5. Landscape and Visual

Executive Summary

5.1 The landscape and visual impact assessment considers the effects of the Proposed Development on landscape character and visual amenity within a study area up to 15 km from the site. The assessment has been undertaken in accordance with all relevant published guidance on the topic, and has involved desk-based and field-based assessments. The approach and scope of the assessment was agreed through scoping and through consultation with local planning authorities.

5.2 The baseline for the assessment includes landscape and visual receptors. The landscape of the site and study area is described through observations made in the field, and drawing on published landscape character assessments and the LANDMAP database. Visual receptors include people in settlements, using the local area for recreation, and travelling through the area on roads. Representative viewpoints have been selected to assess the range of visual receptors, and these viewpoints were agreed through consultation.

5.3 The assessment of effects considers the embedded mitigation achieved through the design process, as set out in Chapter 2 Design Evolution.

5.4 Localised significant landscape effects are predicted during the construction stage, affecting the site itself and the local area of the Mynydd Llangeinwyr Uplands LCA. Due to local topography, construction works will not be widely visible from adjacent valley landscapes.

5.5 During operation, the introduction of seven large turbines alongside access tracks, substation, control building and the Energy Storage Facility (ESF), will give rise to a major (significant) effect on the landscape of the site and the surrounding Mynydd Llangeinwyr Uplands LCA. Significant (moderate) effects on landscape character are likely to be experienced across an area extending no more than 2 km from the proposed turbines, and much less to the north and west. The area where significant effects would occur is approximately bounded by the ridge of Craig Ogwr to the east, the summit of Mynydd William Meyrick, the settlement of Price Town, the south end of the main ridge of Mynydd Llangeinwyr, the settlement of Blaengarw, the summit of Mynydd Caerau, and the hairpin bend on the A4107 to the north. Beyond this area effects on landscape character would reduce to minor or negligible, and not significant.

5.6 The majority of the wind energy developments forming the cumulative baseline are operational schemes. There are a number of consented but unbuilt wind farms, and one unconsented scheme, in the study area, but none are in the same LCA or

within the immediate landscape context of the Proposed Development. As such, no other wind farms would be experienced at the same time as the Proposed Development in such a way that would lead to an additional cumulative effect on landscape character.

5.7 The viewpoint assessment identifies significant effects on sensitive visual receptors up to 4.8 km from the Proposed Development, with effects judged as major being limited to sensitive receptors within 2 km. Minor (not significant) effects were identified at locations up to 11.5 km from the Proposed Development, and effects at more distant viewpoints were judged to be negligible. The substation, control building and ESF will contribute to localised significant effects for a small number of nearby receptors, but will not be clearly seen in more distant views.

5.8 Significant effects are predicted for people within parts of Blaengarw (Viewpoint 4), Blaengwynfi (Viewpoint 6), Price Town, Ogmore Vale and particularly Nant-y-moel (Viewpoint 5), where there would be views of the turbines, due to the appearance of the Proposed Development on the skyline. Significant effects on views are predicted to be experienced by recreational users crossing the high ground of Werfa, Mynydd y Gelli and Mynydd Llangeinwyr (Viewpoint 2), and those accessing the surrounding hills such as Mynydd William Meyrick (Viewpoint 7) and Pen y Foel (Viewpoint 10).

5.9 Cyclists using the NCN routes 883 and 884 in the Ogwr and Garw valleys are predicted to experience significant (moderate) effects. Effects on users of the A4107 will be moderate (significant) for limited localised sections near the site. Significant effects on more distant receptors, such as people visiting the Brecon Beacons, are not anticipated.

5.10 Besides the operational wind farms that form the baseline there are relatively few consented or proposed wind farms, and the majority are sited close to operational developments such that they would not change the pattern of development that is viewed in the area. No significant cumulative effects on views are predicted.

Introduction

5.11 This assessment considers the likely significant effects on landscape and visual resources of the site and the surrounding study area associated with the construction, operation and decommissioning of the proposed Upper Ogmore Wind Farm and Energy Storage Facility (ESF) (herein referred to as the Proposed Development). The specific objectives of the chapter are to:

- describe the landscape and visual baseline;
- describe the assessment methodology and significance criteria used in completing the impact assessment;

- describe the potential effects, including direct, indirect and cumulative effects;
- describe any mitigation measures proposed to address likely significant effects; and
- assess the residual effects remaining following the implementation of mitigation.

5.12 Landscape and visual assessments are separate, although linked, processes.

5.13 This chapter considers the potential effects of the proposal on:

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

5.14 The Landscape and Visual Impact Assessment (LVIA) has been carried out by chartered landscape architects at LUC.

5.15 The chapter is supported by Figures presented in Volume 3 of the EIA Report, and referenced in the text where relevant. These comprise:

- Mapped information on Figures 5.1 – 5.11; and
- Visualisations on Figures 5.12 to 5.29.

Legislation & Planning Policy

5.16 This section notes the legislation and policy context for the LVIA. Legislation and policy is outlined in Chapter 4: Planning Policy Context and is discussed in more detail within the supporting planning statement.

International Legislation and Policy

5.17 The European Landscape Convention highlights the importance of all landscapes and encourages greater attention to care and planning in all landscapes, to manage change and ensure a forward-looking approach to management. The convention also states that all landscapes have value, regardless of formal designations.

National Planning Policy

5.18 National Policy Statements (NPSs) are the main policy documents to take into account when determining an application for nationally significant energy infrastructure, and form the basis for determination of decisions. In the case of renewable energy projects the following NPSs must be taken into account:

- Overarching National Policy Statement for Energy (EN-1); and

- National Policy Statement for Renewable Energy Infrastructure (EN-3).

5.19 With reference to decision making and mitigation, Paragraphs 2.7.48-51 of EN-3 state *"Modern onshore wind turbines that are used in commercial wind farms are large structures and there will always be significant landscape and visual effects from their construction and operation for a number of kilometres around a site. The arrangement of wind turbines should be carefully designed within a site to minimise effects on the landscape and visual amenity while meeting technical and operational siting requirements and other constraints"*. Wind farm design is discussed in Chapter 2 Design Evolution.

5.20 Planning Policy Wales (PPW, Edition 9, November 2016) sets out the land use planning policies for the Welsh Government. It establishes the government's objectives for conservation and improvement of natural heritage, in particular the protection of native habitats, trees and woodlands and landscapes with statutory designations (such as National Parks). The LANDMAP information system is endorsed as an important resource to use for landscape assessment. Technical Advice Notes (TANs) support PPW, and TAN 8: Renewable Energy (2005) is of relevance to this assessment.

TAN 8 Renewable Energy

5.21 Relevant national policy and guidance on onshore renewable energy technologies are set out in TAN 8 Planning for Renewable Energy[1]. It is noted in paragraph 2, 2 of this document that: *"onshore wind power offers the greatest potential for an increase in the generation of electricity from renewable energy in the short to medium term. In order to try to meet the target for onshore wind production the Assembly Government has commissioned extensive technical work, which has led to the conclusion that, for efficiency and environmental reasons amongst others, large scale (over 25MW) onshore wind developments should be concentrated into particular areas defined as Strategic Search Areas (SSAs)."*

5.22 TAN 8 identifies 7 "broad brush" scale SSAs of which paragraph 2.4 notes that: *"It is a matter for local planning authorities to undertake local refinement within each of the SSAs in order to guide and optimise development within each of the areas. If there is robust evidence that land outside (but close to) the SSA is suitably unconstrained local planning authorities might wish to consider the possibility of development of wind farms in these areas as well."*

5.23 The boundary of SSA F lies approximately 1.2 km north of the Proposed Development, beyond the corridor of the A4107 at this location, as shown in Figure

[1] Welsh Assembly Government (2005) Technical Advice Note, 8: Planning for Renewable Energy.

5.1. Additional refined policy areas are detailed in the TAN 8 Annex D study of Strategic Search Areas E and F: South Wales (2006)[2]. The site itself is partly contained within Zone 22: Werfa, which is described as having 'fairly high' visual and sensory sensitivity, and 'medium-high' landscape character sensitivity (Appendix F). The potential visibility of turbines in this zone, particularly from settlements in the Garw and Ogmore valleys, is highlighted in Appendix I, and the wind farm design has sought to address this through considering the micro-siting guidance in Appendix J.

Local Planning Policy

5.24 The site is located within the Bridgend County Borough Council (BCBC) local authority area, and the study area also takes in parts of the Neath Port Talbot and Rhondda Cynon Taf local authority areas. Local Development Plans for these areas identify Special Landscape Areas that are protected by development plan policies.

5.25 Local level guidance on renewable energies relevant to the site is detailed within BCBC supplementary planning guidance (SPG) on Renewables in the Landscape (2015)[3]. The SPG provides additional consideration of landscape sensitivity to renewable energy development within the BCBC landscape character areas, which is discussed in the landscape baseline section.

5.26 Although not formally adopted as SPG by BCBC, additional regional guidance on wind turbine development is provided within the Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements (2014)[4]. Users of SPG20 are advised to refer to this regional study for more detailed information on planning application requirements for wind turbines, and accordingly this document has informed the approach to the LVIA.

Scope of Assessment

5.27 The Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements (2014)[5] outlines the minimum requirements and standards of information to be submitted as part of an LVIA for wind turbine development. The study recommends that turbine development with a blade tip height of more than 109 m (or a group of more than 6 turbines irrespective of

[2] Arup (2006) TAN 8 Annex D study of Strategic Search Areas E and F: South Wales Valleys. Consortium of South Wales Valleys Authorities.

[3] Bridgend Borough Council (2015) SPG20 Renewables in the Landscape: Supplementary Planning Guidance. Prepared for Bridgend Borough Council by Land Use Consultants.

[4] Gillespies LLP (2014) Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements. Prepared for the Heads of the Valleys Landscape Officers and Planners with support from the South Wales Landscape Liaison Group.

height), requires a minimum study area of 15 km radius. However, it is noted that a larger study area may be required if particularly sensitive landscape / visual receptors are located beyond the study area.

5.28 It is considered that a 15 km radius study area remains appropriate for the LVIA as this distance incorporates the closest part of the Brecon Beacons National Park boundary to the north. One viewpoint beyond 15 km, within the National Park, has been included for context. The location of the Proposed Development and the extent of the study area are shown in Figure 5.2.

5.29 A zone of theoretical visibility (ZTV) was generated, illustrating areas from where the proposed wind turbines may be visible in the study area (refer to Figures 5.3a – 3b for tip height ZTV and Figure 5.4a – 4b for hub height ZTV). The ZTVs are based on bare earth topography and therefore do not take account of potential screening by vegetation or buildings. The ZTV is used as a tool for understanding where significant visual effects may occur. Receptors which are outside the ZTV would not be affected by the Proposed Development and are not considered further in this LVIA.

Effects Assessed in Full

5.30 This assessment considers physical changes to the landscape as well as changes in landscape character. It also considers changes to areas designated for their scenic or landscape qualities, and visual impacts of the Proposed Development as perceived by people.

5.31 All potentially significant landscape and visual effects have been examined; including those relating to construction and operation.

5.32 Above-ground heritage assets are considered in so far as they contribute to landscape character and the nature and quality of views from publicly accessible locations, but effects on heritage assets as receptors in their own right, including effects on their setting, will be addressed in Chapter 7 Cultural Heritage of the ES.

5.33 Potentially significant cumulative landscape and visual effects have been examined, including those during construction and operation.

Effects Scoped Out

5.34 On the basis of the desk based and field survey work undertaken, the professional judgement of the LVIA team, and experience from other relevant projects, the following topic areas have been 'scoped out' of detailed assessment:

- with the exception of a representative viewpoint in the Brecon Beacons National Park, effects on receptors beyond 15 km from the location of the site, where it is judged that significant effects are unlikely to occur;

- effects on receptors outside the visual envelope (ZTV) of the Proposed Development;
- effects on LANDMAP aspect areas outside of the study areas as defined in LANDMAP Guidance Note 3 (NRW, 2013), where it is judged that potential significant effects are unlikely to occur;
- effects of decommissioning of the wind farm at the end of its operational phase, since the effects of decommissioning activities will be very similar to those of the construction phase, and similar effects may be anticipated; and
- effects on residential receptors outside of public spaces. Private individuals do not have a right to a view in law, as established in Aldred's Case (1610), and impacts on living conditions are usually dealt with through a separate residential amenity assessment, if required. In this case such an assessment is not considered to be required because the Proposed Development is not likely to be so overbearing or dominating as experienced from any individual property as to result in unacceptable living conditions.

Constraints / Assumptions

5.35 Field work, including baseline photography, was carried out in autumn 2017 and summer 2018 when deciduous trees were in partial or full leaf. Whilst a winter survey was not carried out, the possibility of potentially significant differences between seasonal views was accounted for in the assessment.

Consultation

5.36 LUC invited BCBC, Rhondda Cynon Taf County Borough Council (RCTCBC) and Neath Port Talbot County Borough Council (NPTCBC) in September 2017 to comment on the proposed viewpoint locations to be included within the visual assessment. The correspondence also requested acceptance of the proposed approach to Cumulative Landscape and Visual Impact Assessment (CLVIA). Copies of the letters and maps sent are included in Appendix 5.1 and a summary of responses received contained in Table 5.1 below.

5.37 The consultation letters made reference to the Scottish Natural Heritage (SNH) guidance, which recommends a study area of up to 40 km. Consultation responses included reference to guidance prepared specifically South Wales, which recommends a more proportionate study area, and the latter has therefore been followed. See paragraph 5.27 for discussion of the study area.

Table 5.1: Consultation Responses

Consultee	Date and summary of response
BCBC	08 December 2017 • Fully supported the proposed approach to the assessment of landscape character and visual amenity as well as the production of photomontages. • Five additional viewpoints suggested for consideration as well as the amendment to the location of three preliminary viewpoint locations. See paragraph 5.81 onwards for details of viewpoints.
RCTCBC	09 November 2017 • Requested that the visual assessment considered LANDMAP guidance and assessed potential effects on aspect areas accordingly. See section on LANDMAP (paragraph 5.60) for details. • Acceptance of general approach to cumulative assessment. • General links to information regarding local designations as well as the Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements (2014). It was noted that RCTCBC supports this document, although it has not been adopted. This document has therefore informed the assessment as noted in paragraph 5.27. • Specific comments relating to the location and naming of viewpoints 8, 10 and 13. See paragraph 5.81 onwards for details of viewpoints.
NPTCBC	05 October 2017 • Confirmation that the provision of advice relating to viewpoint selection and review of LVIA approach would incur a non-statutory charge. This was not taken up, on the basis that NPTCBC would have the opportunity to comment through the statutory consultation process.
EIA Scoping Direction –Planning Inspectorate Wales	May 2018 • Requested that viewpoint comments raised by BCBC on the preliminary viewpoint locations were taken into consideration and that efforts are made to agree viewpoints locations with consultees. These efforts are set out and viewpoints are discussed at paragraph 5.81 onwards. • Details of proposed methodology should be clearly described in the ES, including any departures from standard guidance where applicable. The methodology is set out at paragraph 5.38 onwards, and in Appendix 5.2. • Requested that the landscape and visual effects of the Proposed Development are assessed, and that as far as practical, all elements included in visualisations. It was emphasized that the control building, substation and storage compound should be included in any visualisations from close range viewpoints, in addition to any permanent features. These features are shown in relevant visualisations, e.g. Figure 5.13.

	• Requested that temporary features, e.g. cranes, are considered in the assessment of construction phase effects. These effects are assessed in the LVIA.
EIA Scoping Direction Appendix 1a – BCBC	May 2018 • Reiterated previous advice in relation to viewpoint locations. These are set out in detail at paragraph 5.81 onwards.
EIA Scoping Direction Appendix 1c – Natural Resources Wales	May 2018 • Welcome the production of an LVIA as described within the Scoping Report.

Assessment Methodology

5.38 This assessment has been carried out in accordance with the principles contained within:

- Landscape Institute and Institute of Environmental Management and Assessment, (2013) Guidelines for Landscape and Visual Impact Assessment: Third Edition, hereafter "GLVIA3".

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

- Countryside Agency (2004) Topic Paper 6 Techniques and criteria for judging landscape sensitivity and capacity;
- Design Commission for Wales (2014) Designing Wind Farms in Wales;
  Gillespies LLP (2014) Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements;
- Landscape Institute (2011) Practice Advice Note, Photography and photomontage in Landscape and Visual Impact Assessment. Advice Note 01/11;
- Natural Resources Wales (2017) LANDMAP Information Guidance Note 1. LANDMAP and Special Landscape Areas;
- Natural Resources Wales (2013) Guidance Note 3 LANDMAP and LVIA for onshore windfarms;
- Natural Resources Wales (2016) LANDMAP Guidance Note 4: LANDMAP and the Cultural Landscape;
- Natural Resources Wales (2016) LANDMAP Guidance Note 5: LANDMAP and the Geological Landscape; and
- Natural Resources Wales (NRW) (2016) LANDMAP Methodologies, with regard to;
  - Geological Landscape;
  - Landscape Habitats;
  - Visual and Sensory;
  - Historic Landscape; and

- Cultural Landscapes.

- Scottish Natural Heritage (2012) Assessing the Cumulative Impacts of Onshore Wind Energy Developments;
- Scottish Natural Heritage (2017) Siting and Designing Wind Farms in the Landscape. Version 3; and
- Scottish Natural Heritage (2017) Visual Representation of Wind Farms. Version 2.2.

Methodological Overview

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

- A study area of 15 km radius was defined from the outmost turbines in all directions;
- The area in which the Proposed Development may be visible was established through ZTV mapping and field work;
- The landscape of the study area was analysed and landscape receptors identified, in particular the aspect areas defined by the LANDMAP study;
- The visual baseline was recorded in terms of the different groups of people who may experience views of the Proposed Development (visual receptors), the places where they will be affected, and the nature of views and visual amenity;
- Viewpoints were selected and agreed with relevant stakeholders (see Table 5.1);
- Likely significant effects on landscape and visual receptors were identified; and
- The significance of landscape and visual effects was judged with reference to the sensitivity of the receptor (susceptibility and value) and magnitude of effect (a combination of the scale of effect, geographical extent, duration and reversibility).

5.41 Full details of the assessment methodology, including assessment of cumulative effects, are presented in Appendix 5.2.

Baseline Conditions

5.42 This section provides a description of the site and the study area, and sets out the landscape and visual baseline against which the Proposed Development is assessed.

Data Sources

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

- Planning Policy Wales (2005) Technical Advice Note 8: Planning for Renewable Energy;
- LANDMAP (accessed via the Natural Resources Wales website);
- National Landscape Character Assessment:
  - National Landscape Character Area (NLCA) 37: South Wales Valleys;
- Landscape character assessments:
  - LUC (2013) Landscape Character Assessment for Bridgend County Borough;
  - White Consultants (2004) Neath Port Talbot LANDMAP Landscape Assessment;
- National Park Management Plans:
  - Brecon Beacons National Park Authority (2010) A Management Plan for the Brecon Beacons National Park (2015-2020);
- Local landscape designations reports:
  - BCBC (2010) Designation of Special Landscape Areas;
  - RCTCBC (2008) Proposals for Designation of Special Landscape Areas in Rhondda Cynon Taf; and
  - NPTCBC (2018) Landscape and Seascape SPG;
- Bridgend Borough Council (2015) SPG20 Renewables in the Landscape: Supplementary Planning Guidance;
- Ordnance Survey (OS) Maps 1:10000, 1:25000 and 1:50000; and
- Terrain data used for ZTVs.

Field Survey

5.44 Field survey work was carried out over several days under differing weather conditions during autumn 2017 and summer 2018, and records made in the form of field notes and photographs. Field survey work included visits to the site, viewpoints and designated landscapes, and travel around the study area to consider potential effects on landscape character and on views.

The Site

5.45 The site extends to 362 ha and is centred on the summit of Werfa (568m). From this high point the plateau slopes gently down in all directions, though only marginally to the northern boundary which follows the administrative boundary across the upland. On the other sides the plateau drops sharply at the valley edges. In the south-west the site includes the upper slopes of the head of the Garw Valley, down to an elevation of around 300m. To the south the high ground extends beyond the site along the long ridge of Mynydd Llangeinwyr. The eastern part of the site occupies the narrow cwms at the head of the Ogmore Valley, and narrow upland ridges between. Small watercourses drain the site to south-east and south-west.

5.46 Land cover consists of upland grassland, used as rough grazing. The boundary adjoins coniferous plantations to east, west and north, but there is no woodland on site. The only enclosures are in the eastern part of the site and comprise post and wire fencing. The summit of Werfa features an OS trig point, and two communications masts within a fenced compound. The compound is accessed via a track from the A4107, and serviced by a low-voltage overhead power line on wood poles which runs from the Garw Valley. A series of vertical axis wind turbines were formerly located to the south of the masts, but only the foundations now remain. To the west and north the turbines of Llynfi Afan Wind Farm are located along the Werfa ridge.

5.47 There are several public rights of way crossing the site, including a bridle path linking Cwmparc with the Garw Valley, and footpaths linking to the other surrounding valleys, and following the ridge of Mynydd Llangeinwyr south. Being unenclosed upland grazing, the majority of the site is open access land, with the exception of the enclosed pastures in the east.

5.48 The north-east boundary follows the A4107, which connects the Afan Valley with the A4106, which in turn connects the Ogmore Valley with the Rhondda Valley. Both roads feature a series of hairpins as they traverse the steep hills. The junction of the two roads at Bwlch has a car park and is marked as a viewpoint on OS maps, having a prospect north-east towards Treorchy and away from the site.

5.49 The planning application boundary also includes approximately 3.6 km of access track to the north of the Wind Farm site, which will be used as part of the abnormal load access route. This existing forest track runs between stands of commercial conifer plantation, and the boundary includes an existing borrow pit.

The Study Area

Topography and land cover

5.50 The topography of the study area is varied, mainly comprising deeply incised valleys through plateau uplands, with farmed lowlands to the south and the developed coastal strip to the south-west.

5.51 Within approximately 10 km of the Proposed Development the landform is characterised by distinctive valleys and ridges, a result of geological faulting and glacial action. Much of the uplands within this area to the north, north-west and east are forested with dense commercial conifer plantations. Other land uses comprise open moorland and rough grazing at higher elevation and long linear settlements with occasional farmland in the lower valleys.

5.52 The broader Vale of Neath forms an arc across the north of the study area. Beyond this it overlaps slightly with the Brecon Beacons National Park, a major tourist attraction.

5.53 The southern part of the study is at lower elevation, with more gently undulating terrain, comprising farmland and larger settlements such as Bridgend. To the south-west the study area overlaps the narrow coastal strip, including part of Port Talbot and the adjacent docks.

Communication routes

5.54 Main communication routes are associated with the valley floors, lower valley sides, and coastlines within the wider study area. Views from lower elevation are largely focused along the valleys contained by valley sides, with longer distance views gained from areas of open elevated moorland.

5.55 The nearest major road, the A4107, lies within 2 km north of the site. Other roads within close proximity include the A4064 to the south and the A4063 to the west. The closest rail lines are the Rhondda line approximately 3.5 km to the north-east and the Maesteg Line, approximately 6km to the south-west of the site.

5.56 The closest National Cycle Route is NCN 47 (Newport to Fishguard) to the north and east within approximately 7.5 km, and NCN 4 (London to Fishguard). There are a number of popular walking routes within the study area including St Illtyd's Walk, lying approximately 6 km south-west of the site.

Patterns of settlement

5.57 The study area exhibits a distinctive settlement pattern, characterised by the accommodation of built form primarily along transport corridors on the valley floor. This concentration of built form in these locations contracts with the largely unsettled valley uplands above. The settlements within close proximity to the site include Abergwynfi to the north-west, Blaengarw to the south-west and Nant-y-moel to the south-east. Other nearby settlements include Blaengwynfi, Ogmore Vale, Price Town and Pontycymer. Bridgend forms the largest settlement within 15 km, lying to the south of the corridor of the M4.

Existing wind farm development

5.58 Operational wind farms close to the site include: Llynfi Afan (12 turbines) immediately west of the Proposed Development; Pant-y-Wal/Fforch Nest 5.8 km to the south-east (29 turbines); and the 76-turbine Pen y Cymoedd scheme to the north, approximately 6.5 km away. There are also a number of smaller single turbines in the area.

5.59 All operational, under construction, consented and in planning wind farms relevant to the cumulative assessment are outlined in Table 5.7.

Landscape Baseline

LANDMAP

5.60 LANDMAP is a GIS (Geographical Information System) based landscape resource where landscape characteristics, qualities and influences on the landscape are recorded and evaluated into a nationally consistent data set. LANDMAP separates information into five 'aspect layers' as follows:

- Geological Landscape: identifies those landscape qualities which are linked to the control or influence exerted by bedrock, surface processes, landforms and hydrology;
- Landscape Habitats: identifies the characteristics and spatial relationships of habitats and vegetation;
- Visual & Sensory: identifies perceptual landscape qualities as well as including information on individual physical attributes of landform and land cover, and the relationships between them;
- Historic Landscape: identifies those qualities that depend on key historic land uses, patterns and features; and
- Cultural Landscape: includes information on the relationship between people and places, meaning of places to people, how landscape has shaped peoples' actions and how peoples' actions have shaped the landscape.

5.61 Aspect layers are divided into ‘aspect areas’, which are the reporting units for LANDMAP. Each aspect area is also given an evaluation score which is defined as 'Outstanding' (important at an international or national level), 'High' (important at a regional or county level), 'Moderate' (important at a local level), or 'Low' (little or no importance).

5.62 As recommended by LANDMAP guidance,[5] this LVIA considers:

- Aspect areas directly affected / ‘hosting’ the Development for Geological Landscape;
- Aspect areas directly affected / ‘hosting’ the Development for Landscape Habitats;
- Aspect areas intervisible with the Proposed Development within 10 km for Visual & Sensory;

[5] NRW (2013) Guidance Note 3 LANDMAP and LVIA for onshore windfarms

- Aspect areas directly affected by the Development and areas intervisible with the Development within 5 km for Historic Landscape; and
- Aspect areas directly affected by the Development and areas intervisible with the Development within 5 km for Cultural Landscape.

5.63 Aspect areas for all five aspect layers are mapped in Figures 5.6ai – 6eii. The LANDMAP aspect areas within each respective study area are listed in Appendix 5.3. The theoretical intervisibility of the Proposed Development is used as a means of identifying which aspects require further assessment and which aspect areas can be scoped out because they are unlikely to experience significant impacts arising from the Proposed Development. This screening exercise is presented in Appendix 5.3.

Landscape Character

5.64 The Bridgend landscape character assessment forms part of the Council's evidence base for supplementary planning guidance on landscape, design and green infrastructure.[6] It defines 14 discrete Landscape Character Areas (LCA) which are informed by LANDMAP aspect areas. The site itself is located in the Mynydd Llangeinwyr Uplands, which comprises remote uplands between the Garw and Ogmore Valleys (see Figure 5.5). 'Key landscape sensitivities' listed for this LCA include:

- Open landscape character;
- Prominent Craig Ogwr tors and ridgeline;
- Valued upland habitats;
- Long, uninterrupted views; and
- Remote and wild character.

5.65 The Neath Port Talbot character assessment was undertaken alongside a LANDMAP assessment, and the 53 character areas defined are based on combining the aspect areas.[7] No landscape character assessment has been published for the Rhondda Cynon Taf area.

Landscape Sensitivity Studies

5.66 Bridgend Borough Council has produced supplementary planning guidance (SPG) on Renewables in the Landscape, which includes an assessment of landscape sensitivity to wind farms. The SPG presents a criteria-based evaluation of

[6] LUC (2013) Landscape Character Assessment for Bridgend County Borough. Bridgend County Borough Council.

[7] White Consultants (2004) Neath Port Talbot Landmap Landscape Assessment. Neath Port Talbot County Borough Council.

sensitivity for each of the 14 LCAs identified in the Bridgend landscape character assessment. Sensitivity to different sizes of wind turbines is assessed.

5.67 The SPG assessed 'inherent sensitivity', which is not influenced by the presence of existing or proposed wind energy development. The SPG states that it "*provides an initial indication of the relative landscape sensitivities of different areas*", but that "*it should not be interpreted as a definitive statement on the suitability of a certain location for a particular development*". The SPG notes that individual proposals will be considered on their own merits.

5.68 The Mynydd Llangeinwyr Uplands LCA is assessed as having high sensitivity to wind turbines of the height proposed (over 110m to tip). The 'key sensitive features' for this LCA are given as follows:

- "*Elevated and largely undeveloped skylines forming a prominent upland backdrop to views from adjacent settlements and other landscapes across the County Borough and beyond.*
- *Long, often uninterrupted views to as far as the Bristol Channel and Brecon Beacons.*
- *The remote and highly tranquil landscape character.*
- *The open landscape character defined by unenclosed rough sheep grazing.*
- *Nationally important archaeological features from the prehistoric period on hill summits and visible in skylines.*"

5.69 With regard to the application site, it is noted that skylines are not undeveloped, and that local tranquillity is lower, due to the presence of Llynfi Afan Wind Farm, the communications masts, and the nearby A roads. It is likely that an evaluation of sensitivity that considered operational wind farms would reach a different conclusion than the high sensitivity concluded in the SPG. Sensitivity of the local landscape to the Proposed Development is set out in the landscape assessment in Appendix 5.4.

Landscape Value

5.70 As set out in the Methodology (paragraph 5.42) landscape value is determined with reference to landscape designations and LANDMAP evaluations.

5.71 The landscape designations found within the study area are described below and shown on Figure 5.7. Landscape designations are considered as part of the assessment of the value of landscape receptors. Where significant effects on landscape are predicted as part of the LVIA, then the assessment also explores the potential implications for the SLA, in terms of the reasons for its designation. This is set out following the discussion of landscape effects at paragraph 5.124.

National designations

5.72 There is only one nationally designated landscape in the study area: the Brecon Beacons National Park which is around 12 km north of the Proposed Development.

5.73 The Register of Landscapes of Historic Interest in Wales lists a number of areas of historic landscape of national significance. The Rhondda is one such area, identified as a Landscape of Special Historic Interest. Its western extent coincides with the administrative boundary of Rhondda-Cynon Taf, following the A4107 just to the north of the site. This historic landscape is discussed in detail in Chapter 7 Cultural Heritage.

Local designations

5.74 Special Landscape Area (SLA) designations have been identified by BCBC[8], NPTCBC[9] and RCTCBC. Table 5.2 lists all SLAs within 10 km of the site by distance, and these are illustrated in Figure 5.7.

Table 5.2: Special Landscape Areas within 10 km

SLA	Local Planning Authority (LPA)
Northern Uplands	BCBC
Mynydd y Gelli	NPTCBC
Rhondda Fawr Northern Cwms and Slopes	RCTCBC
Cwm Orci	RCTCBC
Foel y Dyffryn	BCBC
Foel Trawsnant	NPTCBC
Western Uplands	BCBC
Bryngarw Country Park	BCBC
Mynydd y Gaer	BCBC
Margam	NPTCBC
Vale of Neath	NPTCBC
Hirwaun Common	RCTCBC

5.75 The site lies within the Northern Uplands SLA as defined by BCBC. This SLA extends across the largely open uplands east of the Garw Valley and around the Ogmore Valley, in the north-eastern part of the Borough. The 2010 Designation of Special Landscape Areas report provides a description and justification for this designation[10].

[8] TACP (2010) Designation of Special Landscape Areas. Bridgend County Borough Council.

[9] TACP (2011) Consultancy Services For The Provision Of Landscape Advice. Neath Port Talbot County Borough Council.

[10] TACP (2010) Designation of Special Landscape Areas. Bridgend County Borough Council.

5.76 In terms of a need for an SLA in this area, the report notes that "*urban, wind farm and forestry influences [are] starting to degrade its integrity*." Mynydd Llangeinwyr is considered to be "*of regional value in terms of the Visual and Sensory aspect topic layer*." The focus of the descriptive text under 'Primary Landscape Qualities and Features' is on the adjacent valleys and their relationship with this upland, including views to and from upland areas. The location of the site is not specifically mentioned, though reference is made to views over unforested upland. 'Key Policies and Management Issues' include recommendations to control the "*visual intrusion of incongruous vertical elements*", which could be interpreted as a reference to wind turbines.

Visual Baseline

5.77 This section identifies the extent of potential visibility of the Proposed Development and introduces the viewpoints that will be used to assess effects on visual receptors.

Analysis of Visibility of the Proposed Development

5.78 The ZTVs in Figures 5.3a-3b and Figure 5.4a-4b show the theoretical visibility of the Development to blade tip and hub height respectively. The ZTV is based on a bare ground model and does not take into account the effects of screening providing by buildings and/or vegetation. Visibility of the Proposed Development has been verified in the field.

5.79 There are a number of operational and under construction wind farms within the study area, which are listed in Table 5.7. All of these wind farms are included as part of the baseline for the assessment, since they are already present in views. These wind farms are shown on Figure 5.9 along with consented and at application schemes.

Key Visual Receptors

5.80 Potential visual receptors include:

- local residents of Abergwynfi, Blaengwynfi, Blaengarw, Pontycymer, Nant-y-moel and Cwmparc;
- people living in the Afon Afan, Ogwr Fawr and Afon Garw valleys;
- those travelling on key routes within the ZTV, including roads, railways, cycle paths and walking routes; and
- recreational users, including hill walkers, cyclists, etc. using promoted routes, public rights of way and open access land.

Selection of Viewpoints for Assessment

5.81 This section sets out the viewpoints that will be used to represent and assess the visual effects of the Proposed Development. The viewpoint list is a representative selection of locations agreed with the statutory consultees; it is not an exhaustive list of locations from which the development will be visible.

5.82 A total of 22 viewpoints were selected through desk study, site work and discussions with BCBC, NPTCBC, and RCTCBC. However, four viewpoints were subsequently omitted following the results of fieldwork. The refined list of 18 viewpoint locations and numbering is included in Table 5.3. Justification for omission of these viewpoints is provided in Table 5.4 below.

Table 5.3 Viewpoint Locations

No.	Name	X	Y	Distance	Reason for Selection
1	A4107, Hairpin Bend	291709	195676	0.9 km	Represents sequential views gained from the A4107, and recreational receptors.
2	Mynydd Llangeinwyr	291951	193247	1.2 km	Representative of views from the highest hill in the Bridgend County Borough area.
3	Craig Ogwr	293803	194554	1.3 km	Representative of views experienced by recreational receptors.
4	Parc Calon Lan, Blaengarw	289854	193095	1.8 km	Representative of views from community recreational receptor.
5	Ogmore Terrace, Nant-y-moel	293550	192759	1.9km	Representative of views from residential street in Nant-y-moel Conservation Area.
6	Caroline Street, Blaengwynfi	289242	196548	2.2km	Represents views from the settlement of Blaengwynfi.
7	Mynydd William Meyrick	295215	192726	3.1 km	Representative of views from high point in the county borough and Open Access land.
8	Meadow Street, Pontycymer	290481	191472	3.2 km	Representative of views experienced by residents of Pontycymer.
9	Cwmparc	295537	196197	3.6 km	Represents views from settlement of Cwmparc
10	Pen y Foel	291900	189554	4.8 km	Representative of views gained by walkers to this location.
11	A4061, Hendre'r Mynydd	292316	202014	7.2 km	Represents views experienced by road users and visitors to the Forest.
12	Mynydd Bach	283587	191195	7.7 km	Representative of views experienced from walking routes west of Maesteg.
13	Penrhys	300261	194560	7.8 km	Representative of views gained from the settlement of Penrhys and similar views experienced by walkers.
14	Ogwr Ridgeway	284591	187303	9.5 km	Representative of views gained by road users and walkers on the Ogwr Ridgeway Walk.
15	Bridgend Circular Walk	291189	182879	11.5 km	Panoramic view of recreational receptor and principal access road / gateway to the Ogmore and Garw valleys.
16	Ergyd Isaf	279463	188684	12.5 km	Represents views gained from local hill summit.
17	B4287 East of Neath	277723	195861	12.8 km	Represents sequential views experienced by road users and similar views gained by walkers and those on horseback.
18	Cadair Fawr	297792	212317	18.5 km	Representative of views from the Brecon Beacons National Park.

Table 5.4 Justification for Omission of Suggested Viewpoint Locations

Name	Reason for Omission
Mynydd Bwllfa, north of Maerdy	Limited view available. Fore and middle-ground views dominated by views of the existing Maerdy Wind farm.
Coed Morgannwg Way near Nantyffyllon	Visual effects would be comparable with Viewpoint 13. An additional viewpoint from this location therefore not included in the assessment. The Coed Morgannwg Way is also no longer a route promoted by NRW.
Bridleway adjacent to Llangeinor Arms	Viewpoint requested by BCBC but not located within the ZTV.
B4281 Cefn Road, near Aberkenfig	Due to the lack of safe stopping places, it was not possible to record viewpoint photography along this route in a locations with a clear view. The view towards the site was noted as being relatively brief glimpses from this section of the road.

Settlements

5.83 Table 5.5 below lists the settlements within the study area which fall within the ZTV output and identifies those which require further assessment. The ZTV does not include for screening of views by buildings, which will substantially reduce visibility from most settlements. In order to focus on potentially significant effects, settlements from which there is no theoretical visibility are not considered. Furthermore, settlements with limited visibility from a longer distance; beyond 10 km from the Proposed Development; and/ or where views of the surrounding landscape (and host LCT) are not important to its setting, and where it is unlikely that significant effects could occur, are not considered further in the assessment.

Table 5.5 Settlements

River valley	Settlement name	Theoretical Visibility of Development (ZTV coverage)	To be considered as part of the assessment due to anticipated visual effects
Garw	Blaengarw	Regular visibility within 1.5 km.	**Yes** (refer to Viewpoint 4)
	Pontycymer	Regular visibility within 2.5 km.	**Yes** (refer to Viewpoint 8)
	Llangeinor	Limited visibility from the SE part of the settlement only.	No
Ogwr Fawr	Nant-y-moel	Regular visibility within 1.5 km.	**Yes** (refer to Viewpoint 5)
	Price Town	Regular visibility within 2.5 km.	Yes
	Ogmore Vale	Some visibility across most of the settlement.	Yes
	Lewistown	ZTV output indicates no visibility from this location.	No
Ogwr Fach	Glynllan	Valley floor settlements that are outside the ZTV.	No
	Gilfach Goch		

River valley	Settlement name	Theoretical Visibility of Development (ZTV coverage)	To be considered as part of the assessment due to anticipated visual effects
Afan	Blaengwynfi	Regular visibility across the settlements, within 2.5km.	**Yes** (refer to Viewpoint 6)
	Abergwynfi		
	Cymmer	Limited visibility indicated form the eastern part of the settlement within 4.5 km.	No
	Croeserw	Limited visibility indicated from the northern part of the settlement within 3.6 km.	No
	Duffryn	Outside the ZTV.	No
Rhondda Fawr	Treorchy	Some visibility from the area around the cemetery.	**Yes**
	Cwmparc	Views of blade tips likely across the settlement.	**Yes** (refer to Viewpoint 9)
	Pentre	ZTV indicates visibility across the northern part of the settlement.	**Yes**
	Ystrad	ZTV indicates visibility across the north-eastern part of the settlement.	**Yes**
	Treherbert	The majority of these linear settlements do not fall within the ZTV.	No
	Llwynypia		
	Tonypandy		
	Trealaw		
	Penygraig		
	Porth		
Rhondda Fach	Penrhys	Visibility is indicated across much of this settlement, which lies on higher ground.	**Yes** (refer to Viewpoint 13)
	Maerdy	The majority of these linear settlements along the valley floor do not fall within the ZTV.	No
	Ferndale		
	Pontygwaith		
	Wattstown		
	Tylorstown		
Llynfi	Caerau	These settlements are on the valley floor and are outside the ZTV.	No
	Nantyffyllon		
	Maesteg	Some visibility indicated from the north-western and southern part of the settlement.	**Yes** (refer to Viewpoint 12)
	Cwmfelin		
	Llangynwyd	ZTV indicates visibility from the old village, and some visibility from part of the lower new village.	**Yes** (refer to Viewpoint 14)
	Bettws	Outside the ZTV.	No

Routes

5.84 Key roads, railways and recreational routes (long distance footpaths and cycle routes) located across the study area and that fall within the ZTV output are listed in Table 5.6 below. The locations of recreational routes are also shown on Figure 5.8. It was noted during consultation with BCBC that the Coed Morgannwg Way was no longer a route promoted by NRW and was therefore omitted from the assessment of potential effects. In order to focus on potentially significant effects, routes with very limited theoretical visibility of the turbines and / or beyond 15 km from the Proposed Development are not considered further.

Table 5.6 Routes

Route	Theoretical Visibility of Development (ZTV coverage)
Roads	
A4017 (N and NW)	Yes – regular visibility indicated from much of the route within 5km. **Consider in assessment** (refer to Viewpoint 1).
A4061 (NE and SE)	Yes – regular visibility indicated from much of the route within 5km. **Consider in assessment** (refer to Viewpoint 11).
A4064 (SW)	Yes – regular visibility indicated from much of the route within 5km. **Consider in assessment** (refer to Viewpoint 8 which is considered to be representative).
A4233 (NE)	No visibility indicated, not considered further.
A4093 (S)	Yes – limited visibility indicated within 7.5km near Glynogwr. Views will be largely oblique to direction of travel, foreshortened and screened by vegetation and built form. Significant visual effects are considered unlikely therefore this route is not considered further.
A4063 (SW)	No visibility indicated, not considered further.
A4069 (E)	No visibility indicated, not considered further.
A4058 (SE)	Limited visibility indicated near Hopkinstown within approximately 13km. Given potential screening by built form and vegetation south of the route significant visual effects are considered unlikely therefore this route is not considered further.
A473 (S)	Visibility indicated south of Pencoed within approximately 13km. Views will be largely screened by intervening features. Significant effects are considered unlikely, therefore this route is not considered further.
A48 (SW)	Limited visibility indicated mainly east of North Cornelly at distances over 13km. Not considered further.
M4 (S)	Yes – intermittent to regular visibility indicated from this route at distances over 11km. Views will be largely oblique to direction of travel. Given potential intervening features and the fast moving nature of this route significant visual effects are considered unlikely. Not considered further.
Railways	
Rhonnda Line	Yes - the ZTV indicates visibility near Treorchy within 5km. Views will be foreshortened and screened by vegetation and built form. Significant visual effects are considered unlikely therefore this route is not considered further.

Maesteg Line	Yes - the ZTV indicates visibility near Garth beyond 5km. Views will be foreshortened and screened by vegetation and built form. Significant visual effects are considered unlikely therefore this route is not considered further.
Cycle Routes	
NCN 4 (S)	Minimal visibility indicated around Bridgend, not considered further.
NCN 46 (N)	Visibility indicated only over a short section 13.5km from the site, and significant visual effects are considered unlikely. Not considered further.
NCN 47 (N, E and W)	ZTV indicates visibility from high ground around 8km north of the site. Views will be screened by intervening conifer forest plantation, and significant visual effects are considered unlikely. Not considered further.
NCN 478 (NE)	No visibility indicated, not considered further.
NCN 881	No visibility indicated, not considered further.
NCN 883 (E)	Intermittent visibility indicated within the Ogmore valley, **consider in the assessment**.
NCN 884 (W)	Intermittent visibility indicated within the Garw valley, **consider in the assessment**.
NCN 885 (W and NW)	Minimal visibility around Croeserw only, not considered further.
NCN 887 (W and NW)	Limited visibility indicated north of Glyncorrwg within 10km north west of the site. Views will be screened by intervening conifer forest plantation, and significant visual effects are considered unlikely. Not considered further.
Walking Routes	
St Illtyd's Walk	Pockets of theoretical visibility afforded south of Maesteg and to the west of Glyncorrwg. **Consider in assessment** (refer to Viewpoint 12).
Bridgend Circular Walk	Potential visibility available within close proximity to the M4 and A4061 infrastructure corridors. **Consider in assessment** (refer to Viewpoint 15).
Sky to Sea Walk	Crosses the site, this route also would also afford visibility from small pockets to the south and west. **Consider in assessment** (refer to Viewpoints 2 and 3).
Taff Trail	Lying at the eastern edge of the study area, no visibility is indicated due to viewing distance. Not considered further.
Celtic Way	In addition to pockets to the south of Maesteg and the west of Glyncorrwg, visibility is also indicated beyond the corridor of the A465 at the north of the study area. **Considered in assessment** (refer to Viewpoint 12).
Ogwr Ridgeway Walk	Visibility indicated south of Maesteg, Mynydd Ty-talwyn and within the Afon Garw Valley. **Considered in assessment** (refer to Viewpoint 14).

Cumulative baseline

5.85 Wind farm development is a clear force for change within the study area, and is examined in the cumulative LVIA. In line with the recommendations of the Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements (page 2.3), wind energy developments have been identified within the following distances:

- Micro turbines (<25 m) within 2 km of the Proposed Development;

- Small turbines (25-50 m) within 8 km of the Proposed Development;
- Medium turbines (50-80 m) within 12 km of the Proposed Development;
- Large turbines (80-109 m) within 17 km of the Proposed Development; and
- Very large turbines (>109 m) within 23 km of the Proposed Development.

5.86 All operational, under construction, consented and in planning wind energy developments within these distances are listed in Table 5.7, and are illustrated in Figure 5.9. Projects at scoping stage are not considered in the cumulative baseline.

5.87 Table 5.7 indicates the maximum tip height of each scheme, as well as the size category as defined in Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements. No 'micro' turbines were identified within 2 km. Distances stated are from the centre of the Proposed Development.

5.88 Figure 5.9 indicates that the locations of larger wind energy developments in the area respond to the TAN8 Strategic Search Areas. Pen y Cymoedd forms a broad arc across the ridge to the north, with other schemes including Ffynnon Oer and Ferndale reinforcing this pattern. Other clusters are formed by Pant y Wal and Fforch Nest to the south-east, and by Taff Ely and Mynydd Portref further south.

5.89 The Proposed Development aims to fit into the wider pattern of wind energy development through its design as an extension to the operational Llynfi Afan Wind Farm, as set out in Chapter 2: Design Evolution.

Table 5.7 Cumulative Wind Farms Included in the Assessment

Wind Farm	Turbines	Tip Height (m)	Category[11]	Distance (km)[12]	Status
Llynfi Afan	12	118	VL	0.3	Operational
Pant y Wal Ext	8	125	VL	3.3	Operational
Pen y Cymoedd	76	145	VL	3.5	Operational
Bwllfa Farm	1	76	M	3.7	Operational
Pant y Wal	10	115	VL	4.0	Operational
Fforch Nest	11	115	VL	4.4	Operational
Nant-y-gwyddon	1	121.5	VL	5.2	Consented
Maerdy	8	145	VL	5.5	Operational

[11] Size category as defined in Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements.

[12] Closest distance, turbine to turbine.

Wind Farm	Turbines	Tip Height (m)	Category[11]	Distance (km)[12]	Status
Abergorki	3	146.5	VL	5.8	Consented
Ferndale	8	74	M	6.2	Operational
Foel Trawsnant[13]	13	120	VL	6.3	Application Submitted
Ffynnon Oer	16	93	L	6.7	Operational
Melin Court	5	145	VL	7.6	Consented
Mynydd Bwllfa	9	125	VL	7.7	Operational
Taff Ely	20	53.5	M	9.0	Operational
Headwind Taff Ely[14]	7	110	VL	9.4	Consented
Mynydd Portref	11	110	VL	10.3	Operational
Llwyncelin Farm	2	125	VL	10.9	Consented
Mynydd Portref Ext	6	110	VL	11.0	Operational
Graig Fatha Farm	1	126	VL	12.5	Consented
Mynydd Brombil	4	100	L	12.8	Operational
Maesgwyn	13	120	VL	13.5	Operational
Rhiwfelin Fach Farm	1	100	L	14.3	Consented
Maesgwyn Extension	1	125	VL	14.7	Operational
Parc Stormy Down	1	125	VL	16.5	Operational
Newton Down	2	125	VL	17.0	Operational

Future Baseline

5.90 In the absence of the Proposed Development, it is likely that the land within the site boundary will continue under the same land use, and the character of the site is therefore unlikely to change significantly.

5.91 The landscape and visual amenity of the study area is likely to be influenced by a number of ongoing forces for change. Forces for change are those factors affecting the evolution of the landscape and which may, consequently, affect the perception of the study area in the near or distant future. These include changes in forestry and land management, as well as continuing development including buildings and infrastructure, including further wind farms.

[13] A scoping request was submitted in 2018 to amend this scheme to 11 turbines at 145m.

[14] This is a repowering proposal, which would see the 20-turbine Taff Ely Wind Farm removed, and replaced with seven larger turbines on the same site.

5.92 It is notable that of the schemes listed in Table 5.7, the great majority are already operational. Of the unbuilt schemes, only one has not received planning consent. The consented schemes are generally for smaller numbers of turbines in comparison with the operational schemes. This suggests that, although wind farms are a feature of the area, the future baseline may not differ greatly from the current baseline. This has influenced the way that cumulative effects are assessed in the LVIA, as described in the methodology (Appendix 5.2).

5.93 Climate can be viewed as having been a highly influential factor in the development of today's landscapes and it is widely accepted that mainly due to anthropological activities and the burning of fossil fuels, climates are changing. Whilst there appears to be no certainty of what the impacts of such climatic changes will be in the future, it is clear that these changes will affect the landscape, including the landscape of the study area.

Likely Significant Effects

5.94 During construction of the Proposed Development, the following elements and activities may potentially affect the landscape and visual resource:

- Construction of a new site access off the A4107;
- Establishment and operation of a construction compound;
- Excavation of borrow pit(s);
- Construction of a network of access tracks and hardstanding areas;
- Forestry operations and track widening along the access route, north of the site;
- Excavation and construction of turbine foundations;
- Development of the substation, control building and energy storage facility (ESF);
- Installation of electrical and control network of underground cables;
- Turbine erection using large cranes; and
- General disturbance across the site including human activity, vehicle movements, lighting, temporary fencing and signage, construction noise, and so on.

5.95 The construction period would last approximately 10 months.

5.96 During operation of the Proposed Development, the following elements and activities may potentially affect the landscape and visual resource:

- Seven three-bladed horizontal axis wind turbines of up to 150 m tip-height;
- Control building, substation and electricity storage facility (ESF), including fencing; and
- Access tracks and retained hardstanding areas.

5.97 The operational period of the Proposed Development would be up to 35 years.

5.98 During decommissioning, activities on site would essentially be a reversal of the construction process, involving dismantling of turbines and other above-ground infrastructure, and restoration of the site. As such, landscape and visual effects during decommissioning would be similar to those experienced during construction, and have not been assessed separately.

Potential for Effects on Landscape Character

5.99 For the 'host' landscape, i.e. that in which the Proposed Development is located, a significant change in landscape character is likely to occur where, for example, valued elements or key characteristics would be lost or substantially changed, to the extent that the Proposed Development would become a key characteristic of the area. The spatial extent of that effect and the significance of changes in character will depend on a range of factors, including the size of the area, the scale of the Proposed Development and the extent of its visibility.

5.100 For the purposes of this assessment, physical effects on landscape character would be confined to the site itself and the Mynydd Llangeinwyr Uplands landscape character area (LCA) which 'hosts' the site.

5.101 For 'non-host' areas, the nature of existing views, the extent to which views contribute to the character of the landscape and the predicted changes in those views arising from the Proposed Development are the main factors for consideration. Significant effects on the character of 'non-host' landscape character types may arise where views of the surrounding area are among the key characteristics of the area and, where the Proposed Development becomes a key feature of these views.

5.102 The ZTV is therefore used to identify those areas of landscape that may experience effects. This scoping exercise has been applied to LANDMAP aspect areas, and is presented in Appendix 5.3.

Potential for Effects on Visual Amenity

5.103 Changes in views may give rise to adverse or beneficial visual effects through obstruction in views, alteration of the components of the view and through the opening up of new views by the removal of landscape elements. The Proposed Development would not entail any significant removal of landscape elements other than a small area of farmland. Changes in visual amenity would relate to effects arising from temporary visibility of construction activity and the permanent views of built form associated with the Proposed Development.

5.104 Potential visual effects have been identified with reference to the features of the Proposed Development that are seen by visual receptors, including:

- Construction effects:
  - Visibility of on-site construction activities (ground disturbance, vehicle movements, temporary compounds and storage, lighting, fencing, etc);
  - Visibility of high level elements (construction of turbines using tall cranes); and
- Operational effects:
  - Visibility of ground level structures (substation, control building and ESF) in views of the site;
  - Visibility of tall moving structures (turbines); and
  - Visual relationship of the development with existing operational wind farm schemes.

Potential Effects of the Grid Connection

5.105 The Proposed Development will be connected to the electricity network via a 66kV wood-pole overhead line to Pyle Substation near Kenfig Hill. The grid connection will be subject to detail design and a separate planning application. A preliminary route has been devised that would follow the existing 66kV wood pole connection for Llynfi Afan Wind Farm. This route runs through forest to the west of the Garw valley, then descends south to the Llynfi valley. It then runs to the west from the A4063 up to a ridge, and turns sharply to the south, descending to the substation.

5.106 The grid connection will be subject to a separate EIA, and effects are not assessed in detail here. However, it is likely that the new overhead line will give rise to some landscape and visual effects due to the introduction of new structures and linear features. The upland forested areas are more likely to be able to accommodate the overhead line without significant effects, than the smaller scale valleys. Cumulative effects may occur due to the two overhead lines being in parallel. Within most of the Upper Ogmore site, the grid connection will be buried, reducing the potential for cumulative effects with the wind farm.

Mitigation

5.107 It is acknowledged that traditional methods of landscape and visual mitigation, such as screen planting, are ineffective for wind farm development. Mitigation for wind farms is generally limited to the reduction of potential direct effects through detailed siting, and the reduction in adverse aesthetic effects through wind farm design.[15] As part of the design process, the landscape and visual objectives for the

[15] SNH (2017) Siting and Designing Wind Farms in the Landscape.

Proposed Development have drawn upon the general and LCA-specific guidelines presented in the BCBC SPG on Renewables in the Landscape. The embedded mitigation is described in Chapter 2 Design Evolution.

5.108 The construction of the turbines and associated infrastructure would follow agreed Construction Method Statements, which would include arrangements for implementation of various aspects of the works to help mitigate potential adverse impacts. These would form part of the Construction Environment Management Plan (CEMP), which would be adhered to throughout the works. The CEMP would be prepared and agreed post-consent, as described in Chapter 3 Proposed Development.

5.109 Since all mitigation is embedded within the Proposed Development, the following sections report the residual effects on landscape and on visual amenity.

Assessment of Landscape Effects

Introduction

5.110 This section sets out the assessment of the significance of the landscape effects that are predicted to occur during the construction and operational phases.

5.111 Appendix 5.3 includes a list of all LANDMAP aspect areas within the relevant study areas, and presents a scoping exercise to determine those aspect areas that are relevant to the assessment and so form part of the landscape baseline. Effects on individual LANDMAP aspect areas are also presented in Appendix 5.3.

5.112 In order to draw conclusions about overall effects on the landscape character of the study area, effects on LANDMAP aspect areas have been summarised according to the landscape character areas (LCAs) into which they fall, as defined by assessments published by Bridgend,[16] and Neath Port Talbot County Borough Councils.[17]

5.113 As a published landscape character assessment is unavailable for the administrative area of RCTCBC, the landscape assessment here reiterates the assessment of LANDMAP Visual and Sensory aspect areas where the ZTV output indicates potential visibility.

5.114 This overall assessment of landscape character receptors starts with the site itself, and assesses impacts on the LCAs and LANDMAP aspect areas as listed in Table 5.8. Effects arising from construction activity have only been assessed for receptors

[16] LUC (2013) Landscape Character Assessment for Bridgend County Borough. Bridgend County Borough Council

[17] White Consultants (2004) Neath Port Talbot Landmap Landscape Assessment. Neath Port Talbot County Borough Council.

within 5 km of the site. The assessment tables are presented in Appendix 5.4 and the findings are summarised below.

Table 5.8 Landscape receptors

Group	Receptor
N/a	The landscape of the site.
Bridgend LCAs	Mynydd Llangeinwyr Uplands (Bridgend LCA 6)
	Ogmore Valley Floor and Lower Slopes (Bridgend LCA 7)
	Garw Valley Floor and Lower Slopes (Bridgend LCA 5)
	Ogmore Forest and Surrounding Uplands (Bridgend LCA 8)
	Llynfi and Garw Uplands and Forestry (Bridgend LCA 7)
	Llangynwyd Rolling Uplands and Forestry (Bridgend LCA 1)
	Hirwaun Common and Surrounding Ridges (Bridgend LCA 9)
Neath Port Talbot LCAs	Mynydd y Gelli (NPT LCA 15)
	Cwm Afan and Cwm Pelenna (NPT LCA 11)
	Mynydd Resolfen, Craig-y-Llyn & Mynydd Ynyscorrwg (NPT LCA 18)
	Foel Fawr (NPT LCA 14)
RCT LANDMAP VS aspect areas	St Gwynno (CYNONVS580)
	Cefn y Rhondda (CYNONVS738)

Summary of effects on landscape

Effects during construction

5.115 Localised significant landscape effects are predicted during the construction stage, affecting the site itself and the local area of the Mynydd Llangeinwyr Uplands LCA. These effects arise from the high level of disturbance across the site due to construction of access tracks and hardstandings, substation, control building and ESF, and erection of the turbines, and the change this will cause to the open upland character of the site, notwithstanding the relatively short timescale of the works (approximately 10 months). Effects on the landscape of the site and on the northern part of the Mynydd Llangeinwyr Uplands LCA are predicted to be moderate (significant).

5.116 The effects of the track widening and construction works to the north of the site will be similar in character to routine forestry operations that take place in these plantation landscapes. Effects on landscape character will be minor (not significant).

5.117 Due to local topography, construction works will not be widely visible from adjacent landscapes. From the nearby valleys of the Garw and Ogmore, construction activity on site will not be seen apart from tall equipment such as cranes, which will primarily be deployed during the turbine erection stage, towards the end of the construction period. Effects on the landscape character of the valleys, and of other adjacent LCAs/aspect areas, are judged to be minor (not significant), reducing to negligible (not significant) at distances over 1-2 km.

Effects during operation

5.118 Significant effects on landscape are predicted to occur across the site, where the introduction of seven large turbines will give rise to a major (significant) effect. The effects of the access tracks, substation, control building and ESF will be more localised but will contribute to this major effect at the site level. The effect on the surrounding Mynydd Llangeinwyr Uplands LCA is also judged to be major (significant), as the turbines, access tracks, substation, control building and ESF would increase the existing level of human influence (arising from the mast and Llynfi Afan Wind Farm) across the northern part of the LCA. Effects will reduce to minor and not significant in the southern part of this LCA.

5.119 The Proposed Development is located on high ground between the Garw and Ogmore Valleys, and the presence of additional turbines on the skylines will affect the character of these valley landscapes (although the effect of the access tracks, substation, control building and ESF will be negligible beyond the site). The scale of the effect on the Ogmore valley is judged to be large, due to turbines being introduced on to a currently open skyline, on the opposite side of the valley to the existing Pant y Wal turbines. From the Garw valley, turbines will be set further back from the valley side, and the scale of effect is judged to be medium. The level of effect in the northern part of both valleys is judged to be moderate (significant), reducing to minor (not significant) south of Blaengarw in the Garw valley and south of Price Town in the Ogmore.

5.120 Due to the relationship of the Proposed Development with the existing Llynfi Afan Wind Farm, effects on landscape character would be more pronounced to the south and east of the site, than to the north and west.

5.121 When viewed from the north and west the Proposed Development will be seen behind Llynfi Afan, and would not change the character of the outlook from landscapes even at close range. Effects on the Mynydd y Gelli LCA directly adjacent to the site are assessed as minor (not significant), mainly due to the fact that this LCA is already occupied by Llynfi Afan Wind Farm. Effects on the Llynfi and Garw Uplands LCA to the south-west are anticipated to be moderate (significant) across a small area at Mynydd Caerau, and not significant elsewhere.

5.122 When viewed from the south and east, the Proposed Development will appear larger and closer than Llynfi Afan, occasionally emphasising the presence of the existing turbines. Moderate (significant) effects are predicted across central part of the Mynydd Llangeinwyr Uplands to the south, and Ogmore Forest and Surrounding Uplands LCAs to the east, where the Pant y Wal Wind Farm is already an influence. To the north east, topography screens views of the Proposed Development from nearer areas, so there will be more limited effects at close range. Further afield, minor (not significant) effects are predicted for a number of LCAs and aspect areas.

5.123 In summary, significant effects on landscape character are likely to be experienced across an area extending no more than 2 km from the proposed turbines, and much less to the north and west. The area where significant effects would occur is approximately bounded by the ridge of Craig Ogwr to the east, the summit of Mynydd William Meyrick, the settlement of Price Town, the south end of the main ridge of Mynydd Llangeinwyr, the settlement of Blaengarw, the summit of Mynydd Caerau, and the hairpin bend on the A4107 to the north. Beyond this area effects on landscape character would reduce to minor or negligible, and not significant.

Implications for designated landscapes

5.124 Due to the localised nature of landscape effects, significant effects are only likely to occur within one designated area: the Northern Uplands SLA identified by BCBC. This section considers the implications of the identified effects on the special qualities of the SLA and the integrity of the designation.

5.125 The Proposed Development will result in landscape effects across the northern part of the SLA, with major effects restricted to the area around the turbines. The open upland character will be largely unaffected, though the Proposed Development will introduce additional vertical elements into the landscape, as well as access tracks, the substation, control building and ESF, affecting local wildness. The siting of the turbines close to areas where vertical elements are already present will help to accommodate the Wind Farm into this landscape. The Proposed Development will affect the views within and out of the Ogmore valley (see Viewpoint 5). The presence of wind turbines will be in keeping with the exposure and 'wind noise' that is stated as a 'dominant aesthetic factor' of the SLA. There will be no effect on land cover and habitats, or on the rock outcrops.

5.126 Overall, the primary landscape qualities of the SLA will not be unduly undermined, such that the area would cease to qualify as a locally designated landscape.

Cumulative effects on landscape character

5.127 The majority of the wind energy developments forming the cumulative baseline (see Table 5.7) are operational schemes. These are discussed in relation to the landscape baseline, and cumulative effects arising from interactions are described in the preceding landscape assessment. This concludes that the additional effect of the Proposed Development in combination with existing wind farms means that the area of likely significant effects is greater to the south and east but smaller to the south and west.

5.128 There are a number of consented but unbuilt wind farms in the study area, but none are in the same LCA or within the immediate landscape context of the Proposed Development. The closest proposals are a single turbine at Nant-y-gwyddon (5.2 km east), and the three-turbine Abergorki proposal north of the Rhondda Fach (5.8 km north-east). Neither these, nor other more distant consented schemes, are likely to be experienced at the same time as the Proposed Development in such a way that would lead to an additional effect on landscape character.

5.129 There is only one unconsented scheme in the study area, at Foel Trawsnant, 6.3 km to the west near Afan Argoed. As noted above, the effects of the Proposed Development tend to be very limited to the west. It is considered highly unlikely that the Foel Trawsnant scheme would be experienced at the same time as the Proposed Development in such a way that would lead to an additional effect on landscape character.

5.130 In terms of the total cumulative effects, the Proposed Development will add to the overall number of turbines in the area, and will intensify the local influence of wind energy development. It will not extend the influence of wind turbines into currently unaffected areas, nor would it introduce wind turbines into a landscape type that is currently unaffected. This would remain the case if consented and planned schemes were included in the baseline.

5.131 As such, no further cumulative effects on landscape character have been identified, beyond those already discussed in the assessment against the landscape baseline.

Assessment of Visual Effects

5.132 This section sets out the assessment of the significance of the predicted visual effects that will arise as a result of construction activity and the operational scheme. Effects arising from construction activity have only been assessed for receptors within 5 km of the site.

5.133 Judging the significance of visual effects requires consideration of the nature of the visual receptors (sensitivity) and the nature of the effect on those receptors (magnitude), as described in the assessment methodology (Appendix 5.2).

5.134 The assessment of effects on views has been undertaken with reference to the representative viewpoints listed in Table 5.3, which are considered representative of the range of views that are available to receptors in the study area. A detailed assessment of effects at each of these viewpoints is included in Appendix 5.5, and has been informed by the visualisations presented in Figures 5.12 to 5.29.

5.135 During construction, significant (moderate) effects are predicted to affect sensitive receptors at locations within 1.5 km of the turbines, which overlook the site. These receptors will have views of construction works and disturbance associated with creation of the access tracks, substation, control building and ESF, as well as turbine erection. Construction activity (other than turbine erection) is unlikely to be more widely visible, and effects at all other locations are predicted to be not significant.

5.136 The viewpoint assessment identifies significant operational effects on sensitive receptors up to 4.8 km from the Proposed Development, with effects judged as major being limited to within 2 km. Minor (not significant) effects were identified at locations up to 11.5 km from the Proposed Development, and effects at more distant viewpoints were judged to be negligible. These effects arise principally from the presence of the wind turbines in views, with visibility of the substation, control building and ESF being much more localised.

5.137 The following sections summarise the likely effects on different receptor groups across the study area, informed by the findings of the viewpoint assessment.

Effects on views from settlements

5.138 This section discusses potential effects on receptors within settlements considered in the assessment, as set out in Table 5.5.

5.139 Within the Garw valley to the west of the site, people in Blaengarw and Pontycymer will view the western part of the Wind Farm above the upper slopes that enclose the valley. As indicated by the ZTVs, views are likely to be restricted to three turbines, with glimpses of other turbine blades. The Proposed Development will be seen in the context of Llynfi Afan in most views (see Figure 5.10), although the Proposed Development will be closer. Significant effects (moderate) are predicted at Viewpoint 4 (Parc Calon Lan), and it is likely that similar effects will be experienced by receptors in other parts of Blaengarw with views of the turbines. From Pontycymer, views will be more restricted by intervening topography. Minor (not significant) effects are predicted for Viewpoint 8 (Meadow Street), and effects on other views from this settlement would not be significant.

5.140 To the east of the site is the Ogmore valley, and the settlement of Nant-y-moel. Effects at Viewpoint 5 are predicted to be major (significant), due to the appearance of the turbines on the skyline that forms part of the setting to this village. Similarly significant effects are predicted for viewers in the eastern part of the settlement, on the valley slope. Viewers in the valley floor area are likely to have more limited views of the Proposed Development. Open views of these turbines would also be available from Price Town, though from slightly further away, and significant effects would be experienced by people moving about this settlement.

5.141 From both of these settlements, there are views of Pant y Wal Wind Farm to the south east. These turbines and the Proposed Development would appear on the skyline, but both would occupy a relatively small angle of view, so that viewers would not experience being surrounded by wind turbines.

5.142 From the linear settlement of Ogmore Vale to the south, views of the Proposed Development would be limited to one or two turbines seen at the head of the valley, 3-5km away. Moderate (significant) effects may be experienced where turbines are viewed in long views along the linear streets in this settlement, though elsewhere the view is likely to be limited by surrounding buildings, and effects would not be significant.

5.143 To the north-west of the site, the settlements of Blaengwynfi and Abergwynfi have close views of Llynfi Afan Wind Farm, and the Proposed Development would be seen in the same views, behind the existing turbines. As shown in Figure 5.17, the proposed turbines group well with the existing wind farm, and effects at Viewpoint 6 in the upper part of Blaengwynfi are predicted to be moderate (significant). Other views from lower down in the settlement, and from Abergwynfi on the south side of the valley, will be more limited, and will not be significant.

5.144 The ZTV indicates limited visibility from the Rhondda to the north-east. Viewers in the settlement of Cwmparc will see only turbine blades, and effects at Viewpoint 9 are predicted to be negligible (not significant). From the settlements of Treorchy and Pentre, and Ystrad further south, there will also be views of turbine blades and from locations higher on the valley side the turbine hubs will be visible low on the skyline. Effects are not predicted to be significant. To the east of Ystrad the settlement of Penrhys lies on higher ground above the Rhondda. However, rising ground and woodland on the western edge of the settlement limits views toward the site. Effects at Viewpoint 13, in open space to the south of the settlement, are assessed as minor (not significant), and effects experienced from within the settlement will be similar or less.

5.145 The settlement of Maesteg is located around 6km south-west of the site, and much of it is outside the ZTV. The higher parts of the settlement to the south-west, as

well as Cwmfelin and the hill top village of Llangynwyd, will have views of the Proposed Development across the wooded foreground hills. Effects on Viewpoints 12 and 14, both located on high ground above the settlements, are assessed as negligible and minor. The Proposed Development will be seen in the context of, and sometimes behind, Llynfi Afan in these views, and therefore the scale of change will be small or imperceptible. Effects on views from within these settlements are not predicted to be significant.

Effects on recreational users

5.146 This section discusses potential effects on receptors using the area for recreation, including people using the cycle routes and walking routes considered in the assessment, as set out in Table 5.6.

5.147 Much of the site is identified as open access land, and there are several public rights of way crossing the high ground of Werfa, Mynydd y Gelli and Mynydd Llangeinwyr. Walkers using this area will experience a large scale of change in view during construction and during operation, due to the presence of wind turbines, access tracks, substation, control building and ESF in the local view. Effects are likely to be major (significant) as identified at Viewpoint 2 Mynydd Llangeinwyr. People walking towards the Proposed Development on nearby footpaths will also experience significant effects, as recorded at Viewpoint 3 Craig Ogwr to the east. The Sky to Sea long-distance walk passes both Viewpoint 2 and 3, and walkers on this route will experience a major (significant) effect as they pass the Proposed Development.

5.148 People accessing walking routes and cycle routes from the A4107 to the north of the site will also have close views of the Proposed Development, though coniferous woodland is likely to screen views from the trails themselves. Walkers accessing the surrounding hills, such as Mynydd William Meyrick (Viewpoint 7) and Pen y Foel (Viewpoint 10) are predicted to experience moderate (significant) effects where open views of the Proposed Development are available.

5.149 At greater distances, significant effects are unlikely, including from the long-distance walks in the west and south of the study area. The Celtic Way and St Illtyd's Walk follow similar routes from north to south, passing through several sections of the ZTV at distances between 7 and 15 km. Both routes pass through areas of coniferous forestry that will further reduce visibility. Effects on views from this route are expected to be minor at most, with effects at Viewpoint 12, which is on both routes, assessed as negligible.

5.150 The Ogwr Ridgeway long-distance walk passes through several sections of the ZTV to the south of the site, including Mynydd Baedan and Mynydd y Gaer, and is generally within more open land. Views north will include the Proposed

Development on high ground, in the context of the Llynfi Afan turbines. Effects are predicted to be minor (not significant), as assessed for Viewpoint 14 which is on this route. Further south, the Bridgend Circular Walk passes through sections of the ZTV between 11 and 15 km from the Proposed Development, around Sarn and the M4. Effects are predicted to be minor (not significant), as assessed for Viewpoint 15 which is on this route.

5.151 Cyclists using the NCN routes 883 and 884 in the Ogwr and Garw valleys respectively will have intermittent views of the turbines as they travel north. These largely off-road routes follow the valley floor and avoid the areas of greater visibility on valley sides. Effects on views are predicted to be moderate (significant) in the northern-most parts of the routes, but not significant over most of their length.

5.152 People visiting the Brecon Beacons would not experience significant effects due to the distance from the Proposed Development and the intervening wind farms. Negligible (not significant) effects are predicted at Viewpoint 18 Cadair Fawr, an accessible hill within the National Park.

Effects on transport routes

5.153 This section discusses potential effects on receptors using the main transport routes considered in the assessment, as set out in Table 5.6.

5.154 Views of the Proposed Development will be available travelling north on the A4061 through the Ogmore valley, with turbines seen on the skyline at the head of the valley. There would be some prolonged views of the turbines and other glimpsed views between Ogmore Vale and Nant-y-moel. Travelling south there would be no view of the Proposed Development until the hairpin bend south of the A4107 junction. Turning this bend, the Proposed Development will be fully visible at close range, from the section of road that traverses the head of the valley. Beyond this point there will be no views. Road users are considered to be of lower susceptibility to changes in view, and effects on users of this road will be locally moderate (significant) for the section at the head of the valley.

5.155 The A4107 runs east to west immediately north of the site. Views of the turbines would be a feature of the route between the hairpin bend and the A4061 junction. Users of this road already have views of the Llynfi Afan turbines at close range, though the Proposed Development would increase the amount of development visible. The access tracks, substation, control building and ESF would all be visible from this section of the route. Effects are predicted to be moderate (significant) along a 3 km section of this road.

5.156 The A4064 runs through the Garw valley, and views of the Proposed Development are likely to be intermittent and limited by buildings and steeply rising ground. Significant effects on road users are not predicted.

5.157 There are few other roads within the ZTV and closer to the proposed development, other than those within settlements which are discussed separately in the section above.

Cumulative effects on views

5.158 As noted in the discussion of landscape effects, the majority of the cumulative baseline is made up of wind farms that are already in operation. The interactions of the Proposed Development and Llynfi Afan Wind Farm are discussed in the viewpoint assessment, and in the sections above. Figure 5.10 illustrates the combined visibility of these two developments. This shows areas where only the Proposed Development would be visible (green) are limited to the Ogmore Valley and small areas of high ground to the south-east. This area of 'new' visibility is even smaller when considering all wind farms in the area (Figure 5.11). As such, the Proposed Development will rarely introduce views of wind turbines where they are not already a feature.

5.159 For similar reasons, the Proposed Development is not considered to give rise to significant sequential effects on views through the study area, since it will almost always be seen in the context of an operational development.

5.160 As with the effects on landscape, effects on views are likely to be greater to the south and east, from where the Proposed Development will appear in front of and larger than Llynfi Afan, than in views from the north and west, where the Proposed Development will be seen as part of the existing wind farm.

5.161 There are a number of consented but unbuilt wind farms and turbines in the study area, though none of these are large proposals. They all sit next to operational development and so will not change the pattern of development that is viewed in the area. The only exceptions being a single turbine at the former Nant y Gwyddon landfill site, and two turbines at Llywncelyn Farm further east. The former may be seen in views from Penrhys (Viewpoint 13), but would not significantly alter the context of the Proposed Development. The latter proposal is unlikely to be seen in the context of the Proposed Development except at long distance.

5.162 There is only one unconsented scheme in the study area, at Foel Trawsnant, 6.3 km to the west near Afan Argoed. This will be seen in views across the western part of the study area, for example Viewpoint 12 Mynydd Bach, where Foel Trawsnant will be visible on the northern skyline. The presence of this scheme would not alter the fact that, in this view, the Proposed Development would be behind Llynfi Afan. There are no locations within the study area where it is considered that the interaction of Foel Trawsnant and the Proposed Development would give rise to a significant cumulative effect on views.

Summary

5.163 Landscape and visual effects are summarised in Table 5.9 and 5.10 respectively.

Table 5.9: Summary of Residual Effects on Landscape Character

Significant effects are shown in bold text with double outline.

Group	Receptor	Suscept-ibility	Value	Construction phase				Operational phase			
				Scale	Geog. extent	Duration	Level of effect	Scale	Geog. extent	Duration	Level of effect
N/A	The landscape of the site.	Medium	Local	Large	Small	Short term	**Moderate**	Large	Small	Long term	**Major**
Bridgend LCAs	Mynydd Llangeinwyr Uplands (Bridgend LCA 6)	Medium	Regional	Large	Small	Short term	**Moderate**	Large	Medium	Long term	**Major**
	Ogmore Valley Floor and Lower Slopes (Bridgend LCA 7)	High	Local	Small	Medium	Short term	Minor	Large	Medium	Long term	**Moderate**
	Garw Valley Floor and Lower Slopes (Bridgend LCA 5)	High	Local	Small	Medium	Short term	Minor	Medium	Medium	Long term	**Moderate**
	Ogmore Forest and Surrounding Uplands (Bridgend LCA 8)	Medium	Regional	Small	Medium	Short term	Minor	Medium	Medium	Long term	**Moderate**
	Llynfi and Garw Uplands and Forestry (Bridgend LCA 3)	Medium	Local	Small	Small	Short term	Minor	Medium	Small	Long term	**Moderate**

Group	Receptor	Suscept-ibility	Value	Construction phase				Operational phase			
				Scale	Geog. extent	Duration	Level of effect	Scale	Geog. extent	Duration	Level of effect
	Llangynwyd Rolling Uplands and Forestry (Bridgend LCA 1)	Medium	Regional	N/A	N/A	N/A	N/A	Small	Large	Long term	Minor
	Hirwaun Common and Surrounding Ridges (Bridgend LCA 9)	Medium	Regional	N/A	N/A	N/A	N/A	Small	Medium	Long term	Minor
Neath Port Talbot LCAs	Mynydd y Gelli (NPT LCA 15)	Medium	Regional	Small	Small	Short term	Minor	Small	Medium	Long term	Minor
	Cwm Afan and Cwm Pelenna (NPT LCA 11)	High	Local	Small	Small	Short term	Minor	Small	Small	Long term	Minor
	Mynydd Resolfen, Craig-y-Llyn & Mynydd Ynyscorrwg (NPT LCA 18)	Low	Regional	Small	Small	Short term	Minor	Small	Small	Long term	Minor
	Foel Fawr (NPT LCA 14)	Medium	Local	Imperceptible	Small	Short term	Negligible	Imperceptible	Small	Long term	Negligible
Rhondda Cynon Taf LANDMAP VS aspect areas	St Gwynno (CYNONVS580)	Medium	Regional	Small	Small	Short term	Minor	Small	Small	Long term	Minor
	Cefn y Rhondda (CYNONVS738)	Medium	Regional	Small	Small	Short term	Minor	Small	Medium	Long term	Minor

Table 5.10: Summary of Residual Effects on Landscape Character

Significant effects are shown in bold text with double outline.

No	Location	Distance	Suscept-ibility	Value	Construction phase				Operational phase			
					Scale	Geog. extent	Duration	Level of effect	Scale	Geog. extent	Duration	Level of effect
1	A4107, Hairpin Bend	0.9 km	Medium	Local	Large	Small	Short term	**Moderate**	Large	Small	Long term	**Moderate**
2	Mynydd Llangeinwyr	1.2 km	High	Local	Medium	Medium	Short term	**Moderate**	Large	Moderate	Long term	**Major**
3	Craig Ogwr	1.3 km	High	Regional	Medium	Small	Short term	**Moderate**	Large	Small	Long term	**Major**
4	Parc Calon Lan, Blaengarw	1.8 km	High	Local	Small	Small	Short term	Minor	Medium	Small	Long term	**Moderate**
5	Ogmore Terrace, Nant-y-moel	1.9km	High	Local	Small	Small	Short term	Minor	Large	Small	Long term	**Major**
6	Caroline Street, Blaengwynfi	2.2km	High	Local	Small	Small	Short term	Minor	Medium	Small	Long term	**Moderate**
7	Mynydd William Meyrick	3.1 km	High	Regional	Small	Medium	Short term	Minor	Medium	Medium	Long term	**Moderate**
8	Meadow Street, Pontycymer	3.2 km	High	Local	Imperceptible	Small	Short term	Negligible	Small	Small	Long term	Minor
9	Cwmparc	3.6 km	High	Local	Imperceptible	Small	Short term	Negligible	Imperceptible	Small	Long term	Negligible

No	Location	Distance	Suscept-ibility	Value	Construction phase				Operational phase			
					Scale	Geog. extent	Duration	Level of effect	Scale	Geog. extent	Duration	Level of effect
10	Pen y Foel	4.8 km	High	Regional	Small	Small	Short term	Minor	Medium	Small	Long term	**Moderate**
11	A4061, Hendre'r Mynydd	7.2 km	High	Regional	N/A	N/A	N/A	N/A	Small	Small	Long term	Minor
12	Mynydd Bach	7.7 km	High	Regional	N/A	N/A	N/A	N/A	Imperceptible	Medium	Long term	Negligible
13	Penrhys	7.8 km	High	Regional	N/A	N/A	N/A	N/A	Small	Small	Long term	Minor
14	Ogwr Ridgeway	9.5 km	High	Regional	N/A	N/A	N/A	N/A	Small	Medium	Long term	Minor
15	Bridgend Circular Walk	11.5 km	High	Local	N/A	N/A	N/A	N/A	Small	Medium	Long term	Minor
16	Ergyd Isaf	12.5 km	High	Local	N/A	N/A	N/A	N/A	Imperceptible	Small	Long term	Negligible
17	B4287 East of Neath	12.8 km	Low	Local	N/A	N/A	N/A	N/A	Imperceptible	Small	Long term	Negligible
18	Cadair Fawr	18.5 km	High	National	N/A	N/A	N/A	N/A	Imperceptible	Small	Long term	Negligible