Galileo 03 Ltd.

Mynydd Ty-talwyn Energy Park - Environmental Statement Volume II

Main Written Statement – Chapter 8: Landscape and Visual

Project Reference: 663870

This chapter is summarised within the Non-Technical Summary in Volume I of this Environmental Statement. A Welsh translation of the Non-Technical Summary is also available as part of the application.

Crynhoir y bennod hon yng Nghrynodeb Annhechnegol y Datganiad Amgylcheddol hwn. Mae cyfieithiad Cymraeg o'r Crynodeb Annhechnegol hefyd ar gael fel rhan o'r cais.

NOVEMBER 2025

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8 LANDSCAPE AND VISUAL

8.1 Introduction

8.1.1 This chapter presents an assessment of likely significant landscape and visual effects arising from the Proposed Development during construction, operation and decommissioning.

8.1.2 This chapter is supported by the following appendices presented in **ES Volume III**:

- **Appendix 8.1: Landscape and Visual Impact Assessment Criteria;**
- **Appendix 8.2: Visualisation Information;**
- **Appendix 8.3: Night Time Lighting Assessment Methodology;**
- **Appendix 8.4: LANDMAP Detailed Assessment;**
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- **Appendix 8.13: BCBC Landscape and Visual Correspondence;**
- **Appendix 8.14: NRW Forest Management and Felling Strategy; and**
- **Appendix 2.2: Arboricultural Planning Report.**

8.1.3 This chapter is supported by the following figures presented in **ES Volume IV**:

- **Figure 8.1: Site Location and Initial LVIA Study Area 35 km;**
- **Figure 8.2: Site Location and Detailed LVIA Study Area 20 km;**
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8.1.4 For ease of reference throughout this Chapter, and to facilitate analysis, solar fields have been grouped into 'Parcel Areas' these areas are shown on **ES Volume IV, Figure 8.36a: Screened ZTV Solar - Parcel Area 1, Figure 8.36b: Screened ZTV Solar - Parcel Area 2, Figure 8.36c: Screened ZTV Solar - Parcel Area 3** and **Figure 8.36d: Screened ZTV Solar - Parcel Area 4**.

8.1.5 Within these areas Parcel Areas, the solar has been further split into solar fields, labelled on **ES Volume IV, Figure 2.1: Proposed Development Layout.** The Parcel Areas and corresponding solar fields are listed below:

- Parcel Area 1 – solar fields A, B and C;
- Parcel Area 2 – solar field D;
- Parcel Area 3 – solar field E; and
- Parcel Area 4 – solar fields F, G, H, I, J, K, L, M, N and O.

8.1.6 The proposed wind turbines are referred to as T01, T02, T03, T04, T05 and T06, as shown on **ES Volume IV, Figure 2.1: Proposed Development Layout.**

8.2 Consultation and Scope

Scoping Direction

8.2.1 The scope of this assessment has been established through an ongoing scoping process. This has involved the production of an EIA Scoping Report (provided in **ES Volume III, Appendix 1.1: EIA Scoping Report**), which was submitted to Planning and Environment Division Wales (PEDW) on 27 November 2023. Further information on the scoping process can be found in **ES Volume II**, **Chapter 4: Approach to the EIA**.

8.2.2 The Scoping Direction, a copy of which is included in **ES Volume III**, **Appendix 1.2: Scoping Direction**, was received on 11 April 2024. **Table 8.1** summarises the key Scoping Direction comments related to this assessment, and sets out how these have been addressed.

Table 8.1 Summary of Scoping Direction Comments Relevant to Landscape and Visual Assessment

ID no.	Issue	Comment raised	Applicant response
ID.52	Study Area	Natural Resources Wales (NRW) comments upon the potential impact upon Bannau Brycheniniog National Park and the Gower Area of Outstanding Natural Beauty (AONB, now National Landscape). NRW is satisfied with the 35 km study area but raises concerns with the 20 km detailed study area. NRW highlights theoretical visibility from within the Bannau Brycheniniog National Park and Gower National Landscape / Tirwedd Cenedlaethol Gŵyr (GNL) (which are beyond 20 km) and PEDW advises that the Bannau Brycheniniog National Park and GNL should be included in the detailed study area and that pre-application consultation with the Bannau Brycheiniog National Park Local Planning Authority should be undertaken to agree assessment methodology.	The assessment reported in this chapter considers both direct and indirect landscape and visual effects, including visual effects of aviation lighting, within the 35 km study area. Whilst the Applicant has retained the 20 km detailed study area, which is the distance beyond which landscape and visual effects are unlikely to be significant based on professional judgement, the initial Zone of Theoretical Visibility (ZTV) plans have been reviewed to identify other visual receptors within the 35 km study area that could be affected by the Proposed Development. Therefore, additional representative viewpoints from within these areas have been included within the viewpoint assessment at **ES Volume III, Appendix 8.7: Preliminary Assessment of Receptor Groups** and detailed assessments of the potential impacts upon the Bannau Brycheiniog National Park Authority and GNL are included in this chapter. It assesses the impacts associated with the turbines and solar panels, as well as any related impacts resulting from the construction compound, underground cabling, Site tracks, and substation.
ID.53	Data sources	NRW's comments refer to the Design Commission for Wales guidance on designing renewable energy projects in Wales, and how the ES should	The Landscape and Visual Impact Assessment (LVIA) has informed the design of the Proposed Development, as set out in the **Section 8.6** of this chapter, **ES Volume II, Chapter 2: Proposed**

ID no.	Issue	Comment raised	Applicant response
		demonstrate how the findings of the LVIA have informed the scheme design.	**Development Description** and **ES Volume II, Chapter 3: Environmental Context and Reasonable Alternatives Considered**.
ID.54	Baseline conditions	Neath Port Talbot Council (NPTC) draws attention to the setting of Margam Country Park which is the location of a number of Grade I, II* and II listed buildings, a registered historic park and garden, conservation area and a registered historic landscape. PEDW recommends the Applicant agrees the list of sensitive receptors to be considered with consultees.	Visitors to Margam Country Park and the wider areas of Margam Mountain are assessed and representative viewpoints are included. Liaison also took place with the Landscape Representative for BCBC and NPTC regarding the approach to the LVIA, who raised no concerns regarding the receptors to be included. The relevant heritage designations are assessed in **ES Volume II, Chapter 7: Cultural Heritage**.
ID.55	Designated sites	This reiterates the point at ID.52 regarding inclusion of assessment of effects upon Bannau Brycheniniog National Park and GNL. PEDW concurs and LVIA and Cumulative LVIA should consider effects upon both designations. With regard to the potential impact on the Bannau Brycheniniog National Park, PEDW notes that the Applicant should refer to NRW's advice on undertaking this assessment. Notably the Management Plan for Bannau Brycheiniog National Park (Y Bannau: The Future - 2023-2028) should also be considered. Stated Special Qualities of the Bannau Brycheniniog National Park are headlines and any assessment of the impacts on these qualities should be informed by detailed supporting evidence,	The assessment reported in this chapter has assessed the potential effects upon potential effects upon the Bannau Brycheniniog National Park and GNL. The documents specified within the Scoping Direction have been utilised within this assessment.

ID no.	Issue	Comment raised	Applicant response
		including that found in e.g., the Brecon Beacons National Park Landscape Character Assessment, August 2012 and LANDMAP.	
ID.56	Cumulative assessment	NPTC highlights cumulative assessment is required to consider operation, pre-construction and pre-determination stage development. PEDW iterates cumulative assessment is to be scoped in. BCBC recommends a 35 km detailed study area should be used to inform the Cumulative Landscape and Visual Impact Assessment CLVIA and that other development types should be considered other than solely renewable energy. PEDW recommends the applicant liaise with the LPAs and NRW to agree the approach.	Cumulative development impacts have been fully considered in the cumulative assessment at **Section 8.12**. In line with BCBC's recommendation, other wind energy developments within a 35 km study area were identified, as illustrated on **ES Volume IV, Figure 8.32: Wind farms within 35km**, along with other development types within 10 km, as illustrated on **ES Volume IV, Figure 8.34: Other non-wind cumulative Development within 10 km**. Detailed assessment was then undertaken with regard to those developments within a 20 km study area, as this was considered to represent the maximum extent of any potential significant effects. Liaison took place with the Landscape Representative for BCBC and NPTC regarding the approach to the LVIA (detailed in **Table 8.2** below) who raised no concerns regarding this approach.
ID.57	Viewpoints	PEDW advises the applicant to liaise with the LPAs and NRW with regard to viewpoint locations.	The LVIA viewpoint locations were set out in the EIA Scoping Report with an invitation for consultees to provide feedback on the viewpoint selection. No requests for additional viewpoints were received. However, following the EIA Scoping exercise it was decided to include a photographic record of additional locations (VPs16-24) focusing on the solar arrays, in response to feedback from the Landscape

ID no.	Issue	Comment raised	Applicant response
			Representative for BCBC and NPTC, requesting more information regarding these elements of the Proposed Development, further details on which are set out in **Table 8.2**. The images are set out in **ES Volume III, Appendix 8.11: Annotated Photo Record Viewpoints 16 to 24**. Visualisations showing the Year 1 view and the view following implementation of mitigation at Year 15 have also been prepared for three of the additional locations (16, 18 and 19), provided at **ES Volume III, Appendix 8.12: Photomontages Viewpoints 16, 18, 19**.

Additional Consultation

8.2.3 **Table 8.2** provides a summary of the additional consultation activities undertaken in support of the preparation of this assessment outside of the EIA Scoping process.

Table 8.2 Summary of Additional Consultation Undertaken

Consultee	Date of engagement	Summary of matters discussed	Applicant response
Bridgend County Borough Council (BCBC)	07 November 2024 Meeting (virtual)	Delivery of direct landscape benefits. Approach to format/reporting of significant effects in main chapter versus appendices. Ensure assessment of topographical changes and those resulting from access requirements. Consider effects of future forestry management. Request for additional viewpoints (with visualisations) for local to solar/BESS aspects	The LVIA has incorporated direct landscape benefits as part of the mitigation strategy. The chapter focuses on significant effects with supporting detail in appendices as suggested. Topographical changes and impacts from access tracks have been fully considered. The effects of the Craig-yr-Aber forestry management

Consultee	Date of engagement	Summary of matters discussed	Applicant response
		of the Proposed Development and effects of proposed mitigation at year 10 or 15. Design evolution and response to landscape and visual matters should be included within the landscape and visual chapter.	programme have been considered throughout the assessment. Additional Viewpoints (VPs) 18 and 19 focusing on the solar arrays have been included (the BESS has been removed from the Proposed Development), along with visualisations showing mitigation at Year 15, included at **ES Volume III**, **Appendix 8.12: Photomontages Viewpoints 16, 18 and 19**. Design evolution and landscape responses have been incorporated into the main chapter as requested.
BCBC	17 March 2025 Meeting and Site Visit with the Landscape and Visual Representative for BCBC and NPTC	LVIA to be proportionate to identification of significant effects, with supporting narrative in appendices. Acknowledgment of forestry management impacts from Craig-yr-Aber coupes programme. Cumulative effects highlighted as key considerations, particularly experiential effects on recreational routes. Concerns raised about the northern solar arrays, despite proposed mitigation. Query about viability of planting between minor road and northwestern solar array. Suggestion to consider relocating the track access north of Mynydd Baeden to south of the solar array. Strong recommendation for inclusion of a field boundary wall restoration program.	The LVIA has been structured to focus on significant effects in the main chapter with detailed assessments in appendices. The Craig-yr-Aber forestry management programme has been fully considered in both standalone and cumulative assessments. Specific assessment of sequential and cumulative effects on recreational routes has been undertaken, with particular focus on the Ogwr Ridgeway Walk. The northern solar arrays have been retained but with enhanced mitigation planting. The access track routing has been maintained due to operational requirements, with design measures to minimise landscape impacts. A commitment to field boundary wall restoration has been included as a landscape

Consultee	Date of engagement	Summary of matters discussed	Applicant response
			enhancement measure, with principles set out in the **ES Volume IV, Figure 8.57: Landscape Mitigation Plan** and detailed specifications to be secured by condition.
BCBC – Planning Officers and Landscape and Visual Representative	Virtual Meeting 16 May 2025	The purpose of the meeting was to understand the concerns of BCBC and in particular their Landscape and Visual representative. The discussion largely focused on the solar, BESS and substation locations as the Landscape and Visual representative was accepting of the proposed turbine positions.	The outcome of the meeting was agreement for an accompanied Site visit to discuss BCBC concerns and seek to reach agreement on possible amendments to the design/layout.
BCBC – Planning Officer and Landscape and Visual Representative	Site visit 05 June 2025	This was a site meeting, following the previous virtual meeting, to further understand the context of the Landscape and Visual Representative's concerns and to discuss what changes could be considered to alleviate these concerns. As before, the focus of this discussion related to the solar and BESS, as the Landscape and Visual Representative was accepting of the proposed turbine positions.	Following discussions on-site , the design was refined and a revised layout was issued to BCBC, which included revision to planting, alterations and removal of solar parcels.
BCBC – Planning Officer and Landscape and Visual Representative	Email correspondence 04 August 2025	Comments were received from the Landscape and Visual Representative regarding the proposed changes. Concerns remained; a copy of these is provided at **ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**	A further virtual meeting was held to discuss these remaining concerns.

Consultee	Date of engagement	Summary of matters discussed	Applicant response
BCBC – Planning Officer, Heritage Officer and Landscape and Visual Representative	Virtual Meeting 5 August 2025	This meeting directly followed on from the email feedback received on 04 August 2025. The meeting discussed the Applicant's proposed changes to the layout and sought feedback on the proposed amendments.	Further design revision was undertaken to remove further solar parcels and the BESS, relocation of the substation and further revision to the woodland planting.
BCBC – Planning Officer and Landscape and Visual Representative	Virtual Meeting 26 August 2025	A virtual meeting was held to discuss the revised layout, where changes were welcomed.	No further changes were made following this meeting.
BCBC – Planning Officer	Email correspondence 04 September 2025	Following the above meeting, written feedback was received on the 04 September 2025, and is provided at **ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**. This feedback noted that the proposed amendments were welcomed by BCBC Planning Officer and Landscape and Visual Representative and acknowledged the positive approach adopted by the Applicant and the decision to work with BCBC to agree the amendments.	No further changes.

Statutory Pre-application Consultation (PAC)

8.2.4 **Table 8.3** provides a summary of the responses received, in relation to landscape and visual, following the statutory PAC process, and the necessary action taken to update the assessment, where relevant. Where appropriate the PAC responses have been summarised. The full consultee comments are set out in the standalone **Pre-application Consultation Report**.

Table 8.3 PAC Comments and Responses

Consultee	Summary of Consultee Comments	Applicant response
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals** The first point to record is that this is a major development in terms of scale and complexity, and in this regard offers many challenges from each of the three main components and the connecting infrastructure.	The Applicant notes this comment.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Wind Turbines** The challenges include that the proposed 200m height of the turbines is large in scale and could impact significantly on both landscape and visual receptors. Early in my commission I discussed impacts with the applicants and through a joint site visit to all of the nearest properties in spring 2025 I ascertained that no dwellings likely to experience impacts on residential amenity that would fail to pass the Lavender Test. This gives an element of comfort. However, understanding the nature of likely cumulative impacts with other schemes on long-distance walking routes and cherished places, such as Margam Park is key. Initially I had concerns that the scale of the turbines proposed in terms of height has the potential for turbines on this site to be out of scale with the landform on which they sit. An important point that I have given due consideration is the positioning of individual turbines whether they would produce an appropriate overall scheme in terms of how they are viewed in the landscape. I consider that whilst generally the proposed development is larger proportionately than the scale of the landscape, my opinion is that the turbines are well-positioned in the landscape and that overall, in landscape terms, the proposals can be accommodated as a stand-alone scheme.	The Applicant notes this comment.

Consultee	Summary of Consultee Comments	Applicant response
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Wind Turbines (continued)** The long-distance Ridgeway Walk runs along the ridge through this proposed development and is a highly valued route that affords users long-range views across to the parallel ridges of high land to the north and to the coast and as far as Exmoor to the south. These views are afforded along a number of kilometres providing rare and spectacular experiences. The users of this and other long-distance paths are highly susceptible to changes that would impact on the views afforded and therefore highly sensitive to change. Near-range views would be afforded of the wind turbines for a substantial length of the route along the ridge and the proposed turbines would be in close proximity. The change, whilst significant, would still enable these long-range views to be appreciated and therefore the visitor experience not changed to such a great degree to being about an unacceptable effect.	The Applicant notes this comment.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays** The solar arrays bring greater challenges. The proposed arrays are spatially spread out into the surrounding landscape, in close proximity to the turbines and in areas that are not physically related to the turbines. As currently proposed, the way the scheme has been designed, to be so spread out in this landscape, creates the perception of the proliferation of development that would bring about unacceptable landscape and visual impacts. The changes in view and visual context will make this a far less attractive place to walk and bring about impacts on the long-distance Ridgeway Walk users and raise further substantial and significant visual impacts. The character of the landscape in these different areas is rural and predominantly pastoral with forestry, but the land itself is heavily dissected and geologically complex and therefore, in terms of siting modular elements at a field-scale, the landscape is too complex to be able to accommodate the proposals successfully. The LPA have significant concerns in this regard and will object	As set out in **Table 8.2**, subsequent virtual meetings and a Site meeting was held with BCBC to discuss the relevant solar parcels, their impact and any revisions to the layout which would alleviate BCBC's concerns. The solar layout has been revised accordingly. Notably, in relation to these BCBC comments, with former parcel E being removed, the removal of the BESS and relocation of the substation to the southern side of the Ogrw Ridgeway Walk. These changes remove the need for mitigation planting along the northern edge of the Ridgeway Walk and therefore longer distance views along this stretch are retained.

Consultee	Summary of Consultee Comments	Applicant response
	on landscape and visual grounds to the solar elements if this scheme is taken forward.	At a subsequent meeting with BCBC and follow up email (**ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**), BCBC confirmed that the changes were welcomed and impacts were reduced.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays (continued)** As an overarching observation, the woodland planting shown is located to screen the solar and BESS and turbine foundation parts of the development. I consider that this is the wrong approach. If the development is appropriate, arbitrary screening should not be required. What I seek to see is well-planned landscape enhancement and mitigation of discordant elements by re-siting or removal from the scheme, not by screening. There are (broadly) six separate areas of arrays. Taking the arrays field by field I have the following observations:	These comments are noted. As mentioned above, former Solar Parcel D and the BESS have now been removed from the scheme and the substation has been relocated. This has enabled the mitigation planting to be reduced and refined. Further detail is provided in relation to each parcel below.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays (A, B & C)** This part of the scheme lies in NPT. I have no concerns with the actual siting of the arrays. They relate to the forestry land appear to be well-sited. The configuration of the woodland planting needs further refinement so that post-development the landscape patterns created respond well to the landform and forestry and inherent field patterns. Currently they respond to electricity and scheme infrastructure. Consider selecting species that can be accommodated under the overhead lines without the need to leave clear gaps that create discordant patterns.	The woodland planting has been refined slightly in this area. It is proposed that a detailed landscaping scheme would be conditioned as part of any planning permission and the Applicant will agree relevant species and more detailed design with BCBC/NPTC at this stage.
BCBC (through Anne Priscott	**Evaluation of the proposals – Solar Arrays (D)** Whilst screened from longer-range views to the south by the adjacent forestry, this array sits on upper north-facing slopes and is close to the Ridgeway Walk.	This solar parcel has now been removed from the Proposed Development. The solar array references have been reallocated to account for this removal.

Consultee	Summary of Consultee Comments	Applicant response
Associates Ltd)	I note that there will be significant changes in view and in the foreground of views of T5. Array D will block the long-range views to the uplands to the north for a walker for a duration /distance of over 600m. The proposed woodland screening would introduce an incongruous element into the landscape in perpetuity that will exacerbate this impact. The walker will become enclosed by woodland to the north and the forestry to the south, thus creating a tunnel experience where an open ridgetop character is highly valued. The impacts would be substantial and adverse and permanent. My advice is to remove this entire area from the scheme. As a fall-back, the applicants could model moving the solar farther to the north so that no elements are visible from the Ridgeway Walk even in winter. However, this would have consequences for long-range views from the north looking back towards the south from the north of Maesteg and the Llynfi Valley that are also highly sensitive to change.	
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays (E) (New Solar Parcel D)** Again, whilst screened from longer-range views to the south by the adjacent forestry, this array sits on upper south-facing slopes/narrow ridge top and is adjacent to the Ridgeway Walk. There will be significant changes in view and in the foreground of views of T4 and T5. I advise that this element can be accommodated as a stand-alone element, but that the cumulative effects with other elements of this complex scheme mean that this is a small area of solar that adds to the complexity of the resultant impacts on highly sensitive viewers. The woodland planting would introduce an incongruous element into the landscape in perpetuity, not just for the 50-year life of the consent, and needs careful re-designing so as to create appropriate long-term landscape patterns or should be removed from the proposals. When on-site on 5th June with the applicant's agents the magnitude of change that this woodland would being was very evidently seen. The views north from the Ridgeway	This solar parcel has been revised to accommodate the relocation of the substation. In response to the comments received by BCBC in relation to planting in this area, the woodland planting has been removed in some areas, and along the road side has been changed to proposed hedgerow planting, in line with the latest comments received by BCBC (**ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**). With the changes implemented, views north from the Ridgeway walk will not be restricted by this parcel. With regards to views south, towards the coast, the area of proposed

Consultee	Summary of Consultee Comments	Applicant response
	Walk of the coast and Exmoor would be blocked impacting significantly upon the walkers' experience.	hedgerow planting along the roadside would strengthen the existing tall vegetation and therefore with regards to longer distance views south, these would not be substantially altered. BCBC confirmed in the latest comments received (**ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**) that they were now satisfied with the proposed woodland planting.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays (F) [New Solar Parcel E)** As a stand-alone element this is predominantly screened from most views by the adjacent riparian woodland and longer-range view interruption by forestry to the north-east, this array sits on north-facing slopes and this is counter-intuitive. There are a number of public rights of way in this area that are difficult to navigate. There will be limited changes in view and in this regard the scheme can be accommodated here without the perception of significant visual impacts. I consider this would be a better location for the BESS (discussed in more detail in this report). I advise that this element can be accommodated as a stand-alone element, but that the this will add to the overarching perception of the proliferation of solar developments in the landscape. The woodland planting would introduce a compatible element into the and is likely to create appropriate long-term landscape patterns.	These comments are noted. The BESS element of the Proposed Development has now been removed.
BCBC (through Anne Priscott	**Evaluation of the proposals – Solar Arrays (G, H & I) [New Solar Parcels F, G, J, K and L]** I have less concerns with the actual siting of the arrays in this group of field-scale parcels. They appear to be well-sited. The configuration of the woodland planting around G [new solar parcels F and G] needs further	In response to these comments from BCBC, the woodland planting to the south of parcels H and I (new solar parcels J and K) have been reduced/refined. Woodland planting to the east

Consultee	Summary of Consultee Comments	Applicant response
Associates Ltd)	refinement so that post-development the landscape patterns created respond well to the landform and inherent field patterns. Currently the woodland shown around G [new solar parcels F and G] appears to be designed to screen the solar arrays rather than provide long-term landscape enhancement. This mitigation needs to be re-designed to only enhance long-term landscape patterns and not to screen views.	of parcel G (new solar parcels F and G) has also been removed, in response to the comments from BCBC. The solar parcels in western area G have been amended to respond to ornithology comments received by NRW, but this has also resulted in a refinement and reduction in woodland along the eastern part of this field, which also addresses the requirements of BCBC.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays (J & K) [New Solar Parcels H and I)** The landscape character and resultant patterns created in this part of the scheme is really complex. There are important cultural heritage aspects and the valley form between areas of ridge mean that I consider that J and the western part of K should be removed from the scheme. The configuration of the woodland planting needs further refinement so that post-development the landscape patterns created respond well to the landform and inherent field patterns. Currently the woodland shown around K [new solar parcel I] in particular appears to be designed to screen the solar arrays rather than provide long-term landscape enhancement. In the long-term the woodland would obscure the field pattern, creating an adverse landscape impact.	Cultural Heritage aspects have been considered within **ES Volume II, Chapter 7: Cultural Heritage.** During the site visit with BCBC (05 June 2025), it was discussed that this area was capable of accommodating the solar arrays, but that refinement to the woodland areas was needed. In response to these comments, the woodland block to the north of parcels J/K (new solar parcels H/I) has been removed and the area to the east of K (new solar parcel I) has been refined. BCBC confirmed in the latest comments received (**ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**) that they were now

Consultee	Summary of Consultee Comments	Applicant response
		satisfied with the proposed woodland planting, as revised.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays (L, M & N) [New Solar Parcels M, N and O]** No concerns with the actual siting of the arrays. Appear to be well-sited. Again, the same comments apply, the configuration of the woodland planting needs further refinement so that post-development the landscape patterns created respond well to the landform and inherent field patterns. Currently they respond to the scheme not the receiving landscape.	Discussions were held with BCBC regarding these woodland blocks offering ecological enhancement as well as landscape mitigation. These woodland blocks have therefore been retained. BCBC confirmed in the latest comments received (**ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**) that they were now satisfied with the proposed woodland planting, as revised.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar Arrays (O)** No concerns with the actual siting of the arrays. Appear to be well-sited. Again, the same comments apply, the configuration of the woodland planting needs further refinement so that post-development the landscape patterns created respond well to the landform and inherent field patterns. Currently they respond to electricity and scheme infrastructure. Consider selecting species that can be accommodated under the overhead lines without the need to leave clear gaps that create discordant patterns. Look at the character of the adjoining fields to the west for visual clues as to how to make this work better with the inherent landscape patterns present.	Solar parcel O has now been removed from the Proposed Development due to discussions with landowners.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Solar overarching conclusion** The landscape does not have the capacity for all of the solar elements shown in the pre-application plans. The development as shown currently would lead to the over proliferation of solar in particular, creating discordant images and impacting unacceptably on highly sensitive receptors. The advice from the LPA is to remove the most impactful parts of the scheme, namely parcels D,	The comments received by BCBC were further refined following a site meeting. The Proposed Development layout has been revised to remove former solar parcel D completely as well as the BESS, which has enabled the substation to be relocated to the

Consultee	Summary of Consultee Comments	Applicant response
	E, F, J and K [new solar parcels D, E and H]. Parcels J & K [new solar parcels H and I] may be perceived as being less impactful in terms of proliferation and impacts on the users of the Ridgeway Walk in particular if D, E and F [new solar parcels D and E] are removed. The screening tree and shrub planting also needs a dramatic re-design so that long-range and other highly valued views are not blocked and disrupted and to design the scheme to work with and enhance the inherent landscape patterns rather than to screen this badly designed development.	south of the Ridgeway Walk, alleviating concerns regarding the longer distance views to the north. Other revisions have been made to the solar parcels and woodland planting as discussed above. BCBC confirmed in the latest comments received (**ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**) that they welcomed the removal of parcel D, the relocation of the substation and the revised woodland planting.
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – BESS** The battery storage element of the scheme is located on the top of the ridge and gives me the greatest concerns because it has an industrial character that is at odds with the rurality of the site. I consider that this would be better located near to solar arrays at F, [new solar parcel E] to the north, or in one of the more visually isolated locations. My recommendation after my site visit on 5th June 2025 remains that this is moved. In addition, there is insufficient information on the detail of the BESS development including an absence of engineering drawings, for an assessment to be made of the impacts the below ground works will have on the ground and where the earth removed from the site will be placed / stored / disposed. This is a notable shortcoming and needs to be resolved prior to submission of the final documents. The submission of 1:100 scale cross sections will assist in this regard.	In response to these comments, the BESS has now been removed from the Proposed Development.

Consultee	Summary of Consultee Comments	Applicant response
BCBC (through Anne Priscott Associates Ltd)	**Evaluation of the proposals – Access** The new tracks will bring about their own impacts. The ones that give me most concern are those located close to the / physically impacting on the Ridgeway Walk. The tracks west of G give the greatest concerns. These should be re-located because they will impact significantly on both landscape and visual receptors.	Further discussions were held with BCBC regarding the proposed access junctions. It was explained that at present Site entrances have been engineered to allow for abnormal loads to access the turbine locations from either direction. These include areas of 'overrun', which will be constructed of grass crete (or similar) and therefore would have a softer appearance once constructed. BCBC highlighted a preference of moving the access route through solar parcel G (new solar parcels F and G) further south, away from the Ridgeway Walk. However, it was explained to BCBC that due to ornithology constraints the original position was preferable. During the site meeting on 05 June 2025, it was highlighted to BCBC that for a large proportion of that route, the Ridgeway Walk was positioned on lower ground with limited visibility over the ridge to the proposed access track. BCBC confirmed in the latest comments received (**ES Volume III, Appendix 8.13: BCBC Landscape and Visual Correspondence**) that whilst moving the access track further south was preferable in their view, it would not be a 'stumbling block' for progressing the Proposed Development.

Consultee	Summary of Consultee Comments	Applicant response
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review** The LVIA has a topic-based structure broadly appropriate to a scheme of this scale and complexity. The following section sets out brief notes, topic-by topic, highlighting parts that require updating before the PAC submission [it is assumed that DNS submission is being referred to]. As an overarching series of comments: submission. As an overarching series of comments: Appendix 8.8 and 8.9 both contain the residential amenity assessment and the viewpoint assessment that should be at 8.8 is missing. Appendix 8.8 has been sent to me by the applicants but will need re-issuing for other responders to view.	These comments are noted. **ES Volume III, Appendix 8.8: Viewpoint Assessment** was uploaded to the project website www.mttenergypark.co.uk for the duration of the statutory PAC period.
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review (continued)** The baseline descriptions of the landscape and views along linear routes and from point receptors are very clear and well-articulated. This is pleasing to read. However, the way the LVIA is structured makes it difficult to untangle the different effects, and there are some issues with the methodology selected and how this is applied. The assessors have used a five-point scale: very high to very low. Whilst theoretically this is acceptable, the reality is that they have not identified any very high value, susceptibility, sensitivity, magnitudes of change or magnitudes of effect throughout the LVIA. For example, the matrix of significance (Table 8.5 [now Table 8.6]), re-printed for ease of reference below *[not copied here]*, uses this five-point scale. The resultant LVIA records no very high magnitude of changes. The methodology at Vol III Appendix 8.1 sets out the criteria for a very high magnitude of landscape change being: the total loss or alteration to existing landscape features; introduction of dominant new features into the landscape; a very major change to the key physical and/or perceptual attributes of the landscape. On the basis of the scale used I would expect the users of the	The five-point scale (very high to very low) has been adopted in accordance with GLVIA3 principles and is widely used in LVIA practice for renewable energy projects. The Applicant acknowledges BCBC's observation that the 'very high' category had not been applied within this assessment. **Very High Value/Sensitivity**: The 'very high' category is reserved for landscapes of international and national importance deemed to be of exceptional quality, such as World Heritage Sites, National Parks and National Landscapes (formerly AONBs). The Site is not located within any such nationally designated landscape. While the Site falls partially within locally designated Special Landscape Areas (SLAs), these are local designations that do not warrant 'very high' value ratings when assessed against the full spectrum of

Consultee	Summary of Consultee Comments	Applicant response
	Ridgeway Walk to be very highly sensitive and the impact to be very high magnitude creating a major / substantial adverse effect. Effectively a four-point scale has been used. The criteria for a very high magnitude of visual change is: a change in view that has a dominating or overbearing influence on the overall view. My opinion is that the authors have set the barre too high, and it would be better to go back to GLVIA3 and reconsider the basis for this assessment approach, and revert to a four-point scale, omitting the very high category. At para 5.49 GLVIA3: Judgements are needed about the size or scale of change in the landscape that is likely to be experienced as a result of each effect. This should be described, and also categorised on a verbal scale that distinguishes the amount of change but is not overly complex For example, the effect of both loss and addition of new features may be judged as major, moderate, minor or none, or other equivalent words. The judgements should, for example, take account of: • the extent of existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape – in some cases this may be quantified; • the degree to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones – for example, removal of hedges may change a small-scale, intimate landscape into a large-scale, open one, or introduction of new buildings or tall structures may alter open skylines; • whether the effect changes the key characteristics of the landscape, which are critical to its distinctive character.	landscape quality from international/national designations down to undesignated landscapes. 'Very high' sensitivity has now been applied to the National Landscape and National Park designations which lie within the study area. **Very High Magnitude of Change**: Similarly, 'very high' magnitude is reserved for changes that would fundamentally and completely alter the baseline landscape or view - effectively creating an entirely different character. Professional judgement has been used to determine the magnitude of change within the assessment. While the Proposed Development would introduce notable change, particularly through the wind turbines, it would not result in the total transformation of the landscape. The upland character, existing field patterns, woodland blocks, and overall landscape structure would remain. The Proposed Development would introduce new elements into an existing landscape mosaic rather than replacing that landscape entirely. The Applicant maintains that the 5 point scale approach is consistent with GLVIA3 and ensures that the assessment scale retains

Consultee	Summary of Consultee Comments	Applicant response
	The matrix needs to be re-configured such that a medium magnitude of change / sensitivity with a high magnitude of change / sensitivity leads to a moderate to major effect not a moderate effect etc. The approach taken in the LVIA leads to confusion and the miss-representation of the magnitude and significance of effects. I have set out a few examples below to illustrate these issues.	meaningful differentiation across the full spectrum of potential landscape impacts.
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review – Landscape Impacts** The LVIA records (para 8.9.17-18) the value of the receiving landscape, the CYNONVS473 - Mynydd Baedan visual and sensory layer to be high, high susceptibility and high sensitivity. This is agreed. The magnitude of change is recorded at para 8.9.20 as medium and resultant effect moderate. However, at paragraph 8.9.26 the author records: Overall, the effects on CYNONVS473 - Mynydd Baedan during the operation phase are judged to be major and significant, with the effects on the southern half of the aspect area, which covers the Site, being direct effects and the effects on the northern parts of the aspect area beyond the Site being indirect effects. The LVIA identified significant construction and operational stage landscape effects on CYNONVS473 - Mynydd Baedan, the receiving landscape, to 5km, (para 8.7.22-24). In the NTS at chapter 16 (pdf page 12) the tables record moderate adverse (significant). I cannot work out, on the basis of my experience of visiting turbine, solar and BESS sites during both construction and operation, why the magnitude of changes would be lower during the construction period than during operation. The construction stages being about considerable disruption to the landscape and to views and are accompanied by audible effects and movement that add to the effects perceived by those in the landscape. I consider that the magnitude should be high or very high on the five-point scale used, and the effect would be major. This distance of 5km seems	The Applicant acknowledges BCBC's concern that the assessment could be clearer in distinguishing effects and revisions have been made throughout the LVIA. In response to specific points: **Construction vs Operation Effects**: BCBC questions why construction effects are assessed as lower magnitude than operational effects. The rationale is: **Construction effects** are **temporary** (24 months) and characterised by activity, machinery, and partially completed structures. While these are visually intrusive, they are understood by observers to be temporary. **Operational effects** are **permanent** for the lifetime of the development. The turbines, in particular, would be permanent vertical features in the landscape, with moving blades that draw attention. The permanence of these features, combined with their scale and movement, results in effects that are assessed

Consultee	Summary of Consultee Comments	Applicant response
	reasonable. However, the assessment of impacts in chapter 8 is very hard to follow and I am concerned that the effects of the development have been under reported through muddling of data. At this stage in the local planning authorities responding to the draft submission documents I am highlighting a few issues and areas where the reporting needs to be simplified and reconciled. However, these errors are peppered throughout the LVIA.	as greater than the temporary construction phase. However, the Applicant acknowledges that construction effects have the potential to be highly intrusive and disturbing to landscape character and visual amenity during the construction period. The assessment does identify significant construction effects where appropriate. BCBC questions the assessment of effects on CYNONVS473 - Mynydd Baedan, particularly the progression from 'medium magnitude' to 'major effect'. The assessment recognises: • **High sensitivity** of this landscape (agreed with BCBC) • **High magnitude of change** in the southern parts of the aspect area where the development is located (direct effects) • **Up to high magnitude** in the northern parts (indirect effects) The combination of high sensitivity and medium magnitude leads to a **moderate effect** which is **significant** for parts of the aspect area during the construction phase.

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		The overall judgement for the operational phase has been determined considering the range of impacts experienced (i.e., both direct and indirect) and is judged as a **major** and **significant** effect (**paragraph 8.9.26**). This reflects: • The intensity of effects in the southern (host) portion • The extent of the aspect area affected • The fundamental change to character in parts of the area
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review – Visual Impacts** The same issues apply to the assessment of visual effects. The LVIA identified significant construction and operational stage effects on residential receptors, users of PRoW and road users up to 3 km from the Site boundary. (para 8.7.20-22) This seems close-rage considering that the users of the Ridgeway Walk and the residential receptors should be assessed on the basis of high sensitivity. But para 8.7.25 identifies that these will reduce to 1km with mitigation from tree planting. I do not agree with this conclusion and with the premiss that screening should be engaged. For the Ridgeway Walk, high sensitivity is set out (para 8.9.107) agreed. Table 8.12 sets out that: *[table not copied here]* I consider that the methodology flaws are hampering the clear determination of effects. The magnitude during construction would be higher than during operation because of the additional disruptions to the walker's experience. High + high = major, High + medium should be moderate-major, not moderate.	The assessment identifies **high sensitivity** for users of this route, which reflects: • High value as a promoted long-distance route • High susceptibility of recreational users to change This sensitivity is agreed with BCBC. The assessment concludes that the magnitude of change varies by location along the route: • Within and immediately adjacent to the Site -**high** magnitude, leading to **major significant effects** (as identified in **Table 8.13** (formerly Table 8.12)) • Within 5 km of the Site **- medium-high** magnitude, leading to **moderate-major significant effects**

Consultee	Summary of Consultee Comments	Applicant response
	For the section 5-10km distant Table 8.12 records high sensitivity and low magnitude of change being slight. By my methods this should be moderate, and by the Matrix (see extract above) the resultant effect should be moderate-minor. These errors continue into the cumulative assessment.	• 5-10 km from Site **- medium** magnitude, leading to **moderate effects;** and • **Beyond 10 km - low to very low magnitude**, leading to **minor-moderate** to **minor effects** This graduated approach reflects the reality that effects diminish with distance. The Applicant considers that 'very high' magnitude is not appropriate even for sections within the Site during the operational phase, as: • The route would remain functional and accessible • The surrounding landscape context would remain (woodland, moorland, rolling topography) • The view would not be dominated or overwhelmed - turbines would be prominent but would not occupy the entire view • Multiple other elements would remain in the view Importantly, the revised layout has significantly reduced effects on the Ogwr Ridgeway Walk through: • Removal of former Solar Parcel D north of the route

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		• Relocation of substation south of the route • Removal of the BESS • Concentration of infrastructure primarily on one side rather than both sides The design has been amended to directly addresses concerns of BCBC about the effects on this important recreational route.
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review – Cumulative assessment** The baseline is again very well described. Minor but important factual point: The Eirlys Solar Farm is not consented. It is still at the pre-planning stage.	The cumulative section has been updated.
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review – Conclusions** As an overarching observation, the LVIA assessment contains a large volume of data that has been collected. The quality of analysis of that data and the format in which it is presented has an influence on how effects are quantified and presented and on how conclusions are drawn. Resolving the issues with the methodology and the transcribing of effects set out above needs to be done as a priority, and then this will start to read as a well-assessed document. The bones are strong, the flesh needs tweaking.	These comments are noted. Changes have been made, as highlighted above.
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review – Conclusions (continued)** The scoping consultation report suggested a study area out to 35 km with an inner 20 km study area. I feel the application would benefit from a 5-7.5 km detailed study area for both the solar and the wind turbines with 5/7.5 km bare ground ZTVs (and surface model ZTVs if the consultants with to add these). By being supported by mapping information at a more detailed scale the	The Applicant has carefully considered BCBC's request for additional 5-7.5 km detailed mapping and offers the following response: **1. Bare Ground ZTVs at 5-7.5km:**

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	reader will get closer in to understanding effects at this key threshold of significance area. Using a 1:25,000 base map will also make the project much more readily understood in terms of the geographic locations of potential impacts.	The existing blade tip and hub height ZTVs (**ES Volume IV, Figures 8.3** to **8.6**) are presented as 'bare ground' or 'bare earth' models that do not account for screening vegetation or buildings. These follow standard SNH/NatureScot guidance for wind energy developments. The ZTVs are presented at both 35 km and 20 km extents, with the 20 km ZTVs providing appropriate detail for the 5-7.5 km zone. **2. Surface Model ZTVs:** 'Surface model' ZTVs account for screening by woodland and buildings (as opposed to 'bare earth' models that show topography only). The Applicant notes that: • **For wind turbines**: Surface model ZTVs have limited value due to the height of the turbines (up to 200 m to tip). Woodland and buildings that screen lower-level views typically do not screen turbines, making surface model ZTVs for turbines similar to bare earth models in most locations. • **For solar**: A surface model Screened ZTV was (and is) provided at **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements**. This accounts

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		for screening by woodland and buildings using OS VectorMap Local data. The Applicant considers that additional surface model ZTVs for the wind turbines would not add significant value to the assessment. The request to use 1:25,000 base map is also noted, this mapping has been used within the 20 km ZTVs.
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review – Conclusions (continued)** The need to possibly divert parts of / interrupt usage of the route of the Ridgeway Walk and the impact this will have on the quality of walking experience and the historic relationship between this walking route and the landscape is not fully evaluated. The application is complex covering three main energy generation / storage elements. It might be easier to break down the assessments from Chapter 15 into the solar + BESS and the wind. Then have scenario 0 being the combined effects in the cumulative assessment. Then the overall effects will be more clearly presented, and I would hope a lot of the confusion would be resolved.	The Proposed Development has been designed to accommodate existing PRoW throughout the Site. Therefore there will be no need to permanently divert any PRoW. There may be the need to temporary divert during the construction phase, and this would be kept to a minimum, short term in duration and managed via an Access Management Plan. The Applicant notes this suggestion for restructuring the assessment. The current LVIA follows the standard approach established in GLVIA3 and widely adopted for mixed renewable energy developments, which is to: • Assess each component's individual contribution to landscape and visual effects; • Consider the combined effect of all scheme elements together; and

Consultee	Summary of Consultee Comments	Applicant response
		• Assess cumulative effects with other developments separately. This approach ensures that: • The effects of each element are clearly identified and understood; • The interaction between elements is properly considered; and • The assessment remains proportionate and focused on significant effects. However, the Applicant acknowledges that clarity of presentation is important. Throughout the revised ES Chapter, care has been taken to: • Clearly distinguish between effects arising from turbines (the most prominent elements) and effects arising from ground-level infrastructure; • Use sub-headings and clear signposting to guide readers through the assessment; and • Ensure that the relative contributions of different elements to overall effects are clearly articulated. The Inter-Project Cumulative Effects assessment (**Section 8.12**) considers the Proposed Development as a whole in combination with other developments in the

Consultee	Summary of Consultee Comments	Applicant response
		area, which the Applicant believes provides appropriate and proportionate consideration of combined effects.
BCBC (through Anne Priscott Associates Ltd)	**LVIA Review – Conclusions (continued)** Delete para 8.12.123 – balancing planning arguments should not be in the LVIA.	This paragraph has been deleted with the planning balance arguments to be made in the **Planning, Design and Access Statement**.
BCBC (through Anne Priscott Associates Ltd)	**Special Landscape Areas** T6 and solar arrays in field parcels A, B & C are located within SLA 4 Margam. The assessment of effects in Appendix 8.5 identifies significant effects not carried through to the NTS tables at chapter 16. The effects need to be broken down into magnitude of change, sensitivity of receptor and combined magnitude of effect so that a reader can understand how the conclusions presented have been drawn.	**ES Volume II, Chapter 16: Summary of Effects** has been updated to reflect any inconsistencies. A further breakdown of the sensitivity of the receptor and the magnitude of change / impact has not been included within ES Volume II, Chapter 16, as the focus of that chapter is to summarise the effects of the Proposed Development and identify those which would be significant. A detailed breakdown of the assessments reported in ES Volume II, and how the significance criteria has been applied, is provided within the corresponding technical chapters (**ES Volume II, Chapter 5 to 15**). However, acknowledging this comment, where required, this ES Chapter and its supporting Appendices have been updated with the relevant magnitude of change, sensitivity and resulting effect clearly stated.

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BCBC (through Anne Priscott Associates Ltd)	**Margam Historic Park and Garden** The effect on the setting of the Margam Historic Park and Garden and associated visitors to the Country Park forms a key consideration of effects on highly sensitive landscape and visual receptors. Views of two turbines will be afforded, and they will contribute to cumulative effects experienced through the park through the Y Bryn, Eirlys and other developments. The greatest combined impacts will be from the upper parkland, near the Bro stone, and for users of the long-distance paths crossing this well used plateau.	These comments are noted. Margam Park is considered within the Viewpoint assessment at **ES Volume III, Appendix 8.8: Viewpoint Assessment** with VP's 1 and 2 located within the park. The effects on the two National Trails The Cistercian Way and the Ogwr Ridgeway Walk passing through the Park are considered in **paragraphs 8.9.119** to **8.9.133** and cumulative effects on these routes in **paragraphs 8.12.78** to **8.12.80.**
Neath Port Talbot Council	Not withstanding the above comments in relation to turbine 6 *[see 'Design' section of this table below]* and potential topple distances, the Authority raises no objection at this time to the Landscape Visual Impacts associated with both this and the other 5 turbines proposed as part of the Proposed Development.	The Applicant notes this comment.
Neath Port Talbot Council	In relation to the proposed Solar Array and BESS aspects of the Proposed Development, the Councils' jointly commissioned Landscape Visual Impact Assessment Consultant has raised a number of concerns within her report to the visual impacts associated with these aspects of the Proposed Development.	This comment is noted, and a response to those concerns is provided against the relevant comments above.
Neath Port Talbot Council	It is noted that Councils' consultant has stated that in relations to the proposed A-C sections of the proposed solar array which are the sections of the proposed solar development proposed to be located within the NPTC jurisdiction that *"I have no concerns with the actual siting of the arrays. They relate to the forestry land appear to be well-sited. The configuration of the woodland planting needs further refinement so that post-development the landscape patterns created respond well to the landform and forestry and*	A response to these comments is provided with the BCBC response above.

Consultee	Summary of Consultee Comments	Applicant response
	inherent field patterns. Currently they respond to electricity and scheme infrastructure. Consider selecting species that can be accommodated under the overhead lines without the need to leave clear gaps that create discordant patterns."	
Neath Port Talbot Council	In response to the other aspects of the proposed solar and BESS development, the Council's Landscape and Visual Impact Assessment Consultant has stated that they would advise against areas D, E, J and K [now parcels D, H and I]; in relation to the impacts associated with these areas. However, she has also identified the need to refine the proposed woodland planting, in relation to the areas F, G, H, I, L, M and N [now parcels E, F, G, J, K, L, M, N, and O] so that the post development responds to the landform and inherent field pattern rather than the proposed development itself. Nevertheless, it is noted that much of the potential impacts identified would have limited impact upon the Jurisdiction of NPTC.	A response to these comments is provided with the BCBC response above.
Neath Port Talbot Council	It is noted that the Figure 8.34 – Other Non-Wind Cumulative Development within 10Km and Figure 8.35 – Other Non-Wind Cumulative Development within 5Km appear to suggest that the Eirlys Solar Farm development is already consent, which is incorrect. It is also noted that reference is also made on these documents to Dyfed Reinforcement Riverside Road scheme, however this is not a project that the planning department recognises as having been consented.	This error is noted and the cumulative assessment has been updated reflecting that Eirlys Solar Farm is only at scoping stage. Dyfed Reinforcement Riverside Road Scheme was granted a lawful development certificate in 2022, and therefore has been retained.
Natural Resources Wales	Our advice relates to the landscape character and visual amenity of the Bannau Brycheiniog National Park (BBNP) and the Gower National Landscape (NL)1, and the statutory purpose of these designations to conserve and enhance their natural beauty. We have reviewed the Mynydd Ty-talwyn Energy Park - Environmental Statement (ES), April 2025 prepared by RSK. In particular: – ES Volume 2: Chapter 8: Landscape and Visual (LVIA)	These comments are noted.

Consultee	Summary of Consultee Comments	Applicant response
	– ES Volume 3 Appendices 8.1-8.12 – ES Volume 4: Figures The proposed development includes 6 wind turbines with a maximum blade tip height of 200m, solar photovoltaic (PV) modules (55 MW), and a Battery Energy Storage System (BESS). Due to the distance between the site and the BBNP and Gower NL, it is unlikely the BESS or solar PV development would impact on the purpose of either designation. Our comments therefore focus on the impact of the proposed wind turbines. The proposed turbines are located outside of a Pre-Assessed Area (PAA) for Wind Energy in Future Wales: The National Plan 2040 (FW). To accord with FW Policy 18, the proposals should not have an unacceptable adverse impact on the surrounding landscape, particularly on the setting of the BBNP and Gower NL. Since our advice at scoping, the number of proposed turbines has reduced from 10 to 6, and the maximum height of the turbines has reduced from 230m to 200m.	
Natural Resources Wales	At its closest point, the BBNP is located just over 20km northeast of the Site. Effects on the National Park and its Special Qualities are assessed within ES Volume III, Appendix 8.6; the findings are summarised in ES Paragraph 8.9.223. We note the LVIA reports no greater than minor adverse effects on receptors within the BBNP (Not Significant), including in relation to visual amenity receptors, landscape character, and Special Qualities of the National Park. With reference to the Zone of Theoretical Visibility (ZTV) analysis (Figures 8.3 and 8.5), we note: – Within the National Park and within 30km of the turbines, visibility of all six turbines at blade tip height is unlikely.	These comments are noted.

Consultee	Summary of Consultee Comments	Applicant response
	– Blade tip visibility of up to 4 turbines is likely at a limited number of locations around the 30km distance. – No visibility of any turbines at hub height is expected within the National Park at distances within 30km of the turbines. VP 15 (Ogof-Ffynnon-Ddu) is the only LVIA viewpoint located within the BBNP and it is within 30km of the proposed turbines in an area where the ZTV indicates no visibility – consequently, the supporting visualisation shows no visibility of the turbines (ES Appendix 8.10). Within the National Park, the largest area of potential intervisibility lies beyond the 30km radius within the Black Mountain / Mynydd Du. This includes both blade tip and hub height visibility. The LVIA does not include any viewpoints within this area but we accept that impacts resulting from the proposed development at this distance are unlikely to be considered significant. Overall, based on the submitted information, we are satisfied that impacts on National Park receptors are unlikely to be significant.	
Natural Resources Wales	*Gower National Landscape* At its closest point, the Gower NL is located c.21 km from the site. Effects on the Gower NL are considered within ES Volume III, Appendix 8.6; the findings are summarised in ES Paragraph 8.9.224. We note the LVIA reports no greater than minor adverse effects on receptors within the Gower NL (Not Significant), including in relation to visual amenity receptors, landscape character, and Special Qualities of the NL. With reference to the ZTV analysis (Figures 8.3 and 8.5), we note:	These comments are noted.

Consultee	Summary of Consultee Comments	Applicant response
	– Visibility of all six turbines at blade tip height is projected across different parts of the NL at distances within c.23km to 35km (extent of LVIA study area) from the site. – Within the NL, the extent of visibility of the six turbines at hub height is significantly reduced compared with blade tip visibility. VP 14 (Mumbles Hill) is the only LVIA viewpoint located within the Gower NL and it is within 25km of the proposed turbines. The supporting visualisations show visibility of five turbines at hub height and blade tip visibility of one turbine (T5) (ES Appendix 8.10). Currently, views from Mumbles Hill across Swansea Bay are characterised by a relatively balanced mixture of natural and built features. Swansea Bay has outstanding integrity as an intertidal landscape and its scenic qualities are complemented by the range of enclosing hills. Although these same views feature substantial urban areas and notable detractors such as the Port Talbot steelworks, the scale of the Bay and the dark backcloth of hills behind has, to a degree, enabled these elements to be absorbed without dominating the natural scenic qualities of the Bay. These qualities provide a positive setting to the National Landscape and contribute to the visual amenity experienced by its visitors. From Mumbles Hill, industry at Port Talbot is visible in the same field of view as the proposed turbines. However buildings at Port Talbot are backclothed by hills which reduces their visual prominence, with the hills being the dominant feature. The turbines would be visible on the ridgeline above the industrial area, and may attract attention on account of their scale, ridgeline location, and the rotation of turbine blades. Whilst the turbines would add to the presence of detractors in views from Mumbles Hill such as 'the turbines on Mynydd Brombil', the impact individually or cumulatively is unlikely to be significant due to the existing nature of views from Mumbles Hill, the distance of separation between the turbines and the viewpoint, and the partial	

Consultee	Summary of Consultee Comments	Applicant response
	screening of the turbines by intervening landform. As this is expected to be the most impacted viewpoint within the NL, we are satisfied with the LVIA conclusion that impacts on receptors within the Gower NL are unlikely to be significant. We are satisfied with the information provided in the ES and do not require any further information at application.	

Scope of the Assessment

8.2.5 The technical scope of this assessment has been established through an ongoing scoping process. As a result of this process, the technical scope of the assessment reported in this chapter comprises:

- Effects on the landscape as a resource in its own right (the landscape effects); and
- Effects on specific views and visual amenity more generally (the visual effects).

8.2.6 Therefore, this LVIA considers the potential effects of the Proposed Development upon:

- Individual landscape features and elements;
- Landscape character;
- Specific views; and
- People who view the landscape.

8.2.7 The following sensitive landscape receptors have been assessed:

- Landscape designations (International and National level landscape designations);
- Historic landscapes (HLCA);
- Local landscape designations (including Special Landscape Areas (SLA));
- National landscape character areas (NCA);
- Local landscape character areas; and
- Local landscape character areas (LANDMAP).

8.2.8 The following sensitive visual receptors have been assessed:

- Residential receptors within 2 km;
- Settlements;
- National trails;
- Long distance walking routes;
- Public rights of way (PRoW);
- Cycle routes; and
- Roads and railways.

8.2.9 An initial filtering exercise of receptors has been undertaken to determine which receptors have the potential for significant effects to arise upon them as a result of the construction, operation and/or decommissioning of the Proposed Development and would therefore require detailed consideration in this assessment. The intention has been to ensure that the level of attention given is proportionate to the likelihood of significant effects arising. The findings of this initial filtering exercise are presented in **ES Volume III** in:

- **Appendix 8.5: Special Landscape Areas Preliminary Assessment;**

- **Appendix 8.6: National Landscape Designations Preliminary Assessment;** and
- **Appendix 8.7: Preliminary Assessment of Receptor Groups.**

8.2.10 Based on the desk study, field work, the professional judgement of the LVIA team and experience of delivering other onshore renewable energy projects, the following receptors/elements have been scoped out of detailed assessment:

- Effects on receptors located outside of the Zone of Theoretical Visibility (ZTV).
- Effects on receptors located on private land.
- Effects on LANDMAP aspect areas outside of the study areas as defined in LANDMAP Guidance Note 46 (NRW, 2023), where it is judged that potential significant effects are unlikely to occur.
- Effects of visible aviation upon landscape character. The Proposed Development is not located within or in close proximity to a designated dark sky area, or remote from existing sources of visible lighting, such as residential areas, commercial or industrial sites, or major roads. The character of the landscape during low natural light levels is already in part characterised by the presence of artificial lighting. Therefore, the addition of visible turbine lighting would not have the potential to bring about a fundamental change to the characteristics of the landscape. Further details on the approach to the assessment of aviation lighting are set out in **ES Volume III, Appendix 8.3: Night Time Lighting Assessment Methodology,** with information regarding the visibility of the lighting illustrated on **ES Volume IV, Figure 8.38: Lighting Intensity ZTV for Lit Turbines.**
- Seascape character effects: The Site is set back from the coast and set within a coastal context which includes settlement and industrial and existing wind development, to which it would add. It is anticipated that the seascape characteristics would not be so altered by the Proposed Development that a significant effect would be concluded.

8.2.11 The scope of the assessment has not changed since the receipt of the Scoping Direction, which is presented in **ES Volume III, Appendix 1.2: Scoping Direction**.

8.3 Methodology

8.3.1 This assessment has been undertaken in accordance with the following legislation, and with regard to the following planning policy and guidance. It should be noted that this chapter does not assess the compliance of the Proposed Development against relevant planning policy. Such an assessment is presented in the **Planning, Design and Access Statement** submitted as a standalone planning document in support of the application.

Legislation

International

- Council of Europe (2000) European Landscape Convention, Florence, 20.X.2000, ETS No. 176. Strasbourg: Council of Europe.

National

- National Parks and Access to the Countryside Act 1949; and
- Countryside and Rights of Way Act 2000.

National Planning Policy

- Natural Resources Wales (2018) LANDMAP Guidance Note 3: LANDMAP and the Renewable Energy Agenda. Cardiff: Natural Resources Wales;
- Planning Policy Wales (PPW) Edition 12, (February 2024)-:
  - PPW sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, MTANs and policy clarification letters comprise national planning policy.
  - The key objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales. PPW also recognises the rich and varied landscapes of Wales, covered by a hierarchy of statutory and non-statutory designations, including National Parks, National Landscapes (formerly AONBs) and non-statutory designations such as Special Landscape Areas (SLA). PPW also recognises the NRW LANDMAP Information System as an important information resource to inform planning for the sustainable management of natural resources in an area;
- Welsh Assembly Government (2005) Technical Advice Note 8: Planning for Renewable Energy. Cardiff: Welsh Assembly Government.
- Future Wales: The National Plan 2040 (February 2021). Policy 17 and 18 are concerned with renewable and low carbon energy: Future Wales provides a national spatial strategy, setting out where Wales should focus development to address key national priorities through the planning system until 2040. It provides the statutory development plan for developments of national significance (DNS) and sets the direction for strategic and local development plans (LDPs), as well as complementing PPW with a shared commitment to placemaking, and towards national ambitions and well-being goals.
  - Policy 17 and 18 are concerned with renewable and low carbon energy. In particular, Policy 17 states that: *"In determining planning applications for renewable and low carbon energy development, decision-makers must give significant weight to the need to meet Wales' international commitments and our target to generate 70% of consumed electricity by renewable means by 2030 in order to combat the climate emergency."*
  - Policy 18 sets out the additional criteria against which proposals will be assessed. The criteria relevant to this chapter are:
    - outside of the Pre-Assessed Areas for wind developments and everywhere for all other technologies, the proposal does not have an unacceptable adverse impact on the surrounding landscape

(particularly on the setting of National Parks and Areas of Outstanding Natural Beauty);
- there are no unacceptable adverse visual impacts on nearby communities and individual dwellings;
- The cumulative impacts of existing and consented renewable energy schemes should also be considered.

8.3.2 Technical studies to identify candidate areas for large scale wind (>10 MW) and solar farms (10-50 MW) were issued during 2019 as part of the '*Assessment of onshore wind and solar energy potential in Wales'.* These include:

- Stage 1 - Development of Priority Areas for Wind and Solar Energy (March 2019);
- Stage 2 - Refinement of Priority Areas for Wind and Solar Energy (July 2019); and
- Executive Summary Stages 1 and 2 (July 2019).

8.3.3 The outcomes from these studies were used to inform Future Wales, which includes '*pre-assessed areas'* for wind development including turbines up to 250 m tip height. The Site is not located within a pre-assessed area as defined by Future Wales, with the closest pre-assessed area located 1.75 km to the north east of the Site.

Local Planning Policy

8.3.4 The Proposed Development straddles the local authority boundaries of BCBC and NPTC with the greater part located within BCBC as shown at **ES Volume IV, Figure 8.1: Site Location and Initial LVIA Study Area 35 km** and **ES Volume IV, Figure 8.2: Site Location and Detailed LVIA Study Area 20 km**.

8.3.5 The 35 km study area for the LVIA extends across a number of local planning authorities (LPA) as shown at **ES Volume IV, Figure 8.1: Site Location and Initial LVIA Study Area 35 km**; comprising: :

- Bannau Brycheiniog National Park Authority;
- Bridgend County Borough Council (BCBC);
- Caerphilly County Borough Council (CCBC);
- Cardiff Council (CC);
- Carmarthenshire County Council (CCC);
- City and County of Swansea (CCS);
- Merthyr Tydfil County Borough Council (MTCBC);
- Neath Port Talbot CBC (NPTC);
- Powys County Council (PCC);
- Rhondda Cynon Taf (RCTC); and
- Vale of Glamorgan (VOG).

8.3.6 The relevant local planning policies for the two 'host' local planning authorities (BCBC and NPTC) are set out for each LPA in **Table 8.4**.

Table 8.4 Relevant Local Planning Policies

LPA	Local Plan and Adoption Date	Policy Details
BCBC	Replacement Bridgend Local Development Plan 2018-2033 (Adopted March 2024)	• DNP4 Special Landscape Areas • SPG20 Renewables in the Landscape
NPTC	Neath Port Talbot CBC Local Development Plan 2011-2026 (Adopted January 2016) • Landscape and Seascape Supplementary Planning Guidance (May 2018) • Renewable and Low Carbon Energy Supplementary Planning Guidance (July 2017) • Historic Environment Supplementary Planning Guidance (September 2013)	• EN2 Special Landscape Area • SP21 Historic Park and Garden

Guidance

8.3.7 The primary source of best practice for LVIA in the UK is 'The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition' (GLVIA3) (Landscape Institute and the Institute for Environmental Management and Assessment, 2013).

8.3.8 The LVIA presented in this chapter has been undertaken in accordance with the principles established in GLVIA3. It must however be acknowledged that GLVIA3 establishes guidelines not a specific methodology. The preface to GLVIA3 recognises that:

> *"This edition concentrates on principles and processes. It does not provide a detailed or formulaic 'recipe' that can be followed in every situation – it remains the responsibility of the professional to ensure that the approach and methodology adopted are appropriate to the task in hand."*

8.3.9 The methodology for this assessment has therefore been developed specifically for this LVIA to ensure that it is proportionate and fit for purpose.

8.3.10 In addition to GLVIA3, the following guidance documents have been used during the preparation of this assessment. Some of the guidance has been prepared by NatureScot or Natural England, whose remit covers Scotland and England, is considered to provide useful guidance to aid consideration of development in Wales in lieu of equivalent guidance from NRW.

- Assessing the Cumulative Impact of Onshore Wind Energy Developments, NatureScot, (March 2021);

- Siting and Designing Wind Farms in the Landscape, Version 3a, Scottish National Heritage (SNH) (August 2017);
- NRW Guidance Note 046, 'Using LANDMAP in Landscape and Visual Impact Assessments, (LVIA),' January 2021;
- Visual Representation of Wind Farms, Version 2.2, SNH (February 2017);
- Visual Representation of Development Proposals - Technical Guidance Note 06/19, Landscape Institute (September 2019), including supporting Technical Information Notes 07/19, 08/19 and 09/19;
- NRW Evidence Report No. 80, NRW (November 2015), Strategic Assessment and Guidance, Stage 1- Ready Reckoner of Visual Effects Related to Turbine Size, Report no. 315, NRW (March 2019);
- An Approach to Landscape Sensitivity Assessment – To Inform Spatial Planning and Land Management, Natural England (June 2019);
- Assessing Landscape Value Outside National Designations -Technical Guidance Note 02/21, Landscape Institute (2021);
- Residential Visual Amenity Assessment (RVAA). Technical Guidance Note 2/19. Landscape Institute (2019);
- Guidance on Aviation Lighting Impact Assessment, NatureScot (November 2024);
- Designing Wind Farms in Wales. Design Commission for Wales (Updated 2014);
- Designing for Renewable Energy in Wales. Design Commission for Wales (November 2023); and
- Landscape Sensitivity Assessment guidance for Wales. Guidance Note GN017. NRW (updated 2023).

Baseline Characterisation

Extent of the Study Area

8.3.11 An initial 35 km ZTV was prepared for the Proposed Development (**ES Volume IV, Figure 8.3: Blade Tip ZTV to 35 km with Viewpoints**). Having reviewed this ZTV, it was considered appropriate for the LVIA to consider an initial 35 km radius study area, with detailed assessment provided for a 20 km radius study area. The 20 km study area is considered to represent the limit within which any potential significant effects might occur.

8.3.12 For the cumulative assessment (**Section 8.12: Inter-Project Cumulative Effects**), consideration is initially given to a 35 km radius from the Site, as recommended by NatureScot best practice guidance and in line with the recommendation from BCBC in its Scoping Response. Thereafter the cumulative assessment focuses on a 20 km detailed study area, which is considered to represent the limit within which any potential significant cumulative effects might occur.

8.3.13 The initial ZTV's indicate that there would be visibility beyond the 20 km study area from within the Bannau Brycheniniog National Park and Gower National Landscape/Tirwedd Cenedlaethol Gŵyr (formerly AONB). Therefore, the

assessment has included designated sites within the wider 35 km study area, as a result of the visibility of the Site.

8.3.14 Having reviewed the Scoping Direction (**ES Volume III, Appendix 1.2: Scoping Direction**), of which the LVIA comments are summarised in **Table 8.1**, based on the professional judgement of the authors of the LVIA and their extensive experience of similar renewable energy projects across the UK, the study areas have been determined as follows:

- Initial LVIA study area – 35 km from the outermost turbines;
- Detailed LVIA study area – 20 km from the outermost turbines plus designated landscapes up to 35 km where there is potential for visibility of the Proposed Development;
- Detailed cumulative landscape and visual study area – 20 km from the outermost turbines; and
- Residential Visual Amenity Study (RVAS) Area – 2 km from the outermost turbines, but also acknowledging any other elements of the Proposed Development which may be visible to the properties within 2 km of the turbines.

8.3.15 The 35 km study area for the LVIA is illustrated in **ES Volume IV, Figure 8.1: Site Location and Initial LVIA Study Area 35 km** (measured from the outermost turbine).

8.3.16 For reference, other operational, consented and proposed wind farms referred to throughout this chapter are illustrated in **ES Volume IV, Figure 8.32: Wind Farms within 35 km** and **ES Volume IV, Figure 8.33: Wind Farms within 20 km**. The cumulative effects assessment in **Section 8.12** provides further explanation on the study area adopted for the cumulative assessment.

Desk Study

8.3.17 A baseline landscape assessment has been carried out to determine the current features and character of the landscape within and surrounding the Site.

8.3.18 The baseline landscape assessment involved firstly a review of desk material, comprising:

- Relevant National and Local Policy documents as set out in **Table 8.4** above;
- Bridgend Landscape Character Assessment (July 2013);
- BCBC Designation of Special Landscape Areas (March 2010);
- Neath Port Talbot Landscape Assessment (December 2004);
- Bannau Brycheiniog National Park Authority. LDP Supplementary Planning Guidance: Landscape Character (2012);
- NRW LANDMAP Information System;
- Gower AONB Management Plan (2017);
- Cadw for information regarding designated historic assets (https://cadw.gov.wales/advice-support/historic-assets);
- Digital Terrain Model (DTM) at 5m spatial resolution;

- Ordnance survey mapping at 1:25,000 scale;
- Aerial and street view imagery available on Google Earth;
- NRW National Landscape Character Areas (NLCA);
- LUC. (2013). Landscape Character Assessment for Bridgend County Borough: Final Report. Prepared for Bridgend County Borough Council;
- White Consultants. (2004). Neath Port Talbot LANDMAP Landscape Assessment: Final Report. Neath Port Talbot County Borough Council and Countryside Council for Wales;
- Neath Port Talbot County Borough Council. (2018). Landscape and Seascape Supplementary Planning Guidance;
- Gower Landscape Partnership. (2013). Gower Landscape Character Assessment. City and County of Swansea Council;
- Fyfe, F., Countryscape, Farmer, A., and Martin, J., 2012. *Brecon Beacons National Park Landscape Character Assessment*. Brecon Beacons National Park Authority (Bannau Brycheiniog National Park Authority); and
- The Management Plan For Bannau Brycheiniog National Park 2023-2028.

Field Study(s)

8.3.19 Field visits have been conducted in a variety of weather conditions and at different times of the year during the pre-application and assessment stages to help understand the landscape and how it changes throughout the year, including any seasonal changes to vegetation. This includes visits to the land within the Site itself and visits to the wider, publicly accessible, landscape, including a joint Site visit with the Landscape Representative for BCBC and NPTC on 17 March 2025 and 5 June 2025.

8.3.20 In addition, visits to a number of the private residential properties within 2 km of proposed wind turbines were carried out as part of the RVAA, accompanied by the Landscape Representative for BCBC and NPTC, (refer to **ES Volume III, Appendix 8.9: Residential Visual Amenity Assessment**).

8.4 Assessment Methodology

8.4.1 In this chapter, landscape and visual effects are assessed separately although the procedure for assessing each of these is closely linked and follows GLVIA3 (Landscape Institute and the Institute for Environmental Management and Assessment, 2013).

8.4.2 The main objectives of the LVIA can be summarised as follows:

- To identify, evaluate and describe the baseline character of the Site and its surroundings and also any notable individual landscape features or important views within the Site and its surroundings;
- To determine the nature of the receptor (i.e. the sensitivity) through a consideration of its susceptibility to the type of development proposed and any values associated with it;

- To identify and describe any impacts of the Proposed Development in so far as they affect the receptors;
- To evaluate the nature of the effects (i.e. the magnitude, duration and reversibility of the effect);
- To identify and describe mitigation measures that have been adopted to avoid, reduce and compensate for effects;
- To evaluate the relative significance of residual effects; and
- To determine which residual effects, if any, are significant.

8.4.3 The LVIA assesses both the long-term effects relating to the operational lifetime and the short-term temporary effects associated with the construction and decommissioning of the Proposed Development.

8.4.4 Consideration has been given to seasonal variations when assessing the visibility of the Proposed Development.

8.4.5 The LVIA also considers any cumulative effects arising in conjunction with other applicable schemes in the study area, as defined below. Best practice guidelines (Assessing the Cumulative Impact of Onshore Wind Energy Developments, NatureScot, March 2021) identify two principal types of cumulative visual impact:

- Combined visibility – where the observer is able to see two or more developments from one viewpoint; and
- Sequential visibility – where two or more sites are not visible at one location but would be seen as the observer moves along a linear route, for example, a road or PRoW.

8.4.6 The NatureScot cumulative assessment guidelines (2021) state that 'combined visibility' may either be 'in combination' (where two or more sites are visible from a fixed viewpoint in the same arc of view) or 'in succession' (where two or more sites are visible from a fixed viewpoint, but the observer is required to turn to see the different sites). Both types are discussed in this chapter. The published GLVIA3 also indicates a difference in emphasis between sequential effects that are frequent and those which are occasional. This chapter also includes a further consideration of the overall totality of the effect when the Proposed Development is considered alongside the other operational or proposed schemes across the study area.

8.4.7 In relation to both the effects of the Proposed Development alone, and the cumulative effects with other schemes in the study area, both beneficial (positive) and adverse (negative) effects are considered. Renewable energy development can give rise to a wide spectrum of opinions, ranging from strongly negative to strongly positive, with a wide range of opinions lying somewhere between these two positions. For instance, some people view wind turbines as incongruous or industrial structures whilst others view them as aesthetically pleasing, elegant structures and a positive response to climate change. This spectrum of opinion has come to be referred to in relation to wind farms as the concept of valency. For the avoidance of doubt, in considering the effects of the Proposed Development, a precautionary approach to the assessment has been adopted and it is assumed that, unless specifically stated otherwise, the effects of the proposal would be

adverse in nature even though it is acknowledged that, for some people, the impacts could be considered to be beneficial.

Landscape Assessment Methodology

8.4.8 The assessment has identified the existing landscape features on the Site, and in the immediate vicinity, and how these elements combine to give the area a sense of landscape character. Plans and construction details of the Proposed Development have been used to determine the impacts of the Proposed Development on landscape features and character.

8.4.9 The LVIA firstly assesses how the Proposed Development would impact directly on any existing landscape features or elements (e.g. removal of trees etc.).

8.4.10 The LVIA then considers impacts on landscape character with reference to landscape character areas/types identified in published landscape character documents. Further details of the assessment criteria that underpins this LVIA are set out in **ES Volume III, Appendix 8.1: Landscape and Visual Impact Assessment Criteria**.

8.4.11 The assessment of effects uses the LANDMAP Visual Sensory Areas as the basis for the assessment. However, effects on wider landscape character such as those on the Bannau Brycheniniog National Park which lies to the far north and the Gower National Landscape (former AONB) which lies to the far west of the study area are also considered; both of which are just outside of the 20 km detailed study area. Furthermore, the description of key characteristics of the larger LCAs from the BCBC and NPTC Local Landscape Character Assessments have also helped inform the assessment. The analysis which follows is therefore based on the updated LANDMAP data (NRW, 2024) with reference made to the local LCA studies where particular sensitivities are mentioned or guidance for managing change in the landscape remains relevant.

8.4.12 The guidance within Local Landscape Character Assessments includes forces for change, key sensitivities and guidelines for development led-change, protection and conservation and the management and enhancement of existing landscape character and features. This guidance also feeds into the mitigation section of this chapter where pertinent to the potential for mitigation of the proposals.

8.4.13 LANDMAP Visual and Sensory Aspect Areas within 20 km of the Proposed Development are shown in **ES Volume IV, Figure 8.15: LANDMAP Visual and Sensory Classification within 20 km** and overlaid with the blade tip ZTV in **ES Volume IV, Figure 8.16: LANDMAP Visual and Sensory Overall Evaluation with Blade Tip ZTV with Viewpoints**.

8.4.14 The majority of the Site lies within Visual and Sensory Aspect Area: CYNONVS473 - Mynydd Baedan. The western part of the Proposed Development is set within a clearing to the west, within the NPTVS897 - Mynydd Bromil & Scarp tops. These two areas are separated by the conifer plantation (CYNONVS731 – conifer to the west of the site). These LANDMAP areas are considered separately in areas to the west of the Site within 5km (refer to **ES Volume III, Appendix 8.4: LANDMAP Detailed Assessment**).

8.4.15 Beyond the Site's host aspect area, the assessment considers effects on landscape character collectively in broad geographical areas around the Site based on their distance from the Proposed Development. The intention has been to ensure that the level of attention given is proportionate to the likelihood of significant effects arising.

8.4.16 The first stage in assessing the effects of the Proposed Development on landscape character is to evaluate the sensitivity of the landscape to the type of change proposed. As indicated within GLVIA3, sensitivity of landscape character should be determined through a consideration of both susceptibility to change and any values associated with the landscape.

8.4.17 The second stage is to determine the magnitude of change on landscape character as a result of the Proposed Development. This has been determined using professional judgement based on the following factors:

- The percentage of the visual and sensory aspect area from where the Site would theoretically and actually be visible;
- The distance between the aspect area and the Site;
- The likely prominence of the turbines, solar arrays or associated infrastructure elements from the aspect area taking account of existing locally dominant characteristics in the character type; and
- The degree to which the physical and perceptual characteristics would change as a result of the Proposed Development.

Visual Assessment Methodology

Zones of Theoretical Visibility (ZTV)

8.4.18 Potential visual receptors of the Proposed Development have been identified by interpretation of digitally generated ZTVs.

8.4.19 A ZTV illustrates the extents from which a feature would theoretically be visible within a defined study area.

8.4.20 ZTVs are generated assuming a 'bare ground' terrain model. The bare ground ZTVs presented within this LVIA have been generated from topographical data only and they do not take any account of vegetation or the built environment which may screen views of the Proposed Development. They are, as such, a 'worst case' zone of visual influence and considerably over-emphasise the actual visibility of the Proposed Development. In reality, trees, hedges and buildings may restrict views of the Proposed Development from many of the areas rendered as within the bare ground ZTV and therefore in addition, Screened ZTVs have also been prepared (further details of which are set out in **Section 8.5** below).

8.4.21 A further assumption of the ZTVs is that climatic visibility is 100 % (i.e., visibility is not impeded by moisture or pollution in the air). In reality, such atmospheric conditions are relatively rare in this part of the country. Mist, fog, rain and snow are all common weather occurrences, which would regularly restrict visibility of the Proposed Development from some of the areas within the ZTV; this being an incrementally more significant factor with distance from the Site. Atmospheric

pollution is not as significant as it is in other parts of the country but is still present and would also restrict actual visibility on some occasions, again more so with distance from the Site.

8.4.22 The ZTVs were generated using GIS. The programme used topographical height data (OS Terrain 5) to build a terrain model. The programme then renders the model using a square grid to illustrate whether the turbines would be visible in each 50 m x 50 m square on the grid for a specified distance in every direction from the Site.

8.4.23 Digital ZTVs have been prepared to illustrate the theoretical visibility of the turbine for a radius of 35 km around the Site. Three sets of ZTVs have been produced for the Proposed Development's wind turbines, the first shows visibility of the proposed wind turbines to blade tip when the blade is at its highest possible position (**ES Volume IV, Figure 8.3: Blade Tip ZTV to 35 km with Viewpoints**), the second, the visibility of the turbines at hub height (**ES Volume IV, Figure 8.5: Hub Height ZTV to 35 km with Viewpoints**) and the final set shows the visibility of the turbines proposed to be lit with visible aviation lights (**ES Volume VI, Figure 8.38: Lighting Intensity ZTV for Lit Turbines T1, T5 and T6 to 20 km with Viewpoints**). Enlargements of the ZTVs have also been produced.

8.4.24 Separate screened ZTV (SZTV) plans have also been produced to illustrate the theoretical visibility of the solar PV arrays, divided into four parts (Parcel Areas 1 to 4) to illustrate visibility of the different areas of solar within the Proposed Development (**ES Volume IV, Figure 8.36: Screened ZTV Solar (4 of 4)**).

8.4.25 These ZTVs were prepared to a radius of 5 km out from the Site boundary given the extent of visibility would be much reduced from that of the turbines. The SZTVs demonstrates the screening from intervening woodland and buildings in the local context which form substantial exclusion barriers which reduce the visible extent of these aspects.

8.4.26 Cumulative ZTVs have been produced to show locations where the ZTVs of two or more operational, consented or proposed developments (in certain cases a number of wind farms which are at the same stage in development have been grouped together). In the cumulative ZTVs one colour has been used to illustrate the theoretical visibility of the Proposed Development and a second colour to illustrate the visibility of the second development. Where the ZTVs of the two sites overlap a third colour has been used to illustrate this potential cumulative visual influence.

8.4.27 It should be noted that there are several limitations to the use of ZTVs. For a discussion of these limitations please refer to Visual Representation of Wind farms – Version 2.2 (NatureScot). In particular, it should be noted that the ZTV plans simply illustrate theoretical visibility and do not imply or assign any level of significance to those areas identified as being within the ZTV. The ZTVs are a tool to assist the Landscape Architect to identify where a development would potentially be visible from.

8.4.28 The assessment of landscape and visual effects in this chapter does not rely solely on the accuracy of the ZTVs. The ZTVs have been ground proofed and professional judgement has been used to evaluate the significance of effects.

Assessment Viewpoints

8.4.29 A selection of viewpoints have been considered as part of this assessment to represent a range of views and viewer types, as discussed in Visual Representation of Wind farms – Version 2.2 (NatureScot) and in paragraphs 6.16-6.20 of GLVIA3. These viewpoints have been derived through desk-based and on-site analysis, interpretation of ZTVs, and through consideration of the viewpoints used in the assessment of nearby wind farms. The assessment viewpoints have also been consulted on as part of the EIA scoping process and amended based on the feedback received from consultees (refer to **Table 8.2**).

8.4.30 The viewpoints are representative of the range of views towards the Site. They are not intended to cover every single view, but are representative of a range of distances from the Site and receptor types (e.g. residents, walkers, road users) and have been used to inform the assessment of effects on landscape character, the visual assessment, and the cumulative assessment. The viewpoints cover a variety of different character areas, are in different directions from the Site and are at varying elevations. Some of the viewpoints are intended to be representative of the visual experience in a general location whereas other viewpoints illustrate the view from a specific or important vantage point. The viewpoints are located at a range of distances from the Site to illustrate the varying magnitude of visual impacts and the differing effects of the Proposed Development.

8.4.31 Visualisations have been produced for each of the 15 assessment viewpoints; these are presented in **ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15**. This includes night-time visualisations for three of the assessment viewpoints (4, 11, and 14). An explanation of how they have been produced and information to be read in conjunction with the visualisations is provided in **ES Volume III, Appendix 8.2: Visualisation Information**.

8.4.32 Table 8.5 identifies the 15 assessment viewpoints. The locations of these viewpoints are illustrated in **ES Volume IV, Figure 8.3: Blade Tip ZTV to 35 km with Viewpoints** and **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**.

Table 8.5 Viewpoint Assessment Locations

Visual Receptor	Distance to nearest proposed turbine	Grid Reference	Reason for inclusion/Key Receptors
1. Margam Park (Access Road)	4,580 m	280106, 185792	Tourists. Special Landscape Area. Registered Park and Garden. Historic Landscape.
2. Margam Park Deer Park / Ogwr Ridgeway Long Distance Walk	3273 m	281388, 186388	Walkers on promoted footpath. Special Landscape Area. Registered Park and Garden. Historic Landscape.

Visual Receptor	Distance to nearest proposed turbine	Grid Reference	Reason for inclusion/Key Receptors
3. Ogwr Ridgeway Walk	1,781 m	283628, 187735	Walkers on promoted footpath. Special Landscape Area. Historic Landscape.
4. Llangynwyd Conservation Area	1,855m	285917, 188835	Residents and visitors to cemetery. Special Landscape Area.
5. Heol Gelli Lenor, Maesteg	3,449 m	284760, 190299	Residents.
6. Heol Dewi Sant, Bettws	3,200 m	289915, 187343	Residents.
7. Bridge over River Llynfi east of Coytrahen	2,216 m	289096, 185474	Residents.
8. Bridgend Circular Walk	5308 m	291190, 182876	Walkers.
9. Heol Shon, Cefn Cribwr	3,292 m	285174, 182779	Residents.
10. Kenfig Burrows	7,091 m	279808, 181111	Tourists, Wales Coast Path. Historic Landscape. Special Landscape Area.
11. Wales Coast Path at Ogmore-by-Sea	10,432 m	286114, 175589	Tourists, Wales Coast Path. Heritage Coast.
12. Ogwr Ridgeway Walk at Waun Wen	7,487 m	294454, 185934	Promoted recreational walk. Special Landscape Area
13. Pen y Foel Trig Point	6,025 m	291896, 189548	Promoted recreational walk. Special Landscape Area.
14. Mumbles Hill, Swansea	21,914 m	262776, 187440	Tourists, Wales Coast Path. Gower National Landscape.
15. Ogof-Ffynnon-Ddu	29,088 m	287459, 216026	Tourists. Promoted recreational walk. National Park.

8.4.33 Each of the representative viewpoints has been visited to gain an understanding of the sensitivity of the viewpoint receptors and to make professional judgements on the likely visual effects arising from the Proposed Development.

8.4.34 The viewpoints were used as the starting point for considering the effects on visual receptors within the entire study area. However, the visual assessment does not rely solely on the viewpoint assessments to determine the significance of effects on different visual receptor groups throughout the study area. It should be recognised that the viewpoints illustrated in the LVIA simply represent a series of snapshots from a small selection of the locations within the study area from where the Proposed Development would be visible. Following the viewpoint assessment, the LVIA considers the effect on visual amenity throughout the study area with reference to different visual receptor groups at varying distances from the Site.

8.4.35 Further local viewpoints within a 5 km radius out from the Site to provide further information about the potential visibility of the solar areas of the Proposed Development have also been provided following further consultation with BCBC and NPTC (refer to **Table 8.2**). The images are set out in **ES Volume III, Appendix 8.11: Annotated Photo Record Viewpoints 16 to 24** with their locations illustrated on **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements** and **ES Volume IV, Figure 8.36: Screened ZTV Solar (1-4)**. The local viewpoints do not form full assessment viewpoints, but have been used to help aid the assessment process, particularly in relation to the potential effects of the solar elements of the Proposed Development from visual receptors within and close to the Site.

8.4.36 Visualisations showing the Year 1 view and the view following implementation of mitigation at Year 15 have also been prepared for three of the additional locations (16, 18 and 19), provided at **ES Volume III, Appendix 8.12: Photomontages Viewpoints 16, 18, 19**.

Assessment Criteria

Significance of Effect

8.4.37 The purpose of an LVIA, when produced in the context of an EIA, is to identify any significant landscape and visual effects within the study area to assist the determining authority in deciding the acceptability of the scheme under consideration.

8.4.38 The detailed assessment criteria used to determine landscape and visual sensitivity, magnitude of change and significance of effect are set out in **ES Volume III, Appendix 8.1: Landscape and Visual Impact Assessment Criteria** .

8.4.39 In summary, the sensitivity of receptors is described as **very high**, **high**, **medium**, **low** or **very low**, and is combined with the magnitude of change, which is also described on this same scale from **very high** to **very low**, to derive a judgement of the level of effect. This judgement is described as being on a scale from **major** to **negligible**, as per **Table 8.6**. Where appropriate, no effect has also been used within this assessment. Professional judgement is then employed to determine whether the effect is significant or not. Those effects described as **major**,

moderate major, and in some cases **moderate**, may be regarded as **significant**. Where a judgement falls within the light grey area of **Table 8.6**, which may or may not be significant, professional judgement has been used.

8.4.40 The indicative matrix shown below in **Table 8.6** is used as a guide on which judgements are based. Each receptor is considered on an individual basis through professional judgement, so although the matrix may be used as an initial guide, there will inevitably be some variation between outcomes where a different scale of effect will be determined. On these occasions the assessment clearly notes that professional judgement has been used.

Table 8.6 Matrix of Significance

		Magnitude of change				
		Very High	**High**	**Medium**	**Low**	**Very Low**
Sensitivity	**Very High**	Major	Major	Moderate Major	Moderate	Minor Moderate
	High	Major	Major	Moderate	Minor Moderate	Minor
	Medium	Moderate Major	Moderate	Moderate	Minor Moderate	Minor
	Low	Moderate	Minor Moderate	Minor Moderate	Minor	Minor / Negligible
	Very Low	Minor Moderate	Minor	Minor	Minor/ Negligible	Negligible

8.5 Baseline Conditions

8.5.1 An initial filtering exercise of receptors has been undertaken to determine which receptors have the potential for significant effects to arise upon them as a result of the construction, operation and/or decommissioning of the Proposed Development and would therefore require detailed consideration in this assessment. The intention has been to ensure that the level of attention given is proportionate to the likelihood of significant effects arising. The findings of this initial filtering exercise are presented in **ES Volume III, Appendix 8.7: Preliminary Assessment of Receptor Groups**.

8.5.2 The following section concentrates on those receptors that have been identified as requiring detailed consideration in this assessment.

8.5.3 At this point, for clarity, it is necessary to distinguish between two terms that are frequently used in published guidance and this chapter. They originate from the 'Guidelines for Landscape Character Assessment' (Countryside Agency and NatureScot, 2002):

- Landscape Character Types are defined as tracts of landscape, which have a generic unity of character due to the particular combinations of landform, land cover, pattern and elements. The same landscape character type can occur at several different locations throughout a study area; and

- Landscape Character Areas (LCAs) are defined as discrete geographical areas of a particular landscape character type and can only occur at a single location.

Existing Baseline – Landscape Receptors

8.5.4 The Site lies across an area of elevated land within the administrative boundaries of BCBC and NPTC. The Site is primarily upland grassland, but also contains areas of both broadleaved and coniferous woodland, along with hedgerows and hedgerow trees. There is one farm-scale wind turbine operating within the Site, which is less than 30 metres in height, and would remain in place. There are also two existing micro-wind turbines (hub height 18.3 m) adjacent to the Site at Baiden Farm and one micro-wind turbine (hub height 9 m) to the west of Ton Phillip Farm 'Cefn Park Turbine'. There are also two existing larger (hub height 30 m) wind turbines just to the northeast of the Site, to the south of Gelli Las Farm. The lower lying valley areas around the Site are generally well populated and include numerous small settlements connected by a strong road network which includes local, A and B roads and the M4. The nearest large settlements are Bridgend, approximately 4 km to the south and Port Talbot, approximately 8 km to the west. Other outlying settlements to Bridgend include Sarn, Aberkenfig, Tondu and Brynmenyn which extend northwards of the M4. Smaller settlements are frequent within the valleys and coastal areas. The City of Swansea is located approximately 17 km to the west and north-west. Refer also to Table 2-1 Preliminary Assessment of Settlements at **ES Volume III, Appendix 8.7: Preliminary Assessment of Receptor Groups**.

Landscape Designations

8.5.5 Landscape designations are illustrated in **ES Volume IV, Figure 8.7: Landscape Designations within 35 km**, **ES Volume IV, Figure 8.8: Landscape Designations within 20 km** and overlaid with the blade tip ZTV in **ES Volume IV, Figure 8.9: Landscape Designations within 20 km with Blade Tip ZTV with Viewpoints**.

International Landscape Designations

8.5.6 There are no international landscape designations covering the Site or the immediate surroundings.

National Landscape Designations

8.5.7 The Bannau Brycheiniog National Park is located just over 20 km to the northeast of the Site at its closest point. The ten Special Qualities of the Bannau Brycheniniog National Park are set out in the 'The Management Plan for Bannau Brycheiniog National Park 2023 – 2028', produced by the Bannau Brycheiniog National Park Authority, and are grouped around landscape, community experiences and wildlife. They are defined as:

- Special Landscapes:
  - Sweeping grandeur & outstanding natural beauty; and

- Contrasting patterns, colours and textures.

- Special communities:
  - A sense of place & cultural identity; and
  - An intimate sense of community.

- Special experiences:
  - Enjoyable and accessible;
  - Sounds, sights, smells & tastes;
  - Sense of discovery; and
  - Peace, tranquillity & darkness.

- Special nature:
  - Mosaic of diversity; and
  - Living landscape.

8.5.8 Effects on the Bannau Brycheniniog National Park and its Special Qualities (SQ) are considered further within **ES Volume III, Appendix 8.6: National Landscape Designations,** the findings of which are set out in **Section 8.10**.

National Landscapes

8.5.9 The Gower National Landscape / Tirwedd Cenedlaethol Gŵyr (formerly AONB) lies just outside the 20 km detailed study area at a distance of c.21 km from the Site to the closest point, at Mumbles Head.

8.5.10 Chosen for its classic coastline and outstanding natural environment, Gower National Landscape covers an area of 188 square km (73 square miles; with 59 km (37 miles) of its coastline also designated as Heritage Coast.

8.5.11 Effects on the Gower National Landscape are considered further within **ES Volume III, Appendix 8.6: National Landscape Designations,** the findings of which are set out in **Section 8.10**.

Historic Landscapes

8.5.12 Three Historic Landscapes lie within the 20 km detailed study area comprising:

- HLW 2 Mynydd Margam (Margam Mountain) – situated approximately 0.8 km to the west at its closest point to the Site;
- HLW 1 Merthyr Mawr, Kenfig & Margam Burrows - situated in two distinct coastal areas approximately 4.7 km to the southwest and 6.0 km to the south;
- HLW 5 Y Rhonnda (The Rhonnda) - situated approximately 10 km to the west.

8.5.13 The closest historic landscape area which has potential to be impacted by the Proposed Development, due to its proximity to the Site, is HLW 2 Mynydd Margam (Margam Mountain). It encompasses evidence of human activity spanning several millennia. Notable features include Bronze Age cairns, medieval ecclesiastical sites, and post-medieval industrial developments. The area demonstrates particular value for its preserved medieval granges associated with Margam Abbey, and its later development as part of the Margam Estate parkland.

8.5.14 Given the main considerations within this adjoining historic landscape area are its heritage assets any landscape and visual related characteristics are assessed within the Historic LANDMAP assessment at **Section 8.7, 8.9** and within **ES Volume III, Appendix 7.2: Heritage Desk Based Assessment,** which also addresses the nearby Registered Parks and Gardens of Special Historic interest.

National Landscape Character Areas (NLCA)

8.5.15 NRW published a series of National Character Area descriptions in 2013/2014. The Site lies at the southern edge of the National Landscape Character Area 37 (NLCA): South Wales Valleys and borders NLCA36: Vale of Glamorgan to the southeast and NLCA38: Swansea Bay to the south and west.

8.5.16 The key characteristics of LCA37 are summarised by NRW as follows:

- Extensive Upland plateau.
- Numerous steep-sided valleys.
- Ribbon urban and industrial areas in valleys.
- Extensive remains of heavy industry.
- Contrast of urban valley activity next to quiet uplands.
- Large blocks of coniferous plantation and deciduous woodland fringes.
- Heather, rough grassland and steep bracken slopes.
- Improved pastures on some lower valley sides.
- Field boundaries – Dry stone walls mark areas of common land, with dense hawthorn hedges on lower slopes.
- Transport routes restricted to valleys.
- Iconic cultural identity.

Local Landscape Designations

8.5.17 Special Landscape Areas (SLA) in LPAs whose administrative boundaries overlap the 20 km detailed study area have been identified, with a total of 42 SLAs located within the detailed study area.

8.5.18 An initial review has been undertaken to determine which SLAs would have the potential for significant effects to arise upon them as a result of the Proposed Development and would therefore require detailed consideration in this assessment (see **ES Volume III, Appendix 8.5: Special Landscape Areas**). The intention has been to ensure that the level of attention given to each SLA is proportionate to the likelihood of significant effects arising upon them.

8.5.19 With reference to **ES Volume IV, Figure 8.9: Landscape Designations within 20 km with Blade Tip ZTV with Viewpoints**, the review identified the potential for significant effects to occur on several SLAs, which all lie within or overlap a 10 km offset from the Site boundary. Two of the SLAs cover part of the Site itself, as follows:

- SLA 3 Western Uplands (BCBC) - this SLA overlaps the majority of the Site and continues up to and including the town of Maesteg >5 km to the north; and

- SLA 4 Margam (NPTC) - the SLA covers Margam Mountain and upland forestry plantations west of the Site. It includes the clearing to the west of the conifer plantation which forms the western Site boundary, where it is proposed to locate turbine T01 and solar arrays.

8.5.20 The remaining six SLAs occur within the wider landscape:

- SLA 7 Laleston – approximately 4 km to the south;
- SLA 6 Kenfig Burrows – approximately 5 km to the south-west;
- SLA 2 Northern Uplands – approximately 5 km to the north-east;
- SLA 9 Merthyr Mawr Warren – approximately 8 km to the south;
- SLA 6 Foel y Dyffryn – approximately 6 km to the north; and
- SLA 5 Mynydd y Gaer – approximately 5 km to the east.

Local Landscape Character (LLCA)

8.5.21 The Landscape Character Assessment for BCBC (LUC, July 2013) divides the landscape of the local area within BCBC's jurisdiction into 15 LCAs, each with its own unique character and identity. The Bannau Brycheniniog National Park lies just outside of the northern extents of the 20 km study area. The landscape character of the Bannau Brycheniniog National Park is set out in the Bannau Brycheiniog National Park Landscape Character Assessment (August 2012).

Bannau Brycheiniog National Park Landscape Character Assessment

8.5.22 The following LCA overlap the 35 km study area, but with each located over 20 km from the Site at their closest point:

- LCA 2 – Y Mynydd Du;
- LCA 3 - Fforest Fawr;
- LCA 4 - Waterfall Country and Southern Valleys;
- LCA 7 - Central Beacons;
- LCA 8 - Talybont and Taff Reservoir Valleys; and
- LCA 9 - Mynyddoedd Llangatwg and Llangynidr.

8.5.23 With reference to the blade tip ZTV in **ES Volume IV, Figure 8.3: Blade Tip ZTV to 35 km with Viewpoints**, theoretical visibility is only predicted from LCA 2 and LCA 3. Therefore, the other LCAs are not considered further within the assessment.

Bridgend County Borough Council

8.5.24 Due to the relatively small geographic area, all of the BCBC LCAs lie within the 20 km detailed study area which are as follows:

- LCA 1 - Llangynwyd Rolling Uplands and Forestry (Host LCA);
- LCA 2 - Llynfi Valley Floor and Lower Slopes (Host LCA);
- LCA 3 - Llynfi & Garw Uplands and Forestry;
- LCA 4 - Bettws Settled Farmland;

- LCA 5 - Garw Valley Floor and Lower Slopes;
- LCA 6 - Mynydd Llangeinwyr Uplands;
- LCA 7 - Ogmore Valley Floor & Lower Slopes;
- LCA 8 - Ogmore Forest and Surrounding Uplands;
- LCA 9 - Hirwaun Common and Surrounding Ridges;
- LCA 10 - Coity Rural Hinterland;
- LCA 11 - Merthyr Mawr Farmland, Warren and Coastline;
- LCA 12 - Newton Down Limestone Plateau;
- LCA 13 - Porthcawl Coastline and Settled Farmland;
- LCA 14 - Kenfig Dunes and Coastline; and
- LCA 15 - Cefn Cribwr Ridge and Settled Farmland.

8.5.25 The Site is located in LCA 1: Llangynwyd Rolling Uplands and Forestry, the southern half of which is also within the boundary of the Western Uplands SLA, and a section in the north falls entirely within the Foel y Dyffryn SLA. The entire area is described as 'Upland' in LANDMAP's Visual and Sensory aspect.

Neath Port Talbot Council (NPTC)

8.5.26 The western edge of the Site and western half of the study area as well as the area further to the north of Maesteg lie with NPTC which is assessed by the Neath Port Talbot LANDMAP Landscape Assessment (White Consultants, Dec 2004). The study divides the NPTC area into 53 distinct LCAs.

8.5.27 With reference to the blade tip ZTV in **ES Volume IV, Figure 8.3: Blade Tip ZTV to 35 km with Viewpoints**, theoretical visibility is only predicted from a small part of the Neath Port Talbot landscape, primarily the area within 5 km to the west of the Site. The following LCAs in NPTC are within 20 km of the Site with those lying adjacent or close to the Site mentioned in brackets:

- LCA 1 Margam Marsh;
- LCA 2 Margam Burrows;
- LCA 3 Margam Country Park (2.2 km to the west of the Site);
- LCA 4 Coedhirwaun (immediate west / southwest of the Site);
- LCA 5 Coedhirwaun Scarp and open scarp tops (immediate west of the Site);
- LCA 6 Mynydd Bromil, Mynydd Emroch & Mynydd Dinas (nearest slopes adjoin the Site to the immediate west);
- LCA 7 Mynydd Margam (immediate west of the Site);
- LCA 8 Goytre Valley;
- LCA 9 Cefn Cethin;
- LCA 10 Mynydd Bycham;
- LCA 11 Cwm Afan and Cwm Pelenna;
- LCA 12 Mynydd Penhydd;
- LCA 13 Foel Trawsnant;

- LCA 14 Foel Fawr;
- LCA 15 Mynydd y Gelli;
- LCA 16 Briton Ferry Woods;
- LCA 17 Foel Fynyddau;
- LCA 19 Neath Valley;
- LCA 43 Jersey Marine;
- LCA 44 Earlswood;
- LCA 45 Crymlyn Bog;
- LCA 46 Cae'r Hendy;
- LCA 47 Elba Crescent;
- LCA 48 Baglan Bay works;
- LCA 49 Port Talbot, Sandfields, Baglan & Margam;
- LCA 50 Port Talbot Docks & Margam works;
- LCA 51 Cwmafan;
- LCA 52 Margam Sands / Aberavon Sands; and
- LCA 53 Neath Estuary Mouth.

Local Landscape Character Areas (LANDMAP)

8.5.28 LANDMAP is the formally adopted five-tiered landscape evaluation baseline tool developed by NRW. It comprises five nationally consistent spatial datasets, referred to as Aspect Layers:

- Geological Landscape;
- Landscape Habitats;
- Visual and Sensory;
- Historic Landscape; and
- Cultural Landscape Services.

8.5.29 These five Aspect Layers are divided into Aspect Areas that have been assessed by a NRW assessor. The overall evaluation of the Aspect Area is key to understanding its value in terms of sensitivity, rarity or importance.

8.5.30 The overall evaluation is:

- Low – little or no importance;
- Moderate – of some local importance;
- High – of regional or county importance; and
- Outstanding – of national or international importance.

8.5.31 The Aspect Areas have been mapped and are presented in **ES Volume IV, Figure 8.10: LANDMAP Geological Landscape Classification** to **ES Volume IV, Figure 8.19: LANDMAP Cultural Landscape Classification within 10 km** and have been overlaid with the ZTV.

Geological Landscape

8.5.32 The Site is underlain by three separate geological LANDMAP areas which are as follows:

- CYNONGL039 Bridgend/Caerphilly/Rhondda (Moderate) – Main body of the Site
  - U-shaped glacial valley with narrow, steep sides eroded into Pennant sandstones;
  - Broadens south of Maesteg across the Caerphilly landform; and
  - Predominantly rural area with some development adjacent to river floodplain and lower valley sides.
- NPTGL028 Neath Port Talbot (Moderate) - Western edge and woodland
  - South-facing slopes of upland plateau in South Wales Pennant Formation Llynfi-Brithdir Beds sandstones;
  - Features deep and steep V-U shaped valleys including Cwm Bromil and Cwm Maelwg; and
  - Good condition with generally appropriate management.
- CYNONGL041 Bridgend/Caerphilly/Rhondda (Moderate) - Southern end of Site
  - East-West strike valley along outcrop of Productive Coal Formation and Upper Namurian Middle Shales Formation;
  - Valley bounded by Pennant sandstones scarp slope to the north; and
  - Currently affected by opencast coal mining activities.

8.5.33 The rest of the geological aspect areas within 5 km are as follows:

- Outstanding: two areas
  - CYNONGL045 (Porthcawl/N. Cornelly)
  - CYNONGL047 (Kenfig Burrows)
- High: three areas
  - CYNONGL034 (Upper Garw valley)
  - CYNONGL044 (Bridgend Plain)
  - NPTGL029 (Graig Goch)
- Moderate: 11 areas
  - CYNONGL035 (Upper Llynfi valley)
  - CYNONGL037 (Mid Ogwr Fawr)
  - CYNONGL038 (Lower Garw valley)
  - CYNONGL039 (Lower Llynfi valley)
  - CYNONGL041 (Tondu)
  - CYNONGL043 (Kenfig Hill)
  - CYNONGL048 (Hendre/Shelf)
  - NPTGL026 (Mynydd Bychan)
  - NPTGL027 (Mynydd Emroch)
  - NPTGL028 (Mynydd Margam)
  - NPTGL030 (Kenfig)
- Low: two areas

- CYNONGL040 (Lower Ogwr valley)
- NPTGL032 (Margam)

8.5.34 The local area contains a diverse range of geological features, from coastal dunes to glacial valleys and coal measures, with overall value ratings ranging from Outstanding to Low. The Outstanding areas are primarily associated with coastal and limestone features, while the High value areas include both upland valleys and lowland plains with important geological exposures all of which are located beyond the immediate setting of the Site.

Landscape Habitats

5 km Site and Local Context

8.5.35 The entirety of the Site is located within grassland and marsh habitat. The analysis below shows this to be the predominant habitat found across the study area particularly relating to the upland areas hosting the Site and its immediate context.

CYNONLH010 Cynon- Host (Moderate)

8.5.36 The host habitat area is CYNONLH010 Cynon described as "*Primarily low-value grassland, this site is distinguished by the presence of Purple moor-grass priority habitat, including an SSSI [Site of Special Scientific Interest -Cwm Risca]-status area that supports a population of Marsh Fritillaries*". The area has an overall evaluation of Moderate.

8.5.37 Within 5 km of the Site there are 39 distinct habitat units which covers the local context of the Site. This is an area with landscape habitats which would have most potential to be affected by the construction, operation and decommissioning of the Proposed Development either through disturbance, habitat loss or impacts upon connectivity.

8.5.38 An analysis below of the LANDMAP data over a 5 km threshold demonstrates the local area has a diverse range of habitats which creates a complex landscape pattern ranging from highly sensitive natural and semi-natural areas (particularly the outstanding value wetlands, woodlands and coastal features) to more modified agricultural and urban landscapes. Refer to **ES Volume IV, Figure 8.12: LANDMAP Landscape Habitat Classification within 5 km**.

- Outstanding Value Habitats:
  - Broadleaved Woodland *(CYNONLH023);*
  - Marsh/Marshy Grassland (*CYNONLH027*); and
  - Sand dune systems (*CYNONLH034*).
- High Value Habitats:
  - Acid Grassland areas (CYNONLH007);
  - Broadleaved Woodland (*CYNONLH009*);
  - Mixed habitat mosaics (CYNONLH021, CYNONLH022, CYNONLH029) ;
  - Improved Grassland (CYNONLH028);
  - Parkland & Scattered Trees (NPTLH067);
  - Water features including reservoirs, lakes and river corridors (NPTLH068, NPTLH071);

- Coastal intertidal areas with muds/sands, saltmarsh and shingle (NPTLH072); and
- Marsh/Marshy Grassland (NPTLH073).

- Moderate Value Habitats:
  - Coniferous Woodland (CYNONLH005, NPTLH108);
  - Improved Grassland (multiple areas including CYNONLH010, CYNONLH012-014);
  - Mixed Woodland (CYNONLH020, NPTLH107);
  - Industrial areas (NPTLH063); and
  - Mosaic habitats combining different landscape types (NPTLH064, NPTLH070).

- Low Value Habitats:
  - Built-up residential areas with green space (CYNONLH002, CYNONLH031, NPTLH090); and
  - Some improved grassland areas (CYNONLH011, NPTLH069, NPTLH074).

20 km Detailed Study Area

8.5.39 An analysis of Landscape Habitat LANDMAP areas within the wider 20 km detailed study area demonstrates it contains a more diverse range of outstanding value habitats than the 5 km area, including additional wetland types and complex habitat mosaics. There is a significant presence of high-value mosaic habitats (18 areas), suggesting complex and interconnected landscape patterns.

8.5.40 Coastal habitats feature prominently across multiple evaluation levels, from outstanding to low value.

8.5.41 The area contains substantial woodland coverage of varying types and quality, from outstanding broadleaved woodland to low-value coniferous plantations.

8.5.42 Built-up areas and improved grasslands represent the majority of low-value habitats, indicating clear zones of existing human influence on the landscape.

Visual and Sensory

8.5.43 Visual and Sensory Aspect Areas within 20 km of the Site are illustrated in **ES Volume IV, Figure 8.15: LANDMAP Visual and Sensory Classification within 20 km** and overlaid with the blade tip ZTV in **ES Volume IV, Figure 8.16: LANDMAP Visual and Sensory Overall Evaluation with Blade Tip ZTV with Viewpoints**.

8.5.44 The Site is primarily covered by CYNONVS473 – Mynydd Baedan, which is an area of high value within the Bridgend-Caerphilly-Rhondda region. This area features northeastern facing slopes ranging from 120 m to 350 m AOD. The landscape consists of rough grazing with woodland blocks and forestry that create both structure and a dominant mosaic pattern. The area has a strong upland character which is reinforced by northeasterly views towards the Bannau Brycheiniog (Brecon Beacons).

8.5.45 Part of the Site which would host T06 and solar parcel 1 is set within a clearing to the west, within the NPTVS897 - Mynydd Bromil & Scarp tops, which is separated from the main body of the Site by the conifer plantation (CYNONVS731 – conifer to the west of the site). These adjacent LANDMAP areas are described below given they extend further west and form the context of the immediate setting and upland areas to the west of the Site.

Local Context

8.5.46 The immediate area surrounding the Site is predominantly characterised by upland landscapes with significant forestry coverage, with varying degrees of urban influence and industrial heritage features. The majority of areas are of moderate overall value, with Bridgend-Caerphilly-Rhondda containing the highest number of high value areas.

8.5.47 The areas are divided into the following zones which are then further subdivided by region to maintain clear spatial relationships:

- Upland Areas;
- Coastal Zone;
- Central Lowlands;
- Valley Systems; and
- Urban and Industrial Areas.

8.5.48 The Site and its immediate surroundings are largely within upland areas with those forming the immediate context for the Site described in the following paragraphs.

8.5.49 To the immediate west is CYNONVS731 (Bridgend-Caerphilly-Rhondda, Moderate value). Conifer to the West of Study Area is a conifer plantation in the west of the study area which is an upland landscape dominated by coniferous forest. These plantations form small parts of much larger coniferous planted areas extending beyond the study boundary. The simple vegetation pattern creates uniform character despite some variation in topography. The area offers limited views to upland areas and overlooks Maesteg in the valley below.

8.5.50 To the immediate east is CYNONVS884 (Bridgend-Caerphilly-Rhondda, Moderate value). The Llynfi Valley presents a very broad valley trending northwest/southeast with smaller subsidiary valleys. The expansive landscape allows long views while maintaining a strong valley character through its topographical containment.

8.5.51 To the immediate south is CYNONVS151 (Bridgend-Caerphilly-Rhondda, Moderate value). Ffordd y Gyfraith comprises rolling landform ranging from approximately 80 m to 120 m AOD with parkland character adjacent to a small low lying valley, grassland and woodland (broadleaf and mixed) provide shelter and pattern, scattered farmsteads, and views out to upland and urban areas. The transitional nature of the landscape creates interest through varied land use and topography.

8.5.52 Further to the west within the Site's local context is NPTVS927 (Visual and Sensory, Neath Port Talbot, Moderate value). Mynydd Margam comprises an area of upland coniferous woodland rising from 100 m to 350m AOD. The consistent woodland cover creates a simple but distinctive landscape that forms part of the wider upland skyline.

8.5.53 CYNONVS368 Opencast (Bridgend-Caerphilly-Rhondda, Low value) receives a Low value rating and comprises an area of opencast mining on the western edge of Bridgend. While the extraction activities have significantly modified the natural landscape, the area demonstrates some positive aspects through ongoing restoration. Parts where extraction has been completed are showing signs of regeneration, with vegetation beginning to establish. The landscape's current value reflects its modified state, though careful restoration work offers potential for enhancement.

8.5.54 Beyond conifer plantations bounding the Site to the west is NPTVS897 - Mynydd Bromil & Scarp tops (Neath Port Talbot, Moderate value). Mynydd Bromil & Scarp tops represents a distinctive upland landscape within the Neath Port Talbot region, ranging in elevation from 130 m to 257 m AOD. This extensively grazed upland area comprises predominantly pastoral grazing land, where sheep maintain open grassland character across the elevated terrain. However, the intrinsic value of this simple upland landscape is somewhat compromised by the encroachment of coarser grass species, bracken, and gorse in various locations.

8.5.55 To the immediate southwest set below Mynyyd Margam is NPTVS543 – Coedhirwaun (Neath Port Talbot, Moderate value). This is an area characterised by mosaic rolling lowland at elevations between 40 m and 130 m AOD. The land cover is a diverse mix of broadleaved woodland, improved grassland and cropland. Field boundaries are a mix of overgrown and trimmed hedgerows with hedge banks. There is a strong sense of enclosure provided by the woodland and topography. Scattered farmsteads, cottages and rural lanes contribute to the tranquil, rural character.

Wider area 10 km

8.5.56 Within 10 km of the Site the study area contains a diverse range of visual sensory landscapes. Outstanding areas are predominantly coastal features with unique natural landscapes, particularly dune systems and beaches. In particular VLFGLVS663: Ogmore and Old Castle Downs, an area known for its distinctive heath downs characterized by dramatic elevations and sweeping views. The natural landscape patterns create a strong sense of place with high ecological value. In Bridgend-Caerphilly-Rhondda UIDs: CYNONVS630, CYNONVS920, CYNONVS987: are areas which feature exceptional coastal landscapes with extensive dune systems, pristine sandy beaches, and dramatic natural landforms. They have a strong maritime character enhanced by natural coastal processes and include nationally significant dune complexes with unique ecological qualities.

8.5.57 High value areas include a diverse range of landscapes: Historic designed landscapes (e.g., Margam Country Park) Dramatic topographical features (e.g., Margam Scarp) Upland areas with distinctive character (e.g., Mynydd y Gelli) Coastal features (e.g., Margam Sands).

8.5.58 Low value areas typically represent: Transport infrastructure (e.g., M4 corridor), industrial sites (e.g., Margam Opencast), modified landscapes (e.g., Margam Moor) and ex-mining settlements with poor landscape integration.

8.5.59 The highest value landscapes are concentrated in the uplands of Bridgend-Caerphilly-Rhondda and the Vale of Glamorgan coast. These feature dramatic topography, unspoiled natural environments and strong visual integrity.

8.5.60 Landscapes of high value also occur in the valleys of Neath Port Talbot and Bridgend-Caerphilly-Rhondda, characterised by prominent ridgelines, distinctive woodland/moorland mosaics and significant viewpoints.

8.5.61 The majority of the area is assessed as being of moderate visual quality, with mixed natural and human influenced landscapes that have undergone varying degrees of modification.

8.5.62 Low quality landscapes make up a notable component, being heavily modified by industrial and urban development resulting in reduced scenic quality and visual coherence. These are distributed across all three regions but particularly in Neath Port Talbot.

Historic Landscape

8.5.63 Historic Landscape Aspect Areas within 10 km of the Site are illustrated in **ES Volume IV, Figure 8.17: LANDMAP Historic Landscape Classification within 20 km** and overlaid with the blade tip ZTV in **ES Volume IV, Figure 8.18: LANDMAP Historic Landscape Overall Evaluation with Blade Tip ZTV**.

8.5.64 The Site is located within CYNONHL227 - H01 Llangynwyd, Bridgend-Caerphilly-Rhondda (Outstanding) which is described by the LANDMAP Historic Landscape Aspect Area analysis as "*A rich, multi-period landscape of national importance on the western side of the River Llynfi. The area contains settlement and enclosure remains dating from prehistoric, early medieval, medieval, and post-medieval periods. The landscape features irregular fieldscapes interspersed with woodland and evidence of industrial activity*."

8.5.65 In the Site's immediate context up to 5 km away there are 18 distinct historical landscapes, which can be categorised by their historical value ratings.

Other Outstanding Aspect Areas

8.5.66 NPTHL016 Margam Park, which presents a multi-layered landscape featuring prehistoric remains, Cistercian abbey ruins, and various garden phases spanning Tudor to 19th-century periods. The site maintains good condition through consistent management.

8.5.67 NPTHL021 Margam Mountain, despite modern forestry impact, contains significant archaeological remains from prehistoric to modern times, including early medieval inscribed stones and prehistoric burial cairns.

8.5.68 NPTHL052 Margam Rural occupies farmland between Mynydd Margam and Kenfig Hill, containing evidence of activity from prehistoric to post-medieval periods, with notable medieval ecclesiastical remains.

8.5.69 CYNONHL242 Maesteg stands as an important industrial corridor with outstanding relict industrial buildings, including the Llynfi and Tondu Ironworks.

8.5.70 NPTHL069 Mynydd Bromil showcases a well-preserved enclosed upland landscape with archaeological evidence from the Bronze Age to recent times, though affected by wind farm development in 2016.

High Value Sites

8.5.71 CYNONHL114 Bryngarw (a registered historic park), CYNONHL342 Cwrt Colman (a Victorian landscape park), and CYNONHL346 Cwm Garw (featuring the only complete valley railway system in the region).

Moderate Value Sites

8.5.72 Moderate value sites include: CYNONHL382 Cwm Ogwr Fawr (partially disrupted industrial corridor), CYNONHL576 Pyle/Kenfig Hill area (affected by modern development), and NPTHL068 Nant-y-glo (impacted by modern forestry).

Low Value Sites

8.5.73 Low value sites include: CYNONHL818 Parc Slip Opencast, established in the 1960s, representing the lowest historical value due to extensive landscape modification.

Preservation Status

8.5.74 The local area has varying levels of preservation across these sites, with some maintaining excellent condition through active management (like Margam Park), while others have experienced significant modern intervention (such as Parc Slip Opencast and areas affected by forestry plantation).

Wider study area

8.5.75 An analysis of historic LANDMAP areas within the wider 20 km detailed study area reveals there are 146 historic landscape aspect areas. The data reveals a clear concentration of Outstanding and High value sites in the Bridgend-Caerphilly-Rhondda and Neath Port Talbot regions, which together contain the majority of the most significant historical landscape features.

8.5.76 The distribution shows that rural environments slightly predominate over built environments, suggesting successful preservation of historical rural character despite urban and industrial development. Each region contributes distinct elements to the overall historical landscape: Bridgend-Caerphilly-Rhondda and Neath Port Talbot offer the highest number of Outstanding sites, while the Vale of Glamorgan and Swansea regions provide important coastal and valley landscapes that enhance the area's historical diversity.

8.5.77 The value patterns indicate that Neath Port Talbot and Bridgend-Caerphilly-Rhondda have been particularly successful in maintaining their historical integrity while accommodating development pressures. These regions demonstrate how industrial heritage can be effectively integrated with preserved rural landscapes, creating a rich historical tapestry that spans multiple periods and landscape types.

Cultural Landscape Services

8.5.78 The LANDMAP Cultural Landscape Services (CLS) is a relatively new dataset layer which provides information relating to cultural services and the connections between landscape, the natural environment and place (including natural settings, aesthetic appreciation, tranquillity, cultural heritage, inspiration and spiritual and identity and sense of place). The aspect uses existing Visual and Sensory boundaries. Cultural characteristics are also picked up by the assessment of local landscape character within **Section 8.7** and **8.9**.

CYNONCLS058 Mynydd Baedan: Site/Host (Bridgend/Caerphilly/Rhondda)

8.5.79 The Site is predominantly located within CYNONCLS058 Mynydd Baedan: An area of moderate cultural value characterised by traditional upland grazing patterns and recreational use. Historic field boundaries and occasional archaeological features contribute to the area's time-depth.

8.5.80 In the immediate context surrounding the Site are the following CLS Aspect Areas:

- NPTCLS113 Mynydd Margam (Neath Port Talbot):
  - A landscape of outstanding historical importance containing nationally significant archaeological remains, medieval monastic associations, and enduring cultural traditions. The mountain retains a strong sense of place and continues to be a focus for community identity and recreational use.
- NPTCLS105 Mynydd Bromil & Scarp Tops (Neath Port Talbot):
  - An important upland landscape that contains significant prehistoric remains and represents centuries of traditional agricultural practices. The dramatic landform provides a distinctive sense of place and cultural continuity through continued grazing practices.
- CYNONCLS112 Llynfi Valley (Bridgend/Caerphilly/Rhondda):
  - A landscape that strongly demonstrates the cultural heritage of industrial South Wales, with significant remains of coal mining, iron working and associated transport infrastructure. The valley settlements retain strong community connections to this industrial past.
- CYNONCLS088 Conifer west of study area (Bridgend/Caerphilly/Rhondda):
  - A modified landscape of limited cultural value, though the forestry plantations provide recreational value and represent changing land management practices in the twentieth century.

Wider Context (2-5 km)

8.5.81 The intermediate landscape reveals several important cultural patterns. CYNONCLS020 Ffordd y Gyfraith and CYNONCLS125 Bettws demonstrate historic routes and settlement forms that remain legible in the modern landscape. CYNONCLS049 Opencast and NPTCLS058 Coedhirwaun represent significant industrial landscapes that have shaped local cultural identity. CYNONCLS084 Bridgend and CYNONCLS123 Cribwr illustrate the complex relationship between urban development and surrounding rural landscapes.

Extended Context (5-10 km)

8.5.82 The broader landscape context reveals additional cultural patterns and relationships. Valley settlements demonstrate a clear hierarchy and relationship with surrounding uplands, with historic communication routes following natural topography. Industrial heritage becomes more diverse, including mining, quarrying, and manufacturing sites that have influenced settlement patterns and community identity.

8.5.83 Religious and spiritual associations become more pronounced in this wider context, with medieval church sites and prehistoric ritual landscapes contributing to the area's cultural value. Agricultural patterns show a transition from upland grazing to more intensive lowland farming, reflecting historical land management practices and social organisation.

8.5.84 The extended study area also reveals important recreational and tourism patterns, with country parks, historic estates, and promoted routes forming part of the contemporary cultural landscape. These features often incorporate earlier landscape elements, demonstrating continuity of use and evolving cultural values.

8.5.85 Transport infrastructure becomes more prominent at this scale, with major routes following historic corridors and influencing settlement patterns and economic development such as the M4 corridor. These transport patterns have played a crucial role in shaping cultural connections and community relationships across the wider landscape.

8.5.86 The remainder of the CLS areas within the 35 km study area are considered within the assessment where it is deemed there is any potential for them to be impacted by the proposals.

Local Landscape Description and Character Appraisal

8.5.87 The following discussion provides an overview of the physical and perceptual characteristics of the Site and the surrounding landscape without particular reference to published landscape character types.

Topography

8.5.88 The topography within the local context of the Site (5 km) is characterised by a distinctive transition between the low-lying coastal margins and the dramatic upland landscapes of Margam Mountain and associated hills. This creates a diverse terrain with significant variations in elevation and visibility.

8.5.89 The western portion within the local context encompasses part of the coastal plain, which lies at approximately 30-50 m AOD. From this relatively flat base, the land rises markedly eastward via the prominent Margam Mountain scarp slope, which forms one of the most significant topographical features in the area. This scarp rises from approximately 30 m AOD to reach elevations of around 210 m AOD, creating a distinctive visual barrier that effectively divides the local landscape.

8.5.90 Beyond the scarp, the eastern portion within the local context is dominated by upland terrain, including Mynydd Margam (Margam Mountain) which reaches approximately 350 m AOD. This upland area features a series of rounded summits and plateaux, with Mynydd Bromil forming another notable high point at approximately 257 m AOD. The terrain in this area is characterised by broad, exposed ridgelines interspersed with steeper valleys.

8.5.91 The topography significantly influences visibility patterns within the local context. The prominent scarp slope creates a strong visual barrier between the coastal plain and the upland areas, effectively splitting the area into two distinct visual compartments. From the lower-lying western areas, views are typically truncated by this scarp feature, though the upper slopes and ridgeline create a distinctive skyline that dominates views eastward. Conversely, from the elevated eastern portions, particularly from the summit areas of Mynydd Margam and Mynydd Bromil, extensive panoramic views are available across much of the local area and beyond, though these are partially interrupted by forestry plantations in some locations.

8.5.92 The valleys that cut through the upland areas create localised variations in visibility, with steep valley sides often restricting views to linear corridors along the valley floors. This is particularly evident in locations such as Cwm Dyffryn, where elevation changes from approximately 100 m AOD to 350 m AOD which creates enclosed visual environments.

Watercourses and Drainage

8.5.93 The drainage network within the local context is characterised by multiple upland watercourses originating from Mynydd Margam, with the Site positioned within a landscape dissected by several named tributaries flowing predominantly westward toward the coastal plain.

8.5.94 The Site boundary is intersected and flanked by several ordinary watercourses, including tributaries that contribute to the Afon Ogwr (River Ogmore) catchment to the southwest and the Afon Cynffig (Kenfig River) system to the west.

8.5.95 The natural drainage pattern is heavily influenced by the upland topography of Mynydd Margam, with numerous small first-order streams converging within steep-sided valleys before joining larger watercourse. This creates a dendritic drainage pattern typical of upland areas, with watercourses following natural contours and gullies as they descend from higher ground at approximately 300-350 m AOD toward the lowland areas to the west.

Wider Context (20 km)

8.5.96 In the broader landscape, the hydrological network becomes more complex and includes several major river systems. The River Afan to the northwest forms a significant valley system, flowing southwest toward Port Talbot. The River Llynfi, located to the northeast, represents another major watercourse, flowing southward through the industrial valley landscape before joining the River Ogmore system.

8.5.97 The River Ogmore and its tributaries, including the Garw and Ogwr Fach, form a substantial drainage network to the east of the study area. These rivers have played a crucial role in shaping the valley landscapes characteristic of this region. Their courses are typically constrained by the steep valley topography, creating strong linear drainage patterns.

8.5.98 To the south, the drainage pattern becomes more diverse as watercourses transition from the upland areas to the coastal plain. Here, the rivers tend to adopt meandering courses as they approach their outlets to the Bristol Channel. Several artificial drainage features are also present across the wider landscape, including reservoir bodies and modified watercourses associated with historical industrial activities and contemporary water management systems.

8.5.99 The entire drainage network ultimately feeds into the Bristol Channel, with the watercourses playing a crucial role in both the natural processes of the landscape and human activities throughout the region.

Vegetation Pattern

Local Context

8.5.100 The vegetation pattern demonstrates a clear transition from coastal margins through to upland areas. Margam Forest represents the most significant woodland coverage, comprising extensive coniferous plantations across the eastern upland areas. These plantations are predominantly Sitka spruce and other commercial species, creating substantial blocks of evergreen woodland that define the upland landscape character.

8.5.101 Margam Country Park contains notable areas of mixed woodland, including both ornamental and native species. The park's designed landscape incorporates mature specimen trees, formal gardens, and managed woodland areas that provide a diverse vegetation structure. Ancient Woodland elements persist within the park's boundaries, particularly in sheltered valleys and along watercourses.

8.5.102 The western lowland areas feature more fragmented vegetation patterns, with industrial development limiting extensive natural coverage. However, structural planting and screening vegetation around the Port Talbot Steelworks provides linear elements of predominantly broadleaved species. Agricultural areas contain hedgerow networks and small woodland copses, though these become less frequent closer to industrial zones.

Wider Context (20 km)

8.5.103 The broader landscape contains several significant woodland complexes and varied vegetation patterns. The Afan Forest Park to the north represents one of the largest forestry areas, predominantly comprising coniferous plantations but with

increasing diversity through recent restructuring programmes. This forest complex extends across multiple valleys and ridgelines, creating a substantial woodland resource.

8.5.104 The Llynfi, Garw, and Ogmore valleys feature characteristic vegetation patterns with woodland concentrated on steeper valley sides. Notable examples include:

- Cwm Garw Forest: A significant upland plantation complex;
- Maesteg Forest: Mixed woodland coverage along valley slopes;
- Coed Tondu: Ancient Woodland remnants with mixed species composition; and
- Parc Slip Nature Reserve: Developing woodland and scrub vegetation on restored industrial land.

8.5.105 Valley floor locations typically support riparian woodland strips along watercourses, while higher ground transitions to moorland vegetation with grass and heather communities. Agricultural areas maintain traditional field patterns defined by hedgerows and occasional woodland copses, particularly in the southern portions of the study area.

8.5.106 Coastal areas support specialized vegetation communities adapted to maritime conditions, including dune systems and salt-tolerant species. The Kenfig National Nature Reserve, though just outside the immediate study area, represents a significant coastal ecosystem with distinctive vegetation patterns.

8.5.107 Recent woodland management initiatives have introduced greater species diversity in response to disease threats and climate change considerations. This is particularly evident in areas where traditional single-species plantations are being restructured to create more resilient woodland coverage.

Sensory and Perceptual Characteristics

8.5.108 The landscape demonstrates a clear transition between coastal industrial areas and dramatic upland terrain. The western portion is characterized by large-scale industrial development at Port Talbot Steelworks, which creates a stark contrast with the rising ground of Margam Mountain to the east. The Margam Mountain scarp forms a prominent visual element, its steep slopes rising dramatically from approximately 30 m to 210 m AOD, creating a distinctive backdrop to the coastal plain.

8.5.109 The upland areas, including Mynydd Margam and Mynydd Brombil, exhibit a more naturalistic character with extensive forestry plantations interspersed with areas of open moorland. These areas provide elevated vantage points offering panoramic views across the wider landscape. The visual experience is notably influenced by the extensive coniferous plantations, which create strong geometric patterns and edges within the upland landscape.

8.5.110 Margam Country Park introduces a distinctive designed landscape element, providing a transition between the industrial coastal plain and the upland areas. The park's formal gardens, historic buildings, and managed woodlands create a more intimate scale and enclosed character that contrasts with both the industrial development to the west and the open uplands to the east.

Forces for Change in the Landscape

8.5.111 Several key factors are influencing landscape change in this area:

Industrial Evolution

8.5.112 The Port Talbot Steelworks continues to influence the landscape character through operational requirements and potential modernization. Any changes to industrial operations could have significant visual implications for the wider area, particularly given the facility's prominent coastal location.

Renewable Energy Development

8.5.113 The recent installation of wind turbines on Mynydd Brombil represents an emerging pattern of upland energy development. This trend is likely to continue, with additional renewable energy infrastructure likely to become operational in the surrounding landscape in the future.

Forestry Management

8.5.114 Commercial forestry operations create ongoing landscape change through felling and replanting cycles. The extensive plantation areas require continuous management, affecting both visual character and habitat connectivity. Climate change and disease resistance considerations may influence future species selection and plantation patterns.

Infrastructure Development

8.5.115 The strategic importance of the M4 corridor and associated transportation routes suggests continued pressure for infrastructure enhancement. This could affect both the immediate corridor and its landscape setting.

Conservation and Heritage

8.5.116 Margam Country Park and its surroundings face ongoing challenges in balancing heritage conservation with modern recreational demands. The management of this historically significant landscape requires careful consideration of visitor facilities while preserving its essential character.

Climate Change Adaptation

8.5.117 Rising sea levels and increased storm frequency may necessitate enhanced coastal defence infrastructure, potentially affecting the relationship between industrial areas and the coastline. Upland areas may face changing management requirements in response to altered weather patterns and vegetation dynamics.

8.5.118 These forces for change are identified within the LANDMAP assessment framework and reflect ongoing challenges in managing this complex landscape. The interaction between industrial heritage, natural processes, and modern development requirements continues to shape the area's evolving character.

Existing Baseline – Visual Receptors

8.5.119 The location of visual receptors is illustrated on **ES Volume IV, Figure 8.21: Principal Visual Receptors to 20 km Blade Tip ZTV and Viewpoints**.

Residential Receptors within 2 km

8.5.120 There are a number of residential properties which lie within 2 km of a proposed turbine location of the Proposed Development. The location of these individual properties is illustrated in **ES Volume IV, Figure 8.31: Residential Receptors within 2 km** with further detail provided in **ES Volume III, Appendix 8.9: Residential Visual Amenity Assessment**.

Settlements

8.5.121 Numerous settlements lie within the ZTV. As detailed in **ES Volume III, Appendix 8.7: Preliminary Assessment of Receptor Groups**, the following settlements within 2-5 km have the potential to be significantly affected by the Proposed Development:

- Llangynwydd (Pont Rhyd-y-cyff);
- Lletty Brongu;
- Bettws;
- Cefn Cribwr;
- Kenfig Hill and Pyle;
- Coedhirwaun; and
- Pen-y-fai.

8.5.122 Within 5-10 km there is one settlement, North Cornelly/Cynffig which has the potential to be significantly affected by the Proposed Development.

National Trails

8.5.123 The only National Trail located within the 35 km study area is the Wales Coastal Path. The Wales Coastal Path is a designated long-distance trail which follows or runs close to the Welsh coastline. The route is 870 miles in total and follows the Gower Peninsular to Swansea at the far west of the study area. The path continues around Port Talbot heading inland before returning along the coast to Porthcawl. The routes continues east past Ogmore-by-Sea where the route is shared by the Valeways Millenium Heritage Trail. At its closest point the route runs approximately 4 km to the south west of the Site

8.5.124 This is a 30 mile section of the route follows the Welsh coastline from Ogmore-on Sea 10 km to the south of the Site where it follows limestone cliffs past Southerndown and Porthcawl, then through Port Talbot's industrial area and Aberavon beach. It crosses the River Neath and follows Swansea Bay into the city.

Long Distance Walking Routes

8.5.125 There are some long-distance footpaths that pass through the study area, most notably the Ogwr Ridgeway Walk that bisects the Site on a northwest-southwest axis. These are illustrated in **ES Volume IV, Figure 8.21: Principal Visual Receptors to 20 km Blade Tip ZTV and Viewpoints**.

8.5.126 The Ogwr Ridgeway Walk forms part of a long ridge walk across southwest Wales; it links the Taff-Ely Ridgeway Walk (Ffordd y Bryniau) with the Coed Morgannwg

Way. It largely follows the tops of the southern Lower Pennant Sandstone ridge from Mynydd y Gaer and Bryn y Wrach (east side of the study area) to Mynydd Baeden at which point it crosses through the Site heading northwest from the village of Coytrahen on route to Mynydd Margam. The route takes in the valleys of the Ogwr Fawr and Fach, Garw and Llynfi.

8.5.127 The Cistercian Way (Wales) is a 672-mile circular walking route that celebrates the 900th anniversary of the Cistercian order and connects 15 Cistercian abbeys with other historic sites. At its closest point the route runs approximately 2 km to the north of the Site.

Public Rights of Way

8.5.128 There is an extensive network of PRoW within the surrounding landscape, including several within the Site. **ES Volume IV, Figure 13.1: PRoW**, illustrates the PRoW which pass within and close to the Site.

Cycle Routes

8.5.129 The following National Cycle Routes are located within 10 km of the Site:

- Route 4 – A national long-distance route between London and Fishguard. The section of the route passing through the study area heads west from Aberkenfig passing to the south of the Site C.200m at its closest point and passing through Margam Country Park to the immediate west towards Margam and Port Talbot. The route then follows the Wales Coast Path alongside the beaches of the Swansea area including the Mumbles, before heading inland and towards the southwestern extent of the country;.
- Route 884 - This route starts at Bryngarw House and Country Park and follows the Garw valley south to Pontycymmer;
- Route 885 - Route 885 of the National Cycle Network connects Bridgend and Afan Forest Park. The route follows the Ogmore River between Bridgend and Aberkenfig where it meets Route 4; and
- Route 887 is a new route between Port Talbot and Afan Forest Park. It follows the River Avan and A4107 through villages in the northwest of the study area.

Roads and Railways

8.5.130 The 20 km detailed study area is predominantly a rural and largely elevated upland area largely served by a minor road network. However, it also includes larger settlements including Bridgend, Porthcawl, Port Talbot within 10 km and several towns that are linked by the wider highways network which contains many A roads and the M4.

Motorways:

- M4 runs east-west through the region c.1.7 km to the south at its closest point. Junction 35 (Pencoed) to Junction 43 (Llandarcy) falls within the study area.

A-Roads:

- A4063 connects Bridgend to Maesteg and passes adjacent to the northeast corner of the Site;
- A48 parallels the M4, connecting Bridgend to Cardiff via Cowbridge c. 3.5 km to the southwest at its closest point;
- A4107 runs through the Afan Valley c. 7.7 km to the northeast at its closest point;
- A4229 links Porthcawl to the M4 c. 5.2 km to the southwest at its closest point;
- A473 connects Bridgend to Pontypridd c. 4.4 km to the south at its closest point;
- A4061 Ogmore Valley Road c. 2.5 km to the southeast at its closest point;
- A4106 connects Porthcawl to the A48 c. 4.9 km to the south at its closest point;
- A465 (Heads of the Valleys Road): The A465 is another important road. It connects towns such as Merthyr Tydfil and Abergavenny c.14 km to the northwest at its closest point; and
- A4232 Cardiff peripheral distributor road c.21 km to the southeast.

Notable B-roads:

- B4281 runs through Pyle and Kenfig Hill, c. 960m to the south at its closest point;
- B4265 coastal road connecting Bridgend to Barry via Llantwit Major c. 7.5 km to the south-east at its closest point; and
- B4524 connects Ewenny, Ogmore-by-Sea and St. Brides Major c. 9 km to the south at its closest point.

Railways:

8.5.131 The local area includes the South Wales Main Line, serving Neath Port Talbot and Bridgend (approximately 4.5 km to the south of the Site at its closest point) and the Maesteg Line, which is a branch line connecting Maesteg to Bridgend (approximately 1 km to the west of the Site at its closest point).

Future Baseline in the Absence of the Proposed Development

8.5.132 It is anticipated that the future baseline will be relatively similar to the current baseline. Over the lifetime of the Proposed Development, agricultural practices may change and climate change may expedite the need for this change in management and the vulnerability of landscape features within the Site. However, such change is difficult to predict with any reliable certainty, and it is therefore assumed that the future baseline would remain unaltered.

8.5.133 The exception to this relates to Craig-yr-Aber Woodland. The forestry management programme for Craig-yr-Aber Woodland[1] will introduce additional temporal changes to the landscape to the west of the Site. As shown in the felling strategy, (**ES Volume III, Appendix 8.14: NRW Forest Management and Felling Strategy**) significant portions of the forest are designated for clearfelling between 2022-2026 (shown in purple) and 2027-2031 (shown in orange), with other areas managed through Low Impact Silvicultural Systems (shown in red). These forestry operations would temporarily reduce the screening effect of the forest and potentially increase visibility of the Site from certain western viewpoints. However, the forestry management plan also shows replanting and phased felling, indicating that while some areas will be cleared, others will remain as forest cover or be in various stages of regrowth.

8.6 Mitigation Embedded into the Design

8.6.1 This assessment has been based on the principle that measures have been 'embedded' into the design of the Proposed Development to remove potential significant effects as far as practicable, for example by the considered placement of infrastructure.

8.6.2 The primary embedded mitigation adopted in relation to the Proposed Development (wind turbines and solar) relates to the consideration that was given to avoiding and minimising landscape and visual effects during the evolution of the layout. A detailed discussion of the design evolution and the iterative process underpinning it is provided in **ES Volume II, Chapter 3: Environmental Context and Reasonable Alternatives Considered**.

8.6.3 Based on general good practice design principles (as set out in SNH/NatureScot guidelines) and an analysis of site-specific opportunities and constraints, the turbine location and solar compartment layout has evolved to take into consideration a number of landscape and visual constraints whilst maintaining an optimal development. The embedded mitigation relevant to this assessment is detailed in **Table 8.7.**

Table 8.7 Embedded Mitigation

Embedded mitigation measure relevant to landscape and visual amenity	Function
Selection of the turbine locations - The proposed turbines have been positioned within the more elevated northern slopes of the Site beyond the summit of Mynydd Baeden, 251 m AOD).	To avoid inconsistent turbine spacing, outliers or excessive overlapping turbines to minimise visual confusion and ensure a balanced / compact array from key views in the local landscape.

[1] Natural Resources Wales (2024) Management Coupes (Forest Management and Felling Strategy). [Map] 23 July. Scale 1:15,000.

Embedded mitigation measure relevant to landscape and visual amenity	Function
Selection of the turbine locations - Appropriate offsets from properties and settlements (800 m buffer where required) has been applied. The turbine locations have been selected so that they are located further away from the sensitive settlement edge to the south of the Site (Pyle/Kenfig to the southwest, Cefn Cribr to the south and the urban extents of Bridgend to the southeast).	To ensure that no property would experience an overbearing visual impact such that it became an unattractive place to live.
Selection of the turbine location - The turbines are proposed to be positioned either side of the more open central grassland areas in order that they can be located as close as is feasibly possible to the woodland blocks that provide enclosure to both the west side (Craig-yr-Aber Woodland) and east side (wooded tributary valley of the Llynfi) of the Site.	To reduce the effects of the turbines on settlements.
Turbine design - The turbines themselves would be painted an off-white colour with a low reflectivity semi-matt finish (or similar as agreed).	Such a finish is widely regarded to be the least intrusive in the landscape when seen against the sky in a host of weather conditions typically experienced within the UK.
Selection of the substation location - The substation has been positioned south of the Ogwr Ridgeway Walk to consolidate infrastructure and reduce visual impacts from the recreational route.	This siting reduces the potential for significant effects on users of the Ogwr Ridgeway Walk while maintaining operational efficiency.
Solar Parcel D (as shown on Site Layout Figure 2.1) has been reduced in size to accommodate the substation being relocated to the south side of the Ogwr Ridgeway Walk. The former Solar Parcel D (in the original scheme) which comprised 3 fields at the northwestern corner of the Site and north of the Ogwr Ridgeway Walk has been removed entirely.	This reduces the overall visual envelope of the ground-level infrastructure and minimises landscape character impacts. Infrastructure is primarily on one side of the recreational route rather than both sides, creating a much more localised effect.
Siting of lower-level infrastructure away from prominent locations - The solar arrays and substation are positioned to utilise existing woodland screening on two sides and set back from the ridgeline .	This would result in lower-level infrastructure being well screened from the majority of sensitive receptors in close proximity to the Site. The siting is also mindful of the fact the forest is subject to a

Embedded mitigation measure relevant to landscape and visual amenity	Function
	Forestry Management Programme which will introduce additional temporal changes to the landscape to the west of the Site.
Access track - Where reasonably practicable, existing tracks will be utilised and existing hedgerows, woodland, ditches and field margins will be retained. Where possible, any breaks or crossings have been designed to use existing gaps in vegetation, and the width of any breaches will be kept to a minimum.	To minimise vegetation removal and impact to landscape character, and to preserve root protection zones. The use of existing tracks minimises the need to remove landscape features within the Site.
Minimum offset distances - The Proposed Development design will incorporate a minimum offset distance of 10 m from any existing woodland, trees (from the edge of the canopy) and hedgerows, where reasonably practicable.	To minimise the potential for adverse effects on woodland, trees and hedgerows. Further details are set out in the **ES Volume III, Appendix 2.2: Arboricultural Impact Assessment**.
Ancient woodland protection - The Proposed Development design incorporates a minimum offset distance of 15 m from any ancient woodland (from the edge of the canopy).	To minimise vegetation removal and impact to landscape character, and to preserve root protection zones.
The Proposed Development design will incorporate woodland planting around new infrastructure, including the solar PVs and the substation.	To provide screening benefits for local residents and users of PRoW.
Hedgerow enhancement - The Proposed Development will incorporate approximately 3.26 km of new hedgerow planting.	To mitigate for the loss of 169 m of hedgerow and improve landscape character.
Infrastructure colouring - Containers will be light grey, white, dark green or similar in colour.	To minimise impact on visual receptors and landscape character.

8.7 Assessment of Likely Effects (Without Additional Mitigation)

8.7.1 It should be noted that successful implementation and long-term maintenance of the embedded mitigation (mainly planting) outlined in **Table 8.7** relies on implementation of additional mitigation measures (see **Section 8.8**). The new planting outlined in **Table 8.7** would not establish or survive in the long term and achieve its intended purpose without maintenance and management, as detailed in the Habitat Management Plan (**ES Volume III, Appendix 10.4: Net Benefit for Biodiversity Report**) and proposed to be secured by condition. Therefore, this section presents a hypothetical worst-case scenario where the new planting does

not establish or achieve its intended purpose. However, this is an unrealistic scenario and therefore the assessment in this section is brief, with the more realistic and detailed assessment of likely significant effects on landscape and visual amenity being presented in **Section 8.9**.

8.7.2 Considering the design evolution of the Proposed Development, a filtering exercise has been undertaken of viewpoints to determine which have the potential for significant effects to arise and would therefore require detailed consideration in this assessment. The intention has been to ensure that the level of attention given is proportionate to the likelihood of significant effects arising. The findings of the initial filtering exercise are presented in **ES Volume III, Appendix 8.7: Preliminary Assessment of Receptor Groups**.

8.7.3 This exercise identified that users at all except the following four viewpoints have the potential to be significantly affected by the Proposed Development, with the remaining 12 viewpoints considered in detail as part of the assessment:

- Viewpoint 2 – On PRoW Margam Park Deer Park / Ogwr Ridgeway Long Distance Walk
- Viewpoint 7 - Bridge over River Llynfi East of Coytrahen;
- Viewpoint 11 - Wales Coast Path at Ogmore-by-Sea; and
- Viewpoint 15 - Ogof-Ffynnon-Ddu (Bannau Brycheniniog National Park).

General Visibility of Wind Turbines

8.7.4 With reference to the blade tip ZTV in **ES Volume IV, Figures 8.3: Blade Tip ZTV to 35 km with Viewpoints** and **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20km with Viewpoints**, due to the height of the proposed turbines visibility is shown over a wide area and is most extensive in the first 10 km out from the Site.

8.7.5 Potential visibility is most extensive across the central part of the study area as one would expect given the height of the proposed turbines where there are direct open views from elevated ridgelines like the Ogwr Ridgeway which passes through the Site itself, these include VP3 on the Ogwr Ridgeway Walk, which is approximately 1.8 km from the nearest turbine.

8.7.6 To the north and northeast of the Site, the ZTV indicates fairly extensive visibility across the valley containing Maesteg, Bettws and Llangynwyd, represented by VP4 and VP5 within 3.5 km of the turbines. Visibility extends across the valley slopes and up to the high ground of Mynydd Llangeinwyr. Further north, theoretical visibility continues up to and beyond 10 km, though becoming more fragmented. VP13 at Pen y Foel trig point, over 8.7 km away, illustrates visibility in this area.

8.7.7 Even so, there are also some notable areas within 5 km, in particular to the north around Maesteg and enclosed farmland areas in and around the settlement which is well enclosed by woodland that would add substantial further screening to the bare earth ZTV. To the north-east there are also areas with no visibility within incised tributary valley areas of the Lynfi Valley and lower A4063 corridor where no visibility is predicted.

8.7.8 East of the Site, visibility is quite extensive across the lower-lying terrain to around 10 km, taking in Aberkenfig, Sarn and the M4 corridor (VP12). Beyond this, patches of theoretical visibility continue across the Vale of Glamorgan, becoming increasingly fragmented with distance.

8.7.9 To the south, the ZTV indicates coastal visibility around 7-10 km away at Kenfig Burrows (VP10) and Ogmore-by-Sea (VP11). Unimpeded visibility also extends across the Bristol Channel as far as Exmoor National Park, over 30 km away.

8.7.10 West and southwest, visibility is more fragmented with the pattern of visibility strongly influenced by topography and woodland which precludes views for much of the extensive coniferous plantation woodland areas but still takes in Margam Park (VP1/2) around 3-5 km away and Mumbles Hill in Swansea (VP14), nearly 22 km distant. Theoretical visibility continues to the western extent of the study area, reaching inland across Carmarthenshire.

8.7.11 To the northwest, visibility extends as far as the Bannau Brycheniniog National Park, represented by VP15 at Ogof-Ffynnon-Ddu nearly c. 29 km away.

General Visibility of Solar and Substation

8.7.12 With reference to the SZTV solar and substation elements in **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements**, this ZTV includes OS woodland and buildings as visual barriers which provide significant further screening to these proposed elements within the Site in comparison to the much larger turbines. The analysis of the solar and substation elements is therefore provided primarily for receptors within a much tighter visual envelope, which is largely contained within 3 km of the Site. It is, however, acknowledged that forestry management practices mean that patterns of forestry are subject to change over time from felling and re-planting programmes (as discussed in **paragraph 8.5.133**).

8.7.13 Throughout the study area, the visibility is significantly influenced by extensive woodland blocks (particularly to the north and west) topographical variations creating natural screening and the built environments of settlement including Maesteg and Bridgend providing urban screening of the lower lying Proposed Development.

8.7.14 Significant woodland blocks north of the proposed solar and substation areas provide substantial screening, limiting visibility from many northern viewpoints.

8.7.15 Maesteg, located to the north, has limited visibility of the proposed solar areas, with visibility mostly contained to the south of the settlement within the more open elevated farmland around Llangynwyd. Areas northeast of the Site show a mix of visibility patterns with substantial woodland screening shown within tributary valleys of the River Llynfi and further afield at Cym Garw. Nevertheless, there are some open elevated areas which show combined theoretical visibility, but given the low level nature of the arrays and the intervening rolling topography and roadside vegetation and hedgerows (not included as visual barriers), actual visibility of these elements is expected to be considerably less.

8.7.16 To the east, topographical features and woodland blocks create a mosaic pattern of mixed visibility. The eastern approach toward Llangeinor shows more comprehensive visibility of the substation but given the distance actual visibility would again diminish substantially.

8.7.17 To the south, areas toward Bridgend show visibility, largely to the solar compartments given the rolling Site topography provides natural screening of the substation location (located within the northwest quadrant). The built-up areas of North Cornelly and Bridgend have varying visibility patterns, but the SZTV demonstrates the majority of built-up areas have no views to the proposals. Several waterbodies to the south create open areas with greater visibility of different components of the proposed solar areas, but these are much less publicly accessible within the former open cast workings, albeit there is no some public access to these areas.

8.7.18 The southern area has greater visibility of the south facing solar elements but benefits from existing topographic screening and proposed mitigation planting.

8.7.19 The western approach has substantial coniferous woodland coverage (Margam Mountain) providing significant screening. Areas southwest towards Kenfig Hill show patchy visibility, with multiple small lakes and woodland features interrupting sightlines. The western boundary benefits from more continuous woodland screening compared to other directions.

Landscape Features and Landscape Character

Construction

8.7.20 Construction works would result in the removal or disturbance of existing landscape features within the Site. Without additional mitigation, the removal of existing landscape features and the presence of construction activities and a partially constructed development would result in significant landscape character effects on Visual and Sensory Aspect Area: CYNONVS473 - Mynydd Baedan, in which the Proposed Development is located. Significant effects on landscape character could also potentially occur up to 5 km from the Site boundary.

Operation

8.7.21 Once operational, the proposed turbines would introduce a large vertical scale of change that would be prominent across Visual and Sensory Aspect Area: CYNONVS473 - Mynydd Baedan, and neighbouring character areas. The other elements of the Proposed Development would also be visible from parts of CYNONVS473, but to a lesser degree than the proposed turbines. Significant effects would be experienced up to 5 km from the Site boundary.

Decommissioning

8.7.22 The likely effects (in the absence of additional mitigation) upon landscape character would be similar or less than those discussed above for the construction phase.

Visual Amenity

Construction

8.7.23 Visual amenity effects from construction activities associated with the Proposed Development would be screened from parts of the study area due to the rolling upland and lowland topography as well as from within some enclosed wooded valley and farmland areas. However, activities would be visible from the more elevated open and exposed locations that allow views across the uplands where the proposed turbines would be located. Significant effects on visual amenity could potentially be experienced by residential receptors, users of PRoW and road users up to 3 km from the Site boundary.

Operation

8.7.24 In the absence of additional mitigation, there is the potential for likely significant effects to arise on visual amenity during operation. Effects associated with the operational phase and the proposed turbines and solar arrays are considered to be long-term, reversible effects.

8.7.25 Once the proposed planting has matured, the visual amenity effects would be reduced for receptors in close proximity to the Site. However, due to the nature of the wind turbines and the topography of the Site and surrounding area, it is not possible to screen all views of the Proposed Development and therefore significant visual amenity effects are anticipated to be experienced by residential receptors, users of PRoW and road users up to 1 km from the Site boundary.

8.7.26 Beyond 10 km, theoretical visibility from national trials and long-distance walking routes is limited with the majority experiencing no visibility or very limited theoretical visibility from short sections of the routes. The viewpoints 11 (Ogmore-on-Sea) and 14 (The Mumbles Swansea) (**ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15)** represent locations further afield on the Wales Coastal Path.

8.7.27 Beyond 20 km, theoretical visibility from the key road and rail routes is very limited, with the majority experiencing limited theoretical visibility from short sections of the route or no visibility at all due to the key routes generally following the lower-lying valleys where no theoretical visibility is predicted. Given the increased distance from the Proposed Development and the limited theoretical visibility and intervening built development and vegetation that would further restrict actual visibility, any effects would be limited and would not be considered significant.

8.7.28 Considering the reduced sensitivity of rail and road users, particularly those travelling on the railway, motorway, A and some B roads, and the existing built context, including that of operational renewable energy schemes and other notable developments (such as the former steel works at Port Talbot for instance), assessment of effects is focussed upon routes within the Site, and to a distance of 5 km from the Proposed Development.

Decommissioning

8.7.29 The likely effects (in the absence of additional mitigation) upon visual amenity would be similar or less than those discussed above for the construction phase.

8.8 Additional Mitigation Measures

8.8.1 **Table 8.8** sets out the additional mitigation measures required to mitigate the likely effects identified in **Section 8.7**.

Table 8.8 Additional Mitigation

Phase	Description of additional mitigation measure	Securing mechanism
Construction	Construction of the Proposed Development will be undertaken in accordance with the principles and commitments presented in **ES Volume III, Appendix 2.1: Outline Construction Environmental Management Plan** (CEMP). This Outline CEMP will be developed into a detailed CEMP by the Principal Contractor and implemented throughout the works. Construction would be undertaken in a sensitive manner with regard to the existing landscape fabric within the Site. The detailed CEMP will set out how existing hedgerows, trees and woodland would be retained and explain the proposed protection measures to be implemented during construction (except where removal is indicated on the vegetation removal plans shown in the **Tree Retention and Removals Plan** in **ES Volume III, Appendix 2.2: Arboricultural Impact Assessment**. Construction compounds would be maintained with a neat and tidy appearance and any temporary construction lighting would be operated in accordance with an agreed lighting scheme (secured through the detailed CEMP).	Planning condition
Construction	The soil resource within the Site would be managed during construction (and decommissioning) in accordance with the principles established in **ES Volume III, Appendix 5.4: Outline Soil Management Plan**.	Planning condition
Operation	During the operational phase there would be ongoing management and maintenance of the landscape of the Site in accordance with the principles established in **ES Volume III, Appendix 10.4: Net Benefit for Biodiversity Report**.	Planning condition

Phase	Description of additional mitigation measure	Securing mechanism
Decommissioning	No specific additional mitigation proposed, but relevant measures presented in **ES Volume III, Appendix 2.1: Outline Construction Environmental Management Plan** and **ES Volume III, Appendix 5.4: Outline Soil Management Plan** will also be applicable to the decommissioning phase, with the measures captured in a Decommissioning Environmental Management Plan to be prepared prior to the decommissioning phase.	Planning condition

8.9 Assessment of Residual Effects (With Additional Mitigation)

8.9.1 This section considers the effects of the Proposed Development on the physical features of the Site, landscape character, and visual amenity. It considers the effects at two different stages in the lifetime of the Proposed Development (Year 1 and year 15), as well as the construction and decommissioning phases and differentiates between the likely effects resulting from the tallest elements of the Proposed Development (wind turbines) and those lower elements (solar/substation).

Landscape Features

Construction

8.9.2 As identified in the baseline section, the existing landscape features within the Site comprise:

- Upland grassland and marshland;
- Coniferous woodland blocks within and bordering the Site;
- Broadleaved woodland blocks within and bordering the Site;
- Hedgerows and hedgerow trees; and
- Two existing micro-wind turbines at Baiden Farm and one micro-wind turbine to the west of Ton Phillip Farm.

8.9.3 The construction phase would result in the partial removal of grassland and heath vegetation and other such ground-level vegetation, through the construction of on-site access tracks, hardstanding areas, the substation compound, on-site underground cabling, the construction compounds and turbine foundations. Underground electricity cables would generally follow existing and proposed access tracks.

8.9.4 The existing vegetation would be removed to allow construction of foundations for the various elements. Soils stripped as part of the establishment works would be stored in accordance with details provided in **ES Volume III, Appendix 5.4: Outline Soil Management Plan** with established soil handling best-practice for use during reinstatement works on completion of construction activities.

8.9.5 The grassland, marsh and patches of heathland vegetation are an abundant feature of the wider surrounding rolling upland area that extends across Mynydd Ty-talwyn and Mynydd Baeden. The Site forms part of the fabric of the Western Uplands SLA and is within Llangynwyd Rolling Uplands and Forestry LCA (Bridgend LCA, BCBC 2013).

8.9.6 The upland grazing grassland, marsh, heathland, coniferous forestry plantations, linear broadleaved woodlands of the valley sides and irregular fields enclosed by hedgerows and some stone walls or post and wire fences are noted in the descriptions of the Western Uplands SLA, Llangynwyd LCA and the host LANDMAP Landscape Habitat Aspect Area (CYNONLH010) that cover the Site are assessed as having an overall moderate evaluation and are judged to have a high susceptibility to change. Combining the value and susceptibility results in the sensitivity of the grassland and heathland vegetation is considered **medium**.

8.9.7 The grassland, marsh, heath and hedgerow vegetation would experience a **low** magnitude of change and **minor** effect resulting from the construction of internal access tracks, hardstandings and turbine foundations, affecting a small part of the overall rolling upland area with large areas remaining unaffected. The construction of the solar compartments will cover over a notable proportion of the grassland, but wide areas will remain as per the existing situation resulting in a **medium** change and **moderate**, **not significant** effect to landscape pattern and ground cover only, with the integrity of the habitat largely physically unaffected. The overall level of effect on these on-site habitats, predominantly grassland and heath, resulting from the construction of the Proposed Development is considered to be **minor-moderate**.

8.9.8 The mixed woodland (predominantly broadleaved) areas found within the Site that connect with the adjoining Lynfi Valley (CYNONLH009), to the immediate east, and the mosaic acid grassland and areas of dense scrub of the adjoining Fford y Gyfraith, to the immediate south, are of high overall value and high susceptibility to change. Combining the value and susceptibility results in the sensitivity of these habitats being **high**. They will however not be subject to any losses or alteration to character, features or elements as no Site infrastructure or construction of access tracks will take place in these areas. The overall level of effect on these habitats bordering and/or enclosing the Site is **no effect**.

8.9.9 The upland landform of the Site is covered by three LANDMAP Geological Landscape aspect areas, as noted in the baseline section (CYNONGL039 - Llynfi Valley which covers most of the Site area, NPTGL028 - Mynydd Margam which skirts the western edge of the Site and CYNONGL041 – Tondu which clips the southern end of the Site). Combining the value and susceptibility results, the overall sensitivity of this area's landform is considered **medium**. There would however be no notable impact to the topography or underlying landform of the Site as a result of the construction of the Proposed Development, with only minor earthworks required to facilitate the construction, and no greater than a **negligible** effect on the overall topography or underlying landform of the Site.

Operation

8.9.10 During the operational phase there would be no further adverse impacts to landscape features. There would however be beneficial effects from the proposed planting illustrated on **ES Volume IV, Figure 8.57: Landscape Mitigation Plan** and ongoing management and maintenance of the landscape of the Site, as set out in **ES Volume III, Appendix 10.4: Net Benefit for Biodiversity Report**. At Year 1 there would be a **low** magnitude of change which, when using professional judgement, results in a **minor** beneficial effect, which by Year 15 would become a **low-medium** magnitude, resulting in **minor-moderate** beneficial effects.

Decommissioning

8.9.11 During the decommissioning phase there would be some limited impact to the landscape features of the Site from the movement of plant and workers associated with the removal of the built development. However, as with the construction phase, the most sensitive landscape features at the Site (the woodland) would experience no impacts. There may be short term medium impacts to the grassland on which the solar arrays would be decommissioned, resulting in **moderate**, **not significant** effects, but the overall level of effect on the on-site habitats, predominantly grassland and heath, resulting from the decommissioning of the Proposed Development, when using professional judgement, is considered to be **minor moderate**. Measures to limit the potential for effects on landscape features during decommissioning period would also be captured in a Decommissioning Environmental Management Plan to be prepared prior to the decommissioning phase (See **Section 8.8**).

Landscape Character

8.9.12 Beyond the immediate environs of the Site, the ground level components of the Proposed Development, including solar arrays, access tracks, areas of hardstanding, temporary construction compound and substation, would often either not be discernible or only a low percentage of these elements (<20 %) would theoretically be visible due to the elevation of the rolling upland upon which they are located. In reality, hedgerows both within and set close to the Site and roadside vegetation will provide additional ground level screening such that visibility is likely to be further reduced. Therefore, effects on landscape character, as experienced in the wider landscape, for most locations arise largely in relation to the introduction of the six proposed turbines into the landscape and the resultant changes to the perceptual experience of landscape character.

8.9.13 It is acknowledged that there may be more elevated areas, particularly to the north, east and west, where ground-level elements, particularly the substation building and electrical infrastructure (for example suspended busbars) may be visible, and these are considered within the assessment where relevant.

8.9.14 It is noted that, in general, the magnitude of change in landscape character would incrementally decrease with distance from the turbines and other elements of the Proposed Development as they become gradually less prominent. A summary of the effects on landscape character is presented in **Table 8.9** and **Table 8.10.** Note

that for all character types stated within this table, the duration of the Proposed Development is considered to be long-term and reversible.

8.9.15 Visual and Sensory Aspect Areas have been overlaid with the blade tip ZTV in **ES Volume IV, Figure 8.16: LANDMAP Visual and Sensory Overall Evaluation with Blade Tip ZTV with Viewpoints**.

Effects on Visual and Sensory Aspect Areas covering the Site

CYNONVS473 - Mynydd Baedan (Host Aspect Area)

8.9.16 As noted in the baseline, this aspect area is an upland area of medium scale comprising hills, scarp slopes and lower plateaus, rough grazing grassland flanked by coniferous forestry plantation woodland to the west and mixed woodland blocks to the east/north that create both strong structure and mosaic pattern. The elevated open areas of the Site afford views over the adjacent incised wooded valleys and distant urban areas as well as towards the lower lying coastal landscapes of Neath Port Talbot, Bridgend and Vale of Glamorgan and further afield to the Bannau Brycheniniog National Park to the north. Views are frequently inclusive of overhead powerlines and telecoms masts as well as distant existing wind farms which form vertical detractors that cause some interruption to landscape pattern.

Sensitivity

8.9.17 The value of the aspect area is assessed as high. It is located within the Western Uplands SPA and is assessed as having a high scenic quality integrity and character and is considered to have visual qualities that are in the 'Rare to Wales' category of LANDMAP indicating a high value in this respect.

8.9.18 The susceptibility of the area is assessed as high as the landscape has a high degree of topographical variation including escarpments, foothills and valleys and prominent ridgelines where skyline character would be affected. Pylons and masts are noted as being intrusive vertical elements that have some influence on the visual character of the area with existing turbines also well-established within the distant surrounding landscape that host turbines within equivalent areas of elevated upland character. The rolling nature of the Site and surrounding areas landform and areas enclosed by woodland creates a high degree of variation in local views resulting in variable levels of visual sensitivity.

8.9.19 Combining the value and the susceptibility results in this aspect area having a **high** sensitivity.

Magnitude of change during construction and decommissioning

8.9.20 During construction the open areas of the Site would be affected by disturbance arising from the formation of turbine foundations, hard standings and access tracks leading to each turbine, solar compartments and substation compound which are located within the north-western part of the area. Large cranes would be used to erect the turbines and over time these would move between turbine locations during the construction period. Temporary fencing and construction signage would also be present. There would also be additional movement of construction vehicles

and people within the Site. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site.

8.9.21 The scale of the change would be medium, affecting the southern half of the aspect area and extending across a moderate geographical extent. The effect would be short-term, temporary and reversible, resulting in a **medium** magnitude of change.

Effects during construction and decommissioning

8.9.22 Overall, the effect is judged to be **moderate** and **significant** with the change affecting the Proposed Development areas across the Site that lie within the southern half of the aspect area. Areas within the northern parts of the aspect area beyond the Site would be unaffected directly but would experience a short-term temporary change to their visual character.

Magnitude of change during operation

8.9.23 With reference to **ES Volume IV, Figure 8.16: LANDMAP Visual and Sensory Overall Evaluation with Blade Tip ZTV with Viewpoints**, theoretical visibility is predicted of all six turbines across the majority of the area. The rolling topography of the aspect area with woodlands covering over substantial parts of the valley sides and bottom means there are areas of lower elevation where theoretical visibility would be reduced, or no views would be available such as the more enclosed parts of the town of Maesteg. The open grassland and heathland of the Site would be partly covered by the solar compartments but the larger part of these open areas would remain such that a partial change in character at low level would occur restricted to landscape pattern and landcover characteristics, with the intactness of field boundaries (hedgerows, tree lines and stone walls) maintained (refer to **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15 -** Viewpoint 4 Photomontage Y1).

8.9.24 The turbines would introduce additional vertical structures into the landscape that would have a strong influence on the visual character of the area particularly across Mynydd Ty-talwyn and Mynydd Baedan, as demonstrated by **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15 - Viewpoint 3** (Ogwr Ridgeway walk, 298m AOD) and **Viewpoint 4** (Llangynwyd Conservation Area, 201m AOD). The turbines at this close range situation would highly contrast with other landscape elements namely horizontal woodland and grassland areas and blades would introduce movement into an otherwise static landscape. The turbines, whilst grouped such that they would form a concentration of energy infrastructure elements seen alongside pylons and overhead transmission lines, would nevertheless create new focal points in the landscape that would characterise the area resulting from the intensification of energy infrastructure. The effects are expected to reduce when the proposed woodland planting is taken account of, particularly within areas to the north of the aspect area set beyond intervening woodland south of Maesteg.

8.9.25 The proposed turbines would introduce a large vertical scale of change that would be prominent and characterise these parts of the landscape but would not entirely be uncharacteristic of the wider landscape hosting other energy developments including wind farms. The effects of the proposed turbines and to a lesser extent the other elements of the Proposed Development would be experienced across a medium geographical extent of the aspect area, resulting in a **high** magnitude of change.

Effects during operation

8.9.26 Overall, the effects on CYNONVS473 - Mynydd Baedan during the operational phase are judged to be **major** and **significant**, with the effects on the southern half of the aspect area, which covers the Site, being direct effects and the effects on the northern parts of the aspect area beyond the Site being indirect effects.

8.9.27 The western part of the Site extends into LANDMAP area NPTVS897 - Mynydd Bromil & Scarp tops, however, as this is a much smaller proportion of the Site, this is considered in more detail below.

Effects on Visual and Sensory Aspect Areas outside of the Site and Host Aspect Area

8.9.28 A detailed assessment of LANDMAP areas outside of the host Visual Sensory Landscape Aspect Area (which provides the immediate landscape context to the Site) is provided at **ES Volume III, Appendix 8.4: LANDMAP Detailed Assessment**. The following paragraphs and **Table 8.9** and **Table 8.10,** at the end of this section, provides a summary of the magnitude of change, level of effect and significance of effects on the wider landscape.

Effects on other Visual and Sensory Aspect Areas within 5 km

Summary of Effects on Northern Aspect Areas within 5 km

8.0.1 Within 5 km to the north of the Site, landscape effects vary according to the degree of intervisibility and character of the receiving landscape, along with the phase of the development.

8.9.29 The Llynfi Valley (CYNONVS884) would experience **moderate** significant effects during the operational phase in its more open elevated areas, with effects diminishing in enclosed wooded valleys and being primarily derived by views of the turbines rather than the solar elements. Effects would be reduced to no greater than **minor-moderate** during both the construction and decommissioning phases, with large parts of the aspect area having little or no visibility of the on-site works, or movement of vehicles and staff due to screening by intervening topography or woodland.

8.9.30 The urban area of Maesteg (CYNONVS351), as a whole, would experience, at most, **minor-moderate** effects during the operational phase that are **not significant**, with visibility largely restricted to southern suburbs, as the town centre and northern areas benefit from screening provided by landform and woodland. However, more open areas, or locations aligned to the Site, and elevated valley positions will experience **moderate** effects, which are **not significant**. During the

construction and decommissioning phases, the effects would be at most **minor** due to the limited visibility of the on-site works being undertaken.

Summary of Effects on Eastern Aspect Areas within 5km

8.0.2 Areas to the east, within 5 km of the Site, would experience varying degrees of landscape effect.

8.9.31 The Llynfi Valley (CYNONVS884), Mynydd Llangeknwyr (CYNONVS349), and Bettws (CYNONVS966) would experience **moderate** operational phase effects that are **significant** in their more open and elevated portions. These effects result from the introduction of turbines that would be visible from west-facing slopes, although the rolling landform and woodland cover would provide screening in lower-lying areas. The landscape would still be perceived to be wooded slopes, but with turbines set beyond. Views of the solar elements would be much more limited than those of the turbines. During the construction and decommissioning phases, the effects would be at most **minor-moderate** due to the limited visibility of the works being undertaken and therefore limited perceived change in landscape character.

Summary of Effects on Northeastern Aspect Areas within 5 km

8.9.32 For areas to the northeast within 5 km, landscape effects vary substantially based on topography and vegetation cover. CYNONVS813 - Garw and Caerau Forest would experience **minor-moderate** and **not significant** effects during construction, operation and decommissioning due to the extensive coniferous plantation providing substantial screening, with visibility highly restricted. The presence of the existing Upper Ogmore Wind farm turbines as part of the baseline character further reduces the magnitude of change.

8.9.33 In contrast, CYNONVS811 - Garth Hill, which has westerly facing slopes set between 150 m and 350 m AOD, would experience **moderate** operational and construction phase effects that are **significant**. From its elevated western slopes, the turbines would be clearly visible, forming new focal points in views looking southwest. The medium magnitude of change results from the open character of these west-facing slopes and direct alignment with the Proposed Development, with the effects primarily derived by the turbines rather than the solar elements. While these effects would not fundamentally alter the upland grazing character of Garth Hill itself, they would influence the visual character and qualities of outward views from its western aspects. During the construction and decommissioning phases, the effects would be more limited in visibility, when compared with the turbines.

Summary of Effects on Southern Aspect Areas within 5 km

8.9.34 For areas to the south within 5 km, including Ffordd Y Gyfraith (CYNONVS151), Cribwr (CYNONVS955), Bridgend (CYNONVS726), Pyle (CYNONVS847) and Margam Opencast (NPTVS001), landscape character effects range from **minor** to **minor-moderate** during construction, operation and decommissioning and are **not significant**. Despite proximity to the Site, substantial screening is afforded by woodland within the mixed farming landscape immediately south of the Site,

intervening built form, and topographical variation. Where views would be available, they would typically be glimpsed along minor roads rather than forming overly dominant elements in the landscape character and relate to the turbines rather than the solar elements.

Summary of Effects on Western Aspect Areas within 5 km

8.9.35 The western aspect areas would experience varying degrees of effect from the Proposed Development. The extensive coniferous plantations of CYNONVS731 and NPTVS927 would largely screen views from within these areas, despite their proximity to the Site, resulting in **minor-moderate** effects during construction, operation and decommissioning that are **not significant** across the majority of these aspect areas. Locally significant effects may be experienced along the Ogwr Ridgeway Walk at the eastern edge of aspect area NPTVS927.

8.9.36 The more elevated and open NPTVS897 - Mynydd Bromil & Scarp tops would experience **minor-moderate** and **not significant** effects during operation, particularly from eastern-facing slopes with direct views toward the Proposed Development across the intervening forestry, with effects primarily derived by the turbines, rather than the solar elements. Effects during the construction and decommissioning phases would be no greater than **minor-moderate**. The lower-lying and more enclosed landscapes of NPTVS403 and NPTVS543 would experience only **minor-moderate** to **minor** effects during construction, operation and decommissioning that are **not significant**.

8.9.37 Overall, landscape effects to the west are predominantly limited to **minor-moderate** levels that are **not significant**. While the upland areas of NPTVS897 would experience some notable changes from the proposed turbines forming new vertical elements visible from elevated eastern-facing positions, the extensive screening provided by intervening coniferous woodland substantially reduces the proportion of the aspect area affected. The landscape is already characterised by energy infrastructure including pylons, and the introduction of the turbines would represent an intensification of vertical infrastructure in localised areas with direct views toward the Proposed Development. However, the scale of change affecting a small geographical extent of the aspect area, combined with the filtering effect of dense plantation forestry, results in effects that, whilst perceptible, would not fundamentally alter the intrinsic upland grazing character of NPTVS897 as a whole.

Effects on Visual and Sensory Aspect Areas 5-10km from the Site

8.9.38 The assessment of effects on landscape character between 5 km and 10 km of the Site has been informed by the LANDMAP Visual Sensory Aspect Areas overlaid with the ZTV, as illustrated on **ES Volume IV, Figure 8.16: LANDMAP Visual and Sensory Overall Evaluation with Blade Tip ZTV with Viewpoints**, with assessment provided for those in visual sensory aspect areas that have potential for more than limited visibility of the Proposed Development. A detailed assessment of the individual aspect areas is provided at **ES Volume III, Appendix 8.4: LANDMAP Detailed Assessment**, with a summary of the findings set out below.

8.9.39 At distances of 5-10 km within the ZTV (**ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**) where five to six turbines could theoretically be seen, landscape effects are generally limited and primarily related to views of the proposed turbines detracting from the appreciation of the landscape, rather than the other built elements of the Proposed Development. Most aspect areas would experience **minor** to **moderate** operational phase effects that are **not significant** due to the filtering effect of distance, intervening topography, and vegetation. The Proposed Development would often form a minor element within broader landscape views at these distances. During the construction and decommissioning phases, the effects would typically be at **minor,** with some **minor-moderate,** due to the more limited visibility of the works being undertaken, when compared with the turbines that would be visible during the operational phase.

8.9.40 The ZTV's represent worst-case scenarios showing theoretical visibility based on landform alone. Actual visibility would be reduced by vegetation and built features not accounted for in the bare earth ZTV, particularly in the wooded and developed areas.

Effects on Visual Sensory Aspect Areas beyond 10 km

8.9.41 With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, theoretical visibility of the proposed six wind turbines in some locations extends beyond 10 km from the Site, particularly to the north, east and south. However, actual visibility at this distance would be greatly reduced by the screening effects of intervening vegetation, built form and subtle variations in landform that are not picked up by the bare earth ZTV model. The other built elements of the Proposed Development would also have limited potential to be seen from these wider aspect areas due to their lower height and scale when compared with the proposed turbines.

8.9.42 To the north, glimpsed distant views may be possible from the high ground of the Bannau Brycheniniog National Park and associated aspect areas (Refer to Viewpoint 15, Ogof-Ffynnon-Ddu, Bannau Brycheniniog National Park **ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15**). However, at over 20 km away, the turbines would form a very small component of expansive views and would not be readily noticeable, nor would the other built elements of the Proposed Development, resulting in a **no effect** during construction, operation and decommissioning. Furthermore, existing wind farms in the intervening landscape are already a well-established characteristic of long range panoramic views looking south from the National Park (Refer to **ES Volume III, Appendix 8.10: Viewpoint 15 Ogof-Ffynnon-Ddu (BBNP)** and **Appendix 8.6: National Landscape Designations Preliminary Assessment** effects on the Bannau Brycheniniog National Park).

8.9.43 At this substantial distance (over 20 km), the proposed turbines would not materially alter the character or appreciation of the landscape when experienced from within the National Park. The key characteristics that define the landscape value of Bannau Brycheniniog National Park - including its sweeping grandeur, outstanding natural beauty, sense of tranquillity and the intimate relationship between upland landscapes and valleys - would remain wholly intact and legible.

The proposed turbines would be perceived as a distant, minor addition to the existing energy infrastructure already visible in long-range southward views across the upland landscapes of South Wales, rather than as a defining or intrusive element. The visual relationship between the aspect areas landscape character would be unaffected, with the appreciation of these nationally important landscape features (such as escarpments, peaks and valleys) maintained.

8.9.44 To the east, glimpsed distant views may be possible from the high ground of the Rhondda valleys. Again, at over 15 km away, the turbines and other infrastructure of the Proposed Development would be barely perceptible, resulting in a **negligible** effect during construction, operation and decommissioning.

8.9.45 At this distance, the proposed turbines would not alter the appreciation or understanding of the landscape character of the Rhondda valleys and its associated aspect areas. The defining characteristics of this landscape - the steep-sided valleys, ribbon development, industrial heritage, and the dramatic contrast between enclosed valley floors and open upland ridges - would remain fully legible and unaffected. The Proposed Development would not diminish the ability to read and appreciate the strong topographic structure, the historic pattern of settlement and industry, or the cultural identity of these valley landscapes. Where glimpsed, the turbines would appear as distant features on the far western skyline, consistent with the existing presence of energy infrastructure in views across this post-industrial landscape, and would not compromise the appreciation of the landscape's key qualities or character.

8.9.46 To the south, long distance views of the turbines may be possible from the Heritage Coast Areas within BCBC and from the Glamorgan Heritage Coast to the far southeast. At over 15 km away, the turbines would form a small/minor component of wider coastal views, which include existing energy infrastructure, industrial areas, settlement and major roads (motorway and A-Roads) resulting in a **negligible** effect on landscape character during construction, operation and decommissioning.

8.9.47 The proposed turbines would not materially change the appreciation of the Heritage Coast landscapes and associated aspect areas from within these designated areas. The special qualities that underpin the Heritage Coast designation - including the dramatic coastal scenery, distinctive geology, relationship between coast and sea, and the sense of place derived from the interface of natural and cultural heritage - would remain fully appreciable and undiminished. Views from the Heritage Coast are characterised by the immediate coastal landscape in the foreground, the seascape, and expansive panoramic views inland that already include considerable energy infrastructure, major transport corridors and industrial development. The proposed turbines, at over 15 km distance, would be perceived as part of this existing upland infrastructure context visible in the far distance, rather than as a feature that alters the fundamental character or appreciation of the coastal landscape itself. The immediate landscape setting, coastal character and sense of place experienced by visitors to the Heritage Coast would be maintained, with the appreciation of geological features, coastal landforms and maritime heritage unaffected by the distant Proposed Development.

8.9.48 To the west, the ZTV's indicates very limited theoretical visibility at over 10 km distance, restricted to small patches of high ground. Actual visibility from these areas is likely to be screened by intervening vegetation (coniferous plantation woodland) and built form, resulting in a **negligible** effect during construction, operation and decommissioning.

8.9.49 Where any glimpsed views of the proposed turbines might occur from elevated locations to the west, these would not alter the appreciation or understanding of the landscape character of these areas. The landscape characteristics - including the extensive coniferous forestry, upland character, and relationship with existing energy infrastructure - would remain clearly legible. The Proposed Development would be consistent with the existing pattern of wind energy development across these upland landscapes and would not introduce a discordant or out-of-character element that would compromise the appreciation of landscape character.

8.9.50 In summary, whilst the ZTV's illustrate some long distance theoretical visibility of the proposed turbines, actual effects on landscape character and visual amenity would be limited by the effects of distance and intervening screening elements. There would be no significant effects as a result of the Proposed Development on landscape character in the area beyond 10 km from the Site. Importantly, at these distances, the Proposed Development would not materially alter the ability to appreciate, understand or experience the key characteristics, special qualities or defining features of these landscapes. The character of views from these areas is already influenced by existing man-made structures including wind turbines, pylons and urban areas such that the addition of the proposed turbines would not seem out of place or compromise the appreciation of landscape character. The distinctive landscape qualities, sense of place, and defining characteristics of each landscape area beyond 10 km would remain fully legible and appreciable, with the Proposed Development perceived as a minor distant element that does not alter the fundamental character or appreciation of these landscapes.

Table 8.9 Summary of Residual Landscape Character Effects on Visual Sensory Aspect Areas within 5 km During Construction, Operation and Decommissioning

Receptor	During Construction and Decommissioning				During Operation			
	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
Visual and Sensory Aspect Areas covering the Site								
CYNONVS473 Host - Mynydd Baeden	High	Medium	Moderate	**Yes** (southern half of Aspect Area)	High	High	Major	**Yes** (southern half of Aspect Area)
Visual and Sensory Aspect Areas within 5 km to the north								
CYNONVS884 – Llynfi Valley	Medium-High	Low	Minor Moderate	No	Medium-High	Medium	Moderate	**Yes**
CYNONVS351 - Maesteg	Medium	Very Low	Minor	No	Medium	Medium to Low	Moderate to Minor-Moderate	No
Visual and Sensory Aspect Areas within 5 km to the east								
CYNONVS884 – Llynfi Valley	Medium-High	Medium-Low	Minor Moderate	No	Medium-High	Medium	Moderate	**Yes**
CYNONVS966 - Bettws	Medium	Medium-Low	Minor Moderate	No	Medium	Medium	Moderate	**Yes**
CYNONVS349 - Mynydd Llangeknwyr	Medium	Medium-Low	Minor Moderate	No	Medium	Medium	Moderate	**Yes**
CYNONVS148 – Cym Ogwr	Medium	Very Low	Negligible	No	Medium	Low	Negligible	No
Visual and Sensory Aspect Areas within 5 km to the northeast								

Receptor	During Construction and Decommissioning				During Operation			
	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
CYNONVS811 - Garth Hill	Medium	Medium	Moderate	**Yes**	Medium	Medium	Moderate	**Yes**
CYNONVS813 - Garw and Caeru Forest	Medium	Low	Minor Moderate	No	Medium	Low	Minor Moderate	No
Visual and Sensory Aspect Areas within 5 km to the south								
CYNONVS847 - Pyle	Low	Low	Minor	No	Low	Low	Minor	No
CYNONVS726 - Bridgend	Low	Low	Minor	No	Low	Low	Minor	No
NPTVS001 – Margam Opencast	Low	Low	Minor	No	Low	Low	Minor	No
CYNONVS151 – Ffordd Y Graith	Medium	Low	Minor Moderate	No	Medium	Low	Minor Moderate	No
CYNONVS955- Cribr	Medium	Low	Minor Moderate	No	Medium	Low	Minor Moderate	No
Visual and Sensory Aspect Areas within 5 km to the west								
CYNONVS731- Conifer west of the study area	Medium	Low	Minor Moderate	No	Medium	Low	Minor Moderate	No
NPTVS897 – Mynydd Bromil and Scarp Slopes	High	Low	Minor Moderate	No	High	Low	Minor Moderate	No
NPTVS927 – Mynydd Margam	Medium	Low	Minor Moderate	No	Medium	Low-Medium	Minor Moderate	No

Receptor	During Construction and Decommissioning				During Operation			
	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
NPTVS403 – Margam CP	Medium-High	Very Low-Low	Minor	No	Medium-High	Low	Minor Moderate	No
NPTVS543 - Coedhirwaun	Medium	Very Low	Minor	No	Medium	Very Low	Minor	No

Table 8.10 Summary of Residual Landscape Character Effects on Visual Sensory Aspect Areas between 5-10 km During Construction, Operation and Decommissioning

Receptor	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
North and Northeast				
NPTVS962 - Mynydd Nant y bar/Mynydd Blaenafan	Medium	Low (all phases)	Minor-Moderate	No
CYNONVS813 - Garw and Caerau Forest (portions beyond 5km)	Medium	Very Low (all phases)	Minor	No
East				
CYNONVS550 - Mynydd y Aber	Medium	Low (all phases)	Minor-Moderate	No
CYNONVS142 - Mynydd y Glyn	Medium	Medium (all phases)	Moderate	No
CYNONVS349 - Mynydd Llangeknwyr (portions beyond 5km)	Medium	Low (all phases)	Minor-Moderate	No
South				
CYNONVS790 - Cefn Hirgoed	Medium	Very Low (all phases)	Minor	No

Receptor	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
VLFGLVS825 - Newton Down	Medium	Very Low (all phases)	Minor	No
VLFGLVS663 - Ogmore and Old Castle Downs	High	Low (all phases)	Minor-Moderate	No
VLFGLVS828 - Between Bridgend and Merthyr Mawr	Medium	Very Low (all phases)	Minor	No
VLFGLVS378 - Alun Valley	High	No Change	No Effect	No
West				
NPTVS811 - Margam Scarp	High	Very Low (all phases)	Minor	No
NPTVS274 - Coastal Dunes	Medium	Very Low (all phases)	Minor	No
NPTVS799 - Eglwy Numydd Reservoir	Medium	Very Low (all phases)	Minor	No
NPTVS837 - Margam Works	Low	Very Low (all phases)	Negligible	No
NPTVS277 - Margam Moor	Low	Very Low (all phases)	Negligible	No
NPTVS920 - Kenfig Sands	Very High	Very Low (all phases)	Minor-Moderate	No

Effects on Visual Amenity

Construction and Decommissioning

8.9.51 Construction activities associated with the Proposed Development would be screened from parts of the study area due to the rolling upland and lowland topography as well as from within some enclosed wooded valley and farmland areas; while activities would be visible from the more elevated open and exposed locations that allow views across the uplands where the proposed turbines would be located.

8.9.52 Visualisations for each of the 15 assessment viewpoints are included at **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15**. The solar construction activities will be noticeable within some closer range views such as from Viewpoints 3,4, 5 and 6 but these effects will diminish with distance, in particular beyond the 3 km study area and are considered minor to moderate and not significant in their own right.

8.9.53 From locations to the west there are very limited views towards the Site such as from Viewpoints 1 and 2, ground-level activities would be mostly screened by landform and by existing intervening coniferous woodland covering over much of the upland to the west of the Site.

8.9.54 Cranes used during the construction phase would be visible for a relatively short period and would be incidental when considered in the context of the turbines being erected. It is assessed that any views of these works would result in a low magnitude of additional change and no greater than a **minor**, temporary effect, which would be **not significant**.

8.9.55 From coastal locations such as Viewpoint 10, which lies 7 km away, Viewpoint 11, which lies 10 km away and Viewpoint 14, which lies 21 km away, the intervening distance would make any construction activities indiscernible.

8.9.56 Similarly, no construction activities would be discerned in distant views from the Bannau Brycheniniog National Park which is represented by viewpoint 15, located at a distance of approximately 29 km.

8.9.57 From elevated locations within relative proximity of the Proposed Development, such as from Viewpoints 3, 5, and 6, views would look over or extend across lower-lying valley areas towards the Site, allowing for views of construction activities, in addition to the views of the cranes used to install the turbines. In these locations, there would be a medium to high magnitude of additional change which would result in **moderate-major significant** temporary effects during the construction phase.

8.9.58 There are also some specific lower lying areas represented by Viewpoints 4 and 9, also in relatively close proximity, at the edges of nearby settlements or with an open aspect, where views are looking up towards the Site over the intervening farmland, where the same **moderate-major significant** temporary effects would occur during the construction phase. Although these effects will result largely from the turbines only, given the Site's rolling landform reduces the opportunity for

intervisibility across the Site itself and the lower-level solar infrastructure as well as the substation being sited away from the more prominent areas of the Site.

8.9.59 From the rest of the remaining viewpoints, ground-level activities would be screened through a combination of existing landform, vegetation and built form (Viewpoints 7 and 8) or seen at greater distance limiting the influence on views (Viewpoints 12 and 13). In these locations, the additional visual effects, over and above those addressed under the heading of Operational Effects, would arise primarily in relation to views of the cranes erecting the turbines, although where seen they would not appear prominent during the construction period, due to their apparent scale diminishing with distance.

8.9.60 The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site. Effects would therefore be expected to be of an equivalent nature with **moderate-major significant** temporary effects on a small number of nearby viewpoints such as Viewpoints 3, 4, 5, 6 and 9.

Operation

8.9.61 A detailed viewpoint assessment of the operational effects is presented in **ES Volume III, Appendix 8.8: Viewpoint Assessment.**, and this considers the long-term visual effects during the operational phase of the proposed turbines and solar for each of the 15 viewpoints, which are considered to have potential for significant effects resulting from the Proposed Development.

8.9.62 For each of the detailed assessment viewpoints, a short description is given of the baseline view, and a judgement is provided regarding the sensitivity of the key receptors likely to experience the view.

8.9.63 This is followed by a description of the features of the Proposed Development that would be visible from that viewpoint. This includes a description of how many turbine hubs and blades would be visible and, where relevant, whether any ground-level components of the proposed solar compartments would be visible. For each viewpoint, where relevant there is also commentary on how vegetation, topography and built form would affect the actual visibility of the turbines.

8.9.64 A judgement is then provided of the magnitude of change that would be experienced at each viewpoint, the level of the effect on the view and a statement provided to clarify whether the additional effect resulting from the proposed wind farm; and then separately for the solar elements and whether these would be significant or not.

8.9.65 A summary of the sensitivity of the view, magnitude of change in the view, the level of effect and its significance is given in **Table 8.11**. Where a viewpoint is representative of more than one type of visual receptor, the assessment carried forward into the table represents the most sensitive receptor group represented by the viewpoint. Note: **Bold** text indicates a significant effect.

8.9.66 With reference to the **ES Volume III, Appendix 8.8: Viewpoint Assessment**, when considered against the existing baseline it has been assessed that there

would be significant visual effects at six of the 15 representative viewpoints. These are as follows:

- Viewpoint 3: Ogwr Ridgeway Walk;
- Viewpoint 4: Llangynwyd Conservation Area;
- Viewpoint 5: Heol Gelli Lenor, Maesteg;
- Viewpoint 6: Heol Dewi Sant, Bettws;
- Viewpoint 9: Heol Shon, Cefn Cribwr; and
- Viewpoint 13: Pen y Foel Trig Point.

8.9.67 Given the scale of the Proposed Development and its location in an area with a high number of visual receptors, this number of significant effects is no higher than would reasonably be expected.

Table 8.11 Summary of Residual Visual Effects From Assessment Viewpoints During Operation

Viewpoint: Location	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
1: Margam Park (Access Road)	High	Low	Minor - Moderate	No
2: On PRoW, Margam Park Deer Park / Ogwr Ridgeway Long Distance Walk	High	Medium	Moderate	No
3: Ogwr Ridgeway Walk	High	High	Major	**Yes**
4: Llangynwyd Conservation Area	High	High	Major	**Yes**
5: Heol Gelli Lenor, Maesteg	High	Medium	Moderate	**Yes**
6: Heol Dewi Sant, Bettws	High	High	Major	**Yes**
7: Bridge over River Llynfi east of Coytrahen	High	No change	No Effect	No
8: Bridgend Circular Walk	High	Medium	Moderate	No
9: Heol Shon, Cefn Cribwr	High	High-Medium	Moderate - Major	**Yes**
10: Kenfig Burrows	High	Low	Minor - Moderate	No
11: Wales Coast Path at Ogmore-by-Sea	High	Very low	Negligible	No

Viewpoint: Location	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
12: Ogwr Ridgeway Walk at Waun Wen	High	Low-Medium	Moderate	No
13: Pen y Foel Trig Point	High	Medium	Moderate	**Yes**
14: Mumbles Hill, Swansea	Very High	Very low	Minor-Moderate	No
15: Ogof-Ffynnon-Ddu (Bannau Brycheniniog National Park)	Very High	No Change	No Effect	No

Residential receptors within 2 km

8.0.3 There are a number of residential properties which lie within 2 km of a proposed turbine location within the Proposed Development. The location of these individual properties is illustrated in **ES Volume IV, Figure 8.31: Residential Receptors within 2 km** with further detail provided in **ES Volume III, Appendix 8.9: Residential Visual Amenity Assessment**.

8.0.4 The layout of the Energy Park has followed an iterative process as set out in the **Planning, Design and Access Statement**, which accompanies the application. An important part of the design process included minimising the visual effects that would be experienced by residents of the closest dwellings i.e., to avoid overbearing visual effects. As a consequence of this design approach, whilst a high magnitude was predicted at several properties, the RVAA predicted that there would be no potential for a Very High magnitude of change to be experienced from any dwelling. This approach has ensured that no visual effect would be close to meeting the Residential Amenity Threshold (RVAT). In accordance with best practice guidance TGN 02/19, the RVAA Step 3 results indicate that there is no requirement for a more detailed Step 4 study where a judgement is made on whether the Proposed Development would result in the RVAT being met or not at specific properties.

8.9.68 Having undertaken an appraisal of the relationship between the Proposed Development and the residential property groups within the 2 km RVAA study area, it is assessed that some residents would experience a significant visual effect during the operational phase. In all cases, the properties would all continue to have other views available that are not affected by the Proposed Development. It is not the case that any of the effects would be of such a scale so as to become dominant or overbearing.

8.9.69 There may be some limited views of the construction or decommissioning works from the properties, but there would be no significant effects during the construction or decommissioning phases.

Settlements

8.9.70 It is recognised that there would be some temporary visual effects during the construction and decommissioning of the Proposed Development over and above those assessed under the operational phase.

8.9.71 The vast majority of effects, of note, when considering the construction and decommissioning phase would be experienced within the local environs of the Site, with views from many areas contained by topography, as illustrated by the blade tip ZTV of the proposed turbines in **ES Volume IV, Figure 8.3: Blade Tip ZTV to 35 km with Viewpoints** and the SZTVs of the proposed solar and substation at **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements** and **ES Volume IV, Figure 8.36: Solar Screened ZTV (4 of 4)**.

8.9.72 The construction and decommissioning works would be visible from a number of properties within the local landscape. These views would only be experienced for a relatively short duration and are considered short term, temporary effects.

8.9.73 The construction and decommissioning effects are described where relevant to the available views from each settlement in the following paragraphs. Overall, it is assessed that there would generally be a lower magnitude of effect during construction and decommissioning compared with the operational phase effects assessed below.

8.9.74 All settlements assessed in detail from the filtered list within **ES Volume III, Appendix 8.7: Preliminary Assessment of Receptor Groups** are located within 5 km of the Proposed Development, with settlements further afield already sieved out of further analysis given the likelihood they would not experience any significant effects as a result of the Proposed Development.

Llangynwyd (Pont Rhyd-y-cyff)

8.9.75 Llangynwyd (also referred to on OS mapping as Pont Rhyd-y-cyff) is situated approximately 2 km north of the built infrastructure within the Proposed Development (CYNONVS351, Maesteg, Low) and to the immediate south of Maesteg and adjoins the Llynfi Valley (CYNONVS884, Llynfi Valley, Moderate). The lower lying settlement (100-135 m AOD) is located within the same SLA, the Western Uplands (SLA 3, BCBC), which covers the Site area and extends to the north within the Llynfi Valley. Residents have views to the north facing slopes of the Site. The Llangynwyd Conservation Area (refer to **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15** - Viewpoint 4) is located in a separate hamlet to the west around St Cynwyd's Church and is assessed separately in **ES Volume II, Chapter 7: Cultural Heritage**.

8.9.76 During construction, with reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints** and **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15 -** Viewpoint 4 (Llangynwyd Conservation Area), a small number of residents, primarily in the separate hamlet to the west, but also on streets such as Heol Cynan, would experience noticeable visual effects from wind turbine construction activities in particular. The tall cranes used during turbine erection would be clearly visible from some southern parts of the settlement and

also the separate hamlet to the west, introducing new vertical elements into the views. Local residents which did have visibility would also see construction vehicles and personnel moving along access tracks and around turbine pads in an area extending about 2 km to the south of the settlement. During winter months when daylight hours are shorter, the construction lighting would also likely be more noticeable. The intervening topography would provide some screening of ground-based construction activity for the solar arrays and suspended substation elements which would be difficult to discern, limiting their visibility from most viewpoints in the settlement. Most residents would not however have any potential views of the construction activities due to screening by either intervening properties, vegetation or the landform of the settlement. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site. During the construction and decommissioning phases, the effects would result in a **medium** magnitude of change and be, at most, **moderate** and **not significant** due to the more limited visibility of the works being undertaken, when compared with the turbines that would be visible during the operational phase.

8.9.77 During operation, most residents in Llangynwyd would be located in the section of the ZTV which indicates they would be theoretically able to see five to six turbines. The turbines would extend across approximately 2 km of the southward view, creating prominent vertical elements against the skyline for those properties and areas of the settlement where views were available, primarily in the separate hamlet to the west, but also on streets such as Heol Cynan. The movement of the turbine blades would naturally draw the eye, making the Proposed Development more noticeable in views from the settlement. As demonstrated by **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements**, there would be limited theoretical visibility of the solar arrays but this is to the northeastern lower lying solar compartment E only, which is afforded some topographic screening and a wooded tributary valley provides the backdrop such that these arrays may be difficult to discern for the casual viewer. The southern solar arrays and substation located to the south of the Ogwr Ridgeway Walk would be screened by intervening Site landform. From the introduction of turbines, the magnitude of change on those small number of residents in Llangynwyd where views were available, primarily in the separate hamlet to the west, but also on streets such as Heol Cynan, would be **high**, primarily due to their proximity to the settlement and large scale of change, within close range views . As a result, they would be seen to appear prominently on the skyline. This would equate to a major change in some views from the settlement that would be highly noticeable and would substantially influence the overall views from small parts of the settlement, primarily in the separate hamlet to the west.

8.9.78 The resulting visual effect would be **major**, with effects considered to be **significant** for a small number of the residents of Llangynwyd, primarily in the separate hamlet to the west, as was determined for the representative Viewpoint 4. The majority of properties in the settlement would however have either no view of the Proposed Development and **no effect,** or a very limited view and a **minor** effect.

Maesteg

8.9.79 Maesteg is located approximately 3.4 km to the north of the Site, with the town centre situated over 5 km away (CYNONVS884, Llynfi Valley, Moderate / CYNONVS351, Maesteg, Low). The settlement has an enclosed valley setting with woodland along the valley sides and large woodland blocks subdividing farmed areas and following tributary valleys. Views of the Proposed Development are largely limited to the southern edges of the town and more open elevated valley positions with northward or southward aspects. As represented by Viewpoint 5 (Heol Gelli Lenor, Maesteg) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), residents on the southwestern edge of Maesteg have views southward toward the upland areas beyond, including the north-facing slopes of the Site. The majority of properties within Maesteg benefit from screening provided by landform and woodland, limiting views of the Proposed Development. Overall the effects would be **minor** to **no effect** and **not significant**, for the settlement as a whole. For those limited areas of the settlement with views toward the Site, the magnitude of change would be **medium**. The cumulative effect for these locations would be **moderate**, which is considered **significant.**

Lletty Brongu

8.9.80 Lletty Brongu is a small hamlet positioned approximately 2.75 km northeast of the Proposed Development at the edge of the Llynfi Valley (CYNONVS884, Llynfi Valley, Moderate). The elevated valley-side position gives some residents, primarily the 11 properties in Bryn Terrace, some clear views of the north-facing parts of the Site.

8.9.81 With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, some residents would have theoretical views of wind turbine construction activities from their elevated opposing valley-side position, which would affect the panoramic views they currently enjoy. There would likely be clear sightlines to turbine foundation works, crane operations, and component deliveries across an area of approximately 2-3 km to the southwest. The elevated position may also provide views of the ground works required for solar array installation, affecting some views from the settlement, although these would appear small in scale and vary subject to vegetative screening, around the edges of the settlement and be comparatively much less noticeable than the erection of the turbines. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site. During the construction and decommissioning phases, the effects would be at most **moderate** and **significant**.

8.9.82 During operation, with reference to **Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, all 6 turbines would theoretically be visible from Lletty Brongu. The settlement's elevated position on the opposite side of the valley creates a largely unobstructed view where some residents would see the turbines in their entirety from base to blade tip, where no landform is available to provide any screening. With reference to **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements** there is also theoretical visibility of the solar

areas, from some parts of Lletty Brongu, albeit to a lesser extent than the turbines with the lower lying solar arrays appearing well assimilated with the rolling topography of the Site.

8.9.83 The visual change for those properties in Lletty Brongu directly orientated towards the Site would constitute a **high** magnitude of change. The settlement's elevated position approximately 2.75 km to the northeast, on the opposing valley side, creates conditions where residents of the 11 properties in Bryn Terrace would see all 6 turbines fully visible from hub to blade tip against the skyline, with no landform screening available. While some solar arrays would be theoretically visible, they would appear well integrated with the rolling topography at this distance and elevation difference. The substation would have limited visibility due to screening from the NRW woodland backdrop and intervening landform so will likely be indiscernible for these residents. The turbines would be the prominent built elements visible, creating a notable change to the existing rural character of views towards the Site, though not so dominant as to be overbearing given the distance of over 2.5 km. The resulting level of visual effect would be **major** and **significant**.

Bettws

8.9.84 Bettws is located approximately 3.2 km east of the Proposed Development within the (CYNONVS966, Bettws, Moderate). Residents at the western edge of the settlement at around (150 m AOD) enjoy panoramic views looking slightly up and over the rolling upland encompassing the Site, as well as the wooded backdrop of Mynyyd Margam (Craig-yr-Aber Woodland) and wooded tributaries of the adjacent Llynfi Valley. The two existing turbines to the south of Gelli-las Fawr / Gelli Las Farm, c.167 m AOD) are seen set below the Site to the immediate east establishing a baseline context of wind energy infrastructure in views.

8.9.85 During construction, with reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, residents in western parts of Bettws would have moderate visibility of turbine construction activities. Construction cranes and turbine component deliveries would be visible on the skyline, extending across approximately 2-3 km of the western view. Residents in eastern parts of the settlement would have more limited visibility due to the settlement's topography and built form, resulting in varying levels of visual effect across different residential areas. Most residents would have limited views of the ground-based construction activities for the solar arrays. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site. During the construction and decommissioning phases, the effects would be at most **minor-moderate** and **not significant.**

8.9.86 During operation, with reference to **ES Volume IV, Figure 8.3: Blade Tip ZTV to 35 km with Viewpoints** and **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15 -** Viewpoint 6 (Heol Dewi Sant, Bettws), residents in the western parts of Bettws would see five to six turbines, while those in eastern and central parts would have more limited views or no views due to the settlement's topography and built form. The visual effects vary across the settlement, with

properties on the western edge experiencing the most pronounced effects.. The photomontage for Viewpoint 6 demonstrates the turbines would appear on the horizon when viewed from Heol Dewi Sant, with each of the proposed turbines visible against the skyline as prominent vertical elements. **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements** indicates a mix of visibility for the solar arrays. Residents on the western edge of the settlement would potentially see solar elements at Year 1, with visibility reducing by Year 15, while those in central and eastern parts would have very limited views of these ground-based components.

8.9.87 The visual change for Bettws would vary across the settlement, but considering the settlement as a whole, the worst-case magnitude of change would be **medium**. Viewpoint 6 (Heol Dewi Sant, Bettws) represents a worst-case scenario, while most residents would experience less pronounced effects. The overall level of visual effect for those residents with views towards the Proposed Development would be **moderate** and is considered **significant**. For other properties where no views were available due to screening by intervening woodland or built form there would be **no effect**.

Cefn Cribwr

8.9.88 Cefn Cribwr is situated approximately 3.2 km south of the Proposed Development at around 120-130 m AOD (CYNONVS955, Cribwr, Moderate). The linear settlement (Cefn Road, B4281) is located near the northern boundary of the Laleston SLA 7 (BCBC), which is characterised as an open agricultural landscape with mixed farmland and fields enclosed by hedgerows, whereas fields surrounding Cefn Cribr are generally smaller and of a more intimate scale, with some densely wooded boundaries which provide a high level of screening for much of the settlement.

8.9.89 With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, during the construction phase, some residents, particularly at the west side of the village, would experience moderate to high visibility of turbine construction activities. With reference to **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15** - Viewpoint 9 (Heol Shon, Cefn Cribwr) construction cranes would be visible on the skyline when viewed from the northern settlement edges, extending across approximately 3 km of the northern view. Residents here would also have moderate visibility of ground-based construction activities, although these will be mostly limited to the southern end of the Site due to topographic and woodland screening preventing visibility across to the northern fields. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site. During the construction and decommissioning phases, the effects would be at most **minor-moderate** and **not significant.**

8.9.90 During operation, with reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints** and **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15 -** Viewpoint 9 (Heol Shon, Cefn Cribwr), five to six turbines would be visible across most of Cefn Cribwr. The photomontage (Year 1) clearly shows how all proposed turbines would be visible against the skyline from the

northern edge of the settlement, forming prominent vertical elements across approximately 3 km of the northward view. The wireframe drawing (Sheet B) illustrates how the six turbines would be distributed across the view at varying distances. **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements** shows mixed visibility of ground-based elements across Cefn Cribwr, including areas where there are solar areas visible in northern parts of the settlement. In reality, views of the solar areas would be far less notable than those of the turbines, seen well-related to the underlying topography and woodland within the landscape.

8.9.91 The visual change for Cefn Cribwr would vary across the settlement, but overall, the magnitude of change would be **medium**. While Viewpoint 9 (Heol Shon, Cefn Cribwr) represents a worst-case scenario from the northern edge of the settlement, many residents would experience less pronounced effects due to screening by buildings and vegetation. The overall level of visual effect would be **moderate** and is considered **significant**.

Kenfig Hill and Pyle

8.9.92 These settlements are located approximately 3-5 km southwest of the Proposed Development, primarily within the (CYNONVS847, Pyle, Low) rising from 35 m AOD at the southern end of Pyle to around 120 m AOD where Kenfig Hill turns east along the B4281 to meet Cefn Cribr.

8.9.93 With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, there is a distinct contrast between the visual effects on these neighbouring settlements. During the construction phase, residents in elevated parts of Kenfig Hill would experience moderate visibility of construction activities, with construction cranes visible on the skyline during turbine erection, extending across approximately 3-4 km of the northeastern view. The elevated position of Kenfig Hill would allow residents to see over intervening landform to the construction Site. Meanwhile, residents in the lower-lying Pyle would have very limited visibility of construction activities due to substantial screening by topography and built form. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site. During the construction and decommissioning phases, the effects would be at most **minor** and **not significant.**

8.9.94 During operation, with reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, five to six turbines would be theoretically visible from most of Kenfig Hill, while Pyle would have varied and limited visibility. The panoramic views from Kenfig Hill towards the Proposed Development would extend across approximately 3-5 km, with limited screening between the settlement and the Site. **ES Volume IV, Figure 8.30: Combined Screened ZTV Solar and Substation Elements** illustrates that the solar areas would be visible in northern elevated parts of Kenfig Hill. Pyle would have very limited visibility of ground-based elements. However, in reality, at this distance from the Site these lower lying elements would be far less visible than the turbines and would appear well related to the underlying topography such that they would not be prominent.

8.9.95 The visual change for this settlement area would vary considerably, but overall, the magnitude of change would be **low**. While some elevated locations would experience more pronounced effects, most of the combined settlement area would have limited views of the Proposed Development. The overall level of visual effect would be **minor-moderate** and is considered **not significant**, for the majority of residents.

Coedhirwaun

8.9.96 Coedhirwaun is located approximately 3 km southwest of the Proposed Development (NPTVS543, Coedhirwaun, Moderate).

8.9.97 With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, during the construction and operational phases, residents are shown to have theoretical visibility towards the Proposed Development of up to five to six turbines. However, due to significant woodland bounding the settlement within adjacent fields to the east and north-east views are likely to be limited to glimpsed winter views only (when trees are not in leaf) and solely from the few open areas within the settlement and its northeastern facing edges. If seen, construction cranes would be visible on the skyline during turbine erection, extending across approximately 3 km of the northeasterly view. The rolling landscape character of the intervening upland area also provides additional natural screening which will further limit views and so these would appear small in scale in any case. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site.

8.9.98 During operation, with reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, up to five to six turbines are shown to be visible but this does not take account of the aforementioned woodland screening which is likely to prevent most views save for glimpsed wintertime views.

8.9.99 **ES Volume IV, Figure 8.30: Combined Screened ZTV Solar and Substation Elements** shows mixed theoretical visibility of ground-based elements across Coedhirwaun, but the aforementioned woodland screening would prevent any views to this lower development.

8.9.100 The very limited visual change for Coedhirwaun would vary across the settlement, but the overall magnitude of change would be **very low** for all phases. While some properties with northeastern aspects might experience more pronounced effects in winter, most residents would have much more limited or no views due to screening by topography, vegetation, and buildings. The overall level of visual effect during all phases would be **minor to no effect** and is considered **not significant**.

Pen-y-fai

8.9.101 Pen-y-fai is located approximately 4.5 km southeast of the Proposed Development within the urban extents of Bridgend (CYNONVS726, Bridgend, Low).

8.9.102 With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, during the construction phase, residents would experience limited visibility of construction activities due to the settlement's position within the wider

Bridgend urban area. Some construction cranes might be visible from elevated northwestern parts of the settlement during turbine erection, but the distance (4.5 km) and intervening urban form would substantially reduce their prominence. The built environment of Bridgend would provide significant screening for most ground-level construction activities. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development would be removed from the Site.

8.9.103 During operation, three to five turbines would be theoretically visible from limited parts of Pen-y-fai, primarily from elevated positions with more open northwestern aspects. However, in reality, the urban context would significantly restrict these views for most residents. **ES Volume IV, Figure 8.30: Combined Screened ZTV Solar and Substation Elements** indicates very limited visibility of ground-based elements, with most of the settlement having no visibility of the solar arrays due to screening by the urban fabric of Bridgend.

8.9.104 The visual change for Pen-y-fai would be Low to Very Low. The distance from the Proposed Development (4.5 km), combined with the screening effect of the urban environment, would significantly limit visibility of the Proposed Development for most residents. While some properties on higher ground with open aspects might experience glimpsed views of turbine blades, these would form minor components in wider views dominated by the urban context. The overall level of visual effect for all phases would be **minor** and is considered **not significant** for residents of Pen-y-fai.

North Cornelly / Cynffig

8.9.105 North Cornelly is located just over 5 km southeast of the Proposed Development and in effect is a continuation of the same built-up area as Kenfig Hill and Pyle discussed above, but covering the area to the south of the railway line and north of the M4.

8.9.106 During the construction phase, residents would have very limited potential for visibility of the construction activities, with potential glimpses of construction cranes visible on the skyline during turbine erection. Effects would be **minor to no effect** and **not significant**. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site.

8.9.107 During operation, with reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, five to six turbines would be theoretically visible from most of the settlement. However, in reality views would in many cases be restricted by intervening properties or built form. **ES Volume IV, Figure 8.30: Combined Screened ZTV Solar and Substation Elements** illustrates that there would be no more than minor potential for visibility of these elements of the Proposed Development and, in reality, any potential for views of this element would be limited to no more than glimpses. Overall, the magnitude of change would be **low,** giving rise to a **minor** visual effect which is **not significant.**

8.9.108 **Table 8.12** provides a summary of the findings of the visual assessment undertaken for settlements.

Table 8.12 Summary of Visual Assessment of Settlements

Settlement (distance to Site)	LANDMAP : Visual Sensory (Value)	Sensitivity	Magnitude of Change	Level of Effect			Significant residual effect?
				Construction & Decommissioning	Operation Y1	Operation Y15	
Llangynwyd – (western hamlet, southern edge of Pont Rhyd-y-cyff) (2 km north)	(CYNONVS351, Maesteg, Low)	High	Construction and decommissioning Medium Operation: High	Moderate	Major	Major	**Yes** (Operation only)
Llangynwyd – Pont Rhyd-y-cyff (settlement as a whole) (2 km north)	(CYNONVS351, Maesteg, Low)	High	Very Low or No Change	Minor or No Effect	Minor or No Effect	Minor or No Effect	**No** (Operation only)
Maesteg	(CYNONVS884, Llynfi Valley, Moderate)	High	Very Low or No change (the majority of properties in the settlement) Medium (properties on edge of settlement with view towards the Site)	Minor or No Effect Moderate	Minor or No Effect Moderate	Minor or No Effect Moderate	No **Yes** (limited properties)

Settlement (distance to Site)	LANDMAP : Visual Sensory (Value)	Sensitivity	Magnitude of Change	Level of Effect			Significant residual effect?
				Construction & Decommissioning	Operation Y1	Operation Y15	
Lletty Brongu (2.75 km northeast)	(CYNONVS884, Llynfi Valley, Moderate)	High	Construction and decommissioning Medium Operation: High	Moderate	Major	Major	**Yes**
Bettws (3.2 km east)	(CYNONVS966, Bettws, Moderate)	High	Construction and decommissioning: Low (properties on western edge) Very Low to No Change (eastern and central properties) Operation: Medium (properties on western edge) Very Low to No Change (eastern and central properties)	Minor-moderate Minor to no effect	Moderate Minor to no effect	Moderate Minor to no effect	**Yes** (Operation only and western properties) No
Cefn Cribwr (3.2 km south)	(CYNONVS955, Cribwr, Moderate)	High	Construction and decommissioning: Low	Minor-moderate	Moderate	Moderate	**Yes** (Operation only)

Settlement (distance to Site)	LANDMAP : Visual Sensory (Value)	Sensitivity	Magnitude of Change	Level of Effect			Significant residual effect?
				Construction & Decommissioning	Operation Y1	Operation Y15	
			Operation: Medium				
Kenfig Hill and Pyle (3-5 km southwest)	(CYNONVS847, Pyle, Low)	High	Construction and decommissioning: Very Low to Low Operation: Low	Minor	Minor-Moderate	Minor-Moderate	No
Coedhirwaun (3 km southwest)	(NPTVS543, Coedhirwaun, Moderate)	High	Very Low	Minor / No Effect	Minor / No Effect	Minor / No Effect	No
Pen-y-fai (4.5 km southeast)	(CYNONVS726, Bridgend, Low)	High	Low to Very Low	Minor	Minor	Minor	No
North Cornelly / Cynffig	(CYNONVS847, Pyle, Low)	High	Very Low or No change	Minor to No Effect	Minor to No Effect	Minor to No Effect	No

National Trails and Long Distance Walking Routes

8.9.109 The following assessment focuses on the national trails and long-distance walking routes within 10 km of the Proposed Development identified in the filtering exercise in **ES Volume III, Appendix 8.7: Preliminary Assessment of Receptor Groups** as having the potential to experience significant effects.

8.9.110 In accordance with the methodology set out in **ES Volume III, Appendix 8.1: Landscape and Visual Impact Assessment Criteria** the sensitivity of users of long-distance routes is considered to be **high**.

Wales Coastal Path

8.9.111 The Wales Coastal Path follows the Welsh coastline from Ogmore-on-Sea (approximately 10 km south of the Site) past Southerndown and Porthcawl, through Port Talbot's industrial area and Aberavon beach, crossing the River Neath and following Swansea Bay into the city. This represents approximately 30 miles (48 km) of the route within the study area.

8.9.112 With reference to **ES Volume IV, Figure 8.21: Principal Visual Receptors to 20 km Blade Tip ZTV and Viewpoints**, there is variable theoretical visibility along the coastal path within the study area. The sections between Ogmore-on-Sea and Porthcawl (approximately 15 km, 10-15 km from the Site) show patches where five to six turbines would be theoretically visible, particularly from elevated cliff-top sections, interspersed with areas having no theoretical visibility in lower-lying sections and where the path passes behind headlands and other coastal features.

8.9.113 The sections through Port Talbot and Aberavon Beach (approximately 15 km, 12-20 km from the Site) show similar patterns of intermittent theoretical visibility, with industrial areas, harbour structures, and coastal development providing substantial additional screening not captured in the bare-earth ZTV. The Swansea Bay sections (approximately 18 km, 18-25 km from the Site) show reduced theoretical visibility with increasing distance.

8.9.114 **ES Volume III, Appendix 8.10: Visualisations: Viewpoints 1 to 15 -** Viewpoint 11 (Ogmore-on-Sea), approximately 11 km to the south, represents conditions along the southern section of the path, while **ES Volume III, Appendix 8.10: Visualisations: Viewpoints 1 to 15 -** Viewpoint 14 (The Mumbles, Swansea), approximately 23 km to the west illustrates conditions along the western extent of the path within the study area.

8.9.115 During construction, walkers would have very limited and distant views of construction activities, primarily tall cranes during turbine erection visible on the far horizon from elevated and open sections of the path. The intervening distance (10 km+) would substantially reduce the scale and prominence of these activities in views, generating a **very low** magnitude of change, resulting in an, at most, **minor** effects**.** The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site.

8.9.116 During operation, where five to six turbines would be theoretically visible from elevated sections of the path, they would appear as small vertical elements on the

distant inland horizon, occupying a small portion of the overall panoramic views available from the coast. The coastal focus of the route, with primary views orientated seaward, would further reduce the significance of inland views toward the Proposed Development. Additionally, coastal vegetation, dune systems, and built development along many sections of the route would provide substantial additional screening not reflected in the ZTV.

8.9.117 The solar arrays would not be visible from the Wales Coastal Path due to distance and intervening topography.

8.9.118 Accounting for distance, direction of primary views, and additional screening elements, the magnitude of change would be **low** to **very low**, resulting in a **minor-moderate** to **minor** level of effect that is **not significant**.

Cistercian Way (Wales)

8.9.119 The Cistercian Way is a long-distance trail that forms a circuit around Wales, linking Cistercian abbeys, monasteries, and related historic sites. Within the study area, the route passes through Margam Abbey and Park approximately 3-5 km west of the Site, then continues northward toward Neath Abbey and south toward Ewenny Priory.

8.9.120 With reference to **ES Volume IV, Figure 8.21: Principal Visual Receptors to 20 km Blade Tip ZTV and Viewpoints**, there is variable theoretical visibility along the Cistercian Way within the study area. The section passing through Margam Park which also forms part of the Ogwr Ridgeway Walk (approximately 5 km, 3-5 km from the Site) shows limited theoretical visibility due to the extensive woodland cover within the park, with only isolated areas where one to two turbines would be visible over the brow of the intervening hill through gaps in tree cover, which is confirmed by the **ES Volume III, Appendix 8.10: Visualisations: Viewpoints 1 to 15 -** Viewpoint 1 and Viewpoint 2 (Margam Park) photomontages. The northern sections toward Neath Abbey (approximately 10 km, 5-15 km from the Site) and southern sections toward Ewenny Priory (approximately 10 km, 5-15 km from the Site) show patchy theoretical visibility, with more extensive areas having no theoretical visibility due to the intervening topography and the route's tendency to follow valley bottoms and settled areas.

8.9.121 During construction, walkers would have very limited views of construction activities, primarily glimpses of tall cranes during turbine erection from specific elevated and open sections of the route. Within Margam Park, the extensive mature woodland would screen most views toward the Site, with only potential glimpses of the construction activities from specific clearings or viewpoints within the park. Visual effects would generate a **Very Low** magnitude of change, resulting in an, at most, **minor** level of effect. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site.

8.9.122 During operation, where turbines would be theoretically visible, they would typically appear as partial elements seen through or above woodland, or as distant features from more open sections of the route. The religious and historic focus of the route, with primary interest directed toward the Cistercian monuments and

their immediate settings, would further reduce the significance of distant views toward the Proposed Development.

8.9.123 Within Margam Park, which represents one of the key Cistercian sites along the route, the extensive mature woodland plantations would screen most views toward the Proposed Development, preserving the historic character and setting of this important section of the route. Any glimpsed views of turbine blades above trees would be peripheral to the main experience of the park's historic and designed landscape features.

8.9.124 The solar arrays would have minimal visibility from the Cistercian Way due to their lower vertical profile and the substantial screening provided by woodland and intervening topography, particularly within Margam Park. Indeed, **ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements**, illustrates that there would only have potential visibility of a small element of the solar development in addition to the turbines.

8.9.125 Accounting for the route's character, intervening vegetation, and the focus on historic monuments rather than wider landscape views, the magnitude of change would be **low** for sections with potential visibility (within 3-5 km), resulting in a **minor-moderate** level of effect that is **not significant,** and **very low** (within some areas at a distance of 5-15 km) resulting in a **minor** effect that is **not significant.**

Ogwr Ridgeway Walk/Taith Fford Las Ogwr

8.9.126 The Ogwr Ridgeway Walk forms part of a long ridge walk across southwest Wales, linking the Taff-Ely Ridgeway Walk with the Coed Morgannwg Way. It largely follows the tops of the southern Lower Pennant Sandstone ridge and notably bisects the Site on a northwest-southwest axis. The route runs from Mynydd y Gaer and Bryn y Wrach (east of the study area) to Mynydd Baeden, crossing through the Site and then heading northwest from the village of Coytrahen toward Mynydd Margam, taking in the valleys of the Ogwr Fawr and Fach, Garw and Llynfi.

8.9.127 **ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15** - Viewpoint 3 and Viewpoint 12 on the Ogwr Ridgeway Walk illustrate the types of views available from this route, as do the additional visualisations for Viewpoints 18 and 19 in **ES Volume III, Appendix 8.12: Photomontages Viewpoints 16, 18, 19**.

8.9.128 With reference to **ES Volume IV, Figure 8.21: Principal Visual Receptors to 20 km Blade Tip ZTV and Viewpoints**, there is extensive theoretical visibility along substantial portions of this route, particularly where it traverses the higher ridgelines. The section that passes directly through the Site (approximately 3-4 km) would have immediate and close-range visibility of all aspects of the Proposed Development. Sections to the east and west of the Site (within approximately 5 km) would have extensive theoretical visibility of five to six turbines, while more distant sections would have more variable visibility depending on the local topography.

8.9.129 During construction, walkers would experience close-range views of construction activities along the section passing through the Site, including extensive groundworks, access road construction, foundation excavation, crane operations,

and turbine component delivery and erection. Construction compounds, materials storage, and vehicle movements would be clearly visible from the route. There would be a **very high** magnitude and **major significant** effect on the section of the route which passes through the Site (which extends to approximately 3-4 km). Thereafter the visibility of the construction phase works would quickly reduce from the route, with the magnitude of change no greater than **medium** and the resulting effect no greater than **moderate** which would be **not significant** for the section up to 5 km away and no greater than **minor** thereafter beyond 10 km . The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site.

8.9.130 During operation, where the route passes through or close to the Site (within approximately 2 km), the turbines would appear as prominent vertical elements at very close range, creating a notable change to the visual experience, as illustrated in the additional visualisations for Viewpoints 18 and 19 in **ES Volume III, Appendix 8.12 Photomontages Viewpoints 16, 18 and 19**. The turbines would become one of the defining features of views in these sections. From the section passing directly through the Site, walkers would experience turbines from multiple angles and perspectives as they move along the route.

8.9.131 The substation, positioned south of the route and set against the wooded backdrop of Craig-yr-Aber Woodland, benefits from this visual containment which helps to integrate the lower-level infrastructure into the landscape setting. Nevertheless, the substation and some solar compartments would be clearly visible from some sections of the route within and close to the Site, appearing as noticeable new elements in the landscape at Year 1. At year 15, the majority of solar compartments would be much less visible, once the proposed mitigation planting has begun to mature. From elevated sections of the route, walkers would have clear views down onto the solar arrays at Year 1, which would contrast with the surrounding moorland and grassland. However, by Year 15 many of the solar arrays would begin to be screened by new planting in particular the lower southern compartments (J,K,L,N,M and O) and appear well assimilated into the landscape. Parcels F and G and D would be more apparent when in close proximity and passing their fields which will have more of an open aspect towards the internal Site track (Ogwr Ridgeway). The concentration of ground-level infrastructure predominantly south of the route, rather than on both sides, creates a more localised visual effect and allows the northern views to retain their more open, less developed character.

8.9.132 As distance from the Site increases, the visual effect would gradually reduce. From eastern and western sections 5-10 km from the Site, the turbines would appear as notable but far less prominent elements, seen in the context of the broader rolling upland landscape. Beyond 10 km, the turbines would form no more than minor elements in wider panoramic views, with very limited influence on the overall walking experience.

8.9.133 Overall, the magnitude would be **high** for the section passing through the Site (which extends to approximately 3-4 km), **high-medium** for sections within 5 km of the Site, **medium** for sections 5-10 km away, and **low** to **very low** for sections beyond 10 km. This would result in a **major** level of effect which is **significant** for

sections within the Site, **moderate** to **major** levels of effect which is **significant** for sections within 5 km, **moderate**, but **not significant** for sections between 5-10 km away, and **minor-moderate** to **minor** level of effect which is **not significant** for sections beyond 10 km. Table 8.13 summaries the visual effects of the Proposed Development on national trails and long-distance walking routes.

Table 8.13 Summary of Residual Effects on National Trails and Long-Distance Walking Routes

Receptor (distance to Site, route length)	Sensitivity	Construction and Decommissioning			Operation Year 1		Operation Year 15			
		Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?
Wales Coastal Path (Ogmore-on-Sea to Swansea) (distance of 4 km)	High	Very Low	Minor	No	Low to Very Low	Minor-moderate to Minor	No	Low to Very Low	Minor to moderate to Minor	No
Cistercian Way - sections within Margam Park (3-5 km for distance of 5 km)	High	Very Low	Minor	No	Low	Minor-moderate	No	Low	Minor-moderate	No
Cistercian Way - other sections within study area (5-15 km for	High	Very Low	Minor	No	Low to Very Low	Minor-moderate to Minor	No	Low to Very Low	Minor-moderate to Minor	No

Receptor (distance to Site, route length)	Sensitivity	Construction and Decommissioning			Operation Year 1		Operation Year 15			
		Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?
distance of 10 km)										
Ogwr Ridgeway Walk - section through Site (3-4 km)	High	Very High	**Major**	**Yes**	High	**Major**	**Yes**	High	**Major**	**Yes**
Ogwr Ridgeway Walk - sections within 5 km of Site	High	Medium	Moderate	No	Medium-High	**Moderate-major**	**Yes**	Medium-High	**Moderate-major**	**Yes**
Ogwr Ridgeway Walk - sections within 5-10 km of Site	High	Low	Minor	No	Medium	Moderate	No	Medium	Moderate	No
Ogwr Ridgeway Walk - sections	High	Very Low	Negligible	No	Low to Very Low	Minor-moderate to Minor	No	Low to Very Low	Minor-moderate to Minor	No

Receptor (distance to Site, route length)	Sensitivity	Construction and Decommissioning			Operation Year 1		Operation Year 15			
		Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?
beyond 10 km										

Public Rights of Way

8.9.134 There are a number of PRoW which pass through the Site and the surrounding landscape as illustrated on **ES Volume IV, Figure 13.1: PRoW**. Those routes which are located within the Site itself would have the greatest potential for visibility of the Proposed Development, with the other built elements visible to some degree along with the proposed turbines. However, **ES Volume IV, Figure 8.30: Combined Screened ZTV Solar and Substation Elements** illustrates that during the operational phase from some sections of the routes, even within the Site, the ground level components would not be visible, such as from PRoW LDL/4/3. However, due to the close proximity of the turbines to the PRoW within the Site there would in general be a **high** magnitude of change and a **major** effect which would be **significant**. This would also apply during the construction and decommissioning phases, due to the close proximity of the receptors to the on-site activities.

8.9.135 Beyond the Site the potential for impacts to the view from the PRoW network begins to decrease as the Proposed Development becomes a smaller element in the view and the lower lying built elements of the Proposed Development become screened by intervening hedgerows and other vegetation and built form in the landscape. Nonetheless where there are clear open views from sections of the PRoW network in the surrounding landscape up to a distance of 5 km there would be a **medium** magnitude of change and a **moderate** effect during the operational phase. For routes beyond 5 km from the Proposed Development, the potential for impacts would further diminish, with many PRoW experiencing no visibility. Even those with sections of clear open views towards the Site would have no greater than a **moderate, not significant** effect. During construction and decommissioning effects from the PRoW network beyond the Site would generally be very limited, with no significant effects arising.

Cycle routes

8.0.5 In accordance with the methodology set out in **ES Volume III, Appendix 8.1: Landscape and Visual Impact Assessment Criteria** the sensitivity of users of cycle routes is considered to be **high**. A summary of the effects is presented in **Table 8.14.**

Route 4 (London to Fishguard)

8.9.136 Route 4 passes approximately 200 m to the south of the Site at its closest point, heading west from Aberkenfig through Margam Country Park toward Margam and Port Talbot, before following the Wales Coast Path alongside the beaches of the Swansea area.

8.9.137 With reference to **ES Volume IV, Figure 8.21: Principal Visual Receptors to 20 km Blade Tip ZTV and Viewpoints** which indicates theoretical visibility along this route, actual visibility would be substantially reduced by the extensive roadside vegetation and intervening woodland and field boundary vegetation that characterise much of this route.

8.9.138 The section between Aberkenfig and Margam Country Park (approximately 6 km, 200 m-5 km from the Site) follows minor roads and dedicated cycle paths, many of which are lined with mature hedgerows, trees, and woodland edge planting. These features provide substantial screening, creating intermittent rather than continuous views of the Site. Even in the closest section, south of the Site (200 m-1 km), established field boundary hedgerows with mature hedgerow trees in the intervening landscape would filter and partially screen many views of the Proposed Development.

8.9.139 The route's passage through Margam Country Park (approximately 3 km, 3-6 km from the Site) is characterised by extensive mature woodland plantations and historic designed landscape features that would almost entirely screen views toward the Site. Only in very specific clearings or managed viewpoints might glimpses of blade tips be possible, and these would be highly localised and not representative of the typical cycling experience through the park.

8.9.140 The coastal sections west of Port Talbot (approximately 15 km, 8-20 km from the Site) benefit from both distance and the substantial intervening urban fabric, industrial areas, and coastal vegetation. Where the route passes through settlements and along seafront promenades, buildings, street trees, and coastal shelterbelts would provide additional screening not accounted for in the ZTV.

8.9.141 During construction, cyclists would have filtered and intermittent views of construction activities in the section immediately south of the Site, with roadside hedgerows and field boundaries creating a more visually enclosed corridor than suggested by the bare-earth ZTV. The tall cranes used during turbine erection would be visible above the vegetation, but lower-level construction activity would be substantially screened. There would be a **very low** magnitude of change resulting in **minor** visual effects. The same activities would be associated with the decommissioning period, but in reverse as the built elements of the Proposed Development were removed from the Site.

8.9.142 During operation, where the turbines would be theoretically visible in the section closest to the Site (200 m - 2 km), they would appear above the intervening vegetation but viewed through a framework of hedgerows and trees that would reduce their prominence in the view. As the route passes through Margam Country Park, visibility would be almost entirely restricted by mature woodland, with only occasional glimpsed views of blade tips possible from specific viewpoints.

8.9.143 The solar arrays would have significantly reduced visibility due to their lower vertical profile. Even in the closest sections of the route, these elements would likely be screened entirely by roadside hedgerows and intervening field boundaries, which are typically 1.5-2 m in height and form effective visual barriers to these lower-level components. This would be further reinforced by the additional planting included with the Proposed Development.

8.9.144 Accounting for this additional screening, overall, the magnitude of change would be **low** for the sections closest to the Site (200 m – 2 km), **low** to **very low** for sections through Margam Park (3-6 km), and **no change** for coastal sections (8-20 km). This would result in a **minor-moderate** effect which is **not significant** for

the closest sections, **minor** effect which is **not significant** for sections through Margam Park, and **no effect** which is **not significant** for coastal sections.

Route 884 (Bryngarw House to Pontycymmer)

8.9.145 Route 884 starts at Bryngarw House and Country Park and follows the Garw valley south to Pontycymmer. This route largely follows the valley floor of a steep-sided valley with extensive riverside vegetation and woodland on the valley sides. While the ZTV shows limited theoretical visibility, the actual visibility would be further reduced by the tree cover along the route, which forms a near-continuous visual envelope around the cyclist.

8.9.146 The route begins in Bryngarw Country Park, which has extensive mature woodland plantations that would completely screen any views toward the Proposed Development. As it follows the valley toward Pontycymmer, the combination of trees along the river corridor, developed areas with garden vegetation, and wooded valley sides creates a highly enclosed visual experience with very limited outward views.

8.9.147 During construction, operation and decommissioning, even potential glimpses of tall structures or blade tips identified in the theoretical ZTV would likely be eliminated by the intervening woodland vegetation, particularly when trees are in leaf.

8.9.148 The solar arrays would not be visible from any section of this route.

8.9.149 Accounting for this additional screening, the magnitude of change for all phases would be **very low** to **no change**, resulting in a **minor** to **no effect** that is **not significant**.

Route 885 (Bridgend to Afan Forest Park)

8.9.150 Route 885 connects Bridgend and Afan Forest Park, following the Ogmore River between Bridgend and Aberkenfig where it meets Route 4. Much of this route follows established river corridors with substantial riparian vegetation and river valley woodlands that are not fully captured in the bare-earth ZTV.

8.9.151 The section between Bridgend and Aberkenfig (approximately 5 km in length, 3-8 km from the Site) has extensive riverside trees and shrubs, creating a visually enclosed corridor for much of its length. Where the route passes through developed areas, garden vegetation, street trees, and built structures provide additional screening. The section near Aberkenfig (approximately 2 km in length, 2-4 km from the Site) shows more consistent theoretical visibility, but here, too, mature vegetation along the route and in the intervening landscape would substantially filter views.

8.9.152 During construction, cyclists would have occasional, filtered views of the tallest construction elements, primarily cranes during turbine erection, but these would be glimpsed rather than sustained views through gaps in the vegetation. During operation, where turbines or other built elements of the Proposed Development would be theoretically visible, they would appear as partial elements above or between trees, with extensive sections of the route having no visibility at all due to

the combined screening effect of riverside vegetation and intervening woodland blocks. The same would apply to the decommissioning phase.

8.9.153 The magnitude of change during all phases would be as a worse-case **low**, resulting in a **minor-moderate** level of effect that would be **not significant** .

Route 887 (Port Talbot to Afan Forest Park)

8.9.154 Route 887 connects Port Talbot and Afan Forest Park, following the River Afan and A4107 through a steep-sided, extensively wooded valley. The combination of valley landform and substantial afforestation in this area creates a highly enclosed visual envelope around the route.

8.9.155 While the ZTV shows that some elevated sections might have theoretical visibility of one to two turbines, in practice, the extensive coniferous and mixed woodland plantations throughout the Afan Forest area would almost entirely eliminate any potential views toward the Site. The route largely follows the valley floor where vegetation screening is most effective, and even on climbs toward the forest park, the surrounding woodland would contain views.

8.9.156 During construction, operation and decommissioning, the visual effects would be negligible, with even the theoretical glimpses shown in the ZTV likely to be screened by woodland vegetation.

8.9.157 The solar arrays would not be visible from this route.

8.9.158 Accounting for this additional screening, the magnitude of change for all phases would be **very low** to **no change**, resulting in a **minor** to **no effect** that is **not significant**.

Table 8.14 Summary of Residual Visual Effects on Cycle Routes

Receptor (section route length, distance to Site)	Sensitivity	Construction and Decommissioning			Operation (Year 1 and Year 15)		
		Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?
Route 4 (6 km section, 200 m - 2 km from the Site)	High	Very Low	Minor	No	Low	Minor-moderate	No
Route 4 - Margam Park section (3-6 km from the Site)	High	Very Low	Minor to No Effect	No	Low to Very Low	Minor	No
Route 4 - coastal sections (8-20 km from the Site)	High	No Change	No Effect	No	No Change	No Effect	No
Route 884 (Bryngarw House to Pontycymmer) (2-5 km from the Site)	High	Very Low to No Change	Minor to No Effect	No	Very Low to No Change	Minor to No Effect	No
Route 885 (Bridgend to Afan Forest Park) (2-10 km from the Site)	High	Low	Minor-moderate	No	Low	Minor-moderate	No
Route 887 (Port Talbot to Afan Forest Park) (7.5 - 10 km from the Site)	High	Very Low to N**o Change**	Minor to No Effect	No	Very Low to No Change	Minor to No Effect	No

Roads and railways

Construction and Operation

8.9.159 The following assessment covers roads within 20 km of the Site identified in the filtering exercise in **ES Volume III, Appendix 8.4: LANDMAP Detailed Assessment** as having the potential to experience significant effects.

8.9.160 In accordance with the methodology set out in **ES Volume III, Appendix 8.1: Landscape and Visual Impact Assessment Criteria** the sensitivity of users of minor roads is considered to be **medium**, while the sensitivity of users of trunk roads is considered to be **low**. A summary of the effects is presented in **Table 8.15.**

M4

8.9.161 The M4 passes approximately 1.7 km to the south of the Site at its closest point, with approximately 37 km of the route falling within the detailed 20 km detailed study area from Junction 35 (Pencoed) to Junction 40 (Port Talbot).

8.9.162 With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints** there would be highly variable visibility along the M4 corridor. The sections between Junction 36 (Sarn) and Junction 38 (Margam) (approximately 12 km) show patches where five to six turbines would be theoretically visible, particularly between Sarn Services and Junction 37 (approximately 6 km), but with significant gaps of no theoretical visibility. East of Junction 36 (toward Pencoed) (approximately 10 km) shows substantially reduced theoretical visibility, with very limited areas where turbines would be visible. Similarly, west of Junction 38 towards Port Talbot (approximately 20 km) has significantly reduced visibility with only isolated patches where one to two turbines might be theoretically visible at distances of 8-20 km.

8.9.163 During construction, motorists would experience intermittent views of construction activities, primarily tall cranes during turbine erection. The fast-moving nature of travel along the motorway means views would be fleeting and constantly changing, with views primarily to the northern periphery of the field of view. The solar arrays would be largely screened by intervening topography and roadside vegetation. The same would apply to the decommissioning phase.

8.9.164 During operation, where the M4 passes through areas where five to six turbines would be theoretically visible (at distances of 1.7-4 km), actual visibility would be significantly reduced by roadside vegetation, fencing, and the cutting/embankment profile of the motorway. The motorway passes through several cuttings, particularly near Junction 36, which would substantially restrict views northward toward the Proposed Development. Where visible, turbines would form vertical elements on the skyline to the north but would be viewed at speed and as part of a much broader visual context that already includes other infrastructure elements. The solar arrays would have minimal visibility from the M4 due to their lower vertical profile and the intervening topography.

8.9.165 The magnitude of change during all phases would be **low**, resulting in a **minor** level of effect that is **not significant**, given the transient nature of views, existing screening, and the current context of infrastructure within the landscape.

A4063 (Bridgend to Maesteg)

8.9.166 The A4063 connects Bridgend to Maesteg and passes adjacent to the northeast corner of the Site, with approximately 14 km of the route falling within the 20 km detailed study area. While the ZTV **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints** indicates theoretical visibility to five to six turbines along portions of this route, actual visibility would be substantially reduced by the extensive roadside woodland that lines the route between Todu/Aberkenfig to the southwest, moving through Coytrahen and towards the urban extents of Maesteg to the north of the Site.

8.9.167 The section between Coytrahen and Pont Rhyd-y-cyff which passes adjacent to the northeast Site boundary for 600 m and up to 4 km from the Site is characterised by dense roadside woodland on both sides of the route, creating a tunnel-like effect that substantially restricts outward views toward the Proposed Development. This woodland corridor is well-established and forms a continuous visual barrier for much of this section, particularly during the spring and summer months when trees are in full leaf. Where gaps do occur in the woodland, they tend to be brief and would provide only fleeting glimpses toward the Proposed Development rather than sustained views.

8.9.168 The section through Llyngynwyd/Pont Rhyd-y-cyff towards the centre of Maesteg (approximately 3 km, 2-5 km from the Site) has a combination of roadside woodland and residential development that collectively provides substantial additional screening. The urban fabric of Maesteg itself, with its buildings, wooded rail corridor, roadside trees and gardens would further restrict views from the northern sections of the route.

8.9.169 The southern section from Coytrahen to Tondu and Aberkenfig (approximately 2 km, 0.75-1.5 km from the Site) follows the valley floor alongside the wooded corridor of the River Llynfi. This section is characterized by continuous riverside woodland and tree belts that line much of the road, creating a substantial visual barrier between the road and the Site. The mature riparian woodland along the River Llynfi, combined with woodland on the rising valley sides creates substantial screening that would significantly restrict views locking west towards the Proposed Development. The road passes through the built-up areas of Tondu and Aberkenfig where built form and trees provide additional screening elements.

8.9.170 During construction, road users would have highly filtered and intermittent views of construction activities, primarily glimpses of tall cranes during turbine erection visible above or between trees where gaps in the woodland allow. Lower-level construction activities would be likely be entirely screened by the roadside woodland even in the section closest to the Site. The same would apply to the decommissioning phase.

8.9.171 During operation, where five to six turbines would be theoretically visible based on **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, actual

visibility would be substantially reduced by the roadside woodland. Where visible through gaps in trees, turbines would appear as partial vertical elements rather than being seen in their entirety. The solar arrays would be almost entirely screened from view due to their lower vertical profile and the effective visual barrier created by the roadside woodland.

8.9.172 Given the substantial additional screening provided by the roadside woodland between Coytrahen and Maesteg, the magnitude of change for all phases would be **medium** for small sections with gaps in woodland, and **Very Low** to **Low** for the majority of the route, resulting in a **moderate** effect that would be **significant** only at specific locations with clear views, and **minor** effects which is **not significant** for most of the route.

A48 (Bridgend to Cardiff via Cowbridge)

8.9.173 The A48 runs parallel to the M4, connecting Bridgend to Cardiff via Cowbridge, and passes approximately 3.5 km to the southwest of the Site at its closest point, with approximately 25 km of the route falling within the 20 km detailed study area. The Laleston to Bridgend section (approximately 8 km, 3.5-7 km from the Site) shows patchy theoretical visibility with areas where five to six turbines would be visible interspersed with substantial areas having no visibility. The Bridgend to Cowbridge section (approximately 12 km, 7-20 km from the Site) and the western section toward Port Talbot (approximately 5 km, 5-10 km from the Site) both show significantly reduced theoretical visibility.

8.9.174 During construction, road users would have highly intermittent views of construction activities, primarily tall cranes used during turbine erection, and only from specific sections of the route where the ZTV indicates visibility. The same would apply to the decommissioning phase.

8.9.175 During operation, where the A48 passes through areas where five to six turbines would be theoretically visible, actual visibility would be significantly reduced by substantial roadside vegetation and the often-enclosed nature of the road corridor. The solar arrays would have minimal visibility from the A48 due to their lower height and substantial intervening vegetation.

8.9.176 The magnitude of change for all phases would be **low** to **medium** for all phases, resulting in a **minor-moderate** level of effect that is **not significant**.

A4107 (Port Talbot to Abergwynfi/Blaengwynfi)

8.9.177 The A4107 starts at Penycae in Port Talbot adjacent to the M4 and follows the Afan Valley northward, passing through Cwmafan, Pontrhydyfen, Cymer, Croeserw, and then continuing to Blaengwynfi and Abergwynfi. The route passes approximately 7.7 km to the northeast of the Site at its closest point, with approximately 15 km of the route falling within the 20 km detailed study area.

8.9.178 With reference to the ZTV (**ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**) the vast majority of the A4107 falls entirely outside the zones of theoretical visibility. The southern sections in Port Talbot and Cwmafan (approximately 5 km, 10-15 km from the Site) show no theoretical visibility on the ZTV. As the route continues northward through Pontrhydyfen and Cymer

(approximately 4 km, 8-12 km from the Site), it remains completely outside the ZTV with no theoretical visibility.

8.9.179 The ZTV does indicate small, isolated patches of potential visibility near Croeserw (approximately 3 km, 8-10 km from the Site), but these are extremely limited and show only one to two turbines might be theoretically visible in very specific locations. The northern sections at Blaengwynfi and Abergwynfi (approximately 3 km, 7.7-9 km from the Site) similarly show only tiny, isolated patches where one to two turbines might be theoretically visible, with the vast majority of this section also falling outside the ZTV entirely.

8.9.180 During construction, road users would have virtually no visibility of construction activities along the entire route. The only potential exception would be extremely limited glimpses of the tops of tall cranes from specific elevated locations near Croeserw or the highest parts of Blaengwynfi and Abergwynfi, and these would be at distances of 8-10 km. The same would apply to the decommissioning phase.

8.9.181 During operation, turbine visibility would be virtually non-existent along the entire route. The extremely limited patches where the ZTV indicates potential visibility of one to two turbines are likely to be further screened by local vegetation and buildings not accounted for in the bare-earth ZTV. Even in these isolated locations, only blade tips might be visible at considerable distance and would form extremely minor elements in the landscape.

8.9.182 The solar arrays would not be visible from any section of this road due to distance and intervening topography.

8.9.183 Given that virtually the entire route falls outside the ZTV, combined with additional screening from vegetation and buildings, the magnitude of change for all phases would be **very low** to **no change**, resulting in a **minor** to **no effect** that is **not significant**.

A473 (Bridgend to Pontypridd)

8.9.184 The A473 connects Bridgend to Pontypridd and passes approximately 4.4 km to the south of the Site at its closest point, with approximately 18 km of the route falling within the 20 km detailed study area.

8.9.185 With reference to the ZTV (**ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**), the vast majority of this route falls outside the zones of theoretical visibility.

8.9.186 The western section near Bridgend (approximately 3 km, 4.4-7 km from the Site) shows small, isolated patches where five to six turbines might be theoretically visible, but these are very limited in extent. The section between Bridgend and Pencoed (approximately 5 km, 7-12 km from the Site) shows even more limited theoretical visibility, with most of this section falling outside the ZTV entirely. The eastern sections beyond Pencoed (approximately 10 km, 12-20 km from the Site) show virtually no theoretical visibility, falling almost completely outside the ZTV.

8.9.187 During construction, road users would have very limited and intermittent views of construction activities, confined to small sections to the west of Bridgend around Laleston. The same would apply to the decommissioning phase.

8.9.188 During operation, where five to six turbines would be theoretically visible, they would appear as moderate-scale elements on the northern skyline, but these views would be extremely limited in extent.

8.9.189 The solar arrays would not be visible from this road due to distance and screening.

8.9.190 The magnitude of change for all phases would be **low**, resulting in a **minor-moderate** level of effect that is **not significant**.

A4061 (Ogmore Valley Road)

8.9.191 The A4061 Ogmore Valley Road passes approximately 2.5 km to the southeast of the Site at its closest point, with approximately 15 km of the route falling within the 20 km detailed study area.

8.9.192 With reference to the ZTV (**ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**), the upland section between Ogmore Vale and Nant-y-moel (approximately 7 km, 5-12 km from the Site) falls almost entirely outside the zones of theoretical visibility, with only very small, isolated patches showing potential visibility of one to two turbines.

8.9.193 The southern sections toward Bryncethin (approximately 8 km, 2.5-10 km from the Site) show more variable theoretical visibility on the ZTV, with some areas where three to six turbines would be theoretically visible interspersed with substantial areas having no theoretical visibility.

8.9.194 During construction, road users would have limited views of construction activities, primarily from specific points in the southern section where the ZTV indicates visibility. The same would apply to the decommissioning phase.

8.9.195 During operation, where the southern section passes through areas where three to six turbines would be theoretically visible, they would appear as moderate-scale elements on the western skyline. The upland sections would have virtually no visibility of the Proposed Development. The solar arrays would have very limited visibility from this road due to intervening topography.

8.9.196 The magnitude of change for all phases would be **low**, resulting in, at most, a **minor-moderate** level of effect that is **not significant**.

A4106 (Porthcawl to A48)

8.9.197 The A4106 connects Porthcawl to the A48 and passes approximately 4.9 km to the south of the Site at its closest point, with approximately 5 km of the route falling within the 20 km detailed study area. The eastern section near the A48 junction (approximately 2 km, 4.9-7 km from the Site) shows more consistent theoretical visibility, while the section passing through and toward Porthcawl (approximately 3 km, 7-10 km from the Site) shows variable visibility with patches where turbines would be visible interspersed with areas having no theoretical visibility.

8.9.198 During construction, road users would have limited and intermittent views of construction activities, primarily of tall cranes during turbine erection. The same

would apply to the decommissioning phase in relation to the decommissioning works.

8.9.199 During operation, where five to six turbines would be theoretically visible, they would appear as moderate-scale elements on the northern skyline, primarily from the eastern section which traverses more open agricultural land. The solar arrays would not be visible from this road due to distance and intervening topography.

8.9.200 The magnitude of change for all phases would be **low**, resulting in a **minor-moderate** level of effect that is **not significant**.

A4229 (Porthcawl to M4)

8.9.201 The A4229 links Porthcawl to the M4 and passes approximately 5.2 km to the southwest of the Site at its closest point, with approximately 6 km of the route falling within the 20 km detailed study area. This relatively short route runs in a broadly north-south direction, connecting the coastal town of Porthcawl with Junction 37 of the M4.

8.9.202 With reference to the ZTV (**ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**), there is varying theoretical visibility along different sections of this route:

8.9.203 The northern section near Junction 37 of the M4 (approximately 2 km, 5.2-7 km from the Site) shows more consistent theoretical visibility on the ZTV, with areas where five to six turbines would be visible. However, this section is characterised by the linear woodland of the road embankment, which would substantially screen views toward the Site, effectively restricting outward views for much of this section despite its proximity to the elevated motorway junction.

8.9.204 The middle section which bypasses South Cornelly (approximately 2 km, 6-8 km from the Site) similarly has tall roadside hedgerows and linear woodland bounding the road. This continuous corridor of mature vegetation would provide substantial additional screening beyond what is indicated in the ZTV. While the theoretical visibility shows areas where five to six turbines might be visible, the actual visibility would be significantly limited to occasional gaps in the roadside vegetation.

8.9.205 The southern section approaching Porthcawl (approximately 2 km, 8-10 km from the Site) shows significantly reduced theoretical visibility on the ZTV, with substantial areas falling outside the zones of visibility entirely, particularly as the road enters the built-up area of Porthcawl. This section is also more enclosed by development and urban vegetation.

8.9.206 During construction, due to the substantial roadside vegetation, road users would have very limited views of construction activities. The tall cranes used during turbine erection might be glimpsed briefly through occasional gaps in the roadside hedgerows and woodland, if any exist, but these would be highly filtered views at distances of 5-8 km. Most construction activities would be entirely screened from view. The same would apply to the decommissioning phase in relation to the decommissioning works.

8.9.207 During operation, despite the ZTV indicating areas where five to six turbines would be theoretically visible, the tall roadside hedgerows and linear woodland bounding

the road between South Cornelly and the M4 would significantly restrict actual visibility. Any views of turbines would be limited to very brief glimpses through occasional gaps in vegetation, appearing as distant elements on the northeastern skyline that would not form prominent features in the visual experience of road users.

8.9.208 The solar arrays would have no visibility from this road due to distance, intervening topography, and particularly the extensive roadside vegetation that characterises the route.

8.9.209 Considering the substantial screening available, the magnitude of change for all phases would be **low**, resulting in a **minor-moderate** level of effect that is **not significant**.

B4281 (Pyle and Kenfig Hill)

8.9.210 The B4281 runs through Pyle and Kenfig Hill and passes approximately 920 m to the south of the Site at its closest point, with approximately 7 km of the route falling within the 20 km detailed study area. The northern section at Kenfig Hill (approximately 3 km, 920 m – 3 km from the Site) shows significant areas where five to six turbines would be theoretically visible. The central section through settlements (approximately 2 km, 3-5 km from the Site) and southern section toward North Cornelly (approximately 2 km, 5-7 km from the Site) show increasingly variable and reduced visibility.

8.9.211 During construction, road users would have clear views of construction activities, particularly from the northern edge of Kenfig Hill where the road climbs toward the Site with few intervening visual barriers. The same effects would apply to the decommissioning phase.

8.9.212 During operation, where all six turbines would be theoretically visible, they would appear as prominent vertical elements in relatively close proximity, especially from the northern edge of Kenfig Hill. Through the settlements, built form would intermittently screen views, while in the southern sections, increased roadside vegetation and the changing alignment of the road would reduce visibility. Some areas of the solar arrays are also anticipated to be visible from elevated sections north of Kenfig Hill where gaps in the intervening vegetation allow.

8.9.213 The magnitude of change for all phases would be **medium to high**, resulting in a **moderate** level of effect that is **significant** in sections with open views, particularly on the northern edge of Kenfig Hill.

B4265 (Coastal road connecting Bridgend to Barry)

8.9.214 The B4265 coastal road connects Bridgend to Barry via Llantwit Major and passes more than 5 km to the south of the Site at its closest approach point, with approximately 20 km of the route falling within the 20 km detailed study area. Near its western end (approximately 5 km, 5-10 km from the Site), some small, isolated patches show potential visibility of one to two turbines, but most of this route (approximately 15 km, 10-20 km from the Site) lies outside the zones of theoretical visibility entirely.

8.9.215 During construction, road users would have very limited visibility of construction activities due to distance and intervening landform. The same would apply to the decommissioning phase.

8.9.216 During operation, turbines would be visible from very limited sections of the route, appearing as small elements on the distant skyline. The coastal alignment of the route means that the primary focus for travellers is toward the Bristol Channel to the south. The solar arrays would not be visible from this road.

8.9.217 The magnitude of change for all phases would be **very low**, resulting in a **minor** level of effect that is **not significant**.

B4524 (Porthcawl to North Cornelly)

8.9.218 The B4524 connects Porthcawl to North Cornelly and passes approximately 4 km to the south of the Site at its closest point, with approximately 4 km of the route falling within the 20 km detailed study area. The northern section near North Cornelly (approximately 2 km, 4-6 km from the Site) shows patches where four to six turbines would be theoretically visible, while the southern section approaching Porthcawl (approximately 2 km, 6-8 km from the Site) shows reduced or no visibility.

8.9.219 During construction, road users would have intermittent views of construction activities, primarily tall cranes during turbine erection. The same would apply to the decommissioning phase in relation to the decommissioning works.

8.9.220 During operation, where four to six turbines would be theoretically visible, they would appear as moderate-scale elements on the northern skyline, primarily from the northern section between North Cornelly and Kenfig Hill. The solar arrays would not be visible from this road due to distance and intervening landscape features.

8.9.221 The magnitude of change in all phases would be low, resulting in a **minor-moderate** level of effect that is **not significant**.

Railways

8.9.222 The local area includes the South Wales Main Line, serving Neath Port Talbot and Bridgend (approximately 4.5 km to the south of the Site at its closest point). With reference to **ES Volume IV, Figure 8.4: Blade Tip ZTV to 20 km with Viewpoints**, part of the route would have no theoretical visibility, or would lie at the very edge of the area with theoretical visibility indicating visibility would likely be restricted to blade tips only. Large sections of the route are also lined with mature vegetation which serves to notably restrict the potential for visibility towards the Site. Residential and commercial development areas also line the route, particularly as it passes through Pyle. There would generally be **no effect** on the route during construction, operation or decommissioning with some sections experiencing a **low** magnitude of change which, combined with the **medium** sensitivity, would generate a **minor** effect which is **not significant**.

8.9.223 The Maesteg Line is a branch line connecting Maesteg to Bridgend (approximately 1 km to the west of the Site at its closest point). The vast majority of the route is lined with mature vegetation which serves to notably restrict the potential for

visibility towards the Site. The route also runs in the lower part of the Llynfi valley such that intervening topography would also serve to screen much of the Proposed Development, with the route also in cutting in parts. Residential areas also line the route, particularly as it approaches both Maesteg and Bridgend, with the built development also screening potential views towards the Site. There would generally be **no effect** on the route during construction, operation or decommissioning with some sections experiencing a **low** magnitude of change which, combined with the **medium** sensitivity, would generate a **minor** effect which is **not significant**.

Table 8.15 Summary of Residual Visual Effects on Roads and Railways

Receptor (distance to Site, route length)	Sensitivity	Construction and Decommissioning			Operation (Year 1 and Year 15)		
		Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?
M4 (1.7 km south of Site, 37 km within study area)	Low	Low	Minor	No	Low	Minor	No
A4063 (adjacent to NE corner of Site, 14 km within study area)	Medium	Very Low – Low to Medium	Moderate to Minor	**Yes** (at specific gaps only)	Medium to Very Low and Low	Moderate to Minor	**Yes** (at specific gaps only)
A48 (3.5 km southwest of Site, 25 km within study area)	Medium	Low to Medium-	Minor-moderate	No	Low to Medium	Minor-moderate	No
A4107 (Port Talbot to Abergwynfi, 7.7 km northeast of Site, 15 km within study area)	Medium	Very Low to No Change	Minor to No Effect	No	Very Low to No Change	Minor to No Effect	No
A473 (4.4 km south of Site, 18 km within study area)	Medium	Low	Minor-moderate	No	Low	Minor-moderate	No
A4061 (2.5 km southeast of Site, 15 km within study area)	Medium	Low	Minor-moderate	No	Low	Minor-moderate	No

Receptor (distance to Site, route length)	Sensitivity	Construction and Decommissioning			Operation (Year 1 and Year 15)		
		Magnitude of Change	Level of Effect	Significant residual effect?	Magnitude of Change	Level of Effect	Significant residual effect?
A4106 (4.9 km south of Site, 5 km within study area)	Medium	Low	Minor-moderate	No	Low	Minor-moderate	No
A4229 (5.2 km southwest of Site, 6 km within study area)	Medium	Low	Minor-moderate	No	Low	Minor-moderate	No
B4281 (920 m south of Site, 7 km within study area)	Medium	Medium to High	Moderate	**Yes** (in sections)	Medium to High	Moderate	**Yes** (in sections)
B4265 (>5 km south of South, 20 km within study area)	Medium	Very Low	Minor	No	Very Low	Minor	No
B4524 (4 km south of Site, 4 km within study area)	Medium	Low	Minor-moderate	No	Low	Minor-moderate	No
South Wales Main Line Railway (2.7 km from Site)	Medium	Low to None	Minor to No Effect	No	Low to None	Minor to No Effect	No
Maesteg Line Railway (0.6 km from Site)	Medium	Low to None	Minor to No Effect	No	Low to None	Minor to No Effect	No

Effects on Landscape Designations

Bannau Brycheiniog National Park

8.9.224 The Bannau Brycheiniog National Park is located just over 20 km to the north-east of the Site at its closest point. Effects on the Bannau Brycheniniog National Park and its Special Qualities (SQ) are considered further within **ES Volume III, Appendix 8.6: National Landscape Designations Preliminary Assessment**. In summary, this **very high** sensitivity receptor would be subject to no greater than **minor** effects, which are **not significant** were identified in relation to either visual amenity on receptors within the Bannau Brycheniniog National Park, or on the landscape character of the Bannau Brycheniniog National Park. As a result, there were no significant effects identified to any of the Special Qualities of the National Park.

The Gower National Landscape/Tirwedd Cenedlaethol Gŵyr

8.9.225 The Gower National Landscape / Tirwedd Cenedlaethol Gŵyr (formerly AONB) lies just outside the 20 km detailed study area at a distance of c. 21 km from the Site to the closest point, at Mumbles Head. Effects on the National Landscape and its SQ are considered further within **ES Volume III, Appendix 8.6: National Landscape Designations Preliminary Assessment**. In summary, this **very high** sensitivity receptor would be subject to no greater than **minor-moderate** effects, which are **not significant** were identified in relation to either visual amenity on receptors within the National Landscape, or on the landscape character of the National Landscape. As a result, there were no significant effects identified to any of the Special Qualities of the National Landscape.

Local Landscape Designations

8.9.226 SLA in LPAs whose administrative boundaries overlap the 20 km detailed study area have been identified, with a total of 42 SLAs located within the detailed study area. Effects on the Special Landscape Areas are considered further within **ES Volume III, Appendix 8.5: Special Landscape Areas Preliminary Assessment**. In summary, the only SLA which would experience a significant effect is SLA 3 Western Uplands (BCBC) which overlaps the majority of the Site and continues up to and including the town of Maesteg. There would be a **high** magnitude of change and a **major significant** effect on that part of SLA 3, within the Site and its immediate environs.

Table 8.16 Summary of Residual Landscape Character Effects on Special Landscape Areas (SLA)

Receptor	During Construction and Decommissioning				During Operation			
	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
SLA 3 Western Uplands - Host (BCBC) (areas within the Site)	High	Very High to High	**Major**	**Yes**	High	Very High to High	**Major**	**Yes**
SLA 3 Western Uplands - Host (BCBC) (areas 1-2 km from Site)	High	High to Medium	**Major** to **Moderate**	**Yes**	High	High to Medium	**Major** to **Moderate**	**Yes**
SLA 3 Western Uplands - Host (BCBC) (areas 2-4 km from Site)	High	Medium	**Moderate**	**Yes**	High	Medium	**Moderate**	**Yes**
SLA 4 Margam (NPTC)	High	Very Low	Minor	No	High	Low	Minor-Moderate	No
SLA 4 Bryngarw Country Park (BCBC)	High	Very Low	Minor	No	High	Very Low	Minor	No
SLA 7 Laleston (BCBC)	Medium	Low	Minor-Moderate	No	Medium	Medium	Moderate	No
SLA 6 Kenfig Burrows (BCBC)	High	Very Low	Minor	No	High	Low	Minor-Moderate -	No

Receptor	During Construction and Decommissioning				During Operation			
	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?	Sensitivity	Magnitude of Change	Level of Effect	Significant residual effect?
SLA 2 Northern Uplands (BCBC)	High	Low	Minor-Moderate	No	High	Medium to Low	Moderate to Minor-Moderate	No
SLA 9 Merthyr Mawr Warren (BCBC)	Medium	Very Low	Minor	No	Medium	Low	Minor-Moderate	No
SLA 6 Foel y Dyffryn (BCBC)	Medium	Very Low	Minor	No	Medium	Low	Minor-Moderate	No
SLA 5 Mynydd y Gaer (BCBC)	Medium	Medium	Moderate	No	Medium	Medium	Moderate	No
SLA 5 Mynydd y Gelli (NPTC)	Medium	Very Low	Minor	No	Medium	Low	Minor-Moderate	No
SLA 6 Foel Trawsnant (NPTC)	Medium	Very Low	Minor	No	Medium	Low	Minor-Moderate	No

Effects of Aviation Lighting

8.9.227 In line with the NatureScot Guidance on Aviation Lighting Impact Assessment (2024), which is considered to be the most up to date best practice for aiding assessments of wind turbine lighting, the process of carrying out assessment of visible aviation lighting can be understood in terms of three distinct steps, each of which are undertaken below. Further detail regarding the approach to the to the assessment of visible aviation lighting is set out in **ES Volume III, Appendix 8.3: Night Time Lighting Assessment Methodology.**

Step 1: Defining the lighting proposal

8.9.228 In accordance with Civil Aviation Authority (CAA) CAP 764 turbines taller than 150 m require visible aviation lighting. An adjusted visible aviation lighting scheme has been agreed with the CAA for the Proposed Development. In total, three turbines (T01, T05 and T06) are proposed to be fitted with visible red 2000/200 candela (cd) steady state lights on the nacelle of each turbine.

8.9.229 Mitigation has been designed into the proposed aviation lighting to reduce the intensity of the 2000 cd steady state lights in certain atmospheric conditions and attenuating the amount of vertical downwards lighting in order to reduce the visual impact experienced by receptors.

8.9.230 It is important to highlight that when not obscured by cloud, the visibility in the area of the turbines can be expected to exceed 5 km for the majority of the time and as such, the lights will be dimmed to 200 cd. Furthermore, it is important to note that intensity of the lights will reduce with increased distance from the aviation lights and the intensity at which a viewer perceives the lights is also dependent on how adapted their eye is to the dark.

8.9.231 There would be no other visible lighting of note associated with the other built elements of the Proposed Development, that would be relevant to the consideration of the turbine lighting.

Step 2: Understanding the baseline

8.9.232 The baseline lighting environment in the landscape in and around the Site is varied, with notable degrees of lighting in and around the various settlements and along the major road network. Lighting is less prevalent in the more undeveloped parts of the landscape, but at no point within the local landscape are there any areas with notable dark sky characteristics.

8.9.233 It is noted that the matter of darkness adaption is also a relevant consideration, with some receptors, in particular car drivers, not perceiving the lighting in the same manner as if they were in a fully dark environment, due to their vision being influenced by lighting sources in their proximity (i.e., car headlights). The same would apply to residents of residential properties who were viewing the aviation lighting from a location with existing lighting present (i.e., it is unlikely that residents would themselves be fully in a dark environment and their eyes therefore adapted to take in the full extent of the light from the turbines). This serves to further reduce the effects compared to how they are set out in the assessment

below, which can therefore be considered to represent a 'worst-case' position compared to what would be experienced by receptors in practice.

8.9.234 As noted in **ES Volume III, Appendix 8.3: Night Time Lighting Assessment Methodology,** the frequency in which a viewpoint is likely to be visited during the hours of darkness is not a factor which is considered within the assessment of magnitude or sensitivity. However, it should be noted that viewpoints at hill summits and on long distance footpaths would be unlikely to be visited after daylight hours. Any effects on these receptors should therefore be considered a 'worst-case' scenario as in many cases the actual numbers of individuals who would be likely to experience the view would be very limited, although it is recognised that there will be a few individuals such as landscape photographers who may visit hilltops to take photographs at sunset or sunrise.

Step 3: Assessing the effects of the aviation lighting

8.9.235 ZTV plans have been prepared showing where the lit turbines are visible from in theory (see **ES, Volume IV: Figure 8.6: Hub height ZTV to 20 km with Viewpoints**) and showing the theoretical intensity of the lighting at **ES Volume IV, Figure 8.38: Lighting Intensity ZTV for Lit Turbines**. Visualisations illustrating the proposed turbine lighting from Viewpoints 4, 11 and 14 in the surrounding landscape have also been produced and are included at **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15**.

8.9.236 Taking account of the limited number of lit turbines (three in total) and the proposed mitigation, the potential for any significant effects to arise from the visible aviation lights for receptors identified within the study area is highly limited.

8.9.237 It unlikely that there would be any potential for significant effects on landscape character from the aviation lighting, unless the immediate surroundings of the Site were particularly sensitive in terms of the darkness qualities of their baseline lighting context. This is because in low light conditions it is not possible to be able to fully appreciate landscape features and components that contribute to landscape character. In this case, there are visible lights across the majority of the local landscape, particularly in and round the local settlements and no areas close to the Site which are particularly sensitive in terms of their darkness qualities. Such more sensitive locations do occur within the wider area beyond the Site, such as the Bannau Brycheiniog National Park and the Gower National Landscape which are of **very high** sensitivity. However, these designations are located where there would either be no visibility of the lights at all, or at such distances that there would no potential for the aviation lights to give rise to no more than a **very low** magnitude of change, and, using professional judgement, a **negligible** effect which is **not significant**. This is illustrated by the night-time visualisations for Viewpoint 14 Mumbles Hill, Swansea (**ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15)**.

8.9.238 Regarding visual effects, the majority of the locations where there would be greater potential for visibility of the turbine lights are away from the built-up areas where visual receptors are more likely to be during the night-time period.

8.9.239 Any more notable effects would be highly localised to the immediate environs of the three lit turbines. This would include localised sections of the Ogwr Ridgeway Walk as it passes through the Site, and the other PRoW which run within the Site, as well as from sections of the minor road which passes through the Site. Each of these receptors would have views in close proximity to one or more of the lit turbines, however with regard to **ES Volume IV, Figure 8.38: Lighting Intensity ZTV for Lit Turbines,** these receptors would all be located in an area where the intensity of the lighting would be at its lowest, due to the angle beneath the lights from which the views would be experienced. As such the magnitude of change would be **moderate** at most, resulting in effects no greater than **moderate** and **not significant**, given their **high** sensitivity.

8.9.240 Beyond the Site, the only assessment viewpoints where the lighting would be visible to any more than a minor degree would be **ES Volume III, Appendix 8.10: Visualisations: Viewpoints 1 to 15 -** Viewpoint 3: Ogwr Ridgeway Walk, which lies approximately 1.8 km to the north-west of the nearest proposed turbine and Viewpoint 4: Llangynwyd Conservation Area, which lies approximately 1.8 km to the north of the nearest proposed turbine. Again, **ES Volume IV, Figure 8.38: Lighting Intensity ZTV for Lit Turbines,** illustrate these locations would be in an area where the intensity of the lighting would be reduced, due to the angle from the turbines. Viewpoint 4: Llangynwyd Conservation Area is illustrated with night-time visualisations which illustrate the limited potential for impacts from the three aviation lights. The effects on these two viewpoints would experience a **medium** magnitude of change and therefore be **moderate** and **not significant**, based on their **high** sensitivity.

8.9.241 Using professional judgement, the remaining viewpoints in the wider landscape, would experience **negligible** and **not significant** visual effects from the aviation lighting, as illustrated by the night-time visualisations for **ES Volume III, Appendix 8.10: Visualisations: Viewpoints 1 to 15 -** Viewpoint 11: Wales Coast Path at Ogmore-by-Sea and Viewpoint 14: Mumbles Hill, Swansea. In the views from Mumbles Hill in particular the potential for impacts would be further limited by the notable existing lighting associated with the Port Talbot steel works complex.

8.10 Opportunities for Environmental Enhancement

8.10.1 The Proposed Development presents several opportunities for landscape and visual environmental enhancement that would complement the primary renewable energy generation functions of the development. These measures have been developed as part of the landscape mitigation strategy for the Proposed Development and are illustrated at **ES Volume IV, Figure 8.57: Landscape Mitigation Plan**.

Ecological and Landscape Enhancement Measures

8.10.2 Native Woodland Planting: Strategic planting of native woodland blocks is proposed in areas between solar array compartments. This woodland planting will:

- Enhance biodiversity by creating new habitat areas;

- Strengthen existing field boundaries and landscape patterns;
- Provide additional screening of ground-level infrastructure from key receptors and viewpoints; and
- Create visual links with existing woodland at Craig-yr-Aber Woodland.

8.10.3 Proposed Coniferous Woodland: New woodland with coniferous species will be established to provide year-round screening to solar compounds and substation area. This will:

- Ensure effective visual mitigation throughout all seasons;
- Create complementary planting to the existing Craig-yr-Aber Woodland; and
- Provide additional wildlife habitat and strengthen ecological networks.

8.10.4 Hedgerow Restoration and Enhancement: The Proposed Development presents opportunities to restore existing hedgerows and establish new hedgerow connections within the Site. This will:

- Reflect and strengthen the traditional field patterns characteristic of the local landscape;
- Improve habitat connectivity for wildlife; and
- Provide additional filtered screening of lower-level infrastructure components.

8.10.5 Species-Rich Grassland: The land beneath and between solar panels will be managed to support grassland that will:

- Increase botanical diversity compared to the existing improved grassland; and
- Enable sustainable grazing management beneath the solar arrays.

8.10.6 Stone Wall Restoration: Existing drystone walls will be retained and repaired where necessary to define field boundaries. This will:

- Preserve and enhance important historic landscape features;
- Maintain the distinctive character of the upland landscape; and
- Provide additional habitat for wildlife, particularly reptiles and invertebrates.

Recreational and Public Access Improvements

8.10.7 Ogwr Ridgeway Walk:

- A permissive footpath is proposed as an alternative route to improve access for users of the Ogwr Ridgeway Walk, particularly during wetter months.

8.10.8 Heritage Access Enhancement:

- New access will be provided to the British Fortified Residence Scheduled Monument (SAM/ROW) to the south via an existing road to the north. An information board and seating will be included to provide details of the monument, enhancing public appreciation of the local cultural heritage and providing a focal point of interest for visitors to the area.

Summary of Environmental Enhancement Opportunities

8.10.9 These enhancement opportunities have been designed to align with local landscape character and respond to the existing landscape framework, particularly in relation to the adjoining Craig-yr-Aber Woodland and its management programme. The enhancement measures focus on reinforcing existing landscape patterns and providing additional visual screening where appropriate, while maintaining the distinct upland character of the Site and its surroundings.

8.11 Difficulties and Uncertainties

8.11.1 The following difficulties and uncertainties have been encountered during the undertaking of this assessment:

Technical Limitations

- ZTV Accuracy: For the wind turbines, the ZTV models used in this assessment show theoretical visibility based on 'bare earth' topography which follows best practice guidance (SNH) and do not account for screening by vegetation, buildings, or minor landform variations. While efforts were made to use the most accurate digital terrain model available, the ZTV remains a theoretical tool and on-ground visibility may differ from predicted patterns. Similarly, the Screened ZTV (**ES Volume IV, Figure 8.30: Screened ZTV Solar and Substation Elements**) used for the solar and substation ZTV takes account of woodland and buildings from Ordnance Survey OS VectorMap Local data and therefore does not take account of other vegetation such as roadside trees and field boundary hedgerows which can provide additional screening of views towards the Proposed Development. Site surveys have been undertaken to ground truth the ZTVs and inform the assessment.
- Viewpoint Photography Limitations: Weather conditions during photography varied across site visits, which may have affected visibility and visual clarity in some viewpoint photographs. While site visits were timed to provide good visibility conditions where possible, atmospheric clarity inevitably varies between viewpoints and over different seasons.
- Visualisation Techniques: Photomontages provide a reasonable representation of the Proposed Development but cannot exactly replicate how the human eye perceives scale and distance in the landscape. The visualisations were prepared in accordance with current best practice guidance, but inherent limitations exist in representing three-dimensional developments on two-dimensional media.

Assessment Process Uncertainties

- Subjective Nature of Assessment: While the LVIA follows a structured methodology, professional judgments about sensitivity, magnitude, and significance inevitably contain a degree of subjectivity. Multiple assessors were involved to provide balance and consistency, but this remains an inherent limitation of landscape and visual assessment.

- Seasonal Variations: While winter views were used where possible to represent a "worst-case" scenario with minimal leaf cover on deciduous vegetation, the assessment cannot capture the full range of seasonal variations that would occur throughout the year, including changes in vegetation, agricultural patterns, and atmospheric conditions.
- Future Baseline Changes: The assessment considers changes to the baseline landscape through the cumulative assessment. However, uncertainty exists regarding which of the in-planning schemes will be consented and constructed, and the exact timing of implementation for the Craig-yr-Aber Woodland management plan, which could modify some findings.

Data Limitations

- Residential Visual Amenity: While detailed assessment was carried out for properties within 2 km, access to some private properties was not available. In these cases, assessments of views from residential properties were therefore made from the nearest publicly accessible location, which introduces some uncertainty about the exact views available from certain properties.

8.11.2 These assumptions and limitations are typical for an assessment of this type and are not expected to affect the validity of the outcome of the assessment.

8.12 Inter-Project Cumulative Effects

8.12.1 All wind energy developments that are operational, under construction, consented or subject to a valid full planning application within 35 km of the Site boundary have been identified and reviewed as part of the cumulative baseline as recommended by NatureScot best practice guidance and in line with the recommendation from BCBC in its Scoping Response. It is acknowledged that this list is constantly evolving and therefore, the 03 October 2025 was used as an effective ‘cut-off’ date, after which no further research was undertaken on the evolving status of any existing development and/or approved developments in the study area, and the Cumulative LVIA reflects the status of each wind farm at the time of this date.

8.12.2 Following a review, it was considered that wind developments within the study area have the greatest potential to result in significant cumulative landscape or visual effects in addition to the Proposed Development. As such, these developments are the focus of the assessment. However, other approved developments have been considered within the detailed assessment where appropriate.

8.12.3 In order that the assessment remains focused on those other existing development and/or approved developments which have the greatest potential to give rise to significant cumulative effects, it was deemed appropriate to focus the assessment on a detailed 20 km area from the Site, with projects beyond this distance having been reviewed and assessed to have no potential to give rise to significant cumulative effects with the Proposed Development. It was also deemed

appropriate to scope out any turbines under 50 m, or any turbines between 50 m and 80 m which lie over 10 km from the nearest proposed turbine. It was also deemed appropriate to scope out any non-wind developments over 10 km from the Site boundary as these are not anticipated to result in significant effects. Developments that are at the scoping stage have not been considered due to the uncertainty that these schemes will come forward. This is in accordance with the approach advocated in GLVIA3.

8.12.4 The existing development and/or approved wind developments within 35 km are illustrated in **ES Volume IV, Figure 8.32: Wind Farms within 35 km** and existing development and/or approved wind developments within the 20 km detailed study area are illustrated in **ES Volume IV, Figure 8.33: Wind Farms within 20 km**.

8.12.5 Wind farms within the detailed 20 km cumulative study area at the time of preparing this LVIA which were either operational, under construction or in planning are set out in **Table 8.17. Table 8.17** also sets out the other existing development and/or approved developments relevant to this assessment as illustrated on **ES Volume IV, Figure 8.34: Other non-Wind Cumulative Development within 10 km**.

Table 8.17 Relevant Cumulative Developments Within 20 km of the Proposed Development

Site	Blade Tip Height	Number of Turbines	Distance and Direction from Site
Operational Wind Farms			
Gelli Las Farm	45 m	2	400 m east
Haregrove Farm	45 m	1	3.72 km south
Newlands Farm	77 m	1	3.87 km west
Parc Stormy	125 m	2	4.93 km south
Newton Down	125 m	2	5.15 km south
Land At Kenfig Industrial Estate Margam	100 m	1	5.31 km south
Mynydd Brombil Wind Farm	100 m	4	5.4 km west
Llynfi Afan Renewable Energy Park	118 m	12	5.6 km north
Ford Motor Company	79 m	1	7.75 km southeast
Pant y Wal	115 m	11	8.6 km northeast
Fforch Nest 1	70 m	4	9.86 km northeast
Fforch Nest 2	70 m	7	9.86 km northeast
Mynydd Portref	75 m	11	10.26 km east
Hill House	77 m	1	10.3 km southeast
Ffynnon Oer	93 m	16	10.32 km northeast
Taff Ely	53.6 m	20	10.46 km east

Site	Blade Tip Height	Number of Turbines	Distance and Direction from Site
Bwllfa Farm	76 m	1	10.66 km northeast
Mynydd Portref Extension	110 m	6	10.68 km east
Pen y Cymoedd	143.5 m	76	11.14 km northeast
Nant-y-Gwyddon Landfill Site	99 m	1	12.48 km northeast
Graig Fatha	126 km	1	13.31 km east
Maerdy	145 m	8	14.2 km northeast
Ferndale	74 m	8	14.52 km northeast
West of Rhiwfelin Fach Farm	50 m	1	15.51 east
Rhiwfelin	62 m	1	16 km east
Mynydd Bwllfa	90 m	9	16.32 km northeast
Llwyncelyn (Llanwonno)	125 m	2	16.75 northeast
Swansea Bay Wastewater Works	77 m	1	16.95 km west
Queens Docks	36 – 40 m	2	17.73 km west
Mynachdy Farm	74 m	2	18.07 km northeast
Maesgwyn	110 -120 m	13	19.22 km north
Maesgwyn (extension)	125 m	4	19.42 km north
Operational Solar Development			
Court Coleman Solar Farm	N/A	N/A	2.38 km south
Caegarw Solar Farm	N/A	N/A	4.09 km southwest
Stormy Down Solar Farm	N/A	N/A	4.93 km south
Pant-Y-Moch	N/A	N/A	7.00 km northwest
Consented or Under Construction			
Metal Processing Facility - Land West of Junction 38 M4	N/A	N/A	4.83 km west
Great Western Avenue, Coity Road Battery energy Storage	N/A	N/A	4.15 km southeast
Cefn Gwrgan Road	21 m	1	5.86 km south
Foel Trawsnant	145 m	11	6.0 km northeast
Upper Ogmore (including battery storage)	130 m	7	6.7 km northeast
Pant y Wal Extension	125 m	2	8.43 km northeast
Taff Ely (repowering)	110 m	7	9 km northeast
Mynydd Fforch-Dwm	200 m	7	10.83 km northeast

Site	Blade Tip Height	Number of Turbines	Distance and Direction from Site
Melin Court	149.9 m	5	12.87 km northeast
Abergorki	99.8 m	3	14.75 km northeast
Mynydd y Glyn	175 m	7	15.72 km east
Consented or Under Construction Solar Development			
Dyfed Reinforcements Riverside Road	N/A	N/A	8.77 km northwest
HyBont Green Hydrogen	N/A	N/A	2.55 km east
Ty'n Y Waun Solar	N/A	N/A	4.69 km east
In Planning			
Foel Trawsnant Wind Farm Connection	N/A	N/A	0.32 km west
Y Bryn (including battery storage)	250 m	18	2.4 km west
Scoping			
WEPA Vesta (Paper Machine)	N/A	N/A	0.52 km east
Proiect Egni Glan Llynfi (Modular Nuclear)	N/A	N/A	0.9 km east
Eirlys Solar Farm	N/A	N/A	0.92 km west
Y Bryn Wind Farm Grid Connection	N/A	N/A	3.7 km north west
Upper Ogmore Grid Connection	N/A	N/A	6.0 km north
Mynydd Y Gaer Wind Farm	198 m	9	6.7 km east
Afon Ddaw Solar and Energy Storage Project	N/A	N/A	13.61 km southeast
Llanwonno Energy	200 m	8	17.45 km
Hirfynydd Renewable Energy Park	200 m	7	18.82 km north

8.12.6 For the avoidance of doubt and to reiterate the methodology adopted in the earlier assessment , the baseline against which the solus effects of the Proposed Development has been assessed includes all operational wind farms. An assessment of the Proposed Development with consideration of operational wind farms has already therefore been presented in the main section of this LVIA.

8.12.7 The primary purpose of the cumulative impact assessment is therefore to consider the additional effects that might arise as a result of the Proposed Development if the other consented or under construction and in planning (awaiting determination) developments were also operational. In addition, this cumulative

assessment also includes a further consideration of the overall totality of the effect, when the Proposed Development is considered alongside the other existing and/or approved developments across the study area.

8.12.8 The baseline in the cumulative impact assessment is therefore extended to consider other developments that are not yet present in the landscape but are at various stages in the planning process. Two scenarios are considered which reflect the different degrees of certainty that these developments will be constructed:

- Scenario 1 assumes that other consented (but as yet unbuilt) wind farms are operational; and
- Scenario 2 extends this further to assume that all developments in planning are also operational. In reality, it is possible that all other developments that are in planning may not be approved and constructed but this scenario assumes that all developments would become operational, as this presents the 'worst case'.

Cumulative ZTVs and Wirelines

8.12.9 Cumulative ZTVs (CZTVs) have been produced to illustrate the theoretical visibility of various wind farms and combinations of wind farms with the Proposed Development.

8.12.10 It should be reiterated that ZTVs imply a much greater geographical extent of influence on the landscape and views of it than would actually be the case. It therefore follows that the cumulative ZTVs also exaggerate the actual impacts of the turbines on landscape character and visual amenity as they do not take account of vegetation or buildings in the landscape, which may restrict the nature and extent of views.

8.12.11 Cumulative ZTVs have been produced and are included in **ES Volume IV** for the following combinations of existing, consented and other wind farm sites in planning within the detailed 20 km study area:

- **Figure 8.39: Cumulative ZTV with operational Gelli Las Farm;**
- **Figure 8.40: Cumulative ZTV with operational Newlands Farm;**
- **Figure 8.41: Cumulative ZTV with operational Haregrove Farm, Newton Down and Parc Stormy;**
- **Figure 8.42: Cumulative ZTV with operational Mynydd Brombii Wind Farm;**
- **Figure 8.43: Cumulative ZTV with operational Llynfi Afan Renewable Energy Park;**
- **Figure 8.44 Cumulative ZTV with operational Pant y Wal, Pant y Wal Extension and Fforch Nest;**
- **Figure 8.45: Cumulative ZTV with operational Taff Ely, Mynydd Portref and Extension;**
- **Figure 8.46: Cumulative ZTV with operational Ffynnon Oer, Pen y Cymoedd, Mynydd Bwllfa and Maerdy;**

- **Figure 8.47: Cumulative ZTV with operational Penrhys Wind Farm;**
- **Figure 8.48: Cumulative ZTV with operational Kenfig Industrial Estate and consented Cefn Gwrgan Road;**
- **Figure 8.49: Cumulative ZTV with consented Foel Trawsnant, Mynydd Fforch-Dwm and Melin Court;**
- **Figure 8.50: Cumulative ZTV with consented Pant y Wal Extension and Upper Ogmore;**
- **Figure 8.51: Cumulative ZTV with consented Mynydd Y Glyn;**
- **Figure 8.52: Cumulative ZTV with in planning Y Bryn;**
- **Figure 8.53: Cumulative ZTV with in scoping Mynydd y Gaer;**
- **Figure 8.54: Cumulative Screened ZTV with operational Caegarw Court Solar Farm;**
- **Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm;**and
- **Figure 8.56: Cumulative Screened ZTV with operational Court Coleman Solar Farm.**

8.12.12 The wirelines included with the visualisations in **ES Volume III, Appendix 8.10: Visualisations Viewpoints 1 to 15** illustrate the other existing development and/or approved cumulative developments.

Cumulative Effects on Landscape Character

8.12.13 It is acknowledged that wherever more than one development is visible at any given location in the landscape, there will be a greater overall or cumulative effect on landscape character than if just one development was visible in the landscape.

8.12.14 However, it is also noted that in any given landscape where turbines are already present, the additional effect on landscape character of introducing further turbines may not be as significant as the initial introduction of turbines. Furthermore, in general, the greater the number of turbines in the baseline landscape the less significant the addition of further turbines may be in landscape character terms as the landscape will be more heavily characterised by turbines in the baseline situation.

8.12.15 It has been assessed in the assessment of the solus effects of the Proposed Development set out earlier in this chapter that there would be some limited significant effects on landscape. The purpose of this section of the cumulative assessment is therefore to identify whether there would be any change to the assessments of significance previously set out in relation to the Proposed Development, once the other wind turbines which are not already operational are considered to form part of the baseline landscape.

8.12.16 Generally speaking, such additional cumulative effects would arise when the addition of the Proposed Development to the baseline results in an increase in effects, when viewed in combination with the other wind turbines forming part of the baseline landscape.

8.12.17 The assessment is considered in two parts, firstly in relation to the scenario where the additional consented developments are also considered to be operational, secondly the scenario where the consented and in-planning schemes are also considered to be operational.

Scenario 1: Operational & Consented Developments

8.12.18 In this scenario, the baseline landscape includes all operational and consented wind farms and solar developments. Based on the cumulative ZTVs (**ES Volume IV, Figures 8.39-8.51**), the key consented developments that may have cumulative effects with the Proposed Development include:

- Kenfig Industrial Estate and Cefn Gwrgan Road (**ES Volume IV, Figure 8.48: Cumulative ZTV with operational Kenfig Industrial Estate and consented Cefn Gwrgan Road**);
- Foel Trawsnant, Mynydd Fforch-Dwm and Melin Court (**ES Volume IV, Figure 8.49: Cumulative ZTV with consented Foel Trawsnant, Mynydd Fforch-Dwm and Melin Court**);
- Pant y Wal Extension and Upper Ogmore (**ES Volume VI, Figure 8.50: Cumulative ZTV with consented Pant y Wal Extension and Upper Ogmore**) and
- Mynydd y Glyn (**ES Volume VI, Figure 8.51: Cumulative ZTV with consented Mynydd Y Glyn**).

8.12.19 Additionally, the felling strategy for Craig-yr-Aber Woodland (**ES Volume III, Appendix 8.14: NRW Forest Management and Felling Strategy**), which bounds the Site to the west, will introduce temporal landscape changes that may interact with the effects of the Proposed Development.

Effects on Host Landscape Character Area (LANDMAP Visual Sensory Aspect Area CYNONVS473 - Mynydd Baedan - Upland Moorland)

8.12.20 With the addition of consented developments, the host landscape character area would experience an increase in the number of visible turbines, particularly from Pant y Wal Extension and Mynydd y Glyn to the northeast and east. With reference to **ES Volume IV, Figure 8.50: Cumulative ZTV with consented Pant y Wal Extension and Upper Ogmore** and **ES Volume IV, Figure 8.51: Cumulative ZTV with consented Mynydd Y Glyn**, there would be areas of combined visibility across portions of the host landscape character area, particularly in its eastern sections.

8.12.21 The Proposed Development would remain the most prominent Energy Park development in the immediate host landscape area due to its proximity and scale. The additional consented wind farms would be visible at greater distances and would appear as part of the wider upland landscape context, often viewed in the middle to far distance.

8.12.22 As noted in the ‘Future Baseline in the Absence of the Proposed Development‘ in **Section 8.5**, the clearfell areas if Craig-y- Aber Woodland scheduled for 2022-2026 are particularly concentrated along the eastern edge of the forest closest to

the Site. This timing coincides with the potential construction and early operational phases of the Proposed Development, potentially increasing the cumulative landscape change experienced in the western portions of the host landscape character area. The areas designated for Low Impact Silvicultural Systems that are interspersed throughout the forest will maintain some forest cover, providing partial screening and reducing the overall magnitude of this cumulative effect.

8.12.23 Within this scenario, the overall effect on the host landscape character area would remain **major** and **significant** as previously assessed. The inclusion of the consented developments and the forestry operations does not materially change the assessment conclusion for the host landscape character area, though it would contribute to a gradual evolution of the wider landscape context toward one with increased renewable energy (in particular wind farm) development as a characteristic element in upland areas, with wind turbines forming the most prominent and important components.

8.12.24 The western part of the Site extends into LANDMAP area NPTVS897 - Mynydd Bromil & Scarp tops, however, as this is a much smaller proportion of the Site, this is considered in more detail below.

Effects on Adjacent Landscape Character Areas (LANDMAP Visual Sensory Aspect Areas)

8.12.25 The adjacent landscape character areas most affected by cumulative impacts when considering consented developments would be:

To the north and northeast (Llynfi Valley, Maesteg and surrounding uplands - CYNONVS884 - Llynfi Valley, CYNONVS351 - Maesteg, CYNONVS811 – Garth Hill)

8.12.26 With consented developments also considered operational, these areas would experience a greater density of wind energy development, particularly with the addition of Mynydd y Glyn to the east/northeast. The cumulative ZTV (**ES Volume IV, Figure 8.51: Cumulative ZTV with consented Mynydd Y Glyn**) shows substantial areas of combined visibility across these areas. However, the landscape already contains operational wind farms as part of its character, and many views are filtered by the significant woodland cover and undulating topography of the Llynfi Valley. The **moderate** to **minor-moderate** level of effect previously assessed for these areas would remain the same, with local variation in effects dependent on specific viewpoints.

To the east (CYNONVS966 - Bettws, , CYNONVS349 - Mynydd Llangeinwyr)

8.12.27 The addition of Mynydd y Glyn to the east would create a more continuous pattern of wind farm development across the eastern uplands of the study area, with the Proposed Development forming the western component. The combined visibility shown in **ES Volume IV, Figure 8.51: Cumulative ZTV with consented Mynydd Y Glyn** indicates a moderate increase in the extent of wind farm visibility. However, these areas already experience views of operational wind farms, and the **moderate** level of effect previously assessed would remain, with the landscape character incrementally shifting toward one where renewable energy (in particular wind farm development) is a more established feature.

To the west (including areas influenced by Craig-yr-Aber Woodland, NPTVS927 - Mynydd Margam, NPTVS897- Mynydd Bromil and Scarp Tops, NPTVS403 - Margam Country Park)

8.12.28 The landscape character to the west of the Site will be notably influenced by the forestry management operations at Craig-yr-Aber Woodland. The scheduled clearfelling operations, particularly those in the 2022-2026 period, will temporarily change the character from forested upland to more open upland during harvest operations. This change will be most noticeable in areas designated for clearfelling, while areas managed through Low Impact Silvicultural Systems will retain more of their existing character.

8.12.29 The combination of forestry operations and the Proposed Development could create a more substantial cumulative effect on landscape character in these western areas, with the eastern parts of the forest and the western parts of the Site experiencing simultaneous landscape change. However, this effect would be temporary as replanting and forest regeneration progress. The level of effect would range from **moderate** to **moderate-major** depending on the timing and extent of forestry operations visible in conjunction with the Proposed Development.

8.12.30 Within these western landscape character areas, NPTVS897 - Mynydd Bromil and Scarp Tops would experience the most pronounced effects, where its more open, elevated character provides clearer views toward the Proposed Development and where forestry operations in Craig-yr-Aber Woodland would be most evident. The effect on this aspect area would increase from **minor-moderate** (**not significant**) in the solus assessment to **moderate-major** (**significant**) when considering the cumulative effects with forestry operations. NPTVS927 - Mynydd Margam, comprising the coniferous plantation woodland, would experience lesser effects due to the filtering effect of the forest canopy, though clearfelling operations would temporarily reduce this screening in some locations. NPTVS403 - Margam Country Park and NPTVS543 - Coedhirwaun would maintain their assessed **minor-moderate** effects due to continued screening from substantial woodland and intervening topography.

To the south (CYNONVS151 - Kenfig Burrows, CYNONVS955 - Cribwr, CNONVS825 – Newton Downs, NPTVS543 Coedhirwaun)

8.12.31 The southern landscape character areas occupy transitional ground between the upland character of the Site and the lowland coastal plain. CYNONVS151 - Kenfig Burrows comprises rolling landform with a mixture of parkland character, grassland and woodland providing varied landscape patterns. CYNONVS955 - Cribwr presents more settled valley character with linear development patterns. CYNONVS825 - Newton Downs exhibits open grassland character on gently undulating terrain, while NPTVS543 Coedhirwaun comprises transitional upland slopes with coniferous woodland influence.

8.12.32 In the solus assessment, these southern areas were assessed as experiencing minor to minor-moderate effects, primarily due to distance from the Proposed Development (ranging from approximately 3 to 8 km) and substantial screening from intervening landform, vegetation and built development. The proposed

turbines would appear on the northern horizon in more open locations, but views are often interrupted or terminated by woodland blocks, hedgerow patterns and the complex topography characteristic of this transition zone between upland and lowland landscapes.

8.12.33 The addition of Kenfig Industrial Estate and Cefn Gwrgan Road wind developments (**ES Volume IV, Figure 8.48: Cumulative ZTV with operational Kenfig Industrial Estate and consented Cefn Gwrgan Road**) would introduce renewable energy infrastructure into these southern areas at closer proximity than the Proposed Development. These operational and consented schemes are positioned within or adjacent to existing industrial/commercial development contexts, with Kenfig Industrial Estate located approximately 5 km southwest of the Site and Cefn Gwrgan Road positioned approximately 4 km south.

8.12.34 The cumulative effect would establish a pattern of renewable energy development across different landscape contexts - the Proposed Development occupying upland terrain to the north, with the consented schemes positioned within lower-lying, more developed contexts to the south and southwest. From elevated locations within CYNONVS825 - Newton Downs and open areas of CYNONVS955 - Cribwr, there would be successive visibility of multiple wind developments distributed across the northern and northeastern horizon, though substantial screening from intervening woodland and built development would limit combined visibility in many locations.

8.12.35 The consented schemes at Kenfig Industrial Estate and Cefn Gwrgan Road represent significantly smaller developments (each comprising 1-2 turbines) compared to the Proposed Development's six turbines. Their positioning within existing commercial/industrial contexts and their smaller scale means they would not substantially alter the landscape character effects already identified for the Proposed Development in isolation. The cumulative magnitude of change would increase from **low** to **low-medium**, with the level of effect increasing from **minor-moderate** to **moderate (not significant)** in the most open, elevated locations where successive visibility occurs.

8.12.36 Within CYNONVS151 - Kenfig Burrows and NPTVS543 Coedhirwaun, substantial woodland screening and more complex topography would continue to limit combined visibility. These areas would maintain the effects identified in the solus assessment, with cumulative effects remaining **minor-moderate (not significant)**.

8.12.37 As shown in **ES Volume IV, Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm**, there is also potential for cumulative visibility with proposed solar developments in this southern area, though the screened ZTV demonstrates that combined visibility would be restricted to specific elevated locations due to the screening effect of landform, vegetation and built development in this transitional landscape.

8.12.38 Overall, the additional effects which would occur are mostly set within the less sensitive landscape areas lying away from the more valuable coastal areas with higher sensitivity landscape character areas. Furthermore, the additional effects

which would occur are mostly set within the less sensitive landscape areas lying away from the more valuable coastal areas.

8.12.39 The operational solar schemes shown in **ES Volume IV, Figure 8.54: Cumulative Screened ZTV with operational Caegarw Farm** would contribute to the cumulative landscape character effects, particularly in areas where they are visible alongside the Proposed Development. Caegarw Farm Solar's limited scale and low vertical profile compared to wind turbines also results in a limited additional contribution to the cumulative landscape character effects beyond the immediate vicinity of these solar developments.

Scenario 2: Operational, Consented, In-Planning and Scoping (where relevant) Schemes

8.12.40 This scenario further extends the baseline to include developments that are in planning, including Y Bryn wind farm (**ES Volume IV, Figure 8.52: Cumulative ZTV with in planning Y Bryn**). This represents a 'worst case' scenario as it assumes all planning-stage schemes receive consent and are constructed.

Effects on Host Landscape Character Area (CYNONVS473 - Mynydd Baedan - Upland Moorland)

8.12.41 The addition of Y Bryn wind farm, which would be located to the west/northwest of the Proposed Development, would introduce a substantial new wind farm into the wider landscape context. Based on **ES Volume IV, Figure 8.52: Cumulative ZTV with in planning Y Bryn**, there would be substantial areas of combined visibility between Y Bryn and the Proposed Development across the host landscape character area.

8.12.42 This would represent a substantial change to the landscape context, with wind farms becoming a more prominent characteristic of the upland landscapes across a wider area. The western and northwestern views from the host landscape character area would now include views toward additional large-scale wind turbines, creating a more continuous distribution of wind energy development across the upland landscapes.

8.12.43 The in scoping Eirlys Solar Farm (**ES Volume IV, Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm**), located to the west of the Site, would have limited visual interaction with the Proposed Development from within the host landscape character area. While Eirlys Solar Farm remains at scoping stage and is subject to uncertainty regarding its final form and delivery, it has been included in this cumulative assessment due to its close proximity to the Proposed Development (0.92 km) and potential for combined visibility**.** As shown in **ES Volume IV, Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm**, the areas of combined visibility between Eirlys Solar Farm and the Proposed Development within the host landscape character area are primarily over the more open farmland areas to the south-southwest of the Site. This is primarily due to intervening topography, as well as the substantial additional screening from the extensive areas of coniferous plantation woodland which separate the Site from Margam Park and the consented Eirlys Solar Farm. **ES**

Volume IV, Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm clearly shows that areas where both developments would be visible together (shown in light blue) are primarily concentrated to the south with only very limited overlap, shown over the southwest solar compartments of the Site. In reality, the lower-level solar development will be afforded a much greater level of screening from additional trees, roadside woodland, and field boundary hedgerows not included as barriers in the ZTV models.

8.12.44 When considered alongside the forestry management operations at Craig-yr-Aber Woodland, this scenario presents a more substantial cumulative effect. The areas where clearfelling is scheduled (particularly the 2022-2026 and 2027-2031 phases) would potentially afford greater visibility of both the Proposed Development and Y Bryn wind farm, reducing the screening effect of the forest that might otherwise limit cumulative visibility. This could create a situation where both wind farm developments are simultaneously visible across newly opened views, increasing the perception of a landscape characterised by renewable energy infrastructure.

8.12.45 The different management coupes shown in the forestry felling plan indicate varied timing of operations, which would create a dynamic landscape context that changes over time as different areas are harvested and replanted. This temporal aspect of change would interact with the more permanent change introduced by the wind farm developments, creating a complex cumulative effect that varies both spatially and over time.

8.12.46 While the individual effect of the Proposed Development would remain as previously assessed (**major** and **significant**), the cumulative context would substantially change, with the landscape character across the wider region becoming more consistently characterised by renewable energy development and commercial forestry operations, particularly wind farms and clearfelled/regenerating forest areas.

8.12.47 In this scenario, there would be an increased perception of the host landscape character area being part of a 'working upland landscape' with multiple forms of resource management, including energy projects and commercial forestry. However, the contribution of the Proposed Development to this cumulative effect would diminish as more wind farms are added to the baseline.

8.12.48 The western part of the Site extends into LANDMAP area NPTVS897 - Mynydd Bromil & Scarp tops, however, as this is a much smaller proportion of the Site, this is considered in more detail below.

Effects on Adjacent Landscape Character Areas

To the north and northeast (Llynfi Valley, Maesteg and surrounding uplands - CYNONVS884 - Llynfi Valley, CYNONVS351 - Maesteg, CYNONVS811 – Garth Hill)

8.12.49 With the addition of Y Bryn to the west these areas would experience an intensification of energy development surrounding them. The Proposed Development would be seen in the context of a landscape that is increasingly characterised by renewable energy infrastructure. The **moderate** to **minor-**

moderate levels of effect previously assessed would increase to **moderate-major** in some locations due to the intensification of development and increased incidence of wind farms visible from multiple directions. The landscape would be in transition toward one where renewable energy development, in particular wind farms, are a defining characteristic rather than isolated features.

To the east (CYNONVS966 - Bettws, CYNONVS349 - Mynydd Llangeinwyr)

8.12.50 The addition of Y Bryn wind farm to the northwest of the Proposed Development would substantially increase the cumulative effect on the eastern landscape character areas. With reference to **ES Volume IV, Figure 8.52: Cumulative ZTV with in planning Y Bryn**, Y Bryn would be positioned in a similar direction to the Proposed Development when viewed from these eastern areas, but at a greater distance, creating a more continuous and extensive spread of wind energy development across the western uplands.

8.12.51 From the elevated portions of Bettws (CYNONVS966) and the upland areas of Mynydd Llangeinwyr (CYNONVS349), the combined visibility of the Proposed Development, consented Mynydd y Glyn to the east, and the in-planning Y Bryn to the northwest-west would create a sense of wind energy infrastructure visible across multiple directions of view. This would represent a marked intensification from Scenario 1, where wind farms were visible primarily to the west and east, to a scenario where wind energy development would be visible across a broader arc of the horizon.

8.12.52 The landscape character would transition more decisively toward one where renewable energy development, in particular wind farms, is a defining characteristic of the upland setting rather than isolated features within it. The **moderate** level of effect assessed in Scenario 1 would increase to **moderate-major** in elevated and more open locations, particularly from viewpoints with panoramic views such as those experienced from the western edges of Bettws and the open upland areas of Mynydd Llangeinwyr. These effects would be **significant** in locations where multiple wind farms would be visible across a wide field of view, fundamentally altering the perception of the surrounding upland landscape.

8.12.53 However, in the more enclosed valley areas of CYNONVS349 - Mynydd Llangeinwyr, where woodland and settlement provide screening, and in lower-lying parts of Bettws where built form limits distant views, the cumulative effects would remain at **moderate** levels and **not significant**. The landscape would remain predominantly characterised by its valley form and mixed land uses, with wind farms forming a noticeable but not dominant component in available views toward surrounding uplands.

8.12.54 Overall, the cumulative effect on these eastern landscape character areas in Scenario 2 would range from **moderate** (**not significant**) in enclosed locations to **moderate-major** (**significant**) in elevated, open locations with extensive views across the surrounding uplands. The landscape character would increasingly reflect the role of these uplands in renewable energy generation, though the intrinsic valley and settlement character of the lower-lying areas would be preserved.

To the west (including areas influenced by Craig-yr-Aber Woodland, NPTVS927 - Mynydd Margam, NPTVS897- Mynydd Bromil and Scarp Tops, NPTVS403 - Margam Country Park)

8.12.55 The combination of Y Bryn wind farm and the forestry operations at Craig-yr-Aber Woodland would substantially increase the cumulative effect on landscape character to the west of the Site. Where Y Bryn wind farm might be partially screened by the forest in its current state, the scheduled clearfelling operations could increase its visibility, particularly from viewpoints to the east looking westward through newly harvested areas. Similarly, views from the west looking eastward toward the Proposed Development might be opened up by forestry operations.

8.12.56 Viewpoint 1 in Margam Park (**ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15)** demonstrates these cumulative effects, where the Proposed Development would be visible against the backdrop of Craig-yr-Aber Woodland, with the potential for Y Bryn wind farm to be visible to the west, though subject to screening by intervening woodland and landform. Viewpoint 2, on the Ogwr Ridgeway Walk (**ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15)** at the boundary between Margam Park and the wider landscape, similarly demonstrates the transition from the more enclosed parkland character to the more open upland character where cumulative effects become more apparent. The overall cumulative effect on the western landscape character areas would be **significant** in Scenario 2, representing a substantial transformation toward a landscape characterised by both renewable energy development and commercial forestry management.

8.12.57 The level of effect would increase to **moderate-major** or **major** in some locations, particularly where clearfelling operations coincide with views toward either or both wind farm developments. The landscape character would transition toward one characterised by both renewable energy infrastructure and commercial forestry, with the temporal changes of the forest creating a dynamic context for the more permanent changes introduced by the wind farms.

To the south (CYNONVS151 - Kenfig Burrows, CYNONVS955 - Cribwr, CNONVS825 – Newton Downs, NPTVS543 Coedhirwaun)

8.12.58 The addition of Y Bryn wind farm would substantially increase the influence of wind energy development visible from these southern areas. Y Bryn comprises a significant wind farm development positioned approximately 7-8 km northwest of these southern landscape character areas. **ES Volume IV, Figure 8.52: Cumulative ZTV with in planning Y Bryn** demonstrates the extent of theoretical combined visibility between the Proposed Development and Y Bryn.

8.12.59 The combined effect of Y Bryn and the Proposed Development would create a more continuous distribution of turbines along the northern horizon when viewed from open, elevated locations within these southern areas. Rather than appearing as a discrete cluster, wind energy development would extend across a broader arc of the northern skyline, approximately 90-120 degrees of horizontal view in the most exposed locations. The two developments would be distinguishable as separate groups due to the intervening distance (approximately 5-6 km separation

between nearest turbines) and differences in elevation, with Y Bryn positioned on upland terrain further west.

8.12.60 From CYNONVS955 - Cribwr and the northern parts of CYNONVS825 - Newton Downs, where settlement patterns create more open views toward the northern uplands, the cumulative effect would be most pronounced. The Proposed Development would appear to the northeast with Y Bryn visible to the northwest, with both developments sharing similar elevated skyline positions despite their separation. The landscape would transition from one where wind energy development appears as a contained upland feature to one where it becomes a more widespread characteristic of the northern horizon.

8.12.61 When considered alongside the operational and consented schemes at Kenfig Industrial Estate and Cefn Gwrgan Road, Scenario 2 would establish wind energy development as present across multiple distance zones and landscape contexts - from the closer, lower-lying commercial contexts (one to two turbine schemes at 4-5 km) to substantial upland developments on the northern skyline (6+ turbine schemes at 6-8+ km). This layered distribution would represent a notable shift in the cumulative landscape context, though the concentration of larger developments on distant upland terrain would maintain clear spatial and contextual separation from the more settled valley landscapes.

8.12.62 The previously assessed **minor-moderate level of effect** in the solus assessment would increase to **moderate** in open, elevated locations within CYNONVS955 - Cribwr and CYNONVS825 - Newton Downs where combined visibility occurs, though the effect would **remain not significant**. The increase reflects the greater horizontal extent of wind energy development visible on the northern skyline and the transition from discrete to more continuous development patterns, while the not significant conclusion is maintained due to:

- Substantial separation distances (6-8+ km to nearest turbines);
- Continued concentration of larger developments on upland terrain distinct from the settled valley character;
- Extensive screening from woodland, hedgerow patterns and built development that limits combined visibility to specific elevated viewpoints;
- The established presence of commercial forestry, overhead transmission infrastructure and operational wind farms in the wider landscape context that reduces the relative magnitude of change; and
- The ability of the rolling, vegetated landscape patterns characteristic of these areas to assimilate successive views of distant upland development without fundamental alteration to landscape character.

8.12.63 Within CYNONVS151 - Kenfig Burrows and NPTVS543 Coedhirwaun, where topography and woodland provide more substantial screening, cumulative effects would remain comparable to Scenario 1, with **minor-moderate effects (not significant)** maintained. The lower-lying coastal plain character of Kenfig Burrows and the coniferous woodland influence at Coedhirwaun would continue to limit views toward the northern uplands, with only occasional glimpsed visibility in the most open locations.

8.12.64 The cumulative effects in Scenario 2 represent the upper limit of anticipated wind energy development influence on these southern areas, given that Y Bryn and the Proposed Development together establish substantial upland wind farm presence across the northern horizon. Any further consented development would likely appear in similar skyline positions and would not materially alter the cumulative assessment conclusions already established by these two developments in combination.

Summary of Cumulative Effects on Landscape Character

8.12.65 In Scenario 1 (operational & consented developments), the cumulative effects on landscape character would represent an incremental increase in the influence of renewable energy, (in particular wind farm development) on landscape character but would not fundamentally alter the assessment conclusions reached for the Proposed Development in isolation. The forestry management operations at Craig-yr-Aber Woodland would introduce additional temporal changes that would interact with the Proposed Development, particularly along the western boundary of the Site, but these effects would be localised and vary over time as forestry operations progress through different phases.

8.12.66 In Scenario 2 (operational & consented & in-planning developments), there would be a more substantial change to the wider landscape character, with wind energy development becoming a more prominent and widespread characteristic. When combined with the forestry operations at Craig-yr-Aber Woodland, this would create a more complex cumulative effect, particularly to the west of the Site where both Y Bryn wind farm and forestry operations would influence the landscape context. The effect of the Proposed Development would be to contribute to a landscape increasingly characterised by renewable energy infrastructure and commercial forestry. This would be most evident across the upland areas between the Llynfi Valley and its intervisible opposing elevated areas and the more open valley areas in relative proximity to the Site which are primarily to the east and northeast <10 km from the Proposed Development. These effects on landscape character would not occur in the more sensitive coastal landscapes (Gower National Landscape, NPT and Bridgend Heritage Coast and the Bannau Brycheniniog National Park) which are all found further afield towards the extents of the study area (35 km) between 10-30 km+ away.

8.12.67 While the contribution of the Proposed Development to these cumulative effects would be significant in some cases (<10 km), it would be proportionally reduced as more wind farms are added to the baseline context and as other landscape changes (such as forestry operations) occur. The Proposed Development would then be perceived as part of a broader pattern of upland wind farm development rather than as an isolated feature.

Cumulative Effects on Visual Amenity

8.12.68 This section of the ES should be read in conjunction with **ES Volume III, Appendix 8.9: Residential Visual Amenity Assessment** and **ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**.

Scenario 1: Operational & Consented Development

8.12.69 In this scenario, the baseline views include all relevant operational and consented cumulative developments. The assessment considers how the addition of the Proposed Development would affect views that already include or would include these developments.

Effects on Principal Visual Receptors

Settlements

8.12.70 For settlements in the surrounding area, including Maesteg, Llangynwyd, Lletty Brongu, Bettws and Cefn Cribwr, the addition of consented developments would increase the presence of wind turbines in views, particularly from elevated areas and locations with open aspects toward the Site. For settlements Kenfig Hill, Pyle, Coedhirwaun and Pen-y-fai the Proposed Development in combination with other developments in the surrounding area would not give rise to significant visual effects and therefore have been excluded from this assessment. The effect would remain as per the Proposed Development scenario.

Maesteg

8.12.71 In scenario 1, views from Maesteg already include operational wind farms, and the addition of consented developments such as Mynydd y Glyn to the east would increase the extent of wind energy development visible from some elevated locations on the southern edge of the settlement. However, these consented schemes would appear at considerable distance and in different parts of the view from the Proposed Development. As shown in **ES Volume III, Appendix 8.10: Visualisations: Viewpoints 1 to 15 -** Viewpoint 5 (Heol Gelli Lenor, Maesteg**)**, residential receptors on the southern edge of Maesteg would experience the proposed turbines visible on the horizon to the south-southeast at approximately 3.4 km distance. The Proposed Development would be seen in the context of existing infrastructure including overhead transmission lines (OHT), which reduces the relative impact of the turbines to some degree. The turbines would appear partially integrated with existing energy infrastructure, with foreground and mid-ground horizontal woodland elements assisting in grounding the turbines. For those limited areas of the settlement with views toward the Site, the magnitude of change would remain **medium**. The cumulative effect for these locations would remain **moderate**, which is considered **significant**. However, for the settlement as a whole, considering the vast majority of properties have no views of the Proposed Development due to screening by landform, woodland and built form, the magnitude of change would remain **very low** or **no change**, and therefore the effect would remain **minor** or **no effect**, which is considered not significant.

Llangynwyd (western hamlet)

8.12.72 The settlement is located in a rural valley setting between the Proposed Development to the south and potential cumulative developments to the east.

8.12.73 In scenario 1, the cumulative effect would be noticeable for this rural settlement located in the valley between the Proposed Development and consented schemes

to the east. Consented schemes such as Mynydd y Glyn would be potentially visible to the east, though with limited visibility from the specific viewpoint location. The proposed wind turbines would be clearly visible on the horizon to the south at approximately 1.9 km distance from the western hamlet, introducing prominent vertical elements into a view that currently has a largely undeveloped skyline. Views from these locations would potentially include wind turbines in multiple directions, with the Proposed Development to the southwest and consented developments to the east. However, the limited combined areas of visibility lie primarily within farmland areas surrounding the settlement rather than from within the settlement core or conservation area itself. The Proposed Development would remain the most prominent new feature due to its proximity. The magnitude of change would remain **high**.

8.12.74 For the western hamlet, as evidenced by Viewpoint 4 (Llangynwyd Conservation Area) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), residential and recreational receptors would experience a **major** effect which is considered **significant**.

Llangynwyd eastern settlement (Pont Rhyd-y-cyff)

8.12.75 When considering the consented schemes in Scenario 1, including Mynydd y Glyn to the east and other operational wind farms in the wider context, the cumulative effect for the elevated properties and southern settlement edges of Pont Rhyd-y-cyff would experience a **moderate** effect which is considered **significant**, while the majority of the settlement would continue to experience **minor** to **no effect** that are **not significant**. The cumulative effect remains localised to those properties with southern aspects and elevated positions and whilst the consented schemes adds incrementally to the presence of wind energy development visible from the more exposed locations, it does not fundamentally alter the pattern of effects across the settlement as a whole.

Lletty Brongu/Bettws

8.12.76 In scenario 1, consented schemes such as Upper Ogmore would potentially be visible to the north/northeast at considerable distance. The addition of consented development would further increase the presence of wind turbines in the wider landscape context for residents on the western edge of the settlement. However, the Proposed Development would remain the most prominent feature due to its position directly facing residential properties on the western settlement edge. All six proposed turbines would be visible on the horizon to the west at approximately 3.2 km distance, appearing as a group occupying a moderate lateral extent of the view. The turbines would introduce prominent vertical elements into the view that currently includes the two smaller existing turbines at Gelli Las Farm. The magnitude of change would increase to **high** for Bettws and would remain **high** for Lletty Brongu. Residents on the western edge of Bettws and Lletty Brongu would experience a **major** effect, which is considered **significant**. Considering the Bettws settlement as a whole, where many properties have limited or no views due to screening by topography and built form, the worst-case magnitude of would

remain **very low** to **no change**, resulting in an overall **minor** to **no effect**, which is considered **not significant**.

Cefn Cribwr

8.12.77 In scenario 1, consented schemes such as Kenfig Industrial Estate would potentially be visible to the south but would not appear in the same field of view as the Proposed Development. The addition of consented schemes would have limited effect on this settlement, as they would not appear in the same field of view as the Proposed Development. Nevertheless, the magnitude of change would increase to **medium-high.** The cumulative effect would be **moderate** to **major**, which is considered **significant**, primarily affecting properties at the northern settlement edge with open northward aspects.

Recreational Routes

8.12.78 For users of recreational routes, particularly the Ogwr Ridgeway Walk which passes close to the Proposed Development, the addition of consented developments in scenario 1 would create a more continuous pattern of wind energy development visible along sections of the route. As shown in Viewpoint 3 (Ogwr Ridgeway Walk) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), recreational receptors would experience a **major** effect which is considered **significant**. The proposed wind turbines would be clearly visible in the middle distance (approximately 1.8 km to the nearest turbine), introducing prominent vertical elements into a view that currently features some man-made elements (OHT's) but is prominently characterised by upland grazing and coniferous plantation woodland. This **major** effect, which is considered **significant,** would remain, but the extent of route affected by significant cumulative effects would increase with the addition of consented developments.

8.12.79 For the Wales Coast Path, located to the south, the addition of consented developments would have limited additional effect due to distance and intervening topography. As shown in Viewpoint 11 (Wales Coast Path at Ogmore-by-Sea) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), there would be no visibility of the Proposed Development from this location due to the distance (over 10 km) and intervening landform. The previously assessed **minor-moderate** to **minor** effect for the Wales Coast Path as a whole, which is considered **not significant,** would remain unchanged.

8.12.80 The forestry operations at Craig-yr-Aber Woodland would have more substantial effects on recreational routes that pass through or near the forest, particularly the Ogwr Ridgeway Walk and the Cistercian Way. Users of these routes would experience both the direct landscape changes associated with forestry operations (clearfelling, replanting, etc.) and potential changes in views toward the Proposed Development as forest cover is altered. The scheduled clearfelling operations, particularly those in the 2022-2026 period, could temporarily open up new views toward the Proposed Development from sections of these routes that are currently screened by forest cover.

Road Users

8.12.81 For users of main roads in the local area beyond the Site, such as the A4063 through the Llynfi Valley, the addition of consented developments would increase the frequency of views toward wind energy development, particularly when traveling along sections of road with open aspects to both east and west. The previously assessed worst-case **moderate**, mainly **not significant** effects, with some localised **moderate**, **significant** effects, would remain unchanged.

8.12.82 The forestry operations at Craig-yr-Aber Woodland would have more noticeable effects on minor roads that pass through or near the forest, particularly the road that traverses the Site from Tondu (New Road) to the northwest corner. Users of this road would experience both the direct landscape changes of forestry operations and potential changes in views toward the Proposed Development as forest cover is altered. The **major** magnitude of effect experienced by users of the road moving through the Site which is **significant** would continue and so there would be no change to the previous assessment but with an increased presence of wind energy development.

Cycle Routes

8.12.83 In Scenario 1, cyclists on NCR 4 would experience limited additional cumulative effects beyond those of the Proposed Development in isolation. The section between Aberkenfig and Margam Country Park (200m-5 km from Site) already has extensive screening from mature hedgerows, trees, and woodland edge planting. Where the Proposed Development turbines would be visible above intervening vegetation in the closest sections, consented wind farms would typically be at greater distances and in different directions, resulting in limited combined visibility.

8.12.84 Within Margam Country Park itself (3-6 km from Site), the extensive mature woodland plantations would continue to screen views toward both the Proposed Development and consented schemes, with only very localised glimpses possible from specific clearings. The coastal sections west of Port Talbot (8-20 km from Site) would experience the Proposed Development as a distant inland element, with consented schemes adding minimally to the overall renewable energy presence in views due to distance and the substantial intervening urban fabric.

8.12.85 For Routes 884, 885, and 887, the cumulative effects in Scenario 1 would remain minimal. These routes are characterised by enclosed valley settings with extensive vegetation screening (Routes 884 and 887) or pass through areas where the Proposed Development would be a distant element (Route 885). The addition of consented schemes would not materially change the limited visibility these routes experience.

8.12.86 Overall, considering the screening provided by roadside vegetation and woodland, the speed of travel, and the heritage focus of key route sections, the magnitude of change for National Cycle Routes in Scenario 1 would remain **low** to **very low** for most route sections, increasing to **low-medium** for the closest sections of NCR 4 (200m-2km from Site) in locations with less effective screening. This would result in a cumulative effect on National Cycle Routes of, using professional judgement, **minor** to **minor-moderate** and **not significant**. The closest route (NCR 4) would experience the most noticeable cumulative effects in specific sections where screening is less effective, but the overall cycling experience along the route -

particularly through Margam Country Park where the heritage landscape remains the primary focus - would not be fundamentally altered by the presence of wind energy developments in the wider landscape.

Scenario 2: Operational, Consented & In-Planning Developments

8.12.87 This scenario further extends the baseline to include developments that are in planning, notably Y Bryn wind farm to the west.

Effects on Principal Visual Receptors

Settlements

Maesteg

8.12.88 In scenario 2, the addition of Y Bryn wind farm to the west would further increase the presence of wind energy development in the wider landscape visible from elevated southern parts of Maesteg. However, Y Bryn would be visible at greater distance beyond the Proposed Development and would not fundamentally alter the assessment for the settlement as a whole. The Proposed Development would remain the most prominent renewable energy development in views from those limited southern edge locations with open southward aspects. For those limited areas with views, the magnitude of change would remain **medium**, resulting in a **moderate** effect, which is considered **significant**. For the settlement as a whole, the magnitude of change would remain **very low or no change**, resulting in an overall effect of **minor or no effect**, which is considered **not significant**.

Llangynwyd (western hamlet)

8.12.89 **In scenario 2** the addition of Y Bryn wind farm would create a situation where turbines could be potentially visible to the west/northwest, creating the potential for wind turbines to be visible in multiple directions from farmland areas surrounding the settlement. With Y Bryn potentially visible to the west/northwest in addition to the Proposed Development to the south/southwest and consented schemes to the east, there would be an increased perception of wind energy development on the surrounding uplands. However, these would primarily be visible from farmland areas outside the settlement rather than from within the conservation area, with the Proposed Development remaining the most prominent due to its proximity. The magnitude of change would remain **high**. The cumulative effect would remain **major**, which is considered **significant**, with the Proposed Development continuing to be the primary driver of effects.

Llangynwyd (Pont Rhyd-y-cyff)

8.12.90 In scenario 2 the addition of Y Bryn wind farm would create a situation where increased turbines could be potentially visible from the elevated properties and southern settlement edges of Pont Rhyd-y-cyff, and therefore these properties are likely to experience an increase in magnitude of change, to high. While the remainder of the settlement would continue to experience **minor** to **no effect** that are **not significant**.

Lletty Brongu/Bettws

8.12.91 –In scenario 2, the addition of Y Bryn wind farm would create a situation where wind turbines are visible in both westerly views (the Proposed Development) and potentially in north-westerly views (Y Bryn) for residents on the western edge of Bettws and within Lletty Brongu. This would increase the prominence of wind farms in the surrounding upland landscape, creating a more continuous pattern of wind energy development across the northwestern to western horizon. However, the Proposed Development would remain the most prominent due to its proximity and direct alignment with views from the western settlement edge. The forestry operations at Craig-yr-Aber Woodland could also potentially increase visibility of Y Bryn from some locations by reducing screening effect, though this would be temporary and phased. The magnitude of change would increase to **high** for **Bettws** and remain **high** for Lletty Brongu. The cumulative effect for western edge residents would increase to major for Bettws and remain **major** for Lletty Brongu, which is considered significant, with Y Bryn adding to the overall sense of wind energy development defining the surrounding upland landscape. For Bettws as a whole, the worst-case magnitude remains **very low** to **no change**, resulting in an overall **minor** to **no** effect, which is considered **not** significant.

Cefn Cribwr

8.12.92 In scenario 2, the addition of Y Bryn wind farm would increase the prominence of wind energy development in views to the north and northwest, creating a more continuous distribution of turbines along the northern horizon. However, Y Bryn would be visible at greater distance beyond the Proposed Development, appearing in a similar northerly/north-westerly direction. This would further increase the presence of wind energy development in the wider landscape context for residents on the northern edge of the settlement. The magnitude of change would be **medium-high.** The cumulative effect would be **moderate** to **major**, which is considered **significant**, with the increased presence of turbines contributing to a landscape increasingly characterised by wind energy development on the surrounding uplands.

8.12.93 When considered alongside the forestry operations at Craig-yr-Aber Woodland, the cumulative visual effect could be further increased for settlements with views toward both the forest and the wind farm developments. The clearfelling operations could potentially increase visibility of Y Bryn wind farm from some settlements, particularly those to the east looking westward through newly harvested areas of forest, but there would be no change to the previous assessments.

Recreational Routes

8.12.94 For users of the Ogwr Ridgeway Walk, as shown in Viewpoints 2, 3, and 12 (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), the addition of Y Bryn wind farm to the west would create a situation where wind turbines are visible for much of the route. At Viewpoint 3, the already assessed **major** effect, which is considered **significant**, would remain, but would extend to a greater portion of the route. At Viewpoint 2 (Ogwr Ridgeway Long Distance Walk in Margam Park),

recreational receptors would experience a **moderate** effect which is considered **not significant**, with all six turbines visible on the horizon to the east. When combined with potential views of Y Bryn to the west, this would result in an increased presence of wind energy development for users of this recreational route.

8.12.95 At Viewpoint 12 (Ogwr Ridgeway Walk at Waun Wen) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), recreational receptors would experience a **moderate** effect which is considered **not significant**, with the proposed turbines visible on the distant horizon to the west at a distance of approximately 7.5 km. The addition of Y Bryn would increase the prominence of wind energy development in the wider landscape context for users of this section of the route.

8.12.96 For the Wales Coast Path and other recreational routes in the wider area, the addition of Y Bryn would increase the prominence of wind energy development in views to the north. As shown in Viewpoint 10 (Kenfig Burrows) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), recreational receptors would experience a **minor-moderate** effect which is considered **not significant**. The addition of Y Bryn would increase the presence of wind energy development in views from this location, but the effect would remain not significant due to the distance.

8.12.97 The forestry operations at Craig-yr-Aber Woodland would also be a relevant factor when considering this cumulative visual effect for recreational routes passing through or near the forest particularly the Ogwr Ridgeway Walk and the Cistercian Way (see **paragraphs 8.12.124– 8.12.151** for more detailed assessment). The scheduled clearfelling operations could increase visibility of both the Proposed Development and Y Bryn wind farm from certain sections of routes, creating more extensive views of renewable energy infrastructure. This effect would be most pronounced where clearfelling coincides with potential view corridors toward either wind farm development

Road Users

8.12.98 For users of main roads in the area beyond the Site, the addition of Y Bryn would increase the prominence of wind energy development in views from multiple sections of routes, particularly those with elevated positions and open aspects. The previously assessed worse case **moderate** effect would however remain.

8.12.99 The forestry operations would have more substantial effects on minor roads passing through or near the forest, particularly the road traversing the Site. Users of this road would experience a complex sequence of landscape changes, including both forestry operations and views toward multiple wind farm developments. The **major** magnitude of effect experienced by users of the road moving through the Site which is **significant** would remain and so there would be no change to the previous assessments but with an increased presence of wind energy development.

Cycle Routes

8.12.100 In Scenario 2, the addition of in-planning schemes, particularly Y Bryn wind farm and the in-scoping Eirlys Solar Farm adjacent to Margam Park, would increase

cumulative effects on certain sections of the National Cycle Routes, most notably NCR 4.

8.12.101 For NCR 4, the addition of Y Bryn wind farm to the northwest would increase the presence of wind energy development visible from open sections of the route between Aberkenfig and Margam Country Park. From elevated sections of the route with northward views, cyclists would potentially experience combined distant views of the Proposed Development and Y Bryn, creating an increased sense of wind energy infrastructure in the northern inland landscape. However, the speed of travel along the cycle route, combined with the need to focus attention on the route surface and traffic conditions, would reduce the prominence of these distant wind farms in the overall cycling experience compared to slower-paced walking.

8.12.102 The inclusion of the in-scoping Eirlys Solar Farm adjacent to Margam Park represents a more significant change for NCR 4 than the addition of distant wind farms. As the route passes through or near Margam Country Park, sections of the cycle route may pass in proximity to the proposed solar development, creating a more immediate awareness of renewable energy infrastructure than distant wind turbines. However, the solar farm's relatively low profile, and screening by woodland, would limit the extent and duration of visibility experienced by cyclists traveling at typical cycling speeds (15-25 km/h). The historic character of Margam Park would remain the dominant feature of this section of the route.

8.12.103 The sequential experience for cyclists on NCR 4 in Scenario 2 would involve:

- Approaching from Aberkenfig (200 m-2 km from Site): Intermittent views of Proposed Development turbines above roadside vegetation, with potential distant views of Y Bryn in similar direction but at greater distance. Experience dominated by traveling through hedged rural lanes with glimpsed views to surrounding landscape.
- Through Margam Country Park (3-6 km from Site): Extensive woodland screening limiting views of wind farms, but potential proximity to Eirlys Solar Farm in specific sections creating awareness of renewable energy development adjacent to the historic designed landscape. Experience primarily defined by the park's mature woodlands and heritage features.
- Coastal sections (8-20 km from Site): Wind energy developments appearing as distant inland elements with minimal prominence due to distance, urban fabric, and coastal focus of the route. Experience dominated by coastal landscape character.

8.12.104 For Routes 884, 885, and 887, Scenario 2 would result in minimal additional cumulative effects. These routes' enclosed valley settings and extensive vegetation screening would continue to limit visibility of both the Proposed Development and in-planning schemes. Route 885, which follows the Ogmore River valley, might experience slightly increased awareness of wind energy infrastructure in the wider landscape from occasional elevated sections, but this would not materially alter the assessment.

8.12.105 Overall, considering the addition of Y Bryn wind farm and the in-scoping Eirlys Solar Farm, the magnitude of change for National Cycle Routes in Scenario 2

would increase to **low-medium** for NCR 4 (particularly sections between Aberkenfig and Margam Park where there would be increased presence of renewable energy development), and **very low** to **low** for Routes 884, 885, and 887 which remain distant and screened by valley topography. This would result in a cumulative effect on National Cycle Routes of **minor-moderate** to **moderate** and **not significant** when considering the routes as a whole. NCR 4, being closest to the Proposed Development and passing adjacent to the proposed Eirlys Solar Farm, would experience the most notable increase from Scenario 1, but the combination of screening vegetation, cycling speed, route focus requirements, and the heritage character of key sections (particularly Margam Country Park) would ensure that cumulative effects remain not significant. Routes 884, 885, and 887 would continue to experience minimal cumulative effects due to their valley settings and distance from developments.

8.12.106 The forestry operations at Craig-yr-Aber Woodland would have limited influence on National Cycle Routes due to distance and screening. Only NCR 4, passing to the west of the forest in Margam Country Park, might experience any awareness of forestry operations, but the mature parkland character and distance would ensure these operations do not materially contribute to cumulative effects on the cycling experience.

Minor Road Through Site – Cyclists

8.12.107 While the minor road through the Site has been assessed for road users generally (paragraphs 8.12.81-8.12.82), it is worth specifically acknowledging the well-used cycling route this provides through the area. Cyclists using this route would experience similar cumulative effects to those described for road users, but with some differences:

- Speed of travel: Cyclists travel more slowly than motorists (typically 15-25 km/h uphill, faster downhill), allowing more time to observe the landscape, but faster than walkers, reducing the duration of exposure to any given view.
- Position on road: Cyclists typically ride closer to the road edge, potentially experiencing more filtered views through roadside vegetation.
- Direction of travel: Cyclists ascending Mynydd Baeden would face views toward the Site and developments beyond, while those descending would experience more limited views due to focus on route ahead and speed.

8.12.108 In Scenario 2, with the addition of Y Bryn wind farm, the magnitude of change would increase to **high**, reflecting the increased extent and prominence of wind energy development visible across the northern landscape. These magnitudes would result in major cumulative effects for cyclists on this route which would be **significant** for sections through and immediately adjacent to the Site, mirroring the assessment for the Ogwr Ridgeway Walk which shares this route alignment.

Cumulative 'Sequential' Effects

8.12.109 A 'sequential' cumulative visual effect is the term used to refer to the situation where a viewer is able to see one or more further developments in addition to the Proposed Development, whilst travelling along a linear route. This could be either on foot, whilst walking on a footpath, or by bicycle or car along the public highway. The main assessment focused on the following routes which it was identified had the potential to experience significant effects as a result of the Proposed Development:

- Minor road from New Road through the Site;
- Ogwr Ridgeway Walk;
- Cistercian Way; and
- Wales Coast Path.

Minor Road from New Road through the Site

Scenario 1: Operational & Consented Development

8.12.110 This minor road provides an important local route from the southeast corner at the edge of Tondu (New Road), passing the southern solar compartments (Ref: L, K) of the Proposed Development and then past the two existing turbines located to the south of the Site at Baiden Farm, which are located on its west side. The road then continues up and over Mynydd Baeden (251 m AOD), where it meets the Ogwr Ridgeway Walk, before continuing towards the Site's northwest corner, passing solar field D and the substation, meeting the northern edge of Craig-yr-Aber Woodland.

8.12.111 Users of this route would experience a progressive transition from a more settled landscape near Tondu into the more rural upland landscape of the Site. The sequential experience would begin with views of the southern solar compartments of the Proposed Development at close range, creating a noticeable change to the immediate roadside landscape. As the route progresses northwest, it passes the existing operational turbines at Baiden Farm, establishing a baseline context of renewable energy development.

8.12.112 As the road climbs over Mynydd Baeden to its highest point (251 m AOD), users would experience more extensive views of the Proposed Development, with wind turbines becoming prominent vertical elements in the surrounding landscape. At this elevated position, there would also be potential views of consented development such as Pant y Wal Extension to the northeast, creating a cumulative experience with renewable energy development visible in multiple directions.

8.12.113 The continuation of the route toward the northwest corner would bring users past or through parts of the Proposed Development, with close-range views of turbines and solar field D and the substation as they approach the northern edge of Craig-yr-Aber Woods. At this point, the route would also experience the influence of forestry operations at Craig-yr-Aber Woodland. The forestry management plan shows several areas designated for clearfelling in the 2022-2026 period along the eastern edge of the forest, coinciding with the area where the minor road meets the forest edge. This could create additional landscape change visible from the

route, with harvesting operations and newly cleared areas forming part of the sequential experience.

8.12.114 The level of effect would vary along the route, ranging from **major** at locations where the Proposed Development is viewed at close range, to **moderate-major** at locations with more distant views of both the Proposed Development and consented developments, which are considered significant. The addition of forestry operations visible in the northwestern portion of the route would further increase the cumulative effect, creating a sequential experience characterised by multiple forms of landscape change. Overall, the sequential effect would be **moderate-major** to **major**, with a pronounced transition from areas with limited renewable energy influence on areas where renewable energy (in particular wind farm development) of the Proposed Development is prominent as well as also being affected by forestry operations.

Scenario 2: Operational & Consented & In-Planning Schemes

8.12.115 In this scenario, the addition of Y Bryn wind farm to the west would further increase the presence of renewable energy development experienced along this route. As users travel northwest from Tondu, they would experience a more continuous sequence of views toward renewable energy, (in particular wind farm development), beginning with the southeastern solar compartments, progressing through views of the proposed wind turbines, and culminating in potential views of Y Bryn wind farm to the west from elevated sections of the route. As shown in the viewpoint assessments, particularly the assessment for Viewpoint 3 (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), which is in proximity to this route, the visibility of turbines would be significant along certain sections.

8.12.116 This would create a more comprehensive experience of renewable energy development along the route, with fewer sections free from views of either wind turbines or solar development. The previously assessed **moderate-major** effect would increase to **major**, which is considered **significant,** in more sections of the route, particularly near the northwestern portions where views of both the Proposed Development and Y Bryn wind farm might be experienced simultaneously.

8.12.117 The forestry operations at Craig-yr-Aber Woods would be a further relevant factor when considering the cumulative effect. The scheduled clearfelling operations in the 2022-2026 period along the eastern edge of the forest could potentially increase visibility of Y Bryn wind farm from the northwestern portion of the route, reducing the screening effect that the forest might otherwise provide. This could create a situation where users of the route experience views of both wind farm developments and active forestry operations simultaneously, increasing the perception of a landscape under change. There would be no change however to the assessment judgements set out above.

Ogwr Ridgeway Walk

Scenario 1: Operational & Consented Developments

8.12.118 The Ogwr Ridgeway Walk passes through the Site and continues across the upland landscapes to both east and west. In Scenario 1, users of this route would

experience views of the Proposed Development at close range. More distant views of consented developments such as Mynydd y Glyn and Pant y Wal Extension to the east and northeast. As evidenced by Viewpoints 2, 3, and 12 (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), which are located along this route, the effects would vary from **moderate** which is considered **not significant** at Viewpoints 2 and 12 to **major** which is considered **significant** at Viewpoint 3. The sequential experience would involve a pronounced transition from areas with limited wind farm influence to areas of greater prominence resulting from wind farm development (in this case largely the Proposed Development), followed by a transition back to areas with more distant views of other wind farms.

8.12.119 The Ogwr Ridgeway Walk also passes near or through portions of Craig-yr-Aber Woodland to the west of the Site. The forestry management plan shows various management approaches across the forest, including areas scheduled for clearfelling in the 2022-2026 and 2027-2031 periods, as well as areas managed through Low Impact Silvicultural Systems. These forestry operations would introduce additional landscape change visible from the route, creating a more complex sequential experience.

8.12.120 The sections of the route passing through or near areas scheduled for clearfelling would experience more substantial landscape change, with harvesting operations and newly cleared areas forming part of the sequential experience. This could also temporarily increase visibility of the Proposed Development and other renewable energy developments by reducing the screening effect of the forest. The sections passing through areas managed through Low Impact Silvicultural Systems would experience less dramatic change, with more forest cover retained.

8.12.121 The route would also offer views of the operational Caegarw Farm solar scheme (**ES Volume IV, Figure 8.54: Cumulative Screened ZTV with operational Caegarw Farm**) from some elevated sections, but very limited areas to experience this in combination with the Proposed Development. Similarly, Court Farm Solar (**ES Volume IV, Figure 8.56: Cumulative Screened ZTV with operational Court Coleman Farm**) would have very limited visibility from this route due to its location south of the M4 and substantial screening. The areas where both Court Farm Solar and the Proposed Development would be visible together are extremely limited. Therefore, the sequential experience would primarily involve transitions between wind farm views, solar development views, and views of forestry operations, creating a diverse but not consistently visible mix of landscape changes. There would be no change, in the level of effect, to the assessments set out for the Proposed Development in its own right.

Scenario 2: Operational & Consented & In-Planning Schemes

8.12.122 In Scenario 2, the addition of Y Bryn wind farm would create a more continuous experience of wind energy development along much of the route. Users would transition from sections with views of Y Bryn to the west on moving through the Site. As shown by the viewpoint assessments along this route (Viewpoints 2, 3, and 12), there would be a varying degree of effect, but the sequential experience

would be characterised by a journey through a landscape increasingly defined by wind energy development.

8.12.123 The route may also offer views of the in scoping Eirlys Solar Farm to the west. As shown in **ES Volume IV, Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm**, there are areas of combined visibility between the Proposed Development and in scoping Eirlys Solar Farm along portions of the Ogwr Ridgeway Walk, particularly as the route approaches the western portions of the study area. This would introduce a more diverse pattern of renewable energy development into the sequential experience, with wind turbines forming the prominent feature to the east and centre, and solar development visible largely in areas to the west of Mynydd Margam and the Site.

8.12.124 The forestry operations at Craig-yr-Aber Woodland would be a further relevant factor when considering this cumulative effect. The scheduled clearfelling operations could increase visibility of Y Bryn wind farm from sections of the route that pass through or near the forest, potentially creating more expansive views of renewable energy infrastructure. This effect would be most pronounced where clearfelling coincides with potential view corridors toward Y Bryn wind farm.

8.12.125 There would be no change to the assessment of effects on Ogwr Ridgeway Walk set out for the Proposed Development in its own right. The combination of wind farms, solar developments, and forestry operations would create a landscape increasingly defined by different forms of resource management, with the sequential experience characterised by transitions between different types and scales of development rather than between developed and undeveloped landscape contexts.

8.12.126 Overall, the sequential cumulative effect along the Ogwr Ridgeway Walk would be **major** and **significant** in proximity to the Site (represented by Viewpoint 3 **ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15**), reducing to moderate and not significant in sections beyond 5 km from the Site (represented by Viewpoints 2 and 12 **ES Volume III, Appendix 8.10 Visualisations Viewpoints 1 to 15**). The experience would be characterised by a pronounced transition from areas with limited wind farm influence to areas of greater prominence resulting from the Proposed Development, followed by a transition back to areas with more distant views of other wind farms. The location of the substation to the south side of the route, ensures lower-level infrastructure is primarily concentrated on one side of the route rather than both with a localised effect. In Scenario 2, the addition of Y Bryn wind farm would extend the sections of the route experiencing significant effects, creating a more continuous experience of wind energy development along the upland sections, though the sequential experience would remain characterised by transitions between different types and scales of development rather than between developed and undeveloped landscape contexts.

Cistercian Way

8.12.127 The route traverses the northern uplands across the upper portion of the 20 km detailed study area, passing to the north of the Site before heading southwest and

eventually connecting with the Ogwr Ridgeway Walk through Margam Park. The viewpoint assessments for Viewpoints 1 and 2, which are located within Margam Park where the Cistercian Way passes, indicate that effects would be **minor-moderate** to **moderate** and **not significant**. However, the sequential experience along the entire route would vary.

Scenario 1: Operational & Consented Developments

8.12.128 In this scenario, users of the Cistercian Way would experience varied views of the Proposed Development as they travel along the route.

8.12.129 The eastern sections of the route, as it traverses the northern uplands, would afford more elevated and open views toward the Proposed Development to the south-southwest. From these locations, the proposed turbines would be visible at middle-distance (approximately 5-10 km), appearing as distinctive vertical elements on the upland horizon. These views would often include existing operational wind farms in the same arc of vision, with the consented scheme of Pant y Wal Extension potentially visible to the east/southeast.

8.12.130 As the route continues westward across the northern uplands, intermittent views of the Proposed Development would occur, often framed by the undulating topography and wooded valley vegetation. The sequential experience would involve periods of visibility alternating with sections where landform or vegetation screening limits views toward the Site.

8.12.131 Where the route turns southwest toward Margam Park, more oblique views of the Proposed Development would be experienced, with the turbines appearing more in the southeastern field of view. When users reach Margam Park to the west of the Site, as shown by Viewpoint 1 (Margam Park Access Road) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), the visibility of the proposed turbines would be limited to the hub of T06 and blade tip of T03, resulting in a **moderate-minor** effect which is not significant.

8.12.132 As the route passes through the northern extents of Margam Park it would have very limited potential views of the operational Court Farm solar development, which is located in the southern portion of the study area beyond the M4.

8.12.133 The Cistercian Way also passes near portions of Craig-yr-Aber Woods as it approaches Margam Park from the north. The forestry management plan shows various management approaches across the forest, including areas scheduled for clearfelling and areas managed through Low Impact Silvicultural Systems. These forestry operations would introduce additional landscape change visible from the route, particularly in sections passing near areas scheduled for clearfelling in the 2022-2026 period. This could temporarily alter the landscape context through which the route passes, creating a more complex sequential experience that includes both renewable energy development and commercial forestry operations.

8.12.134 Overall for Scenario 1 (Operational and Consented schemes), the cumulative effect on the Cistercian Way would remain **minor-moderate** and **not significant**, The consented wind farms at greater distances would add limited additional cumulative effect due to intervening topography and distance.

Scenario 2: Operational & Consented & In-Planning Schemes

8.12.135 In Scenario 2, the addition of in-planning schemes, particularly Y Bryn wind farm (**ES Volume IV, Figure 8.52: Cumulative ZTV with in planning Y Bryn**), would increase the cumulative effects along certain sections of the Cistercian Way.

8.12.136 With reference to **ES Volume IV, Figure 8.52: Cumulative ZTV with in planning Y Bryn**, Y Bryn wind farm would be located to the northwest of the Proposed Development. From sections of the Cistercian Way within and around Margam Park (3-5 km from the Proposed Development), Y Bryn would be positioned in a similar direction to the Proposed Development but at greater distance, potentially appearing in combined views from elevated, open sections of the route. The cumulative baseline sections of the viewpoint assessments, particularly for Viewpoints 1 and 2 in Margam Park, reference the potential combined visibility of the Proposed Development with Y Bryn wind farm.

8.12.137 The sequential experience along the Cistercian Way in Scenario 2 would involve varying degrees of wind energy development visibility as users progress along the route. Within the extensively wooded sections of Margam Park, views toward wind farms would remain highly limited due to mature woodland screening. However, in more open sections of the route, particularly elevated areas with clear views toward the north and northwest, users would experience views of both the Proposed Development and Y Bryn wind farm, creating an increased sense of wind energy development in the northern inland landscape.

8.12.138 As the route passes adjacent to the in-scoping Eirlys Solar Farm near Margam Park, there would continue to be a juxtaposition between the historic landscape of Margam Park and renewable energy development. The addition of Y Bryn wind farm would add a more distant wind energy component to this experience, though from this location the solar development would remain the more prominent renewable energy element due to proximity

8.12.139 The forestry operations at Craig-yr-Aber Woodland would continue to contribute to the cumulative landscape changes experienced along sections of the route passing near the forest. The combination of commercial forestry operations and renewable energy development would create a landscape context increasingly defined by productive land uses, though the route's primary focus on linking historic Cistercian sites would remain its defining characteristic.

8.12.140 The cumulative effects would vary considerably along the route depending on location:

- Sections within Margam Park (3-5 km from Site): Limited visibility due to extensive woodland screening, with only occasional glimpsed views toward renewable energy developments. Effects would remain **minor-moderate** and **not significant**.
- Sections passing between Margam Park and Eirlys Solar Farm: More pronounced juxtaposition between historic landscape and renewable energy infrastructure, with potential distant views of wind farms to the north. Effects would be **moderate** and locally **significant**.
- Northern sections toward Neath Abbey (5-15 km from Site): Patchy visibility with increasing distance reducing prominence of the Proposed Development.

Combined visibility with Y Bryn possible from elevated sections. Effects would increase to **moderate** to **minor-moderate**, generally **not significant**.

- Southern sections toward Ewenny Priory (5-15 km from Site): Limited visibility due to route following valley bottoms and settled areas. Minimal cumulative effects due to topographic screening. Effects would be **minor** and **not significant**.

8.12.141 Overall for Scenario 2, the cumulative effect on the Cistercian Way would be **moderate** and **not significant** when considering the route as a whole, with local variations where effects may be more pronounced. While the addition of Y Bryn wind farm would increase the presence of wind energy development visible from open, elevated sections of the route, the extensive woodland screening within Margam Park, the route's passage through valley settlements with screening from urban form, and the increasing distance along much of the route would continue to limit overall cumulative effects. The sections where cumulative effects would be most notable are those passing between Margam Park and the adjacent Eirlys Solar Farm, where the juxtaposition between historic landscape and renewable energy development is most apparent, and from elevated open sections with combined views of multiple wind farms.

8.12.142 It is important to note that the cumulative effects on the Cistercian Way would be considerably less than those on the Ogwr Ridgeway Walk, which passes much closer to the Proposed Development (bisecting the Site itself) and experiences **major** significant cumulative effects. The Cistercian Way's greater distance from the Site (3-5 km at closest), its extensive screening within Margam Park, and its primary focus on linking historic Cistercian sites rather than upland landscape appreciation, all contribute to lower cumulative effects despite the presence of multiple renewable energy developments in the wider landscape.

8.12.143 The forestry operations at Craig-yr-Aber Woodland would have minimal additional influence on the Cistercian Way's cumulative effects in Scenario 2. While sections of the route passing near areas scheduled for clearfelling would experience temporary changes to their immediate landscape context, these forestry operations would not materially alter the overall cumulative assessment, which is primarily driven by the visibility of renewable energy developments rather than forestry management activities.

Wales Coast Path

8.12.144 The Wales Coast Path passes along the coastline to the south of the Proposed Development. As evidenced by Viewpoint 11 (Wales Coast Path at Ogmore-by-Sea) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), the proposed wind turbines would not be visible from some sections of this route due to the distance (over 10 km) and intervening landform. Similarly, at Viewpoint 10 (Kenfig Burrows) (**ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**), recreational receptors would experience only a **minor-moderate** effect which is considered **not significant**, with the proposed turbines visible on the distant horizon to the northeast at a distance of approximately 7.1 km.

Scenario 1: Operational & Consented Development

8.12.145 In Scenario 1, users of this route would therefore experience limited distant views of the Proposed Development to the north from some elevated sections, with limited views of consented development due to distance and intervening topography. The sequential experience would involve occasional distant views of wind energy development in an otherwise predominantly coastal landscape context.

8.12.146 The forestry operations at Craig-yr-Aber Woodland would have minimal influence on views from the Wales Coast Path due to the distance and intervening topography. The forest is located well inland from the coastal route, and any changes to forest cover would likely be indistinguishable at that distance or screened by intervening landform.

8.12.147 While the route may offer some views of the operational Court Farm solar development (**ES Volume IV, Figure 8.56: Cumulative Screened ZTV with operational Court Coleman Farm**) from certain sections, as this development is located in the southern portion of the study area, the areas where both Court Farm Solar and Proposed Development are visible together are extremely limited. This significantly reduces the potential for combined cumulative effects between these developments. The sequential experience would therefore involve separate views of either the distant wind farm development to the north or the closer solar development, rather than a combined renewable energy landscape.

8.12.148 The cumulative effect on users of the Wales Coast Path in Scenario 1 would remain **minor-moderate**, which is **not significant**. This reflects the limited extent of combined visibility, the substantial distances involved, and the predominance of coastal landscape character which remains the primary focus of views along this route.

Scenario 2: Operational & Consented & In-Planning Schemes

8.12.149 In Scenario 2, the addition of Y Bryn wind farm would increase the prominence of wind energy development in views to the north, creating a more noticeable presence of turbines on the distant horizon. This would create a **minor-moderate** sequential cumulative effect, which is **not significant**, with wind farms becoming a more noticeable element in views inland from the coastal route.

8.12.150 Referring to **ES Volume IV, Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm**, the Wales Coast Path does intersect with areas where both the Proposed Development and in scoping Eirlys Solar Farm would be visible (light blue areas on the ZTV). This suggests potential for combined views of both developments from elevated sections of the coastal path, particularly in the areas south of Pyle and Kenfig. However, the distance to both developments would reduce their prominence in the wider landscape context.

8.12.151 The very limited combined visibility between wind farms to the north and solar developments in the southern portion of the study area means that users of the Wales Coast Path would experience these different types of renewable energy development as separate features in the landscape rather than as an integrated renewable energy landscape. The overall effect on the Wales Coast Path would

remain **minor-moderate**, which is **not significant,** due to the distance, limited extent of route affected, and separation between different development types.

National Designated Landscapes Cumulative Assessment

Bannau Brycheniniog National Park

8.12.152 The Bannau Brycheniniog National Park lies at a considerable distance from the Site, with the closest point being approximately 21 km to the north. At this distance, theoretical visibility of the Proposed Development is extremely limited, and where it exists, the turbines would be seen at such a distance that they would not form discernible elements in views. When considered cumulatively with operational and consented wind energy developments within the wider study area (Scenario 1), there would be no material change to the, at most, **minor** effects identified for the solus assessment. The addition of in-planning schemes including Y Bryn wind farm (Scenario 2) would not alter this conclusion of, at most, **minor** effects. The cumulative baseline already includes operational wind farms such as Pen y Cymoedd, which are visible from elevated areas within the northern parts of the National Park at distances considerably closer than the Proposed Development. The landscape character of the National Park, with its distinctive upland plateau landscape, and the Special Qualities for which it is designated, would not be adversely affected by cumulative effects. A **very low** magnitude of change would mean there would be **no significant** cumulative effects on the Brecon Beacons National Park in either scenario.

The Gower National Landscape

8.12.153 The Gower National Landscape lies just beyond the 20 km detailed study area, with its closest point at Mumbles Head approximately 21 km from the Site. The National Landscape's coastal location, topography, and distance from the Site mean that actual visibility of the Proposed Development would be extremely limited and restricted to the eastern coastal fringes, with further screening provided by existing field boundaries, hedgerows and tree cover. From the limited locations where visibility may occur, the Proposed Development would be seen at such a distance (over 20 km) that it would not form a prominent or intrusive element in views. In cumulative terms (Scenarios 1 and 2), the Proposed Development would be experienced as part of a distant upland landscape that already accommodates renewable energy development, including operational wind farms. The distinctive coastal and lowland landscape character of the Gower National Landscape, including its Special Qualities relating to coastal scenery, geological features, and historic landscapes, would not be materially affected by cumulative effects with the Proposed Development. The separation distance, combined with the distinct character differences between the coastal National Landscape and the upland location of the Proposed Development combined with a **very low** magnitude of change ensures that cumulatively there would be increase to the **minor-moderate**, **no significant** effects on the Gower National Landscape in either scenario.

Totality of the Combined Effects of All Developments

8.12.154 When considering the totality of combined effects across all developments (operational, consented, and in-planning), as well as the forestry operations at Craig-yr-Aber Woodland, several key patterns emerge:

- **Concentration of Renewable Energy Development in Upland Areas:** The pattern of wind energy development (and solar, to a much lesser extent) shows a clear concentration in the upland areas surrounding the valleys, with the Proposed Development, Y Bryn, and other wind farms appearing more prominently across the upland landscape. This creates a situation where the upland horizons are increasingly characterised by turbines, as evidenced by Viewpoints 3, 4, 5, 6, and 9 in **ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**, which all show significant effects, these impacts are most pronounced where settlements and routes have direct views toward these upland areas.
- **Increased Visual Complexity:** The addition of multiple wind farms across the study area increases the visual complexity of views, particularly from elevated viewpoints where multiple developments may be visible simultaneously. This can create a more cluttered visual environment with turbines appearing at different scales and distances. Viewpoint 13 (Pen y Foel Trig Point) in **ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15** illustrates this, showing a Moderate effect that is considered significant from this elevated location, with the proposed turbines forming a noticeable group of elements in the landscape. The forestry operations add another layer of complexity, with areas of clearfelling, replanting, and various stages of forest growth creating a dynamic visual context that changes over time.
- **Transformation of Landscape Character:** In areas with high levels of combined visibility of multiple wind farms, such as parts of the Llynfi Valley and surrounding uplands, there is a gradual transformation of landscape character from one where wind farms are isolated features to one where they are becoming more of a defining characteristic of the upland landscape context. The cumulative wirelines referenced in several viewpoint assessments (e.g., Viewpoint 1) indicate this transformation. The forestry operations at Craig-yr-Aber Woodland contribute to this transformation, with commercial forestry and renewable energy development becoming complementary aspects of a working upland landscape.
- **Variation in Effect by Receptor Location:** The totality of combined effects varies significantly by receptor location. Valley bottoms and enclosed areas often experience limited cumulative effects due to restricted visibility, while elevated areas and open uplands experience more pronounced cumulative effects with multiple wind farms visible simultaneously. This is clearly demonstrated by comparing Viewpoint 7 (Bridge over River Llynfi east of Coytrahen) in **ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**, which shows No Effect due to screening by intervening landform and vegetation, with Viewpoint 3 (Ogwr Ridgeway Walk) in **ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15**, which shows a Major effect due to its elevated, open position. Similarly, the effects of forestry

operations are more noticeable from locations with direct views toward the forest, particularly from elevated viewpoints or routes passing through or near areas scheduled for clearfelling.

- **Integration with Other Infrastructure:** The cumulative effect of wind farms is seen in the context of other vertical infrastructure such as pylons and masts. Viewpoint 5 (Heol Gelli Lenor, Maesteg) in **ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15** specifically notes that "*the turbines would be seen in the context of existing infrastructure including pylons, which reduces their relative impact*." In some views, this creates a landscape increasingly characterised by different forms of resource management, including energy infrastructure and commercial forestry.
- **Temporal Dimension of Change:** The forestry operations introduce a temporal dimension to the cumulative effect that distinguishes it from the more permanent change associated with wind farm development. The phased nature of forestry operations, with different areas scheduled for clearfelling at different times and with varying management approaches, creates a dynamic landscape context that changes over time, providing a changing visual backdrop for the more static wind farm developments.

8.12.155 Table 8.18 below provides a summary of the cumulative assessment. For each receptor type, the table identifies the level of cumulative effect and significance, and cross-references to key contributing viewpoints where the cumulative effects have been assessed in detail (**ES Volume III, Appendix 8.8: Viewpoint Assessment**).

Table 8.18 Summary of Inter-Project Cumulative Effects

Receptor Type	Receptor/Location	Scenario 1: Operational + Consented	Scenario 2: Operational + Consented + In-Planning	Key Contributing Viewpoints
Landscape Character Areas	Host LandMap: CYNONVS473 - Mynydd Baedan - Upland Moorland	**Major** (**Significant**)	**Major** (**Significant**) - Increased extent and prominence of turbines	VP3, VP4, VP6
	North/Northeast: (Llynfi Valley, Maesteg and surrounding uplands - CYNONVS884 - Llynfi Valley, CYNONVS351 - Maesteg, CYNONVS811 - Garth Hill)	Moderate to minor-moderate (Not Significant)	**Moderate-major** (**Significant**) in some locations	VP5, VP7
	East: (CYNONVS966 - Bettws, CYNONVS349 - Mynydd Llangeinwyr)	Moderate (Not Significant)	**Moderate** to **Moderate-Major** (**Significant**) in some locations	VP13
	West: (NPTVS927 - Mynydd Margam, NPTVS897- Mynydd Bromil and Scarp Tops, NPTVS403 - Margam Country Park)	**Moderate** to **moderate-major** **(Significant** in some locations). Forestry operations create temporal landscape changes. Combined effect ranges from moderate to moderate-major depending on timing and extent of forestry operations.	**Moderate-Major** to **Major** **(Significant)** Y Bryn addition substantially increases effect. Clearfelling operations could increase Y Bryn visibility. Landscape transitions to one characterised by renewable energy and commercial forestry.	VP1, VP2
	South: (CYNONVS151 - Kenfig Burrows, CYNONVS955 - Cribwr, CNONVS825 - Newton Downs, NPTVS543 Coedhirwaun)	Minor-Moderate to Moderate (Not Significant)	Moderate (Not Significant) open elevated locations within CYNONVS955 - Cribwr, CNONVS825 - Newton Downs	VP1, VP2, VP10, VP11

Receptor Type	Receptor/Location	Scenario 1: Operational + Consented	Scenario 2: Operational + Consented + In-Planning	Key Contributing Viewpoints
Settlements	Maesteg (southern edge)	**Moderate** (**Significant**) limited to southern edge	**Moderate** (**Significant**) with increased presence of turbines	VP5
	Maesteg (settlement as a whole)	Minor or no effect (not significant)	Minor or no effect (not significant)	VP5
	Llangynwyd (western hamlet, southern edge of Pont Rhyd-y-cyff)	**Major** (**Significant**)	**Major** (**Significant**)	VP4
	Llangynwyd (Pont Rhyd-y-cyff)	Minor to no effect (not significant)	Minor to no effect (not significant)	
	Lletty Brongu	**Major** (**Significant**)	**Major** (**Significant**) with increased presence of turbines	
	Bettws (western edge)	**Major** (**Significant**) at western edge of settlement only	**Major** (**Significant**) with increased presence of turbines	VP6
	Bettws (settlement as a whole)	Minor to no effect (not Significant)	Minor to no effect (not Significant),	VP6
	Cefn Cribwr	**Moderate** to **Major** (**Significant**) at northern edge	**Moderate** to **major** (**Significant**) with increased presence of turbines	VP9
Recreational Routes	Ogwr Ridgeway Walk	**Major** (**Significant**) at close proximity, decreasing with distance	**Major** (**Significant**) with increased extent of route affected	VP2, VP3, VP12

Receptor Type	Receptor/Location	Scenario 1: Operational + Consented	Scenario 2: Operational + Consented + In-Planning	Key Contributing Viewpoints
	Cistercian Way	Moderate (Not Significant) with local variations and increased effect where route passes between Margam Park and adjacent in scoping Eirlys Solar Farm	Moderate (Not Significant) with local variations and increased effect where route passes between Margam Park and adjacent in scoping Eirlys Solar Farm	VP1, VP2
	Wales Coast Path	Minor-moderate to minor (Not Significant)	Minor-moderate (Not Significant) with increased presence on horizon	VP10, VP11
Cycle Routes	National Cycle Routes (NCR 4, 884, 885, 887)	Minor to Moderate-Minor (Not Significant) - Limited cumulative effects due to extensive roadside and woodland screening along most route sections	**Moderate (Not Significant)** - Increased presence of wind energy development from open sections of NCR 4, with local awareness of Eirlys Solar Farm adjacent to Margam Park	N/A (no specific cycle VPs)
	Minor road through Site (well-used by cyclists)	**Moderate-Major (Significant)** - Close proximity to Proposed Development with combined views of consented schemes from elevated sections	**Major (Significant)** - Increased prominence and extent of wind energy development visible from route, particularly from highest point crossing Mynydd Baeden	VP3, VP12 (Ogwr Ridgeway Walk shares route)
Roads	Minor road through Site	**Major** (**Significant**)	**Major** (**Significant**) with increased extent of route affected	VP3
	A4063 (Llynfi Valley)	Moderate (Not Significant) with localised **Moderate-Major** (significant) effects	Moderate (Not Significant) with localised **Moderate-Major** (significant) effects	VP5, VP7

Receptor Type	Receptor/Location	Scenario 1: Operational + Consented	Scenario 2: Operational + Consented + In-Planning	Key Contributing Viewpoints
	Local roads around Llangynwyd	Moderate (Not Significant)	Moderate (Not Significant)	VP4
	M4 corridor	Minor (Not Significant)	Minor (Not Significant)	-
Sequential Visual Effects	Minor road from New Road through Site	**Moderate-major** to **Major** (**Significant**)	**Major** (**Significant**) with increased presence of wind turbines	VP3
	Ogwr Ridgeway Walk	**Moderate** to **Major** (**Significant**) in proximity to Site, Moderate elsewhere	**Major** (**Significant**) with increased extent of significant effects	VP2, VP3, VP12
	Cistercian Way	Minor-moderate (Not Significant)	Moderate (not Significant)	VP1, VP2
	Wales Coast Path	Minor (Not Significant)	Minor-Moderate (Not Significant)	VP10, VP11
Nationally Designated Landscapes	Brecon Beacons National Park	Minor (Not Significant)	Minor (Not Significant)	VP15
	Gower National Landscape	Minor-moderate (Not Significant)	Minor-moderate (Not Significant)	VP14

Note: This table summarises the cumulative effects of the Proposed Development in combination with other wind and solar developments across the 20 km study area. The assessment considers two cumulative scenarios: Scenario 1 (operational & consented development) and Scenario 2 (operational, consented & in-planning schemes, including Y Bryn wind farm). The key contributing viewpoints column identifies which of the 15 assessed viewpoints provide evidence for the effects on each receptor type.

VP = Viewpoint LCA = Landscape Character Area

Summary of Cumulative Effects

8.12.156 The cumulative assessment has identified that the Proposed Development would contribute to an evolving pattern of renewable energy (in particular wind farm) development across the study area, and most consequently for the upland landscapes surrounding the Llynfi Valley and its adjacent valleys. When considered alongside the forestry operations at Craig-yr-Aber Woodland, this creates a more complex cumulative effect characterised by both renewable energy development and commercial forestry.

Summary of Cumulative Effects on Landscape Character

8.12.157 In Scenario 1 (operational & consented development), the cumulative effects on landscape character represent an incremental increase in the influence of renewable energy (in particular wind farm) development but does not fundamentally alter the assessment conclusions reached for the Proposed Development in isolation (solus effects). The host landscape character area (CYNONVS473 - Mynydd Baedan - Upland Moorland) would experience a major and significant effect, while adjacent areas would experience moderate to moderate-major effects. This pattern is reflected in the viewpoint assessment, where viewpoints within or with views toward the host landscape character area (such as Viewpoints 3, 4, 5, 6, and 9) show significant effects, while more distant viewpoints or those with restricted views toward the Site show moderate or minor effects. The forestry operations at Craig-yr-Aber Woodland would contribute to these effects, particularly along the western boundary of the Site, but the overall assessment conclusions would remain unchanged.

8.12.158 In Scenario 2 (operational & consented & in-planning schemes), there would be a more substantial change to the wider landscape character, with wind energy development becoming a more prominent and widespread characteristic across upland areas. The distinction between 'a landscape with wind farms' and 'a wind farm landscape' would begin to be eroded, particularly across the upland areas between the Llynfi Valley and adjacent valleys. The forestry operations would further contribute to this change, creating a landscape increasingly characterised by different forms of resource management. The contribution of the Proposed Development to this cumulative effect would be significant but proportionally reduced as more wind farms are added to the context and as forestry operations progress. As noted in the cumulative assessment for Viewpoint 1, there would be "*no change to solus assessment but the Proposed Development would add to a landscape where turbines of the Y Bryn development may appear in a similar part of the background landscape*."

Summary of Cumulative Effects on Visual Amenity

8.12.159 For visual receptors, the cumulative effects vary by location and type of receptor. As shown in the Summary of Visual Effects From Assessment Viewpoints During Operation (**Table 8.11**), out of the 15 assessed viewpoints, six were found to experience significant effects (Viewpoints 3, 4, 5, 6, 9, and 13). These represent a

mix of recreational and residential receptors at varying distances from the Site, but all with open views toward the Proposed Development. Settlements in valley locations generally experience more limited cumulative effects due to restricted visibility, as demonstrated by Viewpoint 7 (Bridge over River Llynfi east of Coytrahen) in **ES Volume III, Appendix 8.10: Visualisation Viewpoints 1 to 15** which shows no effect due to screening by intervening landform and dense vegetation within the valley. Meanwhile, elevated settlements and recreational routes in upland areas experience more pronounced cumulative effects, as shown by Viewpoints 3 (Ogwr Ridgeway Walk) and 4 (Llangynwyd Conservation Area) which would both experience Major visual effects, which are considered significant.

8.12.160 In Scenario 1, the cumulative visual effects remain broadly consistent with those assessed for the Proposed Development in isolation, with significant effects limited to receptors in close proximity to the Site or with direct views toward it. The viewpoint assessment shows that the most significant effects occur at locations within approximately 3-4 km of the Site, such as Viewpoints 3, 4, 5, 6, and 9. The forestry operations would contribute to these effects, particularly for receptors with views toward both the Proposed Development and Craig-yr-Aber Woodland but would not fundamentally alter the assessment conclusions.

8.12.161 In Scenario 2, the cumulative visual effects increase in both extent and magnitude, with more receptors experiencing significant effects and a greater sense of the increasing prominence of turbines from some viewpoints. The cumulative baseline sections of the viewpoint assessments, particularly for Viewpoints 1 and 2, reference the potential combined visibility of the Proposed Development with Y Bryn wind farm. The sequential experience of wind farms becomes more pronounced along key routes, particularly the Ogwr Ridgeway Walk and minor road through the Site. The forestry operations would further contribute to these effects, creating a more complex visual experience that includes both renewable energy development and commercial forestry.

8.12.162 The key routes experiencing sequential cumulative effects would be the minor road traversing the Site, the Ogwr Ridgeway Walk (represented by Viewpoints 2, 3, and 12), and the Cistercian Way (partially represented by Viewpoints 1 and 2 in Margam Park), with users experiencing varying degrees of exposure to wind energy development and forestry operations as they travel through the landscape. The detailed assessment of these routes indicates a range of effects from Minor-moderate to Major, depending on the specific location and direction of view.

8.12.163 As evidenced by **ES Volume IV, Figure 8.55: Cumulative Screened ZTV with In Scoping Eirlys Solar Farm**, the scoping Eirlys Solar Farm would contribute to cumulative effects in limited areas, primarily to the south and west of the Proposed Development, where combined visibility of both developments would occur. However, for much of the study area, including the northern upland routes and many valley settlements, the potential for combined views of both developments is limited.

8.12.164 The cumulative effects involving Court Farm Solar would be significantly limited due to its location south of the M4 and the very small areas where both Court Farm Solar and Proposed Development would be visible together. The Wales Coast Path would experience more limited sequential cumulative effects due to distance and intervening topography.

Overall Conclusion on Cumulative Effects

8.12.165 The key cumulative effects are concentrated in the host landscape character area and immediate surroundings, with effects diminishing with distance. This pattern is clearly demonstrated in the viewpoint assessment summary table (**Table 8.11**), which shows that of the 15 viewpoints assessed, the six experiencing significant effects (Viewpoints 3, 4, 5, 6, 9, and 13) are generally those closest to the Site or with the most open views toward it. The Proposed Development forms part of an emerging pattern of land management in upland areas that increasingly includes renewable energy infrastructure alongside commercial forestry. Both wind farm development and forestry operations typically avoid the most sensitive landscape designations, focusing instead on upland areas with existing infrastructure and a history of human intervention.

8.12.166 When considered alongside other operational, consented, and in-planning developments, including the operational solar schemes at Caegarw Farm and Court Farm, the in scoping Eirlys Solar Farm, and the forestry operations at Craig-yr-Aber Woodland, the Proposed Development represents a consistent approach to upland landscape management. As demonstrated by **ES Volume IV, Figure 8.55: Cumulative Screened ZTV with in scoping Eirlys Solar Farm** and confirmed in the viewpoint assessments (particularly Viewpoint 1 in Margam Park), the limited intervisibility between the Proposed Development and in scoping Eirlys Solar Farm across much of the study area, particularly in the northern and eastern sections, helps to reduce the potential for widespread cumulative effects. Similarly, the very limited areas where both Court Farm Solar and the Proposed Development would be visible together, due to Court Farm's location south of the M4 and substantial screening, means that cumulative effects between these developments would be minimal.

8.12.167 The forestry management program for Craig-yr-Aber Woodland introduces a temporal dimension to the cumulative assessment, with scheduled clearfelling operations in the 2022-2026 and 2027-2031 periods potentially coinciding with the construction and early operational phases of the Proposed Development. This creates a more complex cumulative effect that varies both spatially and over time, with the dynamic nature of forestry operations providing a changing context for the more permanent wind farm development. However, the phased nature of forestry operations and the various management approaches applied across the forest (including Low Impact Silvicultural Systems that retain more forest cover) help to mitigate the overall cumulative effect.

8.12.168 The sequential cumulative effects along key routes such as the Ogwr Ridgeway Walk (represented by Viewpoints 2, 3, and 12), the minor road through the Site, and the Cistercian Way (partially represented by Viewpoints 1 and 2 in Margam

Park) would be notable, particularly in Scenario 2 with the addition of Y Bryn wind farm to the west. As noted in the cumulative baseline sections of several viewpoint assessments, particularly Viewpoint 1, Y Bryn wind turbines would be theoretically visible in combination with the Proposed Development turbines, though often subject to screening by intervening vegetation and landform. These routes would provide an experience of passing through a landscape increasingly defined by renewable energy development, particularly wind farms on the upland areas. However, the separation between different types of renewable energy development (wind farms and solar farms) due to their locations and the screening effects of topography and vegetation would help to reduce the potential for prominent cumulative effects across the wider landscape.

8.12.169 In conclusion, while the Proposed Development would contribute to significant cumulative effects in some locations, particularly in combination with wind farm developments and forestry operations across the upland areas, these effects would be localised and would form part of a broader pattern of upland landscape management that is increasingly characteristic of the region. As evidenced by the detailed viewpoint assessment, significant effects are primarily experienced by receptors in close proximity to the Site or with direct views toward it, with effects generally diminishing with distance and where screening by landform and vegetation is present. The viewpoint assessment confirms that no significant effects would be experienced from nationally designated landscapes such as the Bannau Brycheiniog National Park (Viewpoint 15) or Gower National Landscape (Viewpoint 14). The Proposed Development represents a consistent approach to renewable energy siting, focusing on areas with existing infrastructure and avoiding the most sensitive landscape designations, while acknowledging the complex interrelationship between renewable energy development and other forms of land management, including commercial forestry.

8.13 References

Landscape Institute and the Institute for Environmental Management and Assessment (2013). The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3). Routledge.

Landscape Institute (August 2024). Technical Guidance Note 2024-01 Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment (GLVIA3). Available at: https://www.landscapeinstitute.org/wp-content/uploads/2024/08/LITGN-2024-01-GLVIA3-NC_Aug-2024.pdf

Landscape Institute (March 2019). Technical Guidance Note 2/19 Residential Visual Amenity Assessment (RVAA). Available at: https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/03/tgn-02-2019-rvaa.pdf

Landscape Institute (2019). Technical Guidance Note 06/19 Visual Representation of Development Proposals. Available at:

https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2019/09/LI_TGN-06-19_Visual_Representation.pdf

NatureScot (March 2021). Assessing the Cumulative Impact of Onshore Wind Energy Developments. Available at: https://www.nature.scot/doc/guidance-assessing-cumulative-landscape-and-visual-impact-onshore-wind-energy-developments

NatureScot (February 2017). Visual Representation of Wind farms – Version 2.2. Available at: https://www.nature.scot/doc/visual-representation-wind-farms-guidance

NatureScot (2017). Siting and Designing Wind Farms in the Landscape, Version 3a. Available at: https://www.nature.scot/doc/siting-and-designing-wind-farms-landscape-version-3a

NatureScot (April 2022). Landscape Sensitivity Assessment Guidance (Methodology). Available at: https://www.nature.scot/sites/default/files/2022-05/Landscape Sensitivity Assessment Guidance %28Methodology%29.pdf

NatureScot (November 2024). Guidance on Aviation Lighting Impact Assessment. Available at: https://www.nature.scot/doc/guidance-aviation-lighting-impact-assessment

NatureScot (January 2025). Special Landscape Qualities – Guidance on assessment effects. Available at: https://www.nature.scot/doc/special-landscape-qualities-guidance-assessing-effects

Natural Resources Wales (2018) LANDMAP Guidance Note 3: LANDMAP and the Renewable Energy Agenda. Cardiff: Natural Resources Wales;

Planning Policy Wales (PPW) Edition 12, (February 2024)

Welsh Assembly Government (2005) Technical Advice Note 8: Planning for Renewable Energy. Cardiff: Welsh Assembly Government.

Future Wales: The National Plan 2040 (February 2021). Policy 17 and 18 are concerned with renewable and low carbon energy

Replacement Bridgend Local Development Plan 2018-2033 (Adopted March 2024)

Neath Port Talbot CBC Local Development Plan 2011-2026 (Adopted January 2016)

Neath Port Talbot CBC Landscape and Seascape Supplementary Planning Guidance (May 2018)

Neath Port Talbot CBC Renewable and Low Carbon Energy Supplementary Planning Guidance (July 2017)

Neath Port Talbot CBC Historic Environment Supplementary Planning Guidance (September 2013)

Natural Resources Wales (NRW) Guidance Note 046, 'Using LANDMAP in Landscape and Visual Impact Assessments, (LVIA),' January 2021

NRW Evidence Report No. 80, NRW (November 2015), Strategic Assessment and Guidance, Stage 1- Ready Reckoner of Visual Effects Related to Turbine Size, Report no. 315, NRW (March 2019)

Designing Wind Farms in Wales. Design Commission for Wales (Updated 2014)

Designing for Renewable Energy in Wales. Design Commission for Wales (November 2023)

Landscape Sensitivity Assessment guidance for Wales. Guidance Note GN017. Natural Resources Wales (updated 2023)