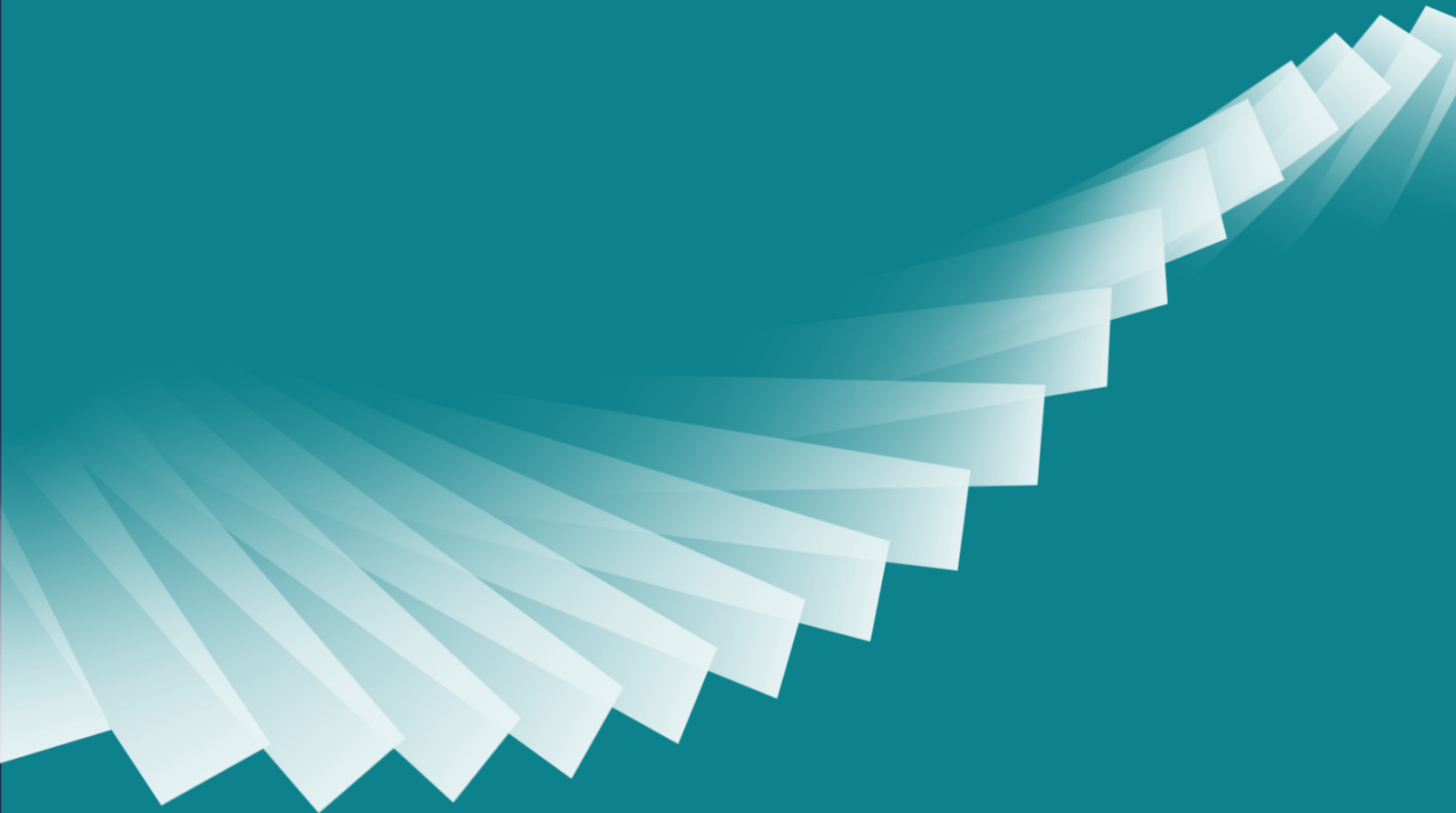




Bute Energy
Aberedw Energy Park

Appendix 5.1: **LVIA and CLVIA Methodology**



Aberedw Energy Park Limited

Aberedw Energy Park
Appendix 5.1: LVIA and CLVIA Methodology

Bristol
Cardiff
Edinburgh
Glasgow
London
Manchester
Sheffield

landuse.co.uk

Land Use Consultants Ltd
Registered in England
Registered number 2549296
Registered office:
250 Waterloo Road
London SE1 8RD

100% recycled paper

Landscape Design
Strategic Planning & Assessment
Development Planning
Urban Design & Masterplanning
Environmental Impact Assessment
Landscape Planning & Assessment
Landscape Management
Ecology
Historic Environment
GIS & Visualisation
Transport & Movement Planning
Arboriculture



Contents

1.	Introduction	1
2.	Guidance	1
3.	Scope of Assessment	1
4.	Judging the Significance of Effects	2
5.	Assessing the Significance of Landscape Effects	2
1.2	Identification of Landscape Units (Landscape Receptors)	2
1.3	Landscape Sensitivity	3
1.4	Nature of Landscape Effect (Magnitude of Landscape Change)	7
1.5	Judging Levels of Landscape Effect and Significance	8
1.6	Direction of Effect	9
2.	Assessing Significance of Visual Effects	9
2.2	Visual Sensitivity	9
2.3	Judging the Level of Visual Effect and Significance	13
2.4	Direction of Effects	13
3.	Judging Effects on Designated Landscapes	13
4.	Cumulative Landscape and Visual Impact Assessment	13
4.2	Types of Cumulative Visual Effects	14
4.3	Approach to Assessment of Additional Cumulative Effects	14
4.4	Approach to Assessment of Total (Combined) Cumulative Effects	16

1. Introduction

- 1.1.1 The following information sets out the methodology for the Landscape and Visual Impact Assessment (LVIA) and Cumulative Landscape and Visual Impact Assessment (CLVIA) for the proposed Aberedw Energy Park (hereafter referred to as the 'Proposed Development'), which is contained in Environmental Statement (ES) **Chapter 5: Landscape and Visual Amenity**.
- 1.1.2 Landscape and visual assessments are separate, although linked, processes considering landscape and visual effects separately. This LVIA therefore considers the likely effects of a proposed development on:
- Landscape as a resource in its own right (caused by changes to the constituent elements of the landscape, its specific aesthetic or perceptual qualities, the character of the landscape, and the special qualities of designated landscapes); and
 - Views and visual amenity as experienced by people (caused by changes in the appearance of the landscape).

2. Guidance

- 2.1.1 This methodology has been developed by Chartered Landscape Architects (Chartered Members of the Landscape Institute (CMLI), who have extensive experience in the assessment of landscape and visual effects arising from wind energy development, amongst a wide range of other types and scales of development.
- 2.1.2 The methodology has been developed primarily in accordance with the principles contained within the 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. Natural Resources Wales (NRW) Guidance Note 46³ informs the approach to LANDMAP in relation to the LVIA for onshore wind energy development, and NatureScot cumulative guidance⁴ informs the approach to the assessment of cumulative landscape and visual effects in relation to onshore wind energy development. The scope of other developments to be included in the cumulative assessment was also informed by The Planning Inspectorate (last updated March 2025) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment⁵.

3. Scope of Assessment

- 3.1.1 This LVIA considers physical changes to the landscape as well as changes in landscape character. It also considers changes to areas designated for their scenic or landscape qualities, and visual changes as perceived by people.
- 3.1.2 All likely significant landscape and visual effects (including cumulative effects) have been examined.
- 3.1.3 The effects during construction on landscape character and visual amenity have also been considered but it is considered that the assessment of the operational phase of the Proposed Development constitutes a worst-case scenario and impacts arising during the construction phase are unlikely to be any greater, and so construction effects have not been assessed in full. Further explanation is provided in **Chapter 5**.
- 3.1.4 At the end of the operational phase, the Proposed Development will either be decommissioned, its operational lifetime extended, or the wind turbines would be replaced. Decommissioning would involve the removal of all above ground infrastructure, including the wind turbines. Access tracks would likely remain in place; however, this will be subject to agreement with the landowners. The changes to the landscape arising from the decommissioning of the Proposed Development would be very similar to those arising from construction. A summary of decommissioning effects is presented at the end of **Chapter 5**.

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 Natural Resources Wales (2021, updated 2024) Using LANDMAP in Landscape and Visual Impact Assessments GN46

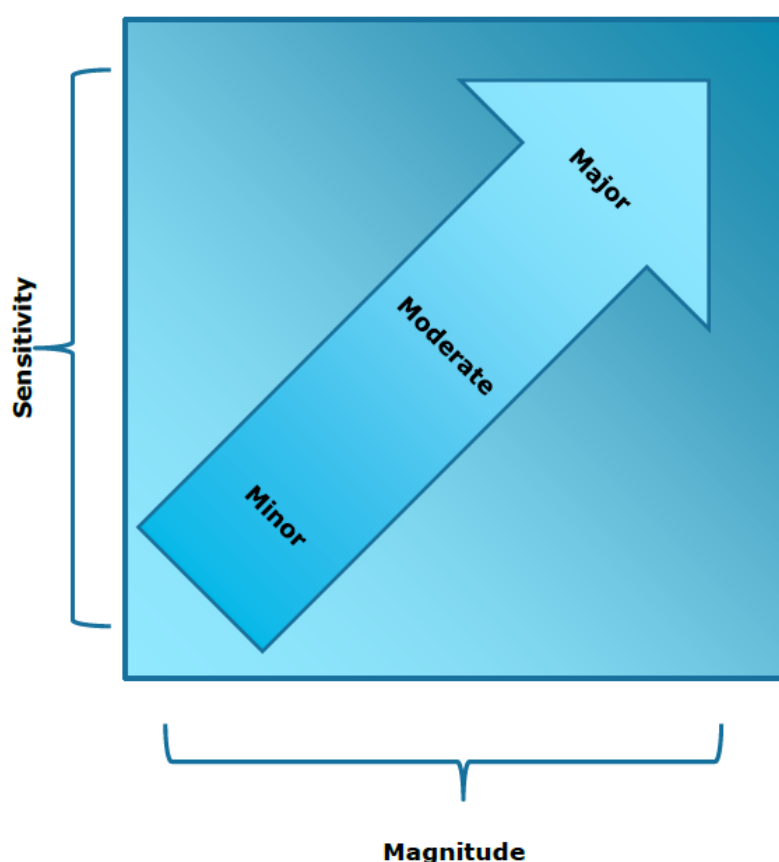
⁴ NatureScot (2021) Guidance – Assessing the cumulative landscape and visual impact of onshore wind energy developments

⁵ 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>

4. Judging the Significance of Effects

- 4.1.1 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). GLVIA3 states that the nature of receptors, commonly referred to as their sensitivity, should be judged by their susceptibility to the type of change proposed, and the value attached to the receptor. The nature of the effect on each landscape and visual receptor, commonly referred to as its magnitude, should be assessed in terms of size and scale of effect, duration and reversibility.
- 4.1.2 These aspects have been considered together, to form a judgement regarding the overall significance of effects (GLVIA3, Figure 3.5, Page 39), guided by the approach set out in **Diagram 4.1**.

Diagram 4.1 Approach to judging levels of effect using sensitivity and magnitude



5. Assessing the Significance of Landscape Effects

- 5.1.1 Judging the significance of landscape effects requires consideration of the nature of the landscape receptors (sensitivity) and the nature of the effect on those landscape receptors (magnitude).

5.2 Identification of Landscape Units (Landscape Receptors)

- 5.2.1 For the purposes of this LVIA, the 'reporting units' are based on the landscape character areas (LCAs) set out in the Landscape Character Assessments for Powys⁶ and the Bannau Brycheiniog National Park⁷ (BBNP)⁸. The LCAs are

⁶ LUC on behalf of Powys County Council (2022) Local Landscape Character Assessment for the Powys Local Development Plan Area – Landscape Character Assessment Report

⁷ Fiona Fyfe Associates on behalf of Brecon Beacons National Park Authority (2012) Brecon Beacons National Park Landscape Character Assessment

⁸ The Brecon Beacons and Brecon Beacons National Park is now called Bannau Brycheiniog National Park (BBNP). However the term Brecon Beacons has been used where quoting directly from LANDMAP.

often made up of multiple smaller LANDMAP units, which have variable boundaries according to which of the five aspects they fall within. As noted in NRW's 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". The LCA units are considered appropriate to the size and scale of the Proposed Development. LANDMAP information from the survey records is also used to further inform the LVIA.

- 5.2.2 **Appendix 5.3: Identification of Landscape Units and LANDMAP Aspect Areas** identifies which LCAs are taken forward to the full landscape assessment and which have been scoped out (with justification). In addition, it sets out the LANDMAP 'filtering process' (recommended by GN46) that identifies which LANDMAP Aspect Layers and Areas should inform the assessment.

5.3 Landscape Sensitivity

- 5.3.1 The sensitivity of a landscape receptor is based on combining judgements on susceptibility and value as set out below. Further information on each criterion is provided in **Table 5.1**.

Table 5.1 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 5.2) 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 5.2) 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 associations or rarity or uniqueness. Areas designated at a national level e.g. National Parks or National Landscapes (AONBs) ⁹ with national policy level protection. LANDMAP aspect areas with higher overall evaluation scores.	↔	Landscapes of limited aesthetic qualities, low conservation interest, little recreational value, few cultural associations or of character that is frequent/widespread. Areas or features that are not formally designated. LANDMAP aspect areas with lower overall evaluation scores.

Susceptibility of the Landscape Receptor

- 5.3.2 Susceptibility means "the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies" (GLVIA3 paragraph 5.40).
- 5.3.3 For wind energy development, a series of criteria are used to evaluate susceptibility of LCAs as set out in **Table 5.2** below. These criteria are drawn from a range of published sources relating to wind farm development, including Siting and Designing Windfarms in the Landscape (SNH, 2017) and Designing for Renewable Energy in Wales (Design Commission for Wales, 2023), as well as from Natural England's landscape sensitivity guidance¹⁰.

⁹ 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).

¹⁰ [Natural England \(2019\) An approach to landscape sensitivity assessment – to inform spatial planning and land management](#)

Table 5.2 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.
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 development. Lacking in naturalness. Threatening; unattractive; noisy. High levels of light pollution/doesn't experience dark skies.	↔	Remote from visible or audible signs of human activity and development. High levels of naturalness evident. Particularly tranquil; wild; spiritual; attractive; peaceful. Low levels of light pollution/experiences dark skies.

5.3.4 Information contained within the relevant landscape character assessments have been used to inform susceptibility. In addition, information contained in the five LANDMAP aspect layers, as shown in **Table 5.3** below, have also been used to inform susceptibility.

Table 5.3 Attributes recorded in LANDMAP aspect layers that inform susceptibility

Aspect Layer	Relevant Information from Survey Details/Collector Record	Relevant Attributes from Table 5.2
Visual and Sensory	Summary description (Q3) Topographic form (Q4), scale (Q8) and sense of enclosure (Q9) Landcover pattern (Q5), boundary type (Q7) and diversity, texture, lines, colour, balance, unity and pattern (Q10-Q16)	Scale; Landform; Skylines; Landcover and landscape pattern/complexity; Settlement and man-made influence; Inter-visibility with adjacent landscapes; Skylines; Perceptual aspects.

Aspect Layer	Relevant Information from Survey Details/Collector Record	Relevant Attributes from Table 5.2
	Settlement pattern (Q6), level of human access (Q18) and use of construction materials (Q20) Attractive views (Q22) and detractive views (Q23) Night time light pollution (Q19) and perceptual and other sensory qualities (Q24)	
Cultural Landscape	Dominant cultural context (Q4)	Landscape pattern and complexity; Settlement and man-made influence; Perceptual aspects.
Geological Landscape	Geographical and topographical character (Q4 & Q5)	Scale; Landform; Landscape pattern and complexity; Skylines; Manmade influence (e.g. quarries).
Historic Landscape	Dominant historic pattern (Q4 & Q5) and dominant chronological period (Q14) Presence of historic landscape features (Q16-Q22)	Historic landscape/time depth; Settlement and man-made influence.
Landscape Habitats	Habitat types present (Q5) and biodiversity character (Q24)	Landcover and landscape pattern/complexity; Naturalness.

5.3.5 Landscape susceptibility is defined as **high**, **medium** or **low**, as set out in **Table 5.4**.

Table 5.4 Definition of landscape susceptibility

Landscape Susceptibility	Description
High	The landscape is less able to accommodate the type of development proposed without undue negative consequences to the baseline situation, e.g. this may include: ■ Landscapes that are smaller in scale or exhibiting some complexity, perhaps with some distinctive topographical features; ■ General absence of modern development and/or presence of historic landscape with a degree of time depth; ■ Relatively undeveloped skylines and/or skylines that are visible and exert an influence on landscape character (which may include some historic landmarks); ■ May be inter-visible with sensitive landscapes or forms an important part of a view; and ■ Has a sense of remoteness/tranquillity with few visible or audible signs of human activity and development, and experiences dark skies.
Medium	The landscape is able to accommodate the type of development proposed to some extent without undue negative consequences to the baseline situation, e.g. this may include: ■ Medium scale landscapes which may have some topographical variety or features present; ■ May be some man-made features and/or contemporary structures present; ■ Skylines may be present but not likely to be the most important skylines in a region – there could be some visibility of the skyline from sensitive landscapes or views; ■ Some visible or audible signs of human activity and development, but may also be some sense of tranquillity and experiences some dark skies; and ■ Medium can also be a balance of indicators associated with high and low susceptibility.
Low	The landscape is more able to accommodate the type of development proposed without undue negative consequences to the baseline situation, e.g. this may include: ■ Large scale landscapes with absence of strong topographical variety and a simple form; ■ Regular or uniform landcover patterns;

Landscape Susceptibility	Description
	■ Presence of man-made features and/ or contemporary structures e.g. utility, infrastructure or industrial elements; ■ Skylines that are not prominent or less important in views; ■ Less visible from sensitive landscapes or views; ■ Presence of visible or audible signs of human activity and development, and doesn't experience dark skies; and ■ Lack of tranquillity.

Value of the Landscape Receptor

5.3.6 Landscape value, for the purposes of the LVIA, has been determined with reference to:

- A review of designations and the level of policy importance that they signify (such as landscapes designated at a national or local level);
- The application of criteria that indicate value (such as scenic quality, rarity, recreational value, representativeness, conservation interests, perceptual aspects and artistic associations) as described in GLVIA3, paragraphs 5.44-5.47; and
- A review of the relevant LANDMAP evaluation information for the Visual and Sensory aspect layer (predominantly relating to the 'overall' evaluation score).

5.3.7 For the purposes of this assessment, landscape value is recorded as **high**, **medium** or **low**.

Table 5.5 Definition of landscape value

Landscape Value	Description
High	This may include: ■ Landscapes designated at national level (e.g. National Parks, AONBs) or Registered Landscapes of Special Historic Interest; ■ Landscapes that are in good condition, have high scenic quality, are rare, have high recreational value, high conservation interest, are remote/tranquil and/or have high/nationally recognised associations with artists, writers or events in history that contribute to perceptions of the natural beauty of the area; and ■ Landscapes that have an 'outstanding' or 'high' LANDMAP overall evaluation for the Visual & Sensory aspect layer where the reason provided is relevant to this assessment. NB not all landscapes with a 'high' LANDMAP score would automatically fall into this category, but when combined with the other indicators above may do so.
Medium	This may include: ■ Landscapes designated at local level (e.g. Special Landscape Areas); ■ Landscapes that are in a moderate condition, that have a moderate scenic quality, may have some rarity value at a local level, have some recreational value, some conservation interest, have a degree of rurality (but not a great sense of tranquillity/remoteness) and/or have locally recognised associations with artists, writers or events in history that contribute to perceptions of the natural beauty of the area; and ■ Landscapes that have a 'moderate' LANDMAP overall evaluation for the Visual & Sensory aspect layer where the reason provided is relevant to this assessment. NB this category may include landscapes with higher or lower LANDMAP scores where other indicators indicate a 'medium' value overall.
Low	This may include: ■ Landscapes that are not designated;

Landscape Value	Description
	■ Landscapes that are in less good condition, have a low scenic quality, are not rare, lacking recreational value or conservation interest, unlikely to exhibit a sense of tranquillity/remoteness and have no notable associations with artists, writers or events in history that contribute to perceptions of the natural beauty of the area; and ■ Landscapes that have a 'low' LANDMAP overall evaluation for the Visual & Sensory aspect layer where the reason provided is relevant to this assessment.

Combining Landscape Susceptibility and Value Judgements

- 5.3.8 An overall judgement of landscape sensitivity is derived by combining the separate judgements on landscape susceptibility and landscape value, as per the 'sequential combination' approach referred to in GLVIA 3 (paragraph 5.55). The process of combining the judgements of susceptibility and value is one of professional judgement. The starting point is an even weighting given to susceptibility and value, but each situation is different and there may be instances where susceptibility or value has more influence. In each case the judgement is clearly explained.
- 5.3.9 Landscape sensitivity of a landscape receptor to change is expressed as **high**, **medium** or **low** (or the intermediate levels of **low-medium** and **medium-high**).

5.4 Nature of Landscape Effect (Magnitude of Landscape Change)

- 5.4.1 The magnitude of landscape change is driven by the size/ scale of change to the landscape and its duration, with reversibility and geographical extent also reported.

Size and Scale of Effect

- 5.4.2 For landscape elements/ features this depends on the extent of existing landscape elements that will be lost or changed, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape.
- 5.4.3 In terms of landscape character, this reflects the degree to which the character of the landscape will change by removal or addition of landscape components, and how the changes will affect key characteristics.
- 5.4.4 This assessment of size/ scale is described as being **large**, **medium**, **small** or **barely perceptible** according to **Table 5.6**.

Table 5.6 Size/scale of landscape change

Size/Scale	Definition
Large	Loss or modification of landscape elements and features, or addition of new elements and features, which result in a large change to the key characteristics and character of the landscape (including perceptual character).
Medium	Loss of landscape elements and features, or addition of new ones, which result in discernible changes to landscape characteristics and character (including perceptual character).
Small	A perceptible but small change to landscape characteristics and character (including perceptual character) as a result of the loss of landscape elements and features or addition of new ones.
Barely Perceptible	A barely perceptible change to landscape characteristics and character.

Duration of Effect

- 5.4.5 GLVIA3 (paragraph 5.51) states that duration of effect "*can usually be simply judged on a scale such as short term, medium term or long term*". For the purposes of this assessment, duration is determined in relation to the length of phases of the development, as follows:
- **Short-term** with effects generally lasting 0-5 years e.g. resulting from construction activities or presence of temporary structures;

- **Medium-term** with effects generally lasting 5-10 years e.g. resulting from longer construction periods or operational effects that may cease on growth of planting mitigation; and
- **Long-term** with effects generally lasting over 10 years e.g. resulting from the presence of turbines or other operational structures lasting more than 10 years.

5.4.6 The frequency of an effect, and whether an effect is intermittent or continuous may also be a consideration (e.g. in relation to effects arising in relation to lighting).

Reversibility of Effect

5.4.7 In accordance with the principles contained within GLVIA3, reversibility is reported as **reversible**, **partially reversible** or **not reversible**, and is related to whether the change can be reversed at the end of the phase of development under consideration (i.e. at the end of the construction or at the end of the operational lifespan of the Proposed Development).

Combining the Magnitude of Landscape Change Judgements

5.4.8 An overall judgement for the magnitude of landscape change is derived by combining the judgements on size/scale and duration. In most cases, size/ scale of change tends to have the largest influence on overall magnitude. Reversibility does not tend to influence the magnitude, but is recorded for clarity. Geographical extent is also recorded separately i.e. the area over which the effect on landscape character will be felt is recorded for each assessment unit.

5.4.9 The magnitude of landscape change is expressed as **high**, **medium**, **low** or (or the intermediate levels of **low-medium** or **medium-high**) or **barely perceptible** according to **Table 5.7** below.

Table 5.7 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.

5.5 Judging Levels of Landscape Effect and Significance

5.5.1 Judgements on landscape sensitivity and magnitude of landscape change are combined to assess the overall significance of each effect. A numerical or formal weighting system is not applied, therefore enabling consideration of the relative importance of each aspect to feed into the overall decision. This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered.

Judgements are made on a case-by-case basis, guided by the approach set out in **Diagram 4.1** above. A rigid matrix-type approach, which does not allow for the application of professional judgement and experience, and where the level of effect is defined simply based on the level of sensitivity (nature of receptor) combined with the magnitude of change (nature of effect), is not used.

- 5.5.2 Levels of effect are 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).

5.6 Direction of Effect

- 5.6.1 The direction of landscape effects (**beneficial**, **adverse** or **neutral**) is determined in relation to the degree to which the proposal fits with landscape character and the contribution to the landscape that the development makes. For the purpose of this LVIA, all effects are likely to be considered to be adverse during construction due to the fact that construction activities do not contribute positively to landscape character. During operation the presence of the turbines is generally considered to be adverse because they are not installed for the benefit of landscape character. Adverse also covers the 'worst case'.

6. Assessing Significance of Visual Effects

- 6.1.1 Visual effects are experienced by people at different locations around the study area. Visual receptors are the people who will be affected by changes in views of visual amenity at different places, and they are usually grouped by what they are doing at that place (residents, road users, recreational users etc.).
- 6.1.2 Judging the significance of visual effects requires consideration of the nature of the visual receptors (sensitivity) and the nature of the effect on those receptors (magnitude).

6.2 Visual Sensitivity

- 6.2.1 Visual sensitivity is based on combining professional judgements on susceptibility and value as set out in **Table 6.1** below. Further information on each criterion is also provided below this table.

Table 6.1 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.
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.

Susceptibility of the Visual Receptor

- 6.2.2 The susceptibility of visual receptors to changes in views/ visual amenity is a function of the occupation or activity of people experiencing the view and the extent to which their attention is focused on views (GLVIA3, paragraph 6.32).
- 6.2.3 The susceptibility of visual receptors is defined as **high**, **medium** or **low**, as set out in **Table 6.2**.

Table 6.2 Definition of visual susceptibility

Susceptibility	Receptor Group
High	Viewers whose attention or interest is focused on their surroundings, including: ■ Communities where views contribute to the landscape setting enjoyed by residents; ■ People engaged in outdoor recreation (for example users of rights of way including national trails and promoted routes, whose interest is likely to be focused on the landscape, views from promoted viewpoints, or views from nationally/locally designated landscapes); and ■ Visitors to heritage assets or other attractions where views of surrounding are an important contributor to experience.
Medium	Viewers whose attention or interest is focused on their surroundings to some extent, including: ■ People travelling on local road routes, where attention may be focused on the surrounding landscape, but is transitory; ■ People staying at campsites whose attention may be focused on the surrounding landscape, but are there for a short period of time; and ■ People at their place of work whose attention is focused on the surroundings and where setting is important to the quality of working life.
Low	Viewers whose attention or interest is less focused on their surroundings, including: ■ People travelling more rapidly on major road, rail or transport routes (not recognised as scenic routes); ■ People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; and ■ People at their place of work whose attention is not on their surroundings (and where setting is not important to the quality of working life).

Value of the Views Experienced by the Visual Receptor

6.2.4 Recognition of the value of views experienced from the visual receptor is determined with reference to:

- Planning designations specific to views;
- Whether views are recorded as an important part of designated landscapes, for example views being specifically mentioned within the special qualities of a National Park, National Landscape (AONB) or SLA;
- Whether they are notable views from a National Trail;
- Whether views are recognised as important within citations, for example designed views within Registered Parks and Gardens (RPG), or views recorded as important within Conservation Area appraisals;
- The value attached to views by visitors, for example as indicated by designated viewpoints advertised on OS maps and in tourist information, or significant destinations such as popular hill summits, or viewpoints which have facilities for enjoyment of the view, or views made famous by photographs or paintings; and
- The 'attractiveness' of views, as referenced in existing information, such as landscape character assessments and LANDMAP, and/ or judged on site.

6.2.5 The value of views experienced from the visual receptor is recorded as **high**, **medium** or **low** in accordance with **Table 6.3** below.

Table 6.3 Definitions of value attached to views

Value of Views Experienced from the Visual Receptor	Description
High	This may include:

Value of Views Experienced from the Visual Receptor	Description
	■ High quality views associated with nationally/locally designated landscapes (perhaps identified in management plans), or high-quality views from National Trails; ■ Designed views recorded in citations for historic parks and gardens; ■ Valued views from heritage assets (conservation areas, scheduled monuments or listed buildings) that are highlighted in the citation for the designation or, in the case of conservation area, in the conservation area appraisal; and ■ High quality views that have facilities provided for the enjoyment of the view by visitors (such as parking places, sign boards and interpretative material for the views).
Medium	This may include: ■ Non-designated views, which may be noted as attractive in landscape character assessments or within LANDMAP evaluative information (i.e. if views/visual qualities are mentioned in the overall evaluation for a Visual and Sensory Aspect Area (VSAA) or noted in Q22 of the VSAA profile which states if there are attractive views out); and ■ Views that are 'attractive'/scenic (as judged on site).
Low	This may include: ■ Other non-designated views that are not noted as attractive in landscape character assessments or within LANDMAP evaluative information (i.e. if views/visual qualities are not mentioned in the overall evaluation for a Visual and Sensory Aspect Area (VSAA) or not noted in Q22 of the VSAA profile which states if there are attractive views out), and are not notably scenic (they may nevertheless be valued by the local community who experience them).

Combining Visual Susceptibility and Value Judgements

- 6.2.6 An overall judgement of visual sensitivity is derived by combining the separate judgements on visual susceptibility and the value of views experienced from the visual receptor, as per the 'sequential combination' approach referred to in GLVIA 3 (paragraph 6.43).
- 6.2.7 The starting point for combining the judgements of susceptibility and value is an even weighting given to susceptibility and value, but each situation is different and there may be instances where susceptibility or value has more influence. If an even weighting is not applied, the reason for this has been explained.
- 6.2.8 Visual sensitivity of a visual receptor to change is expressed as **high**, **medium** and **low** (or the intermediate levels of **low-medium** and **medium-high**).

Nature of Visual Effect (Magnitude of Visual Change)

- 6.2.9 The magnitude of visual change is driven by the size/ scale of change to views and duration, with reversibility and geographical extent also reported.

Size and Scale of Visual Effect

- 6.2.10 The size/scale of visual effect depends on:
- The scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the development;
 - The degree of contrast or integration of any new features or changes in the landscape with the existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and
 - The nature of the view of the development, in terms of whether views will be fully open, partially open, glimpsed or oblique.

- 6.2.11 The assessment of size and scale is described as being **large**, **medium**, **small** or **barely perceptible**, as set out in **Table 6.4** below.

Table 6.4 Size and scale of visual change

Size/Scale	Description
Large	Large change in the available view, perhaps where the development is in relatively close proximity in a direct line of vision, or affecting a substantial part of the view, or providing contrast with the existing view.
Medium	Clearly perceptible change in the available 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.
Small	Small change in the available view, perhaps where the development is at a distance or oblique angle, or where the scale of the landscape absorbs the development well.
Barely Perceptible	Change in the available view which is barely perceptible, or the change may go unnoticed.

- 6.2.12 Effects are assumed to be judged to be during winter when a 'worst case' situation is present due to minimal screening by vegetation.

Duration of Visual Effect

- 6.2.13 Duration is reported as **short-term**, **medium-term** or **long-term**, as defined for landscape.

Reversibility of Visual Effect

- 6.2.14 Reversibility is reported as **reversible**, **partially reversible** or **not reversible** (i.e. permanent) and is related to whether the change can be reversed at the end of the phase of development under consideration (i.e. at the end of the construction or at the end of the operational lifespan of the development).

Combining Magnitude of Visual Change Judgements

- 6.2.15 An overall judgement for the magnitude of visual change is derived by combining the judgements on size/scale and duration. In most cases, size/scale of change tends to have the largest influence on overall magnitude. Reversibility does not tend to influence the magnitude but is recorded for clarity. The geographical extent over which the visual effect will occur is recorded for each visual receptor, focussing on the largest scale of visual change experienced by the receptor. The magnitude of visual change is expressed as **high**, **medium**, **low** or **barely perceptible** in accordance with **Table 6.5** below.

Table 6.5 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

Magnitude of Change	Definition
	■ 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.

6.3 Judging the Level of Visual Effect and Significance

- 6.3.1 Judgements on visual sensitivity and magnitude of visual change are combined to assess the overall significance of each effect. A numerical or formal weighting system is not applied, therefore enabling consideration of the relative importance of each aspect to feed into the overall decision. This determination requires the application of professional judgement and experience to take on board the many different variables which need to be considered. Judgements are made on a case-by-case basis, guided by the approach set out in **Diagram 4.1** above. A rigid matrix-type approach, which does not allow for the application of professional judgement and experience, and where the level of effect is defined simply based on the level of sensitivity (nature of receptor) combined with the magnitude of change (nature of effect), is not used.
- 6.3.2 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).

6.4 Direction of Effects

- 6.4.1 The direction of visual effects (**beneficial**, **adverse** or **neutral**) is determined in relation to the degree to which the development fits with the view and the contribution to the view that the development makes. For the purpose of this LVIA, all effects are likely to be considered to be adverse during construction because construction activity and equipment does not contribute positively to visual amenity. Whilst people have differing opinions in terms of how they perceive operational wind turbines in views, adverse covers the 'worst case' for the operational phase.

7. Judging Effects on Designated Landscapes

- 7.1.1 For designated landscapes (i.e. Bannau Brycheiniog National Park), the effects identified on landscape character and views are used to inform a judgement as to whether the Proposed Development will prejudice the values or integrity of the designated landscape by adversely impacting on the special qualities for which it has been designated.

8. Cumulative Landscape and Visual Impact Assessment

- 8.1.1 GLVIA 3 states *"The most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on its key characteristics and even, in some cases, to transform it into a different landscape type. This may be the case where the project being considered itself tips the balance through its additional effects. The emphasis must always remain on the main project being assessed and how or whether it adds to or combines with the others being considered to create a significant cumulative effect"* (paragraph 7.28 GLVIA3).
- 8.1.2 The aim of a Cumulative Landscape and Visual Impact Assessment (CLVIA) is to *"describe, visually represent and assess the ways in which a proposed windfarm would have additional impacts when considered with other consented or proposed windfarms"* (NatureScot, 2021).
- 8.1.3 The CLVIA therefore focuses on the assessment of additional cumulative effects, i.e. the effect of adding the Proposed Development to a baseline of other built or unbuilt wind farms.

- 8.1.4 The assessment also refers to total (also referred to as combined) cumulative effects at the end of the assessment (i.e. this considers the effects of all current and future proposals, as well as Aberedw, against the existing baseline).
- 8.1.5 As with an LVIA, a CLVIA deals with cumulative landscape and visual effects separately.

8.2 Types of Cumulative Visual Effects

A1.1.1 Three types of cumulative effects on visual amenity have been referred to in the assessment as follows:

- **Combined effects** which occur when a static viewer is able to observe two or more wind farms from a viewpoint within the same arc of vision (which is assumed to be about 90 degrees for the purpose of this assessment).
- **Successive effects** which occur when a static viewer is able to observe two or more wind farms from a viewpoint, but needs to turn to see them.
- **Sequential effects** which occur when a viewer is moving through the landscape from one area to another, for example travelling along a road or a footpath, and is able to see two or more wind farms either at the same time or at different times as they pass along the route. Sequential effects commonly occur when wind farms appear regularly with short lapses of time between points of visibility. Occasionally sequential effects can occur where long periods of time lapse between views of wind farms, often when speed of travel is slow, for example walking, or there is a large distance between viewpoints.

8.3 Approach to Assessment of Additional Cumulative Effects

- 8.3.1 Although LVIA and CLVIA both look at the effects of a proposed development on the landscape and on views, there are differences in the baseline against which the assessments are carried out.
- 8.3.2 For the LVIA, the baseline includes existing developments which are present in the landscape at the time of undertaking the assessment, which may be either operational or under construction, as they form a part of the baseline situation. Their presence has the potential to influence the assessment of effects on landscape character and the assessment of effects on views. For the additional CLVIA, the baseline is partially speculative and includes (in addition to existing wind farms):
- Wind farms which have been granted planning consent but are not yet constructed (consented); and
 - Submitted valid wind farm applications which are currently awaiting determination by the relevant consenting authority, including those at appeal (proposed).
- 8.3.3 Both of the above fall under the Tier 1 criteria set out in the Planning Inspectorate guidance¹¹. Projects at scoping stage (i.e. Tier 2) are not considered in the cumulative 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**.
- 8.3.4 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). In accordance with NatureScot guidance¹² this assessment assesses 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 the following scenarios:
- **Scenario A** is the most certain cumulative scenario (which includes consented schemes alongside the existing operational schemes that are already in the LVIA baseline); and
 - **Scenario B** is a less certain cumulative scenario (which includes undetermined planning applications alongside the schemes considered in Scenario A).
- 8.3.5 The assessment then considers 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.

¹¹ 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>

¹² NatureScot (2021) Guidance – Assessing the cumulative landscape and visual impact of onshore wind energy developments

- 8.3.6 The susceptibility and value of the landscape and visual receptors remain the same as for the LVIA. The magnitude of change is judged using the same criteria as for the LVIA (taking into account the size/scale of additional effect and its duration).
- 8.3.7 The cumulative landscape assessment considers:
- The position of the wind farms within the landscape, e.g. in similar landscape or topographical context;
 - The relationship between the scale and layout of the wind farms, including turbine size/proportion/number of turbines; and
 - The distances between wind farms, and their distance and direction from the receptor.
- 8.3.8 The cumulative visual assessment considers:
- The arrangement of wind farms in the landscape or view e.g. developments seen in one direction or part of the view (combined views), or seen in different directions (successive views in which the viewer must turn) or developments seen sequentially along a route;
 - The relationship between the scale and layout of the wind farms, including turbine size/proportion/number of turbines;
 - The position of the wind farms within the landscape, e.g. in similar landscape or topographical context; or within the view, e.g. on the skyline, against the backdrop of land;
 - The distances between wind farms, and their distance and direction from the viewer; and
 - In the case of routes, the relative duration of views of wind farms from routes.
- 8.3.9 As for the LVIA, judging the significance of cumulative landscape and visual effects requires consideration of the sensitivity (nature of the receptor) and the magnitude of effect on those receptors (nature of the effect), guided by the same approach as set out in **Diagram 4.1. Table 8.1** below sets out the criteria considered for judging the magnitude of change.

Table 8.1 Criteria for judging magnitude of change in the CLVIA

	Higher	↔	Lower
Landscape	The Proposed Development: ■ may be in a different type of landscape to the other proposed developments that form the cumulative baseline; ■ may be at a scale that is different to the other proposed developments that form the cumulative baseline; ■ may be a prominent component when considered against the other proposed developments that form the cumulative baseline.	↔	The Proposed Development: ■ may be in the same/ similar type of landscape to the other proposed developments that form the cumulative baseline; ■ may be at a scale that is similar to the other proposed developments that form the cumulative baseline; ■ may be an inconspicuous component when considered against the other proposed developments that form the cumulative baseline.
Visual	The Proposed Development: ■ may be in a different direction of view/ into an undeveloped part of the view; ■ may be at a scale that is different to the other proposed developments that form the cumulative baseline; ■ may be in a different type of landscape/ in a different form to the other proposed developments that form the cumulative baseline;	↔	The Proposed Development: ■ may be in the same direction of view/ into a developed part of the view; ■ may be at a scale that is similar to the other proposed developments that form the cumulative baseline; ■ may be in a similar type of landscape/ in a similar form to the other proposed developments that form the cumulative baseline;

	Higher	↔	Lower
	■ may be a prominent component when considered against the other proposed developments that form the cumulative baseline.		■ may be an inconspicuous component when considered against the other proposed developments that form the cumulative baseline.

- 8.3.10 Cumulative landscape or visual effect are described as **major**, **moderate**, minor or negligible (or the intermediate levels of **moderate-major** and **minor-moderate**). Cumulative landscape or visual 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).

8.4 Approach to Assessment of Total (Combined) Cumulative Effects

- 8.4.1 The assessment of total (also referred to as combined) cumulative effect considers the effect on landscape and views if all current, and future proposals, including Aberedw, are implemented when compared to the existing baseline. GLVIA3 (paragraph 7.13) acknowledges that *"assessing combined effects involving a range of different proposals at different stages in the planning process can be very complex"* and it is acknowledged that there is a relatively high level of uncertainty regarding what the future scenario will look like. It is not up to one developer to assess all other developers' projects and this is also recognised in paragraph 7.13 of GLVIA3 *"the assessor will not have assessed the other schemes and cannot therefore make a fully informed judgement"*. A judgement of the total cumulative effect is provided in the LVIA.