying characteristics of the landscape (i.e. landscape character).

5.211 The assessment also concludes that the Proposed Development at dusk/night will not affect the special qualities of the BBNP, including the special quality detailed in Y Bannau: The Future - The Management Plan For Bannau Brycheiniog National Park 2023-2028⁴⁵ which

⁴⁵ Bannau Brycheiniog National Park Authority (2023) Y Bannau: The Future – The Management Plan For Bannau Brycheiniog National Park 2023-2038

includes reference to dark skies “*Peace, tranquillity and darkness: A National Park offering dark night time skies, peace and tranquillity with opportunities for quiet enjoyment, inspiration, relaxation and spiritual renewal*” (Page 47). Areas where the visible aviation lights will be observed from the BBNP k are generally less likely to be frequented during the hours of darkness, given their relative remoteness and sometimes challenging terrain.

Monitoring

5.212 It is not anticipated that further survey/monitoring will be required.

Summary of Effects

Summary of Residual Landscape Effects

5.213 Landscape effects are summarised in **Table 5.12** below. The areas where significant landscape effects will occur are shown on **Figure 5.25**.

Table 5.12 Summary of Landscape Effects

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Landscape Units (within 15 km) based on Powys Landscape Character Areas				
Aberedw Uplands LCA 50	Medium-high	High for the western part of the landscape unit that falls within the Site, which will be directly affected by the Proposed Development (including all 18 turbines) and up to 1.5 km from the turbines. Medium for the perceptual (visual and sensory) character of the north and west facing slopes and	Major (significant) for the western part of the landscape unit that falls within the Site, which will be directly affected by the Proposed Development (including all 18 turbines) and up to 1.5 km from the turbines. Moderate (significant) for the perceptual (visual and sensory) character of the north and west facing	Scenario A: Major (significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Major (significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		summits 1.5-5 km from the turbines.	slopes and summits 1.5-5 km from the turbines.	
	Medium-high (at night)	Low-medium at night during the maximum intensity scenario. Low at night during the reduced lighting intensity scenario.	Minor-Moderate (not significant) at night during both the maximum and reduced lighting intensity scenarios.	Scenario A: N/A Scenario B: N/A
Llanbister-Penybont Uplands LCA 40	High	High for areas within 1.5 km of the proposed turbines . Medium for the perceptual (visual and sensory) character of areas up to 5 km from the proposed turbines,	Major (significant) for areas within 1.5 km of the proposed turbines. Moderate (significant) for the perceptual (visual and sensory) character of areas up to 5 km from the proposed turbines,	Scenario A: Major (significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Major (significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		including from elevated, open common land at Perthi Common and from south-facing slopes of Carneddau/Castle Bank.	including from elevated, open common land at Perthi Common and from south-facing slopes of Carneddau/Castle Bank.	
Aberedw Valley LCA 54	Medium-high	High for areas within 1.5 km of the proposed turbines e.g. around Cregrina. Medium for the perceptual (visual and sensory) character of areas beyond 1.5 km	Major (significant) for areas within 1.5 km of the proposed turbines e.g. around Cregrina. Moderate (significant) for the perceptual (visual and sensory) character of areas beyond 1.5 km from	Scenario A: Major (significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Major (significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		from the proposed turbines, particularly the north and west facing slopes.	the proposed turbines, particularly the north and west facing slopes.	
Wye Valley (Builth Wells to Hay-on-Wye) LCA 55	Medium-high	High for the upper north-east facing valley sides within 1.5 km of the proposed turbines. Medium for the perceptual (visual and sensory) character of the north-east facing valley sides beyond 1.5 km from the proposed turbines.	Major (significant) for the upper north-east facing valley sides within 1.5 km of the proposed turbines. Moderate (significant) for the perceptual (visual and sensory) character of the north-east facing valley sides beyond 1.5 km from the proposed turbines.	Scenario A: Major (significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Major (significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Northern Mynydd Epynt LCA 56	Medium-high	Medium for north-east-facing valley sides and upper hill slopes between 2.5 - 5 km of the Proposed Development. Low for areas beyond 5 km from the Proposed Development.	Moderate (significant) for north-east-facing valley sides and upper hill slopes between 2.5 - 5 km of the Proposed Development. Minor-moderate (not significant) for areas beyond 5 km from the Proposed Development.	Scenario A: Moderate (significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Moderate (significant) - the same level of landscape effect as recorded in the primary assessment.
Painscastle Uplands LCA 51	Medium-high	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Mynydd Epynt LCA 57	Medium-high	Medium for east-facing slopes within 5 km of the Proposed Development. Low for the landscape unit beyond 5 km	Moderate (significant) for east-facing slopes within 5 km of the Proposed Development. Minor-moderate (not significant) for the landscape unit beyond 5 km	Scenario A: Moderate (significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Moderate (significant) - the same level of landscape effect as recorded in the primary assessment.
Irfon Valley LCA 53	Medium	Low	Minor (not significant)	Scenario A: Minor (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor (not significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Wye Valley (Rhayader to Builth Wells) LCA 44	Medium-high	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
Eastern Mynydd Epynt Hills LCA 58	Medium-high	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
Radnor Forest LCA 43	Medium-high	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
				primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
River Dulas Hills & Valleys LCA 38	Medium-high	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
Southern Mynydd Epynt Valleys LCA 59	Medium	Low	Minor (not significant)	Scenario A: Minor (not significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
				Scenario B: Minor (not significant) - the same level of landscape effect as recorded in the primary assessment.
Bryn Glas Uplands LCA 47	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
Southern Bryn Glas Uplands LCA 52	Medium-high	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
				same level of landscape effect as recorded in the primary assessment.
Landscape Units within the BBNP (up to 33 km) based on BBNP Landscape Character Areas				
Wye Valley Foothills LCA 14	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
The Black Mountains LCA 13	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
				same level of landscape effect as recorded in the primary assessment.
Middle Usk Valleys LCA 6	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
Eastern Usk Valley LCA 11	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Central Beacons LCA 7	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
Western Usk Tributaries LCA 5	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.
Fforest Fawr LCA 3	High	Low	Minor-moderate (not significant)	Scenario A: Minor-moderate (not significant) - the same level of landscape effect as recorded in the

Landscape Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
				primary assessment. Scenario B: Minor-moderate (not significant) - the same level of landscape effect as recorded in the primary assessment.

Summary of Residual Visual Effects

Visual effects are summarised in **Table 5.13** below. The locations where significant visual effects will occur are shown on **Figure 5.26**.

Table 5.13 Summary of Visual Effects

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
People within Settlements (Local Communities)				
Cregrina	Medium-high	Low-medium from the northern part of the village. Low from the southern and south-western parts of the village.	Minor-moderate (not significant) from the northern part of the village. Minor (not significant) from the southern and south-western parts of the village.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
Hundred House	Medium-high	High from the central part of the village and the minor road in the north. Medium from the eastern	Major (significant) from the central part of the village and the minor road in the north. Moderate (significant) from	Scenario A: Major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		and western parts of the village.	the eastern and western parts of the village.	
Llansantffrae d-in-Elwel	Medium-high	High from the southern edge of the village. Low from the minor lane along the western edge of the village	Major (significant) from the southern edge of the village. Minor-moderate (not significant) from the minor lane along the western edge of the village.	Scenario A: Major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Major (significant) - the same level of visual effect recorded in the LVIA.
Franksbridge	Medium-high	Medium from the junction of where the minor lane meets the unnamed cul-de-sac. Low-medium from the southern settlement edge	Moderate (significant) from the junction of where the minor lane meets the unnamed cul-de-sac. Minor-moderate (not significant) from the southern	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		and from the properties in the north-western part of the village (orientated to the south-west).	settlement edge and from the properties in the north-western part of the village (orientated to the south-west).	
Builth Wells	Medium-high	Medium from Castle Road in the east, elevated areas south of the A483, east-west aligned streets in the north-west (such as Pendre and Irfon Road) and properties along the north-western settlement edge (including along Golf Links Road), and from along the Wye Bridge (A483).	Moderate (significant) from Castle Road in the east, elevated areas south of the A483, east-west aligned streets in the north-west (such as Pendre and Irfon Road) and properties along the north-western settlement edge (including along Golf Links Road), and from along the Wye Bridge (A483).	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Llanelwedd	Medium-high	Medium from the front of The Llanelwedd Arms Hotel in the south of the village. Low-medium from the western end of 'The Crescent' (in the north-east).	Moderate (significant) from the front of The Llanelwedd Arms Hotel in the south of the village. Minor-moderate (not significant) from the western end of 'The Crescent' (in the north-east).	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.
Caerwnon Park	Medium-high	Low from the north-eastern corner and central areas of the residential park.	Minor-moderate (not significant) from the north-eastern corner and central areas of the residential park.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Cilmerly	Medium-high	Low from the northern edge of the village and from along the A483	Minor-moderate (not significant) from the northern edge of the village and from along the A483	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
Llandrindod Wells	Medium-high	Low from the southern and south-eastern edge of the town (including properties along Brynteg, Pentrosfa Road and Lakeside Avenue).	Minor-moderate (not significant) from the southern and south-eastern edge of the town (including properties along Brynteg, Pentrosfa Road and Lakeside Avenue).	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
Newbridge-on-Wye	Medium-high	Low from the southern settlement edge (namely the properties along	Minor-moderate (not significant) from the southern settlement edge (namely the	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		Knapplands and Meadowlands).	properties along Knapplands and Meadowlands).	Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
Llanyre	Medium-high	Low from the southern, eastern and north-eastern edges of the village (including the graveyard of St Llyr Church, and properties along Penrhiw, Cagebrook Lane and near Roundfield).	Minor-moderate (not significant) from the southern, eastern and north-eastern edges of the village (including the graveyard of St Llyr Church, and properties along Penrhiw, Cagebrook Lane and near Roundfield).	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
People Travelling on Roads				
Road users of the A481	Medium	Medium-high from the stretch of road in the west (between the roundabout junction with the Wyeside	Moderate-major (significant) from the stretch of road in the west (between the roundabout junction with the Wyeside	Scenario A: Moderate-major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		Enterprise Park and the junction with the B4567), from the stretch of road in the north-east (between Llangyfrwys and Hundred House), and from the stretch of road that runs parallel with the northern edge of the Site.	Enterprise Park and the junction with the B4567), from the stretch of road in the north-east (between Llangyfrwys and Hundred House), and from the stretch of road that runs parallel with the northern edge of the Site.	Scenario B: Moderate-major (significant) - the same level of visual effect recorded in the LVIA.
Road users of the A470	Medium	Medium effect from the stretch of road leaving Builth Wells in the east and near to Aberduhonw. Low-medium effect from the stretch of road between Tregaer and	Moderate (significant) effect from the stretch of road leaving Builth Wells in the east and near to Aberduhonw. Minor-moderate (not significant) from the stretch of road between Tregaer and	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		Alltmawr, and along the approach to Builth Wells in the north.	Alltmawr, and along the approach to Builth Wells in the north.	
Road users of the A483	Medium	Medium from the stretch of road between Cilmerly and Builth Wells and along the Wye Bridge.	Moderate (significant) from the stretch of road between Cilmerly and Builth Wells and along the Wye Bridge.	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.
Road users of the A44	Medium	Low from the short stretch of the A44 between Rhosdegla and Grylls.	Minor (not significant) from the short stretch of the A44 between Rhosdegla and Grylls.	Scenario A: Minor (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor (not significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Road users of the A4081	Medium	Low from along the A4081 where intervening vegetation does not screen/ filter views.	Minor (not significant) from along the A4081 where intervening vegetation does not screen/ filter views.	Scenario A: Minor (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor (not significant) - the same level of visual effect recorded in the LVIA.
Road users of the B4567	Medium	Medium from the stretch of road between its junction with the A481 and The Hall residence, and from along the stretch of road between the farmstead at Coed-yr-aber and the River Edw crossing.	Moderate (significant) from the stretch of road between its junction with the A481 and The Hall residence, and from along the stretch of road between the farmstead at Coed-yr-aber and the River Edw crossing.	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Road users of the B4520	Medium	Medium from the short stretch of road that travels through the village of Llanddewi'r Cwm. Low-medium from the road between Builth Wells and Cwm-nant-gwyn.	Moderate (significant) from the short stretch of road that travels through the village of Llanddewi'r Cwm. Minor-moderate (not significant) from the road between Builth Wells and Cwm-nant-gwyn.	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.
People Using Open Access Land, Walking Routes and Cycle Routes				
Users of the Open Access Land (Aberedw Hill, Llan-fraith Hill and	Medium-high	High from the entirety of the open access land and PROW across the Site.	Major (significant) from the entirety of the open access land and PROW across the Site.	Scenario A: Major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Wylfre) and the PRowS on the Site				
Users of the Open Access Land at Perthi Common, Carneddau and Gilwern Hill (including users of PRowS to the north and north-west of	Medium-high	High from the summits and south-facing slopes of Perthi Common, Carneddau and Gilwern Hill, as well as surrounding PRowS where intervening vegetation does not screen/ filter views.	Major (significant) from the summits and south-facing slopes of Perthi Common, Carneddau and Gilwern Hill, as well as surrounding PRowS where intervening vegetation does not screen/ filter views.	Scenario A: Major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
the Site and within 5 km)				
Users of the Open Access Land at Red Hill, Rhulen Hill, Llanbedr Hill and Llandeilo Hill (including users of PRowS to the south and south-east of the Site and within 5 km)	Medium-high	High from the summits and north/ north-west facing slopes of Red Hill, Rhulen Hill, Llanbedr Hill and Llandeilo Hill, as well as from the sections of PRowS that extend along the lower slopes of the valley where intervening vegetation does not screen/ filter views.	Major (significant) from the summits and north/ north-west facing slopes of Red Hill, Rhulen Hill, Llanbedr Hill and Llandeilo Hill, as well as from the sections of PRowS that extend along the lower slopes of the valley where intervening vegetation does not screen/ filter views.	Scenario A: Major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Users of the Open Access Land at Little Hill, Cefn Wylfre and Glascwm Hill (including users of PRowS to the north-east and east of the Site and within 5 km)	Medium-high	High from the summits and west/ south-west facing slopes of Little Hill, Cefn Wylfre and Glascwm Hill, as well as from the sections of PRowS that extend along the lower slopes of the valley where intervening vegetation does not screen/ filter views.	Major (significant) from the summits and west/ south-west facing slopes of Little Hill, Cefn Wylfre and Glascwm Hill, as well as from the sections of PRowS that extend along the lower slopes of the valley where intervening vegetation does not screen/ filter views.	Scenario A: Major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Users of the Open Access Land at Garth (including users of PRowS to the west of the Site and within 5 km)	Medium-high	High from the summit of Garth Hill, as well as from the sections of PRowS that extend along the lower slopes of the valley where intervening vegetation does not screen/ filter views.	Major (significant) from the summit of Garth Hill, as well as from the sections of PRowS that extend along the lower slopes of the valley where intervening vegetation does not screen/ filter views.	Scenario A: Major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Major (significant) - the same level of visual effect recorded in the LVIA.
Users of the Open Access Land at Gwaunceste Hill, Little Hill, Llanfihangel	Medium-high	Medium from the summits and upper west-facing slopes of Gwaunceste Hill and Little Hill. Low-medium from the summits and upper west-	Moderate (significant) from the summits and upper west-facing slopes of Gwaunceste Hill and Little Hill. Minor-moderate (not significant) from the summits	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Hill, Colva Hill and Mynd		facing slopes of Llanfihangel Hill, Colva Hill and Mynd.	and upper west-facing slopes of Llanfihangel Hill, Colva Hill and Mynd.	
Users of the Open Access Land at The Begwns	Medium-high	Low-medium from the summits and upper north-facing slopes of The Begwns.	Minor-moderate (not significant) from the summits and upper north-facing slopes of The Begwns.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
Users of the Open Access Land at Moelfre, Cefn-poeth and Comin-y-garth	Medium-high	Low-medium from the summits and east-facing slopes at Moelfre, Cefn-poeth and Comin-y-garth.	Minor-moderate (not significant) from the summits and east-facing slopes at Moelfre, Cefn-poeth and Comin-y-garth.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Users of the Open Access Land at Llandegley Rhos	Medium-high	Low-medium from the summits and south-facing slopes of Llandegley Rhos.	Minor-moderate (not significant) from the summits and south-facing slopes of Llandegley Rhos.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
Users of the Open Access Land at Cefn Gledwen, Cefn Llwydallt and Cefn Clawdd	Medium-high	Low-medium from the summits and north-east facing slopes of Cefn Gledwen, Cefn Llwydallt, and Cefn Clawdd.	Minor-moderate (not significant) from the summits and north-east facing slopes of Cefn Gledwen, Cefn Llwydallt, and Cefn Clawdd.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Users of the National Cycle Network Route 825 (including users of the Open Access Land at Hundred House Common)	Medium	High from the stretch of the route where it crosses Hundred House Common (when looking south). Medium-high from the stretch of the route between Cregrina and Hundred House. Medium from the stretches of the route between the properties at Busnant and Rhos (east of Cregrina) and between Bwlch-Ilwyn and Franksbridge.	Moderate-major (significant) from the stretches of the route where it crosses Hundred House Common (when looking south); and between Cregrina and Hundred House. Moderate (significant) from the stretches of the route between the properties at Busnant and Rhos (east of Cregrina) and between Bwlch-Ilwyn and Franksbridge.	Scenario A: Moderate-major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate-major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Users of the National Cycle Network Route 8	Medium	Medium from the stretch of the route that crosses the Wye Bridge and from the stretch of the route between Cmon Coch and Builth Well.	Moderate (significant) from the stretch of the route that crosses the Wye Bridge and from the stretch of the route between Cmon Coch and Builth Wells.	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.
Users of the Wye Valley Walk (including users of the Open Access Land at Banc y Celyn and PRowWs to the south-	Medium-high	Medium from the summit and east-facing slopes of Banc y Celyn (including from along the Wye Valley Walk where it traverses the open access land), as well as from the other PRowWs that extend from the Wye Valley Walk and traverse the lower slopes	Moderate (significant) from the summit and east-facing slopes of Banc y Celyn (including from along the Wye Valley Walk where it traverses the open access land), as well as from the other PRowWs that extend from the Wye Valley Walk and traverse the lower slopes of the River Wye Valley	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
west of the Site within 5 km)		of the River Wye Valley to the south-west of the Site (where intervening vegetation does not screen/ filter views). Low from along the elevated stretch of the Wye Valley Walk that runs for approximately 2.5 km along the western valley sides to the north-west of Newbridge-on-Wye (around Upper Cefncoed and Ty'n-y-coed).	to the south-west of the Site (where intervening vegetation does not screen/ filter views). Minor-moderate (not significant) from along the elevated stretch of the Wye Valley Walk that runs for approximately 2.5 km along the western valley sides to the north-west of Newbridge-on-Wye (around Upper Cefncoed and Ty'n-y-coed).	

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Users of the Heart of Wales Line Trail	Medium-high	Medium from where the footpath travels along the Wye Bridge (A483). Low-medium from along the south-east facing valley slopes of the River Wye (between the edge of Llanelwedd and Lower Llanelwedd Wood) and the lower slopes of the open access land at Moelfre. Low from the elevated slopes at Coedswydd and Rhos-swydd (east of Penybont).	Moderate (significant) from where the footpath travels along the Wye Bridge (A483). Low-medium (not significant) from along the south-east facing valley slopes of the River Wye (between the edge of Llanelwedd and Lower Llanelwedd Wood) and the lower slopes of the open access land at Moelfre. Low (not significant) from the elevated slopes at Coedswydd and Rhos-swydd (east of Penybont).	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Users of the Elan Valley Way	Medium-high	Low from where the Elan Valley Way traverses the hilltop at Bwlch-Mawr and from the elevated slopes on the eastern side of the River Ithon and hilltop at Little Hill (to the west of Penlan).	Minor-moderate (not significant) from where the Elan Valley Way traverses the hilltop at Bwlch-Mawr and from the elevated slopes on the eastern side of the River Ithon and hilltop at Little Hill (to the west of Penlan).	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
People at Visitor Attractions				
Visitors to Builth Castle	Medium-high	Medium from the eastern edge of the mound.	Moderate (significant) from the eastern edge of the mound.	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Visitors to the Royal Welsh Showground	Low-medium	Medium from open areas within the showground.	Moderate (significant) from open areas within the showground.	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.
Visitors to the promoted viewpoint south of Cwm Graig-ddu	High	Low from the wooden shelter and parking area.	Minor-moderate (not significant) from the wooden shelter and parking area.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
People at Campsites				

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
Visitors to Fforest Fields, Mid Wales Caravan & Camping Site	Medium	High from open areas of the campsite (including grass pitches and lakes). Medium from the main area of the campsite (including hardstand pitches, the circuit road and the reception building).	Moderate-major (significant) from open areas of the campsite (including grass pitches and lakes). Moderate (significant) from the main area of the campsite (including hardstand pitches, the circuit road and the reception building).	Scenario A: Moderate-major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate-major (significant) - the same level of visual effect recorded in the LVIA.
Visitors to Brynchrach Caravan and Camping Site	Medium	Medium-high from across the campsite	Moderate-major (significant) from across the campsite	Scenario A: Moderate-major (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate-major (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
People Visiting Popular Hill Summits in the BBNP				
Visitors to popular hill summits in the BBNP	High	Low from the northern extent of BBNP, including the areas of open moorland and hill summits at Hay Bluff, Cefn Llechid, Pen y Fan, Corn Du, Cribyn and Fan y Big.	Minor-moderate (not significant) from the northern extent of BBNP, including the areas of open moorland and hill summits at Hay Bluff, Cefn Llechid, Pen y Fan, Corn Du, Cribyn and Fan y Big.	Scenario A: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor-moderate (not significant) - the same level of visual effect recorded in the LVIA.
Dusk/ night-time Visual Effects				
Viewpoint N1: Perthi Common	Medium-high	Medium during reasonable maximum worst-case scenario for close by residents (e.g. the local community at Llansantffraed-in-Elwe)	Moderate (significant) during reasonable maximum worst-case scenario for close by residents (e.g. the local community at Llansantffraed-in-Elwe) and other local	Scenario A: Moderate (significant) - the same level of visual effect recorded in the LVIA. Scenario B: Moderate (significant) - the same level of visual effect recorded in the LVIA.

Visual Receptor	Sensitivity	Magnitude of Change (at operation)	Residual Effect (at operation)	Cumulative Effect
		and other local communities at a similar distance and elevation (e.g. the local community at Hundred House). Low-medium during the reduced lighting intensity scenario.	communities at a similar distance and elevation (e.g. the local community at Hundred House). Minor-moderate (not significant) during the reduced lighting intensity scenario.	
Viewpoint N2: Hay Bluff, Bannau Brycheiniog National Park	High	Low during reasonable maximum worst-case scenario for visitors of the BBNP and International Dark Sky Reserve. Barely perceptible during the reduced lighting intensity scenario.	Minor (not significant) during reasonable maximum worst-case scenario for visitors of the BBNP and International Dark Sky Reserve. Negligible (not significant) during the reduced lighting intensity scenario.	Scenario A: Minor (not significant) - the same level of visual effect recorded in the LVIA. Scenario B: Minor (not significant) - the same level of visual effect recorded in the LVIA.