

SPG 20 Renewables in the Landscape: Supplementary Planning Guidance





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List of Abbreviations

BCBC: Bridgend County Borough Council

GI: Green Infrastructure

LCA: Landscape Character Area/Landscape Character Assessment

LDP: Local Development Plan

PPW: Planning Policy Wales

SINC: Site of Importance for Nature Conservation

SPG: Supplementary Planning Guidance

TAN: Technical Advice Note

TCPA: Town and Country Planning Association

Executive Summary

This Supplementary Planning Guidance (SPG) is part of a suite of Green Infrastructure SPGs produced by the Council to echo the emerging principles of Natural Resources Wales: promoting the strategic management and planning of landscapes to deliver multiple (social, economic and environmental) benefits. This *Renewables in the Landscape SPG* recognises that the varied landscapes of Bridgend County Borough have a significant economic, social and community value, contributing to a sense of identity, well-being, enjoyment and inspiration. At the same time, many parts of the landscape have good conditions to produce wind and solar energy which are already being capitalised upon through the installation of related developments.

The Council recognises these opportunities and understands the need to maximise renewable energy generation, which can also have environmental, economic, social and other benefits. However, the development of wind and solar electricity generating installations within the county borough needs to be managed carefully to achieve the greatest contribution towards energy needs, while at the same time ensuring that the valued characteristics of the landscape are not unacceptably harmed.

In order to help understand how best to design and site wind and solar PV developments at the right scale and in the right places, this SPG includes an assessment of the sensitivity of the County Borough's landscapes to different scales of wind and solar photovoltaic energy developments. It also includes general guidance for developers to follow when planning and designing schemes, as well as specific information tailored to each of Bridgend's 15 Landscape Character Areas to reflect local variations in landscape character.

For wind energy developments, further planning guidance on Landscape and Visual Impact Assessment (LVIA) requirements is provided in the regional study produced by Gillespies LLP for the Heads of the Valleys Landscape Officers and Planners¹. Users of this *Renewables in the Landscape SPG* are encouraged to refer to the regional study for more detailed information on planning application requirements for wind turbines.

This SPG provides evidence to support LDP policies including SP2: *Design and Sustainable Place Making*, SP4: *Conservation and Enhancement of the Natural Environment* and SP8: *Renewable Energy*.

¹ Gillespies LLP (June 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.

1. The Green Infrastructure Approach



1 The Green Infrastructure Approach

What is Green Infrastructure?

- 1.1 Green Infrastructure (GI) is a network of multifunctional green spaces, natural features and environmental management systems which help to provide a natural life support system for people and wildlife.
- 1.2 GI provides the spatial framework for a range of natural functions and uses. By adopting the GI approach, development schemes may be adapted or designed to provide a range of important benefits to people such as improved connectivity through footpaths and cycle routes; space for nature that contributes to the local or sub-regional pattern of connected habitat; imaginative recreational facilities that give educational and physical health benefits to local people; and places that will be more resilient to the impacts of a changing climate.

The natural character of Bridgend

Bridgend County Borough is a small but remarkably diverse area, demonstrating centuries of human interaction with the natural environment. The northern half of the County Borough comprises the steep-sided valleys and commons which form part of the wider coalfield plateau of South Wales, with pockets of pastoral farmland and rough grazing land. To the south the landscapes of the County Borough meet the sea, including part of the Glamorgan Heritage Coast. This dramatic and wild coastline provides a stark contrast to the nearby settlements with their strong human influence (including the tourist centre of Porthcawl and nearby steelworks at Neath Port Talbot). The coast includes the highest sand dunes in Britain at Merthyr Mawr, part of an internationally important network of coastal habitats which provide a scenic frontage to the County Borough.

The market town of Bridgend itself has evidence of settlement dating back to the Prehistoric period, but the discovery of coal in the valleys north of the town had a dramatic impact on its development. Like other parts of South Wales, the decline of the coal mining and other primary industries had a significant impact on the local economy and the communities which relied on them. In recent years, much investment has been injected into the area, with regeneration projects and new development breathing new life into the area, including both within the town and the nearby mining settlements in the valleys.

Bridgend County Borough Council is preparing an online [Green Infrastructure Tool](#) which will support those submitting planning applications. This tool will incorporate maps of features and topics which should be considered when planning for green infrastructure, and should be utilised when designing Green Infrastructure within planned development.

Green Infrastructure Assets

- 1.3 Most natural and semi-natural features in the landscape can be considered to be green infrastructure, and many can perform one or more Green Infrastructure functions. Examples of green infrastructure assets (following the terms defined by the Town and Country Planning Association's '*The essential role of Green Infrastructure – eco-towns green infrastructure worksheet*' (2008)) are as follows:

Parks and gardens – urban parks, country and regional parks, formal and private gardens (permeable paving, trees, rainwater collection, ponds) and institutional grounds (e.g. at schools and hospitals) for example Bryngarw Country Park, and Cemeteries and churchyards;

Amenity green space – informal recreation spaces, play areas, outdoor sport facilities, housing green spaces, domestic gardens, village greens, urban commons, other incidental space, green roofs, hedges, civic squares and spaces, and highway trees and verges, for example Newbridge Fields and Pandy Park sports fields;

Productive spaces - Allotments, community gardens, city farms, orchards, roof gardens, and urban edge farmland;

Natural and semi-natural features - woodland and scrub, trees, hedgerows, grassland (for example downland and meadow), heath and moor, wetlands, open and running water (rivers Llynfi, Garw, Ogmore) brownfield sites, bare rock habitats (for example cliffs and quarries), coast, beaches.

Green corridors - rivers (e.g. Llynfi, Garw, Ogmore) including their banks, road and rail corridors (verges), access networks, cycling routes, and rights of way, for example the All Wales Coastal Path, Bridgend Circular Walk, the Ogwr Ridgeway Walk and the Afon Llynfi;

Existing national and local nature reserves and locally designated sites for nature conservation for example Kenfig NNR, Craig-y-Parcau LNR and Parc Slip Nature Reserve, Merthyr Mawr SSSI.

Archaeological and historic sites, for example Y Bwlwarcu Scheduled Ancient Monument; Coity Castle, Parc Tondu Ironworks.

Functional green space, such as sustainable urban drainage schemes and flood storage areas.

- 1.4 The GI approach is associated with capitalising on green infrastructure assets for the multi-functional social, economic and environmental opportunities they offer.
- 1.5 Whilst wind and solar development are 'grey' infrastructure in respect of them being man-made structures, they could be considered as 'green' infrastructure in respect that the developments, by their very nature, function to capitalise on the natural environment (wind and sunlight) providing a renewable source of energy, reducing our reliance on fossil fuels and therefore reducing the impact that burning fossil fuels is having on the environment and climate change.
- 1.6 However, there are competing green infrastructure objectives in respect of wind and solar energy development as they are often considered to have an adverse impact on another key green infrastructure asset which is the County Borough's rich and varied landscape.
- 1.7 The purpose of this guidance therefore is to provide the necessary guidance, supported by a robust evidence base, which will allow for a balance to be struck between facilitating wind and solar development whilst also protecting the landscape.

Green Infrastructure and the Planning Process

- 1.8 When considering planning applications for renewable energy development, the Local Planning Authority will consider all material considerations relevant to the determination of the planning application. There may be instances where the development is considered to have a detrimental impact on existing infrastructure (green and grey) and may require that suitable mitigation is secured to appropriately mitigate these impacts.
- 1.9 For example, for a wind energy development this might include the impact on biodiversity (please refer to the Council's Biodiversity and Development SPG), the impact on the landscape considered in this SPG, the need to widen access roads or correcting losses to amenity (e.g. correcting for TV interference). These are considered in Policy ENV18 of the LDP and might be addressed/secured by way of condition or a Section 106 agreement².
- 1.10 Policy ENV18(8) of the LDP states:
Local receptor of heat and energy from the proposal are identified and, where appropriate, are connected to/benefit from the facility
- 1.11 Paragraph 4.6.10 of the LDP expands on this stating:
The local community should also benefit appropriately from any facility with examinations of the potential to connect existing/future development to the facility or, where this is not possible, other forms of community benefit should be examined.
- 1.12 The purpose of this policy is to encourage developers to consider community benefits beyond those which make the development proposal acceptable from a planning perspective and could be a material consideration in the determination of a planning application – although would not represent a reason for refusal. In the first instance the developer is encouraged to look for local receptors for heat and energy produced by the development as this meets the policy objectives of Strategic Policy SP8 and ENV17 of the LDP (which encourage low and zero carbon buildings). Where this is not possible or appropriate, the developer should then consider alternative community benefits which meet other policy objectives of the LDP. For example, if the developer were to

² A legal agreement under section 106 of the 1990 Town & Country Planning Act. Section 106 agreements are legal agreements between a planning authority and a developer, or undertakings offered unilaterally by a developer, that ensure that certain extra works related to a development are undertaken (Planning Portal: <http://www.planningportal.gov.uk/general/glossaryandlinks/glossary/s>)

improve green connectivity in the area surrounding the development which was considered to enhance the green infrastructure network, this could be considered as another material planning consideration in favour of the proposal.

- 1.13 However, there are also those community benefits which do would not be a material consideration in the determination of a planning application and would be confided separately from the planning process. These are non-the less encouraged in the LDP however and would contribute toward the green infrastructure approach adopted by the Council in respect of achieving social and economic benefits (which in this case is the renewable energy development).
- 1.14 The following paragraphs provide guidance on how best to capitalise on these opportunities.

Employment and training opportunities

- 1.15 This involves local contracting and associated local employment during construction and operation. Significant sums of money are often involved in the construction, operation and maintenance of a renewable or low carbon energy development.
- 1.16 It is not allowed by procurement laws in the UK for developers to guarantee that they will let contracts to local companies. However, there are things which can be done, by both the developer and by local authorities or local economic development agencies, which can make it more likely that more of the value in a development and operation is spent locally, through local businesses and through employing local people.
- 1.17 For example, developers can provide early details of a typical specification of works locally, hold briefings for contractors in the locality of the development site, and indicate to all their contractors and suppliers a preference, for sustainable development reasons, to source labour and materials locally.
- 1.18 Local authorities and/or economic development agencies can, for example, identify contractors potentially qualified to deliver contracts, provide active encouragement and support to local contractors to engage with the developers and the tendering process, and engage with the developer early to secure a commitment to encourage local sourcing of labour and materials with their contractors.

Education opportunities

- 1.19 Developers should provide educational opportunities for local residents, such as through organised community group and school trips.

Community economic benefits from community owned schemes

- 1.20 These can be achieved in a number of ways:

Community funds

- 1.21 This involves a lump sum or regular payments put into a fund for the benefit of the local community. Contributions are often linked to the scale of the project, for example an annual payment per megawatt, either for every year or some years of the project.
- 1.22 The fund could be used to develop a 'community asset' such as affordable housing, new recreation facilities or access to land, or a community energy initiative. The designation of local funds that meet carbon reductions or local service needs may also be set up. These will have the benefits of addressing social inequality. The local funds may be used to supplement insulation for local households.

Benefits in kind

- 1.23 This involves the developer directly providing or paying for local community benefits such as facility improvements, environmental improvements, visitor facilities, school and educational support.
- 1.24 It is important to note that these are different from those actions required to make a development 'acceptable', for example, additional infrastructure such as widening access roads, or restoring wildlife habitats to make up for any impact caused by development. These necessary actions are those which the development has created a direct need for.
- 1.25 Many communities will already have lists of improvements they want to achieve in their area, through their parish or county councils, or other community interest groups. These may include local community facilities (such as village hall improvements, sports facilities and community gardens), tourism, recreational and education provision (such as nature trails, school education materials and visitor information), and improvements to amenity, environmental and wildlife habitats.

- 1.26 If a community fund is set up the scope of the fund should take account of the match-funding for other regeneration programmes delivering community benefits, such as the rural development programme, communities first, micro and social enterprise support schemes, etc.
- 1.27 As well as geographic communities benefiting from developments, consideration should be given to communities and groups with a common interest benefiting from the development as it may be logical for local interest groups where much of the activity and investment comes from to benefit from their involvement. Investment models could be set up through established networks such as Transition groups. Farmer led energy co-operatives should be encouraged to be set up.
- 1.28 Benefits in kind can be secured through Section 106 agreements. Generally such agreements are made between the developer, community and local planning authority, with all three stakeholders as parties to the agreement.

Local ownership

- 1.29 This involves the ownership of shares by local people, either through their own investment or through a profit-sharing or part-ownership scheme designed to tie community benefits directly to the project performance. It is possible for the ownership to be either bought through investment by individuals or groups in a community, or granted by the developer to a community group.
- 1.30 There are a number of risks associated with the shareholder approach, for example, shareholders may receive little or no dividend on their investment if the project fails to generate enough income to pay its bank loan repayments.
- 1.31 There is also the potential issue of social inequality – the shareholder approach clearly requires people to have money to invest, and not all members of a local community may be in this situation.
- 1.32 There is also the potential for developers to ‘gift’ shares in the energy company, or part of the development project (for example, one of the turbines in the case of a wind energy development) to a local community organisation. To reduce risk, the bank would restrict the activities and rights of the community ‘ownership’ in much the same way as it does the rights of the commercial owner.
- 1.33 As well as part ownership schemes it may be possible for the community to own an entire turbine. The developer would add another turbine to their plans and take on the development and planning related considerations (Most of which would be applicable to their original scheme) and the community would raise the finance for the turbine. This would give a higher level of ownership and gives the opportunity to negotiate their own power purchase agreements should the community wish, as well as providing a clearer definition of what is specifically owned by the community.

2 Policy Background & Method for Assessing Landscape Sensitivity



2 Policy Background & Method for Assessing Landscape Sensitivity Purpose

This Section of the Supplementary Planning Guidance outlines how landscape character and sensitivity should be considered as part of renewable energy development proposals (wind turbines and field-scale solar photovoltaics (PV)) within the County Borough.

It begins by setting out the national and local policy context to this SPG and summarises the method taken to the landscape sensitivity assessment discussed and presented in Chapters 3 and 4.

Recognising the Importance of Landscape Character when Considering Renewable Energy Proposals

- 2.1 The [Landscape Character Assessment](#) for Bridgend County Borough (July 2013) provides a sound evidence base for planners and developers to consider the character and sensitivity of the different landscapes of the County Borough when considering new developments. It also promotes an understanding of how the landscapes of the County Borough are changing (as a result of a combination of natural, economic and human factors), and how they can be strengthened in response. This SPG draws on the information provided in the Landscape Character Assessment and uses the same framework of fifteen Landscape Character Areas (LCAs) to assess the varying levels of sensitivity to wind energy developments (turbines of >15 metres height to blade tip) and field-scale solar PV (with footprints of 1 hectare and above)³.
- 2.2 The overarching philosophy of the suite of Green Infrastructure SPGs produced by the Council is to echo the emerging principles of Natural Resources Wales: promoting the strategic management and planning of landscapes to deliver multiple (social, economic and environmental) benefits. This SPG responds to the current and ongoing demand for renewable energy developments to be sited within the landscape; capitalising on the wind and solar resources the environment offers as a clean source of energy. This demand in turn responds to international and national targets for renewable energy generation, as well as national and local policy drivers which are summarised below.

National and Local Policy Context

Renewable energy

- 2.3 Climate change and energy security are key priorities of both the UK and Welsh Governments. The use of fossil fuels is seen as a major contributor to greenhouse gas emissions, a major cause of global climate change and moving towards a low carbon energy based economy to tackle the causes of climate change and improve energy security are a Government priority. The generation and use of renewable and low carbon energy sources has a key role to play in this and the UK Government is committed to meeting the EU target of 15% of energy from renewable sources by 2020⁴. The Climate Change Act 2008 introduces a legally binding target of at least a 34 percent cut in greenhouse gas emissions by 2020, and at least an 80 percent cut by 2050, against a 1990 baseline.
- 2.4 The Welsh Government has embarked on an ambitious and long-term programme of cross cutting policy initiatives to address these issues. This is contained in *One Wales: One Planet* (2009) which sets out a vision where within the lifetime of a generation we want to see Wales using only its fair share of the earth's resources.

³ Please note that the Landscape Character Assessment does not cover the five main urban areas in the County Borough, as indicated in Figure 2.1. Therefore this assessment also excludes the urban areas, which are also unlikely to be considered as sites for the scales of renewable energy developments considered by this SPG.

⁴ EU Renewable Energy Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009

To support this vision, Planning Policy Wales (PPW) 2012 sets out the objectives of the Welsh Government with regard to renewable energy and low carbon developments. One of these is to:

“Promote the generation and use of energy from renewable and low carbon energy sources at all scales and promote energy efficiency, especially as a means to secure zero or low carbon developments and to tackle the causes of climate change”.

2.5 Technical Advice Note (TAN) 8: *Planning for Renewable Energy* (2005)⁵ provides guidance for the land use planning system in relation to the development of wind energy specifically. This document identifies ‘Strategic Search Areas’ (SSAs) where *...’for efficiency and environmental reasons amongst others, large scale (over 25MW) onshore wind developments should be concentrated’*. These areas were further refined at a local level through a landscape and visual assessment exercise in 2006⁶, and the resultant refined SSAs for the County Borough are included in **Figure 2.1**.

2.6 At a local level, the Bridgend Local Development Plan (LDP) contains a number of policies which seek to support the sustainable development and promotion of renewable energy objectives, including:

- The overarching strategic **Policy SP2: Design and Sustainable Place Making**, which states that development should *“make a positive contribution towards tackling the causes of, and adapting to the impacts of Climate Change”*.
- **Policy PLA4: Climate Change and Peak Oil** reiterates this, stating that *“all development proposals will be required to make a positive contribution towards tackling the causes of, and adapting to the impacts of Climate Change and Peak Oil issues,”* including by *“encouraging the development of renewable energy generation”*.
- **Policy SP8: Renewable Energy** defines the role of the County Borough in promoting renewable energy developments, where it can be demonstrated that there will be no significant impact on the environment or local community, to contribute to national targets. Chapter 1 for sets out how this LDP policy seeks to promote the Green Infrastructure benefits arising from developments.
- **Policy ENV18: Renewable Energy Developments** offers more detailed specifications on what is expected from proposals for renewable energy development. This includes the TAN 8 requirement to direct wind energy schemes of 25MW or more to the SSAs, but it does not place any energy generation limits on land outside the SSA.

Landscape character and local distinctiveness

2.7 The above targets and policies for renewable energy need to be carefully balanced with policies that seek to protect and enhance landscape character and distinctiveness. Developers and other applicants will need to demonstrate how their proposals adhere to these policies to ensure the local authority can make an informed and balanced decision on the planning application.

2.8 At a strategic level, LDP **Policy SP2: Design and Sustainable Place Making**, states that ‘All development should contribute to creating high quality, attractive, sustainable places which enhance the community in which they are located, whilst having full regard to the natural, historic and built environment’. The policy also requires that all development proposals should have ‘a design of the highest quality possible, whilst respecting and enhancing local distinctiveness and landscape character’.

2.9 The importance of the County Borough’s landscape is also referenced in a number of other policies in the LDP (**SP4, SP5, ENV3, ENV4, ENV5 and ENV6**). These policies highlight the importance of enhancing the natural and heritage environment through development, and state that developments which result in adverse impact on the landscape and its important features will not be permitted. The strategic policy SP4: Conservation and Enhancement of the Natural Environment, states that *“Development which will conserve and, wherever possible, enhance the natural environment of the County Borough will be favoured,”* and further makes clear that *“Development proposals will not be permitted where they will have an adverse impact upon...the character of the County Borough’s landscape”*. Specific policies are included on Special Landscape Areas (ENV3), Local and Regional Nature Conservation Sites (ENV4), Green Infrastructure (ENV5) and Nature Conservation (ENV6).

⁵ <http://wales.gov.uk/topics/planning/policy/tans/tan8/?lang=en>

⁶ Covering Bridgend County Borough, this document is Arup (December 2006) *TAN 8 Annex D study of Strategic Search Areas E and F: South Wales Valleys*. Final report for the Consortium of

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Figure 2.1

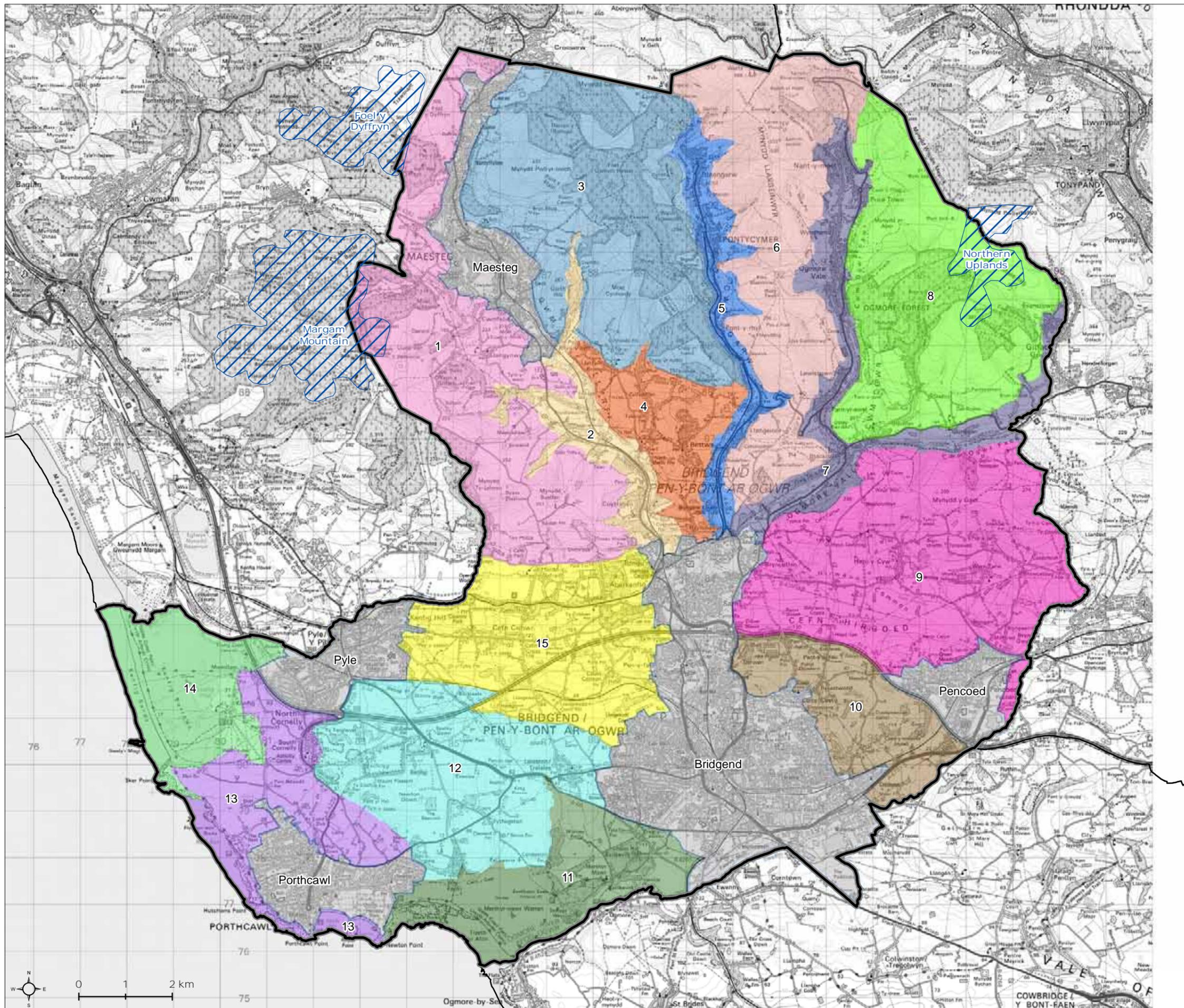
Landscape Character Areas and TAN 8 Strategic Search Areas

-  Bridgend County Borough Boundary
-  TAN 8 Strategic Search Areas

Landscape Character Areas

-  1 Llangynwyd Rolling Uplands and Forestry
-  2 Llynfi Valley Floor and Lower Slopes
-  3 Llynfi & Garw Uplands and Forestry
-  4 Bettws Settled Farmland
-  5 Garw Valley Floor and Lower Slopes
-  6 Mynydd Llangeinwyr Uplands
-  7 Ogmore Valley Floor & Lower Slopes
-  8 Ogmore Forest and Surrounding Uplands
-  9 Hirwaun Common and Surrounding Ridges
-  10 Coity Rural Hinterland
-  11 Merthyr Mawr Farmland, Warren and Coastline
-  12 Newton Down Limestone Plateau
-  13 Porthcawl Coastline and Settled Farmland
-  14 Kenfig Dunes and Coastline
-  15 Cefn Cribwr Ridge and Settled Farmland
-  Urban Area

Map Scale @ A3: 1:80,000



- 2.10 In all areas of the County Borough, proposals will be favoured where the applicant has demonstrated an understanding of how the development would affect the distinctive landscape character of the locality and has sought to protect and enhance key landscape features and qualities and to mitigate any negative impacts on landscape character. This SPG seeks to provide the evidence to support these landscape policies in the context of the development of wind turbine and solar PV developments.

Landscape Areas Subject to Particular Protection

- 2.11 The Local Development Plan makes clear that a number of different site and area designations will be protected from harm by development through the following policies:
- **Strategic Policy SP4** *Conservation and Enhancement of the Natural Environment* confers protection to international and national nature conservation designations and also the nationally important Glamorgan Heritage Coast and the outstanding historic landscapes of Kenfig and Merthyr Mawr Warren.
 - **Strategic Policy SP5** *Conservation of the Built Environment* confers protection to Listed Buildings and their settings; Conservation Areas and their settings; Scheduled Ancient Monuments; Sites or Areas of Archaeological Significance; Historic Landscapes, Parks and Gardens and Locally Significant Buildings.
 - **Policy ENV3** confers protection to nine *Special Landscape Areas* (see below)
- 2.12 Through ENV3, the LDP recognises nine **Special Landscape Areas** (SLAs) as being unique, exceptional or distinctive to the County Borough. These are at Foel y Dyffryn, the Northern Uplands, the Western Uplands, Bryngarw Country Park, Mynydd y Gaer, Kenfig Burrows, Laleston, Porthcawl Coast and Merthyr Mawr Warren.
- 2.13 In these Special Landscape Areas, Policy ENV3 states that development will only be permitted where:
- 1) It retains or enhances the character and distinctiveness of the SLA;
 - 2) The design of the development reflects the building traditions of the locality in its form, materials and details, and/or assimilates itself into the wider landscape; and
 - 3) The proposed development is accompanied by a landscape assessment which takes into account the impact of the development and sets out proposals to mitigate any adverse effects.
- 2.14 Detailed maps delineating the boundaries of these areas are held on the County Borough Council's [website](#) and can also be viewed using the [Green Infrastructure Tool](#) and referenced at **Figure 2.2**. See **Figure 2.4** for a map of the historic landscape designations within the County Borough.

Nature Conservation Areas Subject to Particular Protection

- 2.15 There are three tiers of sites that recognise the international, national and regional or local importance of habitats for nature conservation. Developers should be aware of these sites in relation to their proposed development and be able to show how they have included the protection and enhancement of any sites that would be affected directly or indirectly by their proposals. The [Biodiversity SPG](#) provides further information on the consideration of designated nature conservation sites and protected wildlife species in development proposals, and should be referred to in order to ensure biodiversity and ecological issues are considered in any application.

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Figure 2.2

Landscape Character Areas and Special Landscape Areas

-  Bridgend County Borough Boundary
-  1 Llangynwyd Rolling Uplands and Forestry
-  2 Llynfi Valley Floor and Lower Slopes
-  3 Llynfi & Garw Uplands and Forestry
-  4 Bettws Settled Farmland
-  5 Garw Valley Floor and Lower Slopes
-  6 Mynydd Llangeinwyr Uplands
-  7 Ogmore Valley Floor & Lower Slopes
-  8 Ogmore Forest and Surrounding Uplands
-  9 Hirwaun Common and Surrounding Ridges
-  10 Coity Rural Hinterland
-  11 Merthyr Mawr Farmland, Warren and Coastline
-  12 Newton Down Limestone Plateau
-  13 Porthcawl Coastline and Settled Farmland
-  14 Kenfig Dunes and Coastline
-  15 Cefn Cribwr Ridge and Settled Farmland
-  Urban Area
- Special Landscape Areas**
-  Foel y Dyffryn
-  Northern Uplands
-  Bryngarw Country Park
-  Laleston
-  Merthyr Mawr Warren
-  Kenfig Burrows
-  Porthcawl Coast
-  Mynydd y Gaer
-  Western Uplands

Map Scale @ A3: 1:80,000

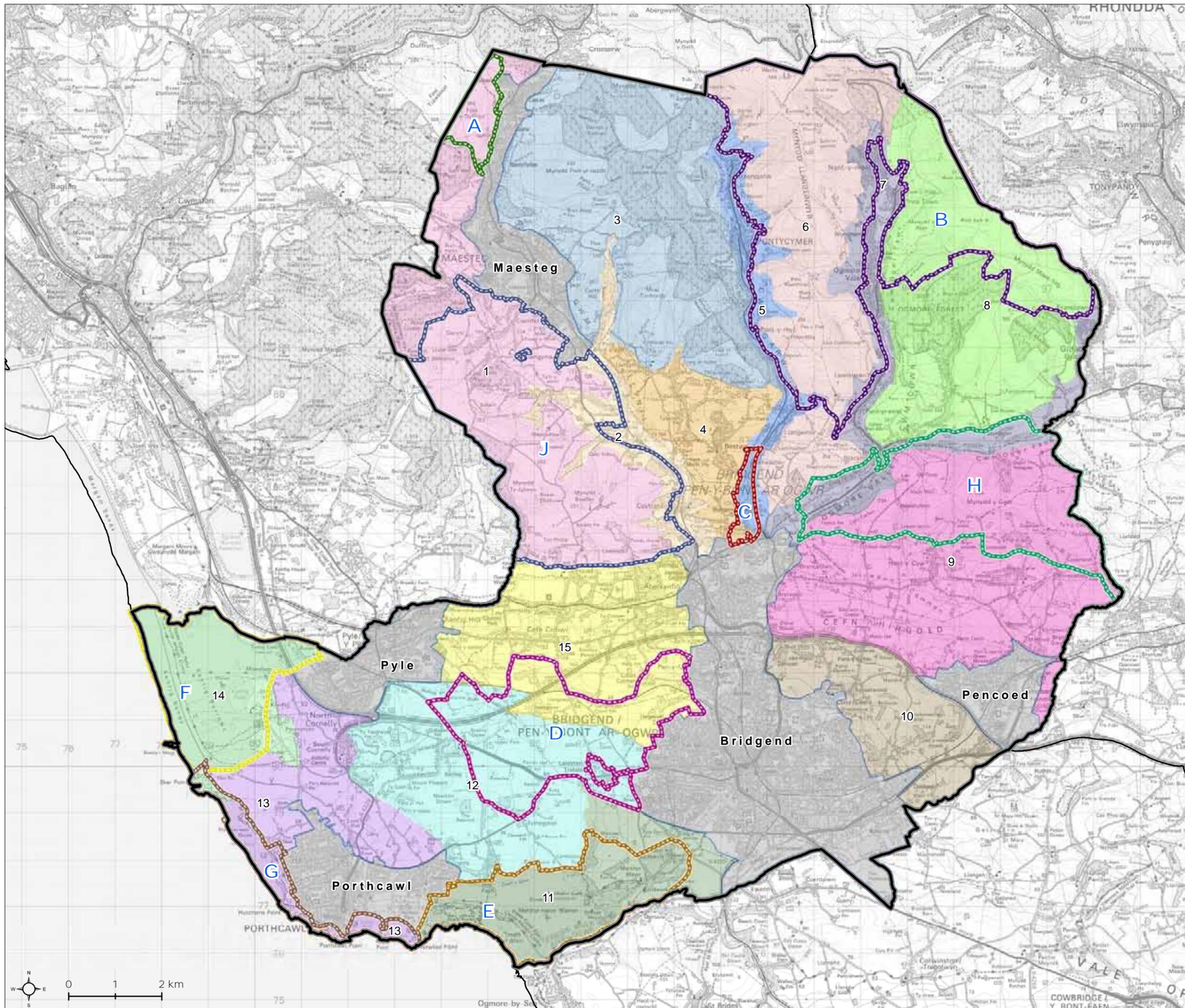


Figure 2.3

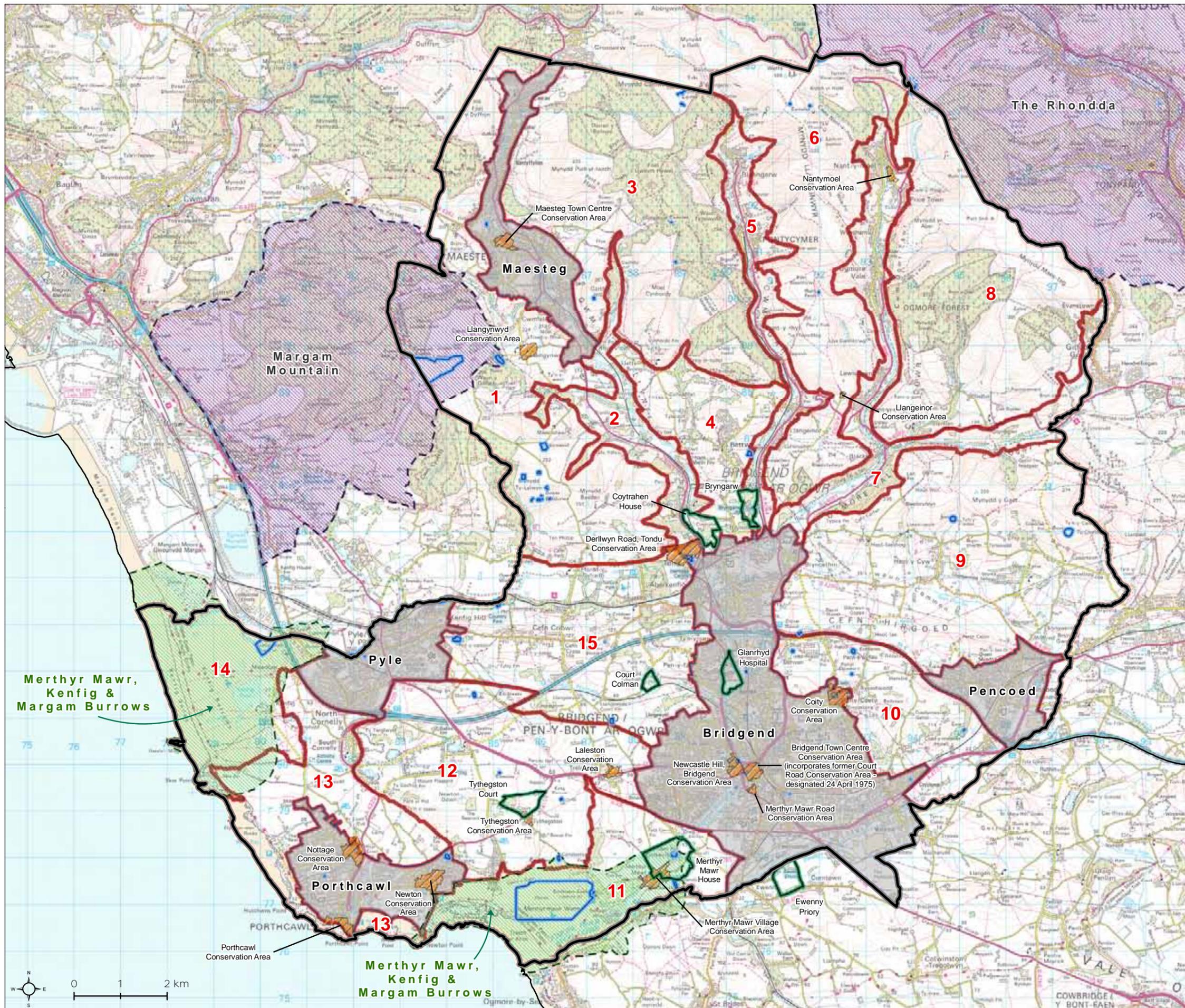
Historic Designations In
Bridgend County Borough

-  Bridgend County Borough Boundary
-  Registered Parks & Gardens
-  Conservation Areas
-  Scheduled Monuments
-  Landscape of Outstanding Historic Interest
-  Landscape of Special Historic Interest

Landscape Character Areas

-  1 Llangynwyd Rolling Uplands and Forestry
-  2 Llynfi Valley Floor and Lower Slopes
-  3 Llynfi & Garw Uplands and Forestry
-  4 Bettws Settled Farmland
-  5 Garw Valley Floor and Lower Slopes
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-  12 Newton Down Limestone Plateau
-  13 Porthcawl Coastline and Settled Farmland
-  14 Kenfig Dunes and Coastline
-  15 Cefn Cribwr Ridge and Settled Farmland
-  Urban Area

Map Scale @ A3: 1:80,000



Method for Assessing Landscape Sensitivity to Renewable Energy Developments

- 2.16 Paragraph 4.2 of Topic Paper 6⁷ (which accompanies the current Landscape Character Assessment guidance) states that:

'Judging landscape character sensitivity requires professional judgement about the degree to which the landscape in question is robust, in that it is able to accommodate change without adverse impacts on character. This involves making decisions about whether or not significant characteristic elements of the landscape will be liable to loss... and whether important aesthetic aspects of character will be liable to change'

- 2.17 In this study the following definition of 'landscape sensitivity' has been used, which is based on the principles set out in Topic Paper 6. It is also compliant with the third edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA 3, 2013) as well as definitions used in other landscape sensitivity studies of this type:

Landscape sensitivity is the extent to which the character and quality of the landscape is susceptible to change as a result of wind energy or solar PV developments.

Assessment Criteria

- 2.18 In line with the recommendations in Topic Paper 6, this landscape sensitivity assessment is based on an assessment of landscape character using carefully defined criteria.
- 2.19 These criteria are based on attributes of the landscape most likely to be affected by each development type. These are as follows:

Wind energy assessment criteria

- Landform and scale
- Land cover pattern and presence of human-scale features
- Historic landscape character
- Skylines
- Key views and vistas
- Scenic and special qualities
- Perceptual qualities

Solar PV assessment criteria

- Landform
- Sense of openness / enclosure
- Field pattern and scale
- Landcover
- Historic landscape character
- Key views and vistas
- Scenic and special qualities
- Perceptual qualities

- 2.20 **Table 2.1** provides more information on the criteria that have been used for the assessment of landscape sensitivity to the principle of wind energy development (of any size); and **Table 2.2** for the assessment of landscape sensitivity to solar PV development (of any size). It includes guidance and examples for applying the criteria for the two development types, which have then been verified through professional judgement and field survey work in Bridgend County Borough (undertaken in January 2014).

⁷ Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity. Landscape Character Assessment Guidance for England and Scotland. Available at http://www.naturalengland.org.uk/Images/lcatopicpaper6_tcm6-8179.pdf

Table 2.1: Criteria and Guidance for Assessing Landscape Sensitivity to Wind Energy Developments

Landform and scale				
<p>A smooth gently sloping or flat landform is likely to be less sensitive to wind energy development than a landscape with a dramatic rugged landform, distinct landform features (including prominent headlands and cliffs) or pronounced undulations. Larger scale landforms are likely to be less sensitive than smaller scale landforms - because turbines may appear out of scale, detract from visually important landforms or appear visually confusing (due to turbines being at varying heights) in the latter types of landscapes.</p> <p>Information sources: Bridgend CB Landscape Character Assessment; Ordnance Survey basemaps; Topography data (Ordnance Survey Panorama); fieldwork.</p>				
<i>Examples of sensitivity ratings</i>				
Lower sensitivity		Higher sensitivity		
<p>e.g. an extensive lowland flat landscape or elevated plateau, often a larger scale landform</p>	<p>e.g. a simple gently rolling landscape, likely to be a medium-large scale landform</p>	<p>e.g. an undulating landscape, perhaps also incised by valleys, likely to be a medium scale landform</p>	<p>e.g. landscape with distinct landform features, and/or irregular in topographic appearance (which may be large in scale), or a smaller scale landform</p>	<p>e.g. a landscape with a rugged landform or dramatic landform features, or a small scale or intimate landform</p>
Land cover pattern and presence of human scale features				
<p>Simple, regular landscapes with extensive areas of consistent ground cover are likely to be less sensitive to wind energy development than landscapes with more complex or irregular land cover patterns, smaller and / or irregular field sizes and landscapes with frequent human scale features that are traditional of the landscape, such as stone farmsteads and small farm woodlands⁸. This is because large features such as wind turbines may dominate smaller scale traditional features within the landscape.</p> <p>Information sources: Bridgend CB Landscape Character Assessment; Ordnance Survey basemaps; Google Earth (aerial photography); fieldwork.</p>				
<i>Examples of sensitivity ratings</i>				
Lower sensitivity		Higher sensitivity		
<p>e.g. a very large-scale landscape with uniform groundcover and lacking in human scale features.</p>	<p>e.g. a landscape with large-scale fields, little variety in land cover and occasional human scale features such as trees and domestic buildings.</p>	<p>e.g. a landscape with medium sized fields, some variations in land cover and presence of human scale features such as trees, domestic buildings.</p>	<p>e.g. a landscape with irregular small-scale fields, variety in land cover and presence of human scale features such as trees, domestic buildings.</p>	<p>e.g. a landscape with a strong variety in land cover and small-scale / irregular in appearance containing numerous human scale features.</p>

⁸ Human scale features are aspects of land cover such as stone walls, hedges, buildings which give a 'human scale' to the landscape

Historic Landscape Character

Due to intrinsic historic landscape character significance, or potential for preserved archaeological evidence – historic landscapes, including those listed on the register of *Outstanding* or *Special Historic Landscapes in Wales* – would be more sensitive to new development than those dominated by modern human influence.

Information sources: Cadw Historic Landscape Areas, national historic designations (e.g. Scheduled Monuments, Registered Parks & Gardens, Conservation Areas), LANDMAP Historic Landscape aspect.

Examples of sensitivity ratings

Lower sensitivity		↔		Higher sensitivity
e.g. majority of the landscape dominated by modern (20 th and 21 st) development or land uses.	e.g. majority of the landscape covered by modern development or land uses, but may include some small areas of historic importance.	e.g. landscape including a mixture of modern and historic landscapes, which may include some designated sites or areas.	e.g. majority of the landscape covered by valued historic landscapes and features, but may include small areas of lower sensitivity.	e.g. the majority of the landscape included on the Register of Historic Landscapes in Wales, has a high number of other national heritage designations and/or is rated as 'high' or 'outstanding' in the LANDMAP Historic Landscapes aspect.

Skylines

Prominent and distinctive and/or undeveloped skylines, or skylines with important landmark features, are likely to be more sensitive to wind energy development because turbines may detract from these skylines as features in the landscape, or draw attention away from existing landform or landmark features on skylines. These include the skylines of elevated coastlines and coastal headlands. Important landmark features on the skyline might include historic features or monuments.

Information sources: Bridgend Landscape Character Assessment; fieldwork, Ordnance Survey 1:25K basemaps.

Examples of sensitivity ratings

Lower sensitivity		↔		Higher sensitivity
e.g. a large-scale flat or plateau landscape where skylines are not prominent and/or there are no important landmark features on the skyline	e.g. a large-scale landscape where skylines are not prominent and/or there are very few landmark features on the skyline – other skylines in adjacent LCAs are more prominent	e.g. a landscape with some prominent skylines, but these are not particularly distinctive. There may be some landmark features on the skyline.	e.g. a landscape with prominent skylines that may form an important backdrop to views from settlements or important viewpoints, and/or with important landmark features	e.g. a landscape comprising prominent or distinctive undeveloped skylines or skylines with particularly important landmark features

Key views and vistas

Landscapes with key, highly valued views (within or beyond the LCA) are likely to be more sensitive to wind energy development, as the presence of wind turbines may intrude on these views or negatively impact on landmark features by taking them out of context or obscuring them. Rural landscapes that form a valued backdrop to views from settlements are also likely to be more sensitive to wind energy development.

Information sources: Bridgend Landscape Character Assessment; Designation of Special Landscape Areas report (March 2010); fieldwork; Ordnance Survey 1:25K basemaps.

Examples of sensitivity ratings

Lower sensitivity		↔		Higher sensitivity
e.g. a landscape with no important or valued views to other landscapes or that does not form a backdrop to views from settlements.	e.g. a landscape with a few valued views to/from the area but the majority is self contained.	e.g. some parts of the landscape form a rural backdrop to views from settlements and a few locations afford valued views to other landscapes.	e.g. large parts of the landscape form a valued rural backdrop to views from settlements or it is valued for its scenic views to other landscapes.	e.g. a landscape with prominent key landmarks, key vistas or important and valued views, appreciated for their unspoilt or scenic character.

Scenic and special qualities

Landscapes that have a high scenic quality (which may be recognised as a National Park, AONB, Heritage Coast or, at a local level, Special Landscape Area) will be more sensitive than landscapes of low scenic quality. This is particularly the case where their special qualities (as recorded in the Landscape Character Assessment or designation documents) are likely to be affected by wind energy development. Scenic and special qualities may relate to landscapes that are not designated as well as landscape designated for their natural beauty.

Information sources: Landscape Character Assessment information on 'special qualities and features'; Heritage Coast designation information; Designation of Special Landscape Areas report (March 2010).

Examples of sensitivity ratings

Lower sensitivity		↔		Higher sensitivity
e.g. landscape has low scenic quality such as an industrial area or despoiled land – special qualities will not be affected by wind energy development.	e.g. landscape has low-medium scenic quality, or special qualities are unlikely to be affected by wind energy development.	e.g. landscape has a medium scenic quality and some of the special qualities may be affected by wind energy development.	e.g. landscape has a medium-high scenic quality (which might be designated as SLA)– most of the special qualities are likely to be affected by wind energy development.	e.g. area has a high scenic quality (likely to be recognised as National Park/AONB/ Heritage Coast) and the scenic qualities will be affected by wind energy development.

Perceptual qualities

Landscapes that are relatively remote or tranquil (due to freedom from human activity and disturbance and having a perceived naturalness or a strong feel of traditional rurality with few modern human influences) tend to increase levels of sensitivity to wind energy development compared to landscapes that contain signs of modern development (as the development will introduce new and uncharacteristic features which may detract from a sense of tranquillity and or remoteness/ naturalness).

Information sources: Bridgend Landscape Character Assessment; Ordnance Survey basemaps (presence / absence of development, settlement, structures).

Examples of sensitivity ratings

Lower sensitivity		Higher sensitivity		
e.g. a landscape with much human activity and development such as industrial areas.	e.g. a rural landscape with much human activity and dispersed modern development.	e.g. a rural landscape with some modern development and human activity.	e.g. a more naturalistic landscape and / or one with little modern human influence and development.	e.g. a remote or 'wild' landscape with little or no signs of current human activity and development.

Table 2.2: Criteria and Guidance for Assessing Landscape Sensitivity to Solar PV Developments

Landform				
<p>A flat or gently undulating lowland landscape or extensive plateau is likely to be less sensitive to solar PV development than a landscape with prominent landforms and visible slopes, including coastal headlands. This is because arrays of solar PV panels will be less easily perceived in a flat landscape than on a slope, especially higher slopes.</p> <p>Information sources: Bridgend Landscape Character Assessment; contours from the Ordnance Survey basemaps; Topography data (Ordnance Survey Panorama); fieldwork.</p>				
<i>Examples of sensitivity ratings</i>				
Lower sensitivity		↔	Higher sensitivity	
e.g. a lowland flat landscape or extensive plateau.	e.g. a gently undulating lowland landscape or plateau.	e.g. an undulating landscape with hidden areas as well as some visible slopes.	e.g. a landscape with many prominent, visible slopes or an upland landscape.	e.g. very steep landform and exposed, visible slopes.
Sense of openness / enclosure				
<p>A landscape with a strong sense of enclosure (e.g. provided by land cover such as woodland or high hedgebanks) is likely to be less sensitive to solar PV development than an open and unenclosed landscape because the development will be less easily perceived, especially at a distance, in an enclosed landscape.</p> <p>Information sources: Bridgend BC Landscape Character Assessment; Google Earth / aerial photographs; fieldwork.</p>				
<i>Examples of sensitivity ratings</i>				
Lower sensitivity		↔	Higher sensitivity	
e.g. a very well enclosed landscaped – perhaps provided by thick, high hedgebanks and hedgerows, tree belts and woodland.	e.g. relatively high levels of enclosure provided by hedgebanks and thick hedgerows with frequent hedgerow trees.	e.g. a landscape with some open and some more enclosed areas – likely to be a rural landscape with some hedgebanks and hedgerows and tree belts.	e.g. an open landscape with little sense of enclosure (low, few or no hedgebanks or hedgerows, few trees).	e.g. an extremely open landscape such as an unenclosed plateau with no field boundaries or trees.

Field pattern and scale

Landscapes with small-scale, more irregular field patterns are likely to be more sensitive to the introduction of solar PV development than landscapes with large, regular scale field patterns because of the risk of diluting or masking the characteristic landscape patterns. This would be particularly apparent if development takes place across a number of adjacent fields where the field pattern is small and intricate (bearing in mind that the height of panels could exceed that of a hedge/ hedgebank).

Information sources: Bridgend BC Landscape Character Assessment; LANDMAP Historic Landscapes Level 2 Aspect; Ordnance survey 1:25K basemap (showing field patterns); Google Earth (aerial photography); fieldwork.

Examples of sensitivity ratings

Lower sensitivity		↔			Higher sensitivity
e.g. a landscape with large-scale, regular fields of mainly modern origin.	e.g. a landscape which is mainly defined by large, modern fields.	e.g. a landscape with a mixture of large-scale, modern fields and some smaller, more historic enclosure.	e.g. a landscape dominated by ancient, small-scale field patterns with a few isolated areas of modern enclosure.	e.g. a landscape characterised by small-scale, ancient field patterns.	

Landcover

Since PV panels introduce a new land cover (of built structures) , landscapes containing existing hard surfacing or built elements (e.g. urban areas, brownfield sites or large-scale horticulture) are likely to be less sensitive to field-scale solar PV development than highly rural or naturalistic landscapes.

Information sources: Bridgend BC Landscape Character Assessment; Google Earth (aerial photography); fieldwork.

Examples of sensitivity ratings

Lower sensitivity		↔			Higher sensitivity
e.g. an urban or 'brownfield' landscape	e.g. an area of large scale horticulture	e.g. a rural landscape, perhaps with some brownfield sites or urban influences	e.g. a rural landscape , perhaps with some areas of semi-natural land cover	e.g. a landscape dominated by semi-natural land cover	

Historic Landscape Character

Due to intrinsic historic landscape character significance, or potential for preserved archaeological evidence – historic landscapes, including those listed on the register of *Outstanding* or *Special Historic Landscapes in Wales* – would be more sensitive to new development than those dominated by modern human influence.

Information sources: Cadw Historic Landscape Areas, national historic designations (e.g. Scheduled Monuments, Registered Parks & Gardens, Conservation Areas), LANDMAP Historic Landscape aspect.

Examples of sensitivity ratings

Lower sensitivity		↔			Higher sensitivity
e.g. majority of the landscape dominated by modern (20 th and 21 st) development or land uses.	e.g. majority of the landscape covered by modern development or land uses, but may include some small areas of historic importance.	e.g. landscape including a mixture of modern and historic landscapes, which may include some designated sites or areas.	e.g. majority of the landscape covered by valued historic landscapes and features, but may include small areas of lower sensitivity.	e.g. the majority of the landscape included on the Register of Historic Landscapes in Wales, has a high number of other national heritage designations and/or is rated as 'high' or 'outstanding' in the LANDMAP Historic Landscapes aspect.	

Key views and vistas

Landscapes with key, highly valued views (within or beyond the LCA) are likely to be more sensitive to wind energy development, as the presence of wind turbines may intrude on these views or negatively impact on landmark features by taking them out of context or obscuring them. Rural landscapes that form a valued backdrop to views from settlements are also likely to be more sensitive to the siting of solar PV development.

Information sources: Bridgend BC Landscape Character Assessment; Designation of Special Landscape Areas report (March 2010); fieldwork; Ordnance Survey 1:25K basemaps.

Examples of sensitivity ratings

Lower sensitivity		↔			Higher sensitivity
e.g. a landscape with no important or valued views to other landscapes or that does not form a backdrop to views from settlements.	e.g. a landscape with a few valued views to/from the area but the majority is self contained.	e.g. some parts of the landscape form a rural backdrop to views from settlements and a few locations afford valued views to other landscapes.	e.g. large parts of the landscape form a valued rural backdrop to views from settlements or it is valued for its scenic views to other landscapes.	e.g. a landscape with prominent key landmarks, key vistas or important and valued views, appreciated for their unspoilt or scenic character.	

Scenic and special qualities

Landscapes that have a high scenic quality (which may be recognised as a National Park, AONB, Heritage Coast or, locally, a Special Landscape Area) will be more sensitive than landscapes of low scenic quality. This is particularly the case where their special qualities (as recorded in the Landscape Character Assessment or designation documents) are likely to be affected by solar PV development. Scenic and special qualities may relate to landscapes that are not designated as well as landscapes designated for their natural beauty.

Information sources: Landscape Character Assessment information on 'special qualities and features'; Heritage Coast designation information; Designation of Special Landscape Areas report (March 2010)

Examples of sensitivity ratings

Lower sensitivity		↔			Higher sensitivity
e.g. landscape has low scenic quality such as an industrial area or despoiled land—special qualities will not be affected by solar PV development.	e.g. landscape has low-medium scenic quality, or special qualities are unlikely to be affected by solar PV development.	e.g. landscape has a medium scenic quality and some of the special qualities may be affected by solar PV development.	e.g. landscape has a medium-high scenic quality (which might be designated as SLA) – most of the special qualities are likely to be affected by solar PV development.	e.g. area has a high scenic quality (likely to be recognised as National Park/ AONB/ Heritage Coast) and the scenic qualities will be affected by solar PV development.	

Perceptual qualities

Landscapes that are relatively remote or tranquil (due to freedom from human activity and disturbance and having a perceived naturalness or a strong feel of traditional rurality with few modern human influences) tend to increase levels of sensitivity to solar PV development compared to landscapes that contain signs of modern development (as the development will introduce new and uncharacteristic features which may detract from a sense of tranquillity and or remoteness/ naturalness).

Information sources: Bridgend BC Landscape Character Assessment; Ordnance Survey basemaps (presence / absence of development, settlement, structures).

Examples of sensitivity ratings

Lower sensitivity		↔			Higher sensitivity
e.g. a landscape with much human activity and development such as industrial areas.	e.g. a rural landscape with much human activity and dispersed modern development.	e.g. a rural landscape with some modern development and human activity.	e.g. a more naturalistic landscape and / or one with little modern human influence and development.	e.g. a remote or 'wild' landscape with little or no signs of current human activity and development.	

The Summary of Landscape Sensitivity

- 2.21 Once the criteria have been assessed individually, the results are drawn together into a balanced summary of landscape sensitivity to the principle of the renewable energy development for that LCA. All of the assessments for the Landscape Character Areas found in Bridgend County Borough (fifteen in total) are included in **Chapter 4**.
- 2.22 If one criterion has a particularly strong influence on landscape sensitivity this is drawn out in the summary (an example might be a landscape with prominent/ dominant skylines, or particularly high levels of tranquillity or remoteness). In any given LCA there may be criteria that have conflicting effects on sensitivity. For example, when considering sensitivity to wind energy development, a settled landscape, while containing greater human influence (indicating a lower sensitivity), will also include more human scale features that could be affected by large-scale wind turbines (indicating a higher sensitivity). Conversely, a more remote landscape will lack the human scale features but is likely to present a higher sensitivity from a perceptual point of view. When considering solar PV development, a landscape with a very small-scale field pattern and with a high sense of enclosure might score higher for 'field pattern and scale' but be assessed as of lower sensitivity for 'sense of enclosure/openness'.
- 2.23 It is important to note that the results of the sensitivity assessment are not influenced by the presence of existing or proposed renewable energy developments in the landscape; it focuses on its *inherent* landscape sensitivity.

Judging Landscape Sensitivity to Different Sizes/Scales of Development

- 2.24 The next stage of the assessment is to come to a judgement on landscape sensitivity to different sizes/scales of development (height and cluster sizes of wind turbines and size of solar PV developments). In the case of wind turbines, notes are also provided in relation to sensitivity to different turbine cluster sizes.
- 2.25 Sensitivity is judged on a five-point scale as shown in **Table 2.3** below, which is consistent with the majority of studies of this kind undertaken in the UK. These sensitivity ratings can apply to any landscape in Wales (or indeed the UK) – they are not specific to this study. Therefore the sensitivity assessments are taken in the national context.

Table 2.3: Sensitivity Levels and Definitions

Sensitivity Level	Definition
High (H)	The key characteristics and qualities of the landscape are highly sensitive to change from the type and scale of renewable energy being assessed.
Moderate-High (M-H)	The key characteristics and qualities of the landscape are sensitive to change from the type and scale of renewable energy being assessed.
Moderate (M)	Some of the key characteristics and qualities of the landscape are sensitive to change from the type and scale of renewable energy being assessed.
Low-Moderate (L-M)	Few of the key characteristics and qualities of the landscape are sensitive to change from the type and scale of renewable energy being assessed.
Low (L)	Key characteristics and qualities of the landscape are robust and are less likely to be adversely affected by the type and scale of renewable energy development being assessed.

Presentation of the Landscape Sensitivity Results

- 2.26 The full landscape sensitivity assessments for each of the fifteen Landscape Character Areas (LCAs) are presented in tabular format in **Chapter 4**. The tables – separate for wind and solar PV - provide:
- A summary description of the LCA against each of the assessment criteria, giving an overall landscape sensitivity assessment 'score' for each LCA (on the coloured five-point scale as set out in **Table 2.3** above).
 - An overall discussion on landscape sensitivity for the LCA.
 - Sensitivity ratings for different scales of development (different turbine heights for wind energy development and different areas (in hectares) of solar PV development).
 - For wind energy development, a commentary on landscape sensitivity to different cluster sizes.
 - A list of key sensitive landscape features/characteristics within the LCA.
- 2.27 A summary of the results of the landscape sensitivity assessment for the county borough as a whole is presented and mapped at the beginning of **Chapter 3**.

Strategies and Guidance by Landscape Character Area (LCA)

- 2.28 The second part of the LCA assessments for both wind and solar PV sets out the following information:
- **An overview of the location of operational and permitted developments** within the LCA (and in the case of LCAs on the edge of the administrative boundary, those within close proximity). Please note that this is based on Council data from November 2013 and will be subject to frequent change. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: <http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales>. An equivalent database is not available for solar PV developments.
 - **An overall strategy for development** within the LCA. For LCAs that include land within the refined TAN 8 Strategic Search Areas (Figure 2.2) it is accepted through national policy that change to landscape character could as a result of wind energy development. For land outside the SSAs, a separate strategy is provided for the LCA, as is the case for the solar assessments.
 - **LCA-specific guidance for development**. This section sets out bullet-pointed guidance tailored to the landscape concerned, taking account of its sensitive characteristics and features highlighted in the preceding sensitivity assessment.
 - **Guidance for siting multiple developments within the LCA**. This section takes account of any local variations in landscape sensitivity within the character area as a whole.
- 2.29 General guidance that should be followed when considering any wind energy or solar PV developments in the County Borough is included after the overall sensitivity results in **Chapter 3**.

Limitations of the Landscape Sensitivity Assessment

- 2.30 While the Landscape Sensitivity Assessment presented in Chapters 3 and 4 provides an initial indication of the relative landscape sensitivities of different areas to wind energy and solar PV development and guidance for accommodating such developments in the landscape, it should not be interpreted as a definitive statement on the suitability of a certain location for a particular development. All developments will need to be assessed on their individual merits. It is also unrelated to any Government targets for renewable energy development or studies of technical potential.
- 2.31 It should also be noted that the results of the study are based on an assessment of landscape character using carefully defined criteria. As with all analyses based upon data and information which is to a greater or lesser extent subjective, some caution is required in its interpretation. This is particularly to avoid the suggestion that certain landscape features or qualities can be absolutely associated with certain sensitivities – the reality is that landscape sensitivity is the result of a complex interplay of often unequally weighted variables (or 'criteria'). We have sought to address this issue in our summary of overall landscape sensitivity given for each LCA – which considers how the criteria-based assessments combine to give an overall sensitivity result for different scales of development within an LCA. Because of the complexity of the criteria, and their subtle interrelationships with each other, we have purposefully not used a numeric scoring system in expressing sensitivity. The

assessments are based on professional judgement, taking account of the interplay between criteria, as well as those which might be more important [to landscape character] in a particular LCA.

- 2.32 It is also worth noting that the assessment does not cover specific ecological issues associated with nature conservation designations or, in the case of wind turbines, bird flight paths; specific cultural heritage/archaeological issues associated with individual designated heritage assets and their settings; visual amenity issues (including residential visual amenity) or impacts on tourism or recreation (or other economic activities); or technical issues, such as the fact that trees and woodland can create turbulence making siting of turbines more difficult. These are all issues that will need to be taken into account in site selection by developers, and when reporting on impacts at the time when individual proposals are being put forward – e.g. through the Environmental Impact Assessment (EIA) process (required for proposals more than of local significance).

3 Overall Landcape Sensitivity Results and General Guidance for Development



3 Overall Landscape Sensitivity Results and General Guidance for Development

Purpose

This Section of the Supplementary Planning Guidance is designed to provide a robust evidence base for informing future planning and management decisions on wind and field-scale solar photovoltaic (PV) developments across the County Borough. The primary aims are to ensure the area's distinctive, varied and dynamic landscapes are considered in the planning of any new development or land uses, and that opportunities to enhance and strengthen the distinctive design of the development within the landscape setting are pursued wherever possible.

Recognising the Full Value of Landscape Character and Design

- 3.1 Producing well designed developments, that sit well in their local landscape, is an essential part of the planning process. Developments that reflect the County Borough's varied landscape character reinforce the spirit of place that makes the area special, enhancing people's sense of belonging and commitment to their locality. The quality of people's natural surroundings has been shown to improve their health and well-being and encourage inward investment by businesses.
- 3.2 The general guidance included in this Chapter, as well as the LCA-specific guidance provided for each assessment in Chapter 4, provides information on how wind and solar PV developments can be designed and sited to best reflect and account for landscape character. In particular, the scale and form of developments in the context of the 'host' landscape is a particularly important consideration which this SPG is designed to provide guidance on. Please note that there are a number of other important reference documents produced by other organisations that should also be referred to. These are cited (as footnotes) throughout the general guidance section of this chapter.

Overall Levels of Landscape Sensitivity to Wind and Solar PV developments in Bridgend County Borough

Interpretation of the landscape sensitivity assessment results

- 3.3 The County Borough's Landscape Character Areas often contain areas of higher and lower sensitivity within them, which should be borne in mind when using the overall sensitivity results maps and tables that follow. It is therefore very important to take note of the content of the individual LCA sensitivity assessments and guidance presented in Chapter 4 when interpreting the results.
- 3.4 **Figures 3.1 to 3.10** present the mapped landscape sensitivity results using the spatial framework of LCAs, starting from 'very small' wind, through the wind size categories; and then followed by the maps for the solar PV sensitivity assessment results.

Overall findings

- 3.5 The mapped results depicted in the following figures show that all of the county borough's landscapes are assessed as being particularly sensitive to large-scale developments of both wind and solar PV. For wind energy development, the majority of the area is assessed as of 'moderate-high' or 'high' sensitivity to turbines of over 75 metres in height. Only two Landscape Character Areas (1: Llangynwyd Rolling Uplands & Forestry and 8: Ogmore Forest and Surrounding Uplands) are assessed as of 'moderate' sensitivity to large wind turbine

developments (76-110m to blade tip), due to their large landform scale and presence of existing development on skylines. Moving up to the next size bracket used for the assessment (turbines of over 110 metres), both of these LCAs are assessed as of 'moderate-high' sensitivity, whilst the remainder of the County Borough is classed as of 'high' sensitivity. This reflects the often small scale of many parts of the landscape, with frequent human-scale features (e.g. trees, woodlands, field boundaries, farm buildings) and rural skylines forming a valued backdrop to views from settlements and urban areas.

- 3.6 For solar PV development, the presence of small-scale fields, prominent slopes and ridgelines and valued tracts of naturalistic habitat across the County Borough have resulted in the overall majority of the area being of high sensitivity to larger (over 10 hectare) schemes. The exception is LCA 12: Newton Down Limestone Plateau, which contains some large-scale fields of intensive farm production on flatter (less visible) plateau areas as well as locations of existing industrial activity. Nevertheless, other sensitive attributes within this LCA have still resulted in a 'moderate-high' landscape sensitivity assessment for developments within the 10-15 hectares size bracket. All of Bridgend is assessed as of 'high' sensitivity to solar PV developments of over 15 hectares in size.
- 3.7 As stated previously, the individual LCA assessments presented in Chapter 4 provide detailed information on variations in landscape sensitivity within them, and should always be referred to when interpreting the overall mapped results.

Bridgend Landscape Sensitivity Assessment

Figure 3.1

Landscape Sensitivity to Wind Energy Developments - Very Small (15-25m)

 Bridgend County Borough Boundary

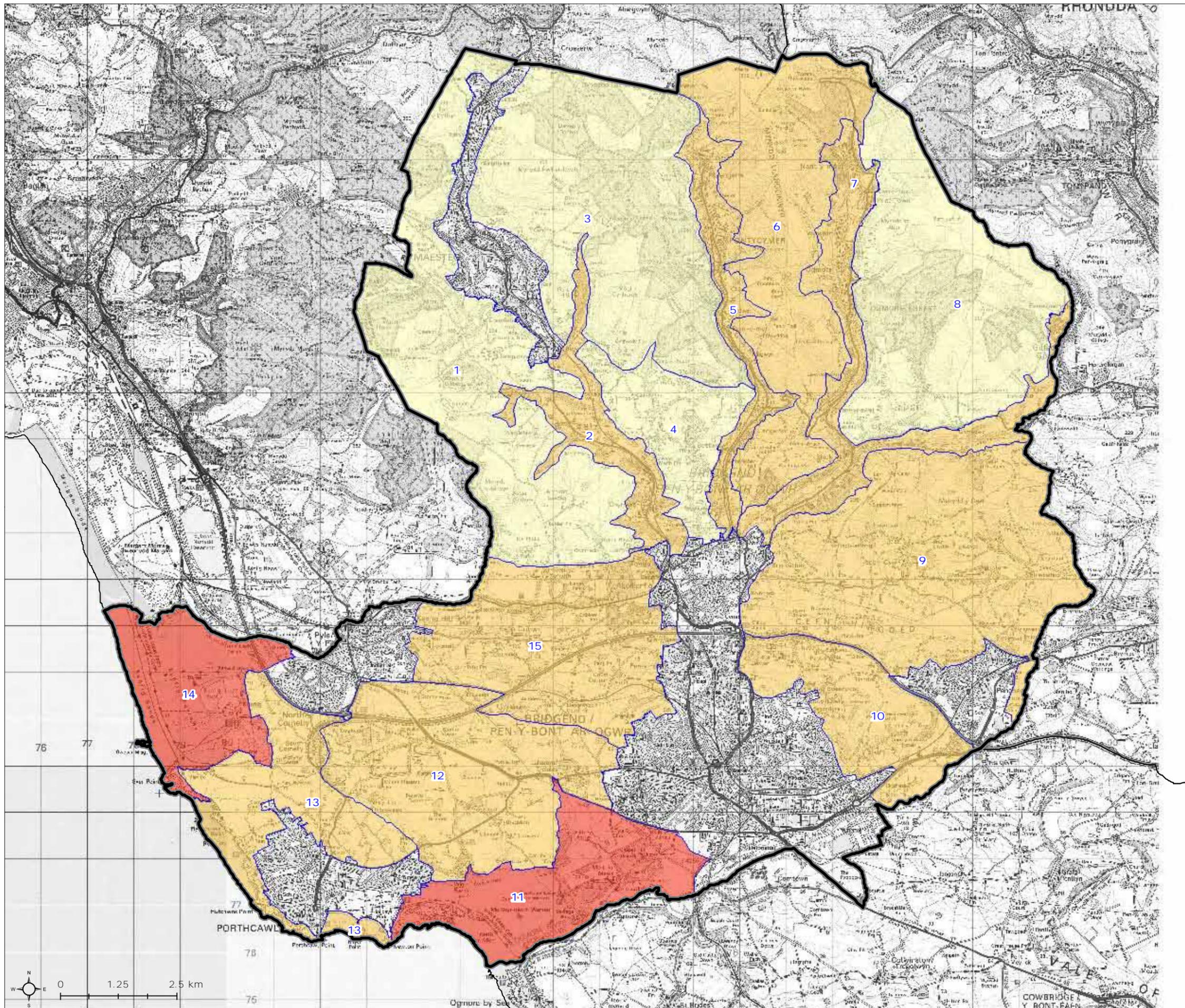
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Very Small Wind Energy Developments

-  Low
-  Low - Moderate
-  Moderate - High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.2

Landscape Sensitivity to Wind Energy Developments - Small (26-50m)

 Bridgend County Borough Boundary

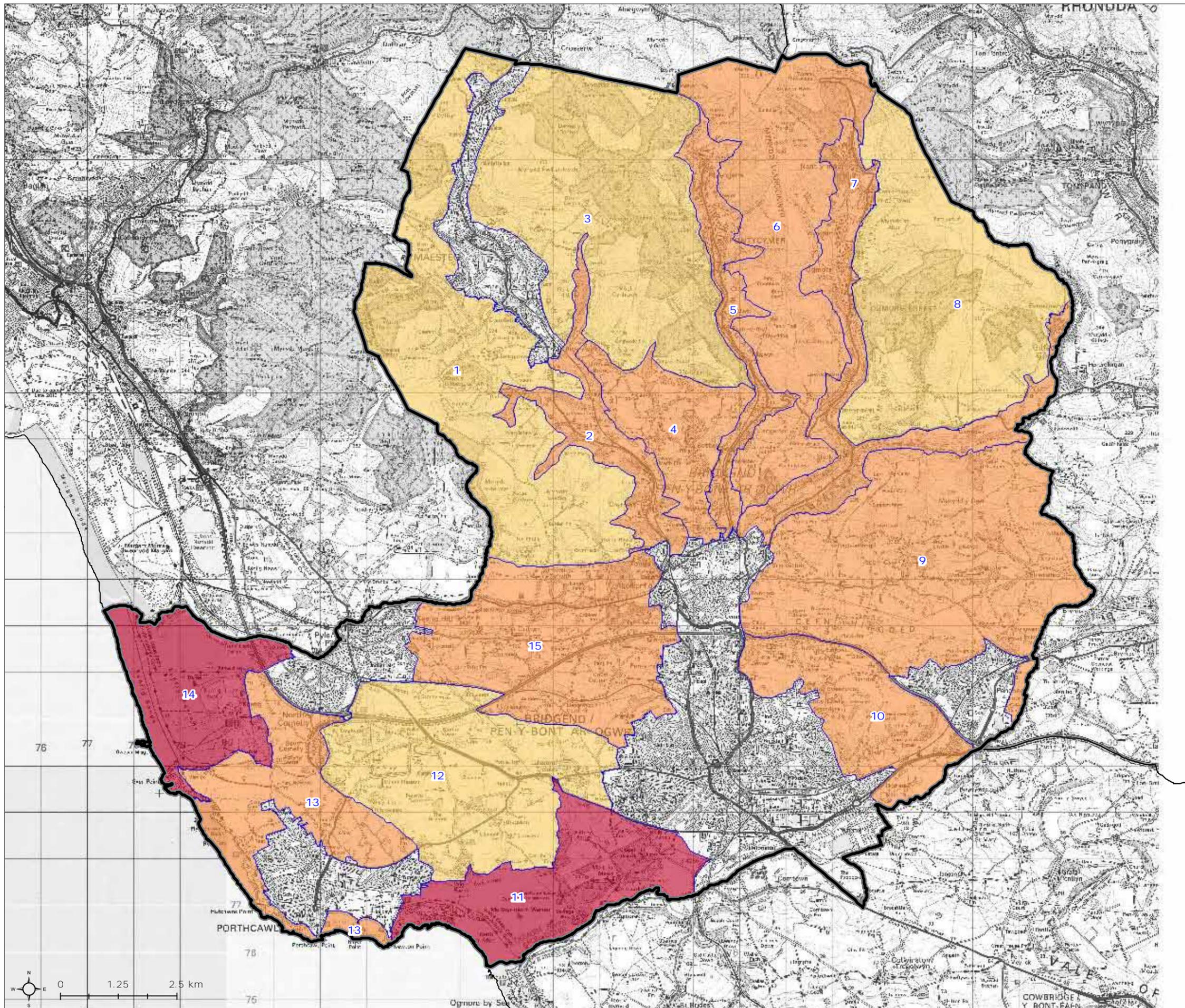
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Small Wind Energy Developments

-  Low - Moderate
-  Moderate
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.3

Landscape Sensitivity to Wind Energy Developments - Medium (51-75m)

 Bridgend County Borough Boundary

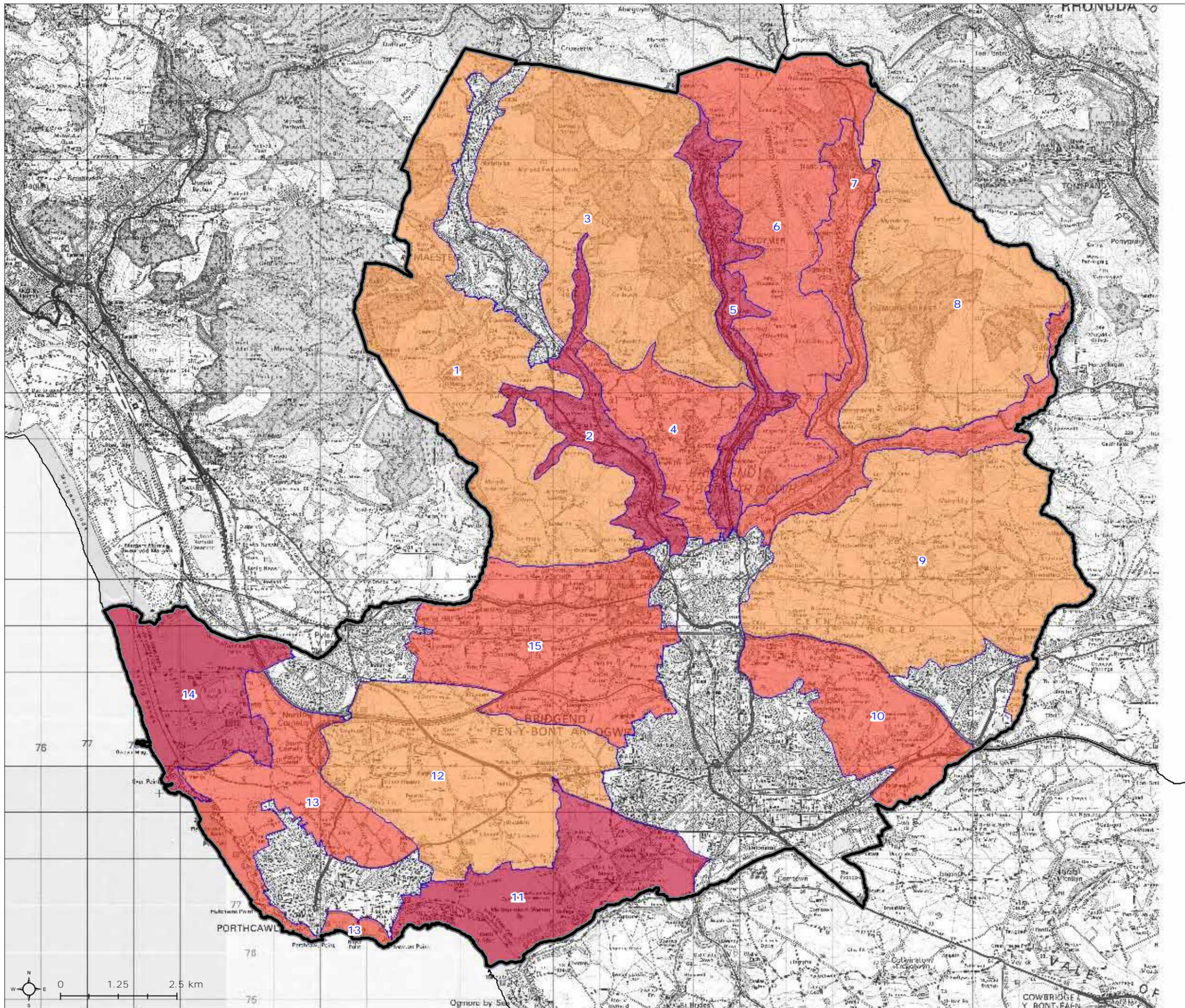
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Medium Wind Energy Developments

-  Moderate
-  Moderate - High
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.4

Landscape Sensitivity to Wind Energy Developments - Large (76-110m)

 Bridgend County Borough Boundary

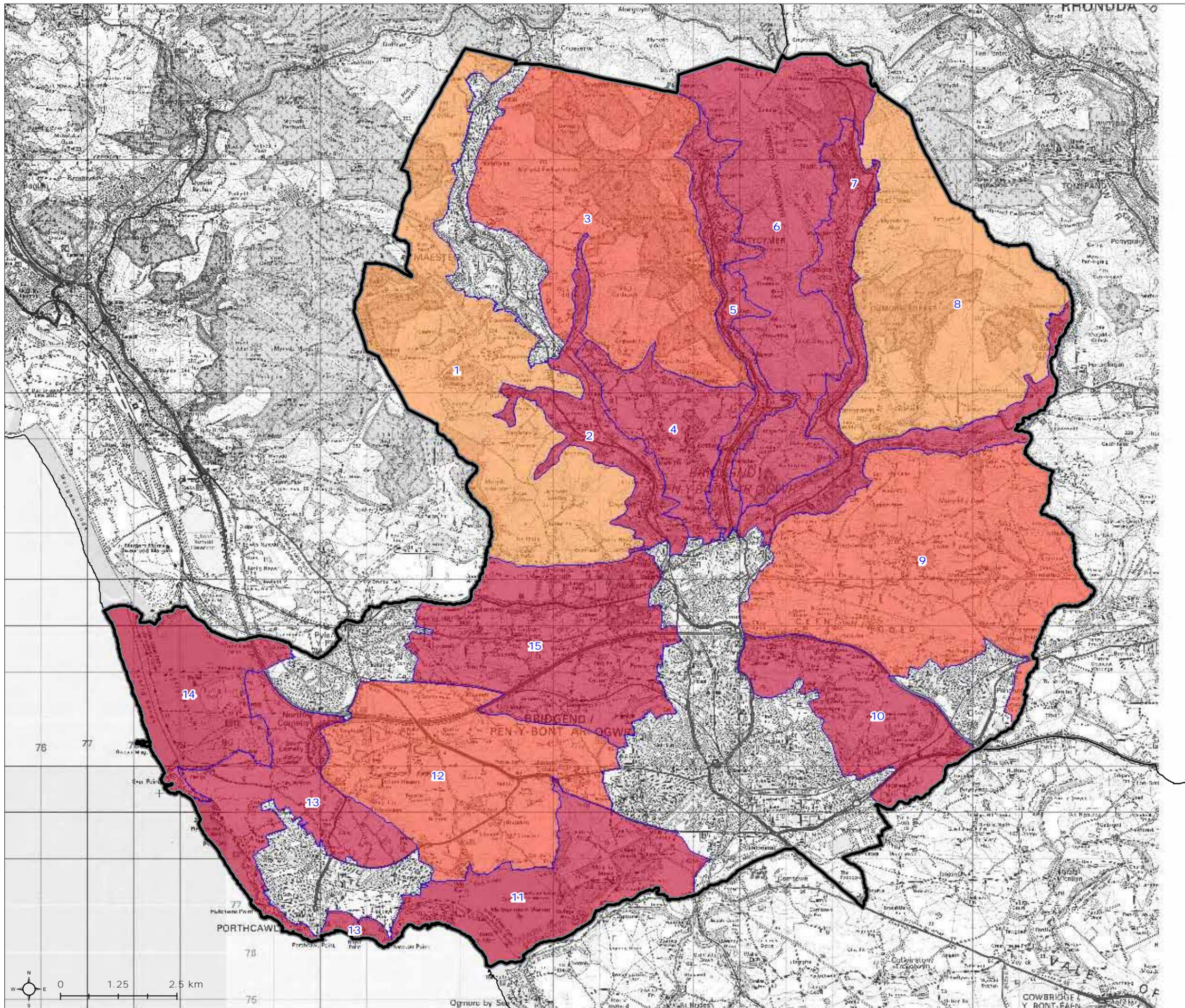
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Large Wind Energy Developments

-  Moderate
-  Moderate - High
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.5

Landscape Sensitivity to Wind Energy Developments - Very Large (111-150m)

 Bridgend County Borough Boundary

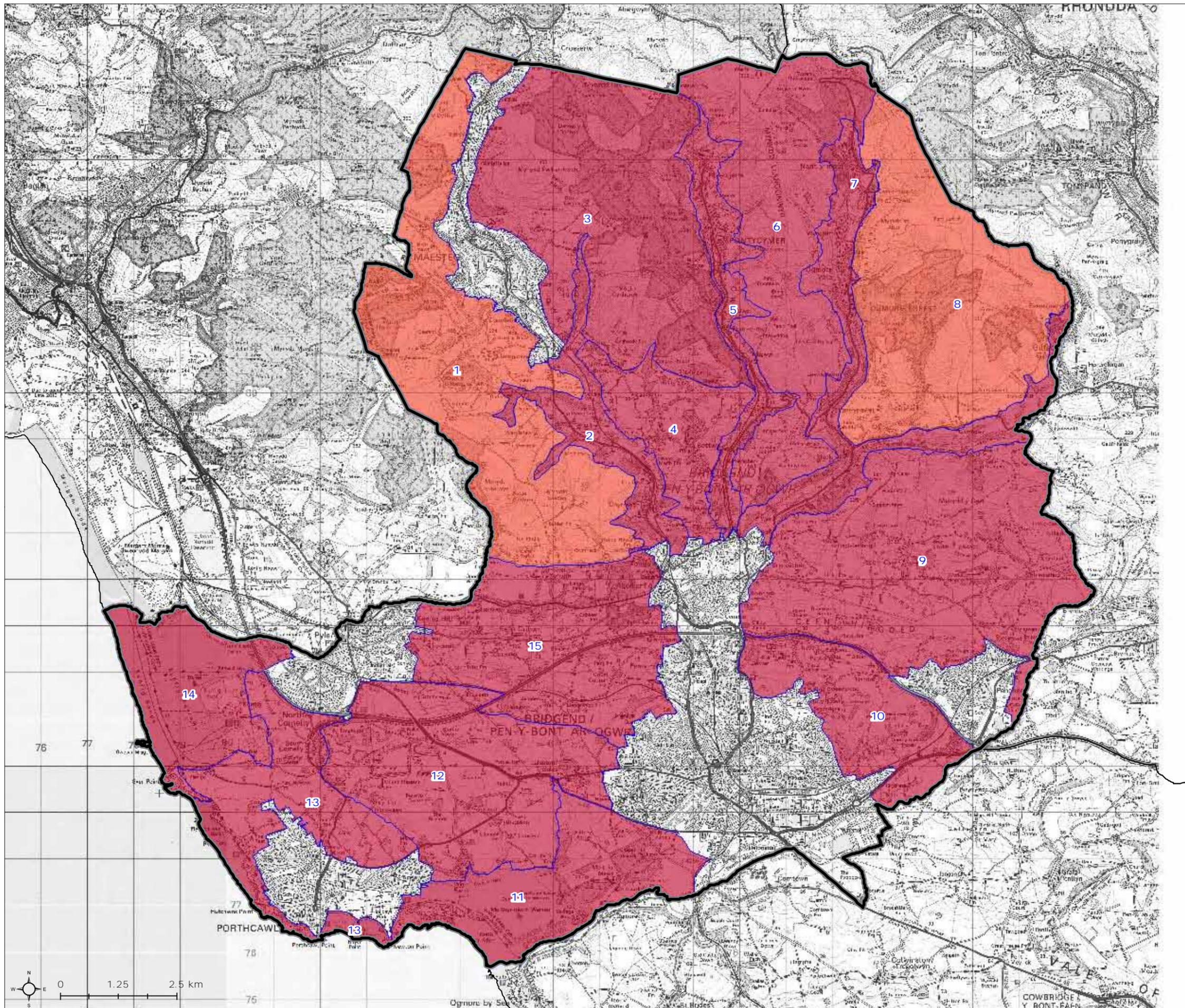
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmore Valley Floor & Lower Slopes
-  8 : Ogmore Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Very Large Wind Energy Developments

-  Moderate - High
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.6

Landscape Sensitivity to Solar PV Developments - Very Small (less than 1ha)

 Bridgend County Borough Boundary

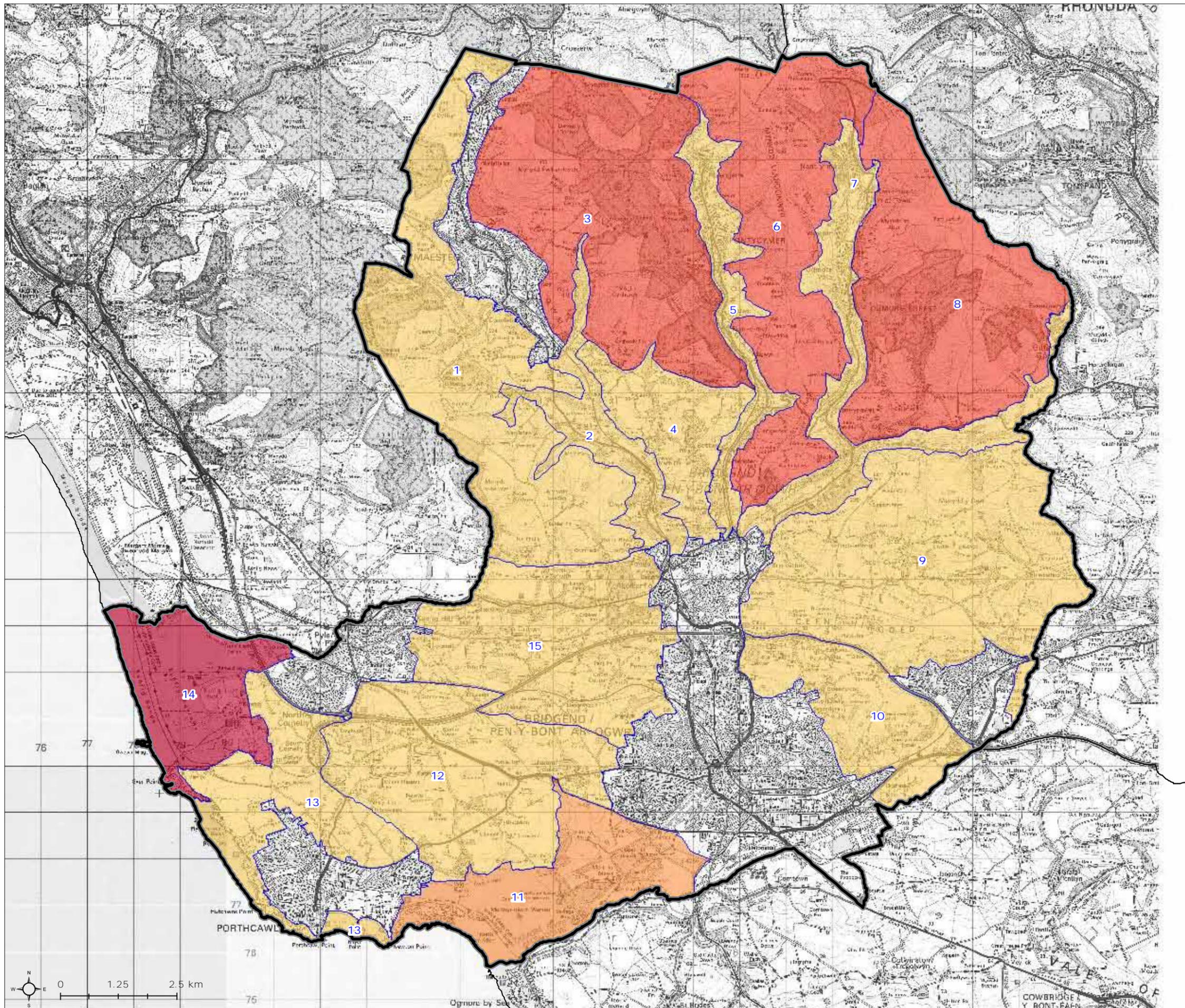
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Very Small Solar PV Developments

-  Low - Moderate
-  Moderate
-  Moderate - High
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.7

Landscape Sensitivity to Solar PV Developments - Small (1-5ha)

 Bridgend County Borough Boundary

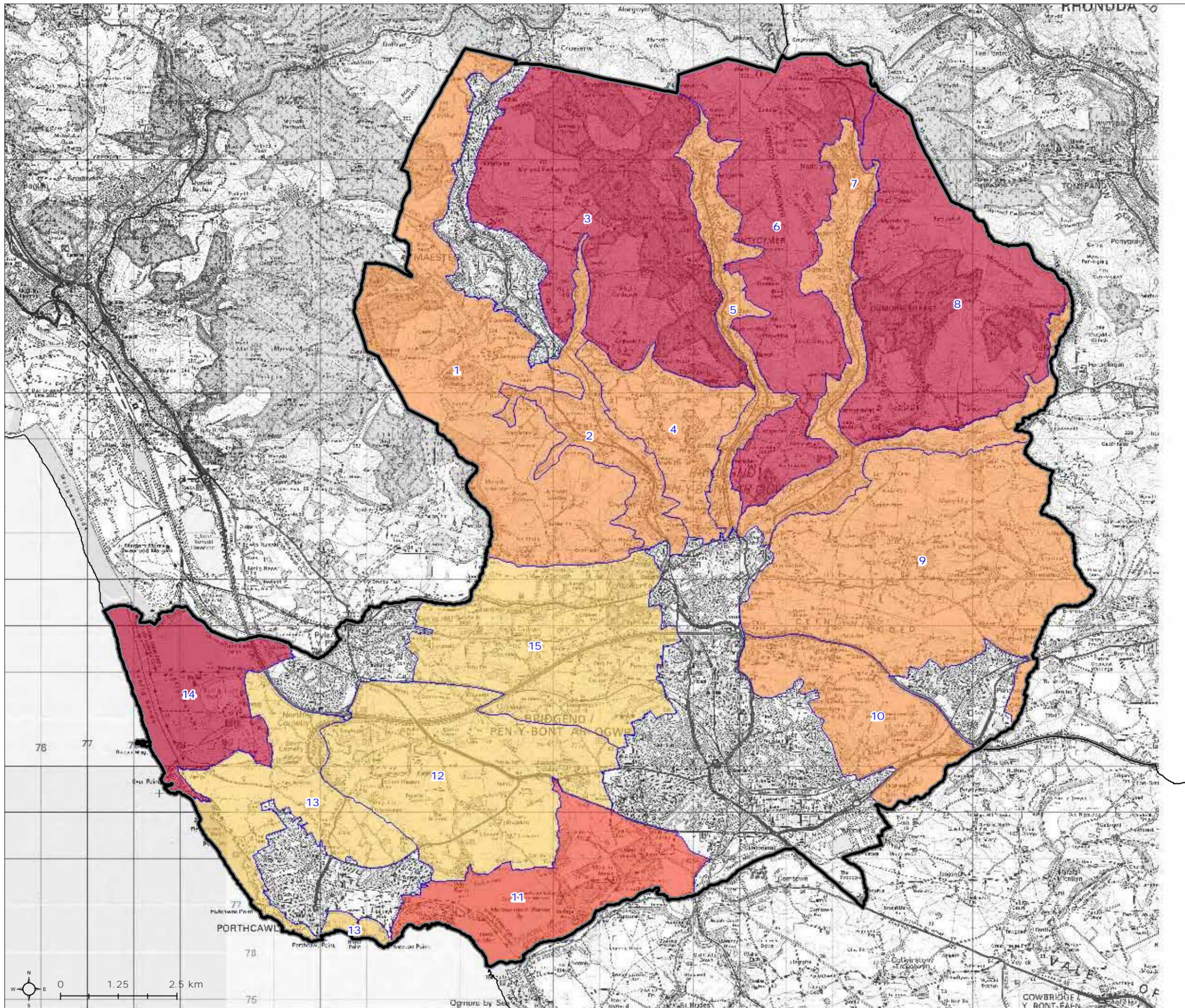
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Small Solar PV Developments

-  Low - Moderate
-  Moderate
-  Moderate - High
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.8

Landscape Sensitivity to Solar PV Developments - Medium (5-10ha)

 Bridgend County Borough Boundary

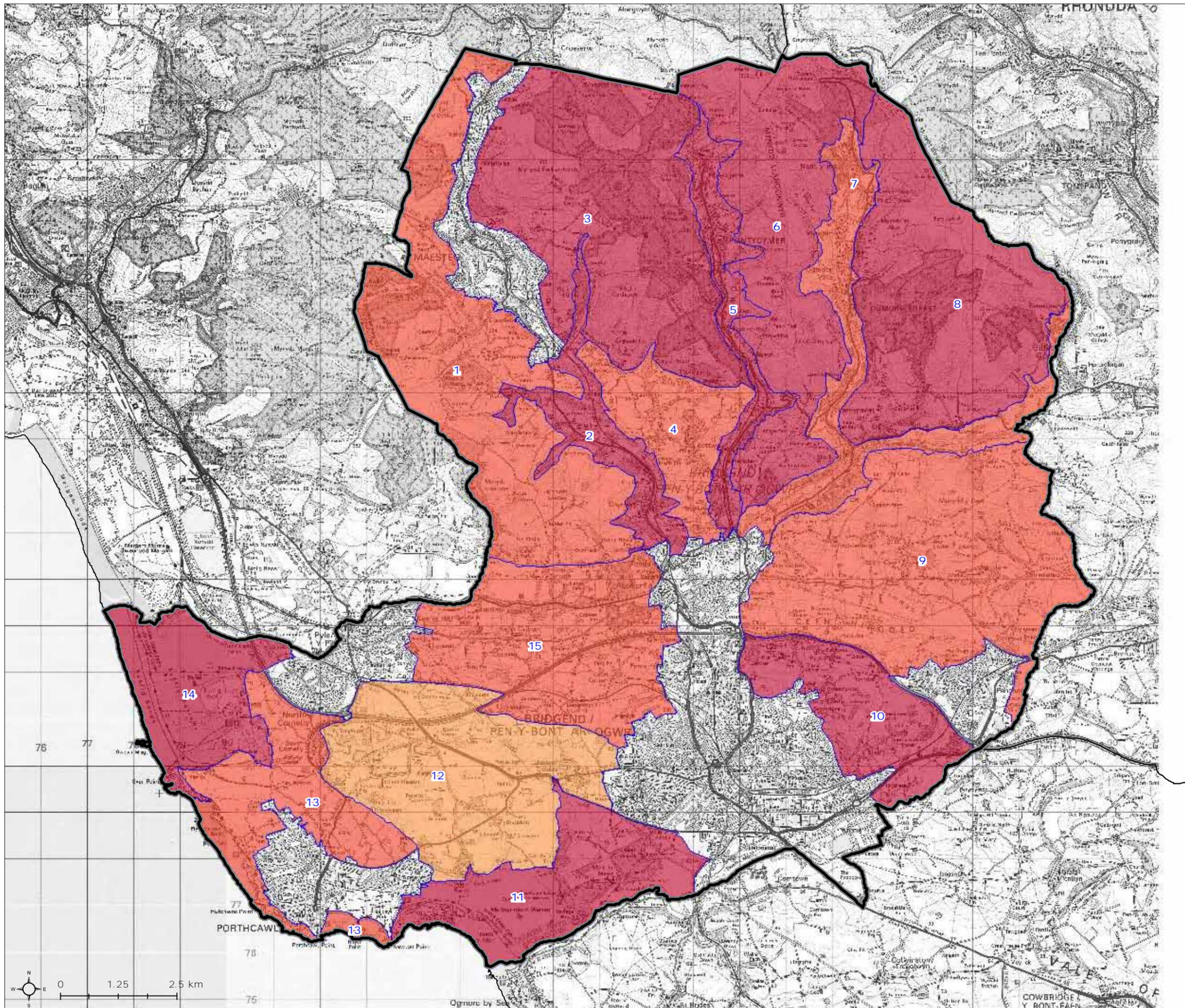
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Medium Solar PV Developments

-  Moderate
-  Moderate - High
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.9

Landscape Sensitivity to Solar PV Developments - Large (10-15ha)

 Bridgend County Borough Boundary

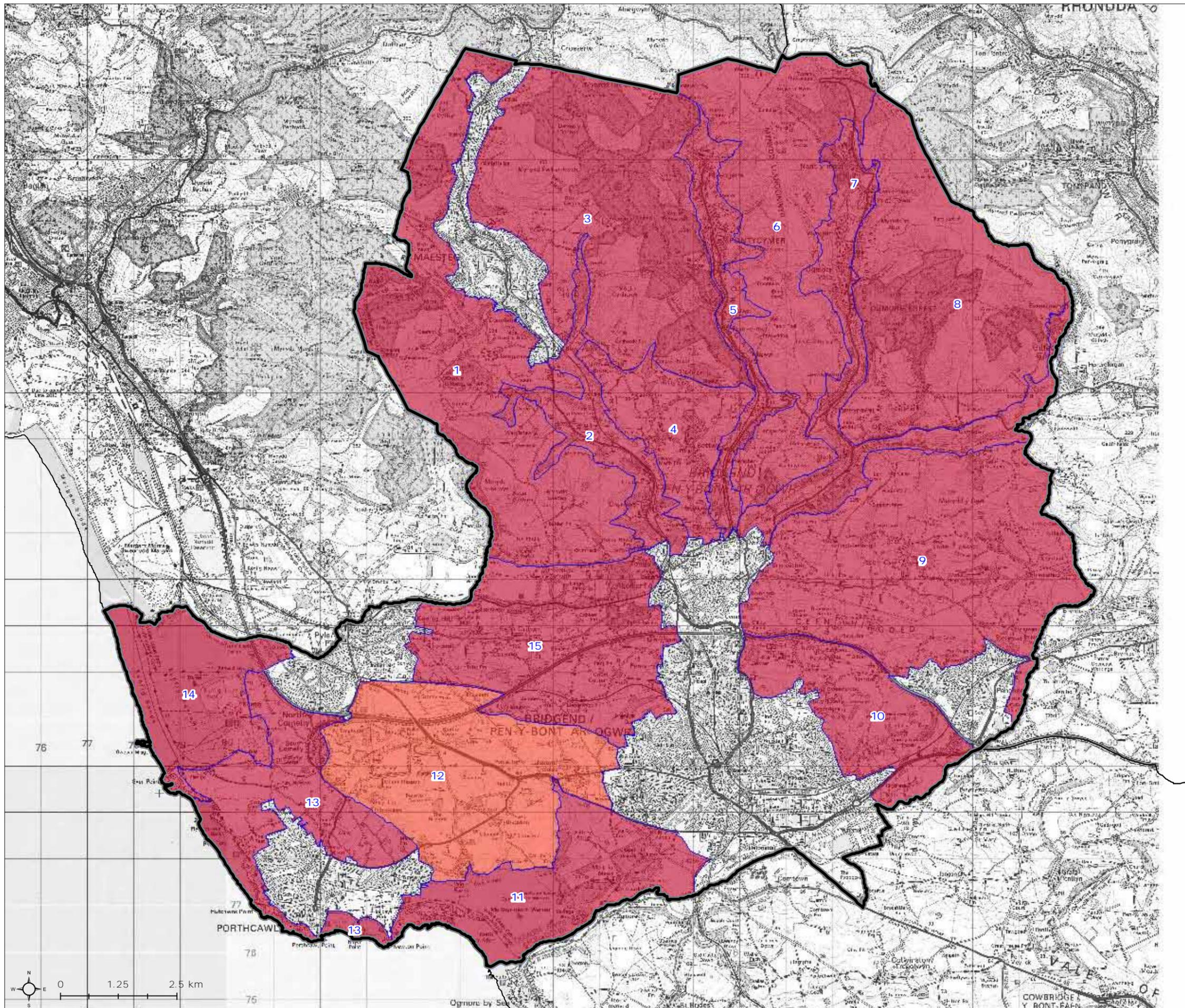
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Large Solar PV Developments

-  Moderate - High
-  High

Map Scale @ A3: 1:80,000



Bridgend Landscape Sensitivity Assessment

Figure 3.10

Landscape Sensitivity to Solar PV Developments - Very Large (greater than 15ha)

 Bridgend County Borough Boundary

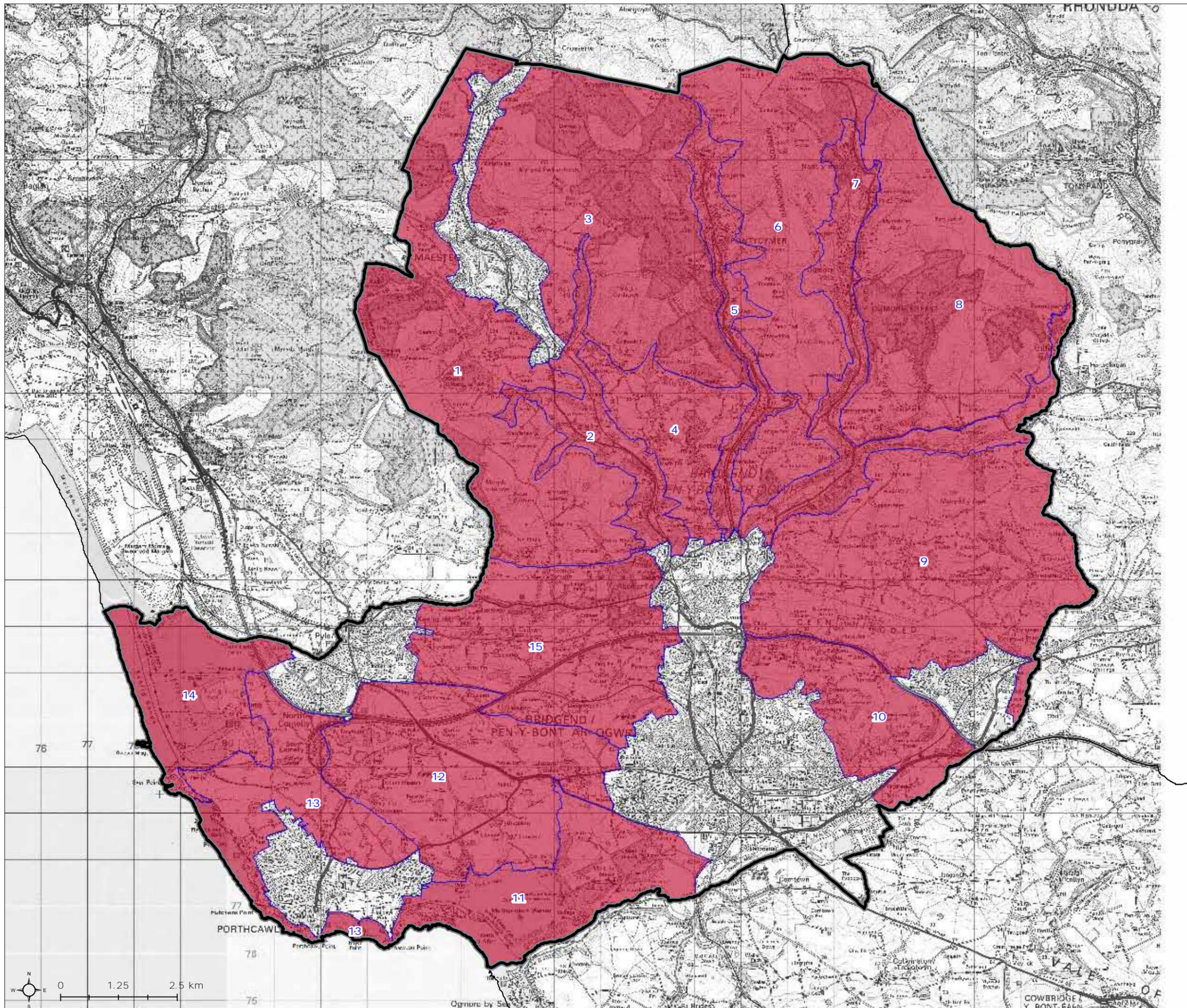
Landscape Character Areas

-  1 : Llangynwyd Rolling Uplands and Forestry
-  2 : Llynfi Valley Floor and Lower Slopes
-  3 : Llynfi & Garw Uplands and Forestry
-  4 : Bettws Settled Farmland
-  5 : Garw Valley Floor and Lower Slopes
-  6 : Mynydd Llangeinwyr Uplands
-  7 : Ogmores Valley Floor & Lower Slopes
-  8 : Ogmores Forest and Surrounding Uplands
-  9 : Hirwaun Common and Surrounding Ridges
-  10 : Coity Rural Hinterland
-  11 : Merthyr Mawr Farmland, Warren and Coastline
-  12 : Newton Down Limestone Plateau
-  13 : Porthcawl Coastline and Settled Farmland
-  14 : Kenfig Dunes and Coastline
-  15 : Cefn Cribwr Ridge and Settled Farmland

Landscape Sensitivity to Very Large Solar PV Developments

 High

Map Scale @ A3: 1:80,000



General Siting and Design Guidance for Wind Energy Development

- 3.8 This section provides generic guidance on the siting and design of wind energy development in Bridgend County Borough. It will help ensure that adverse landscape and visual effects⁹ are addressed satisfactorily, including cumulative landscape and visual effects.
- 3.9 The guidance should be read alongside the guidelines contained within BCBC's [Landscape Character Assessment](#) (Part 3 of the separate Landscape Character Area data sheets which are set out in Chapter 3 of the document).

Siting Wind Energy Development within the Landscape

- 3.10 The following section provides some generic guidance on siting wind energy development in Bridgend County Borough, focussing on minimising landscape and visual effects. It is recognised that technologies need to be sited and designed to ensure a reasonable output.
- 3.11 In all cases the 'Overall Strategy' for the relevant Landscape Character Area to the proposed development site should be considered when choosing potential sites for wind energy development (set out in Chapter 4). The following guidance should be followed for siting any wind energy development, whether it comprises one small turbine or multiple large turbines:
- Site wind energy developments away from dramatic rugged landforms or valued distinct landform features (including prominent headlands).
 - Seek to avoid siting wind turbines where they would detract from the undeveloped character of the coast (as stated in para. 5.7.2 of PPW).
 - Seek to avoid areas valued for their remoteness¹⁰, areas free from human influence and perceived 'untamed' naturalness e.g. the upland moors.
 - Seek to avoid areas where ground level disturbance affects landscapes that are difficult to restore (e.g. deep peat or bog).
 - Ensure siting of turbines does not adversely affect the distinctive characteristics and special qualities of the Glamorgan Heritage Coast (designated in 1972).
 - Ensure siting of turbines does not damage the special qualities of the landscape as recorded in the Bridgend Landscape Character Area descriptions.
 - Significant effects on views from important viewpoints (including views which are integral to the character of conservation areas and recognised /iconic views), popular tourist and scenic routes, and settlements should be avoided where possible or minimised through careful siting.
 - It is generally less distracting to see a substantial part of a turbine rather than blade tips only – this may be a particular consideration for views from sensitive viewpoints or those frequented by a larger number of viewers.
 - Consider locations in association with business parks and reclaimed, industrial and man-made landscapes where other landscape sensitivities are not compromised.
 - Consider the landscape effects of transmission infrastructure when siting development, aiming for sites that will minimise the need for above ground transmission infrastructure. Undergrounding cables may mitigate effects in sensitive locations.
 - Consider sites where areas of existing vegetation could screen ground-level features of wind energy developments (such as fencing, tracks and transformers).

⁹ Landscape impacts (or effects) derive from changes in the physical landscape, which may give rise to changes in character and how it this is experienced. This may in turn affect the perceived value ascribed to a landscape. Visual impacts (or effects) relate to the changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual amenity.

¹⁰ Remoteness can be described as freedom from human activity and disturbance and having a perceived naturalness or a strong feel of traditional rurality with few modern human influences.

- The visibility of turbines from valleys and lower ground may be reduced if they are located on high plateau with concave or steep wooded slopes.
- It is preferable to site turbines where they do not prevent the understanding and appreciation of historic landmarks features such as hilltop monuments or church towers.
- Protect the cultural and heritage values of areas listed on the Cadw register of *Outstanding or Special Landscapes of Historic Interest in Wales*, Conservation Areas (including views integral to their character), the setting to listed buildings (where the character of the landscape is an important part of a listed building's setting) and Registered historic parks and gardens (including views to and from, particularly designed views)¹¹ – see map at Figure 2.4 in Chapter 2 and individual LCA maps in Chapter 4.
- Smaller-scale medieval enclosed landscapes are also likely to be more sensitive due to both scale and inherent historic character, with LANDMAP's Historic Landscape aspect and evaluations being a key source of information to identify such locations¹². Some more recent but discrete enclosed landscapes may also be sensitive, such as 19th century fields created on the upland fringes, particularly when associated with a Listed historic farmstead.
- When siting medium or large-scale wind energy development (i.e. those with multiple turbines over 50m tip height), select sites in simple, regular landscapes with extensive areas of consistent ground cover over landscapes with more complex or irregular land cover patterns, smaller field sizes and landscapes with frequent human scale features (subject to satisfying other sensitivities).
- When siting medium or large-scale turbines (i.e. those over 50m tip height), avoid selecting sites on important undeveloped or distinctive skylines, or skylines with important cultural or historic landmark features (including skylines of elevated coastlines and coastal headlands).
- When selecting sites consider potential effects of transporting turbines to site, and the possible limitations presented by winding narrow lanes bounded by hedgerows.

When siting single turbines the following guidance should be considered:

- Consider siting turbines so they are perceived as part of other built development /in association with a building group where effects on amenity allow. For example, there may be some opportunity to site smaller single turbines in relation to farm buildings with larger scale single turbines sited in relation to larger businesses or community buildings - development should be commensurate with (or reflect) the scale of the associated buildings.

When siting multiple turbines the following guidance should be considered:

- Locate turbines on the most level part of a site or following contours to avoid a discordant variation of turbine heights.
- Ensure the size and grouping of turbines responds to landscape character, reinforcing the difference between distinct types of and scales of landscape character.
- Seek to keep a turbine group within one type of landscape (particularly as perceived in sensitive views) so that turbines do not span across marked changes in character on the ground, such as changes in topography.

Detailed Layout and Design

- 3.12 The next stage in planning a wind energy scheme is the detailed layout and design. Alternative options should be investigated to find the optimum layout and design of a wind energy development. PPW (Section 4.11) states that good design should be inclusive and acknowledges the community involved in the design process. The landscape and visual impact assessment (LVIA) may aid this process. The following should be considered:
- Site layout, including number and arrangement of turbines;
 - Turbine design and relationship with their landscape setting;

¹¹ BCBC's Conservation and Design Team or Cadw should be approached directly to obtain advice on development that could affect these historic and cultural heritage assets.

¹² See Natural Resources Wales (May 2013) *LANDMAP Guidance Note 3: Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines*. This note also provides guidance on the use of other aspect areas/layers when conducting windfarm LVIA's.

- Ancillary features, including access tracks, transformers and other buildings / infrastructure;
- Land management and land use changes including opportunities for habitat creation/ enhancement appropriate for the character area, following the guidance of the appropriate Landscape Character Area (section 3 of the LCA data sheets included in Chapter 3 of the Landscape Character Assessment).

Site layout

- When developing multiple turbines, ensure that turbines read as a coherent group in all the main views – aim for a composition that is visually balanced, simple and consistent in image as it is viewed from various directions, minimising views of blade tips only in views (which can be distracting).
- When developing multiple turbines, seek to avoid 'stacking' of turbines when seen from one direction as far as possible (such as is experienced when looking along a row).
- When developing multiple turbines, seek to avoid siting turbines which are remote from the rest of the group – maintain a clear balanced cluster.
- Ensure turbine size does not overwhelm the scale of distinct hills and ridges.
- When developing multiple turbines, ensure cluster size is in proportion with the scale of the landscape, including landform features and landscape elements such as woodlands and fields.
- Ensure wind turbines respect the hierarchy of elements in the landscape and do not compete with, or create clutter when seen together with, other man-made landscape elements such as pylons.
- In urban fringe or industrial contexts, developments should respond to the scale of the built form and sit comfortably alongside buildings or structures.
- Use information on landscape scale contained within published landscape character assessments to inform choice of turbine size and cluster size.
- Ensure the layout and design of the development responds to other wind energy developments in the same type of landscape to minimise cumulative effects – this is more important the closer sites are together.

Turbine design and relationship with the landscape

- Ensure the height of turbines does not overwhelm the scale of hills, ridges, or historic monuments.
- Ensure that the proportion of rotor diameter to tower height is balanced - short blades on a tall tower or long blades on a short tower may look unbalanced. Aim for a ratio of approximately 1:1 for tower height: blade diameter for medium and large turbines.
- Three bladed turbines tend to look more balanced than two bladed turbines, and should be the preferred turbine design wherever possible.
- Tubular steel towers tend to look simpler and less 'industrial' than lattice towers, and are therefore the preferred tower design for developments in the County Borough.
- Hubs are more aesthetically pleasing when oval shaped with flowing lines, rather than 'boxy' shapes.
- Simple, pale grey coloured turbines will be most suitable for most turbines over 25m to tip (to reduce contrast with the sky), with a semi-matt finish to reduce any potential glare. However, in some cases darker colours may be suitable for very small turbines (less than 25 metres) to help them blend into their setting.
- Opinion is divided about how effective graduated bases (usually from green to grey) are at integrating turbine towers into the landscape, but these may be appropriate in certain situations.
- All turbines on a site should rotate at the same speed and direction.
- Speed of blade rotations should be kept as low as possible (particularly on smaller turbines) to reduce visual impact.
- Avoid use of advertising on turbines, particularly in rural areas.

Ancillary features

- Minimise the width and length of new tracks introduced into the landscape, using existing routes wherever possible.
- Any new tracks should follow contours, avoiding steep slopes or wet ground where possible, and following field boundaries or woodland edges where possible – in some cases this may result in slightly longer lengths of track being required.
- Ensure the surface of tracks blend into the surrounding landscape and aim to re-vegetate tracks (in full or in part) following construction.
- Minimise works to offsite roads, particularly rural roads, and prevent damage and alterations to stone walls, hedges, flower rich verges, trees, historic bridges and gateposts - repair and replace any features affected ensuring materials and planting are in keeping with local context and character.
- Where possible, house transformers within the turbine towers to reduce their visual effects.
- Substation and control buildings should be carefully sited and should generally avoid high or exposed locations – use existing buildings where possible, or existing and locally occurring vegetation to screen new buildings.
- Ancillary features should match the local vernacular where they are visible (e.g. using locally occurring materials on substations, control buildings, and transformer cabins if not housed within the turbines).
- Avoid use of urbanising elements in rural situations, such as kerbs, and minimise areas of hard surfacing, fencing and lighting.
- Ensure on-site cables are buried underground (without damage to existing hedges or archaeology) to minimise effects on landscape character and visual amenity – on-site grid connections should be underground wherever possible and crane hard standings re-vegetated during operation of the turbines.
- If lighting is required on turbines for aviation purposes, use infra-red lighting to minimise visual effects at night, particularly in darker areas (para. 13.13.2 of PPW encourages a balance between the provision of lighting and protection of the natural and historic environment and retention of dark skies).

Land management and land use changes

- Continue the existing land use underneath the turbines so that the landscape flows underneath and around the turbines, or link land use to adjoining land uses especially if this can create more robust semi natural habitats and reduce habitat fragmentation.
- Provide enhanced management of landscape features, habitats and historic assets as part of a development, including contributing to wider landscape scale targets and projects in Bridgend's Local Biodiversity Action Plan and Landscape Character Assessment.
- Encourage traditional management of farmland including maintaining small fields, hedgerows and stone walls.
- Developers should provide a design statement to set out how the design has evolved, how the design responds to landscape character, how visual issues have been addressed and how this guidance has been taken on board.
- Developers should provide a land management plan for land surrounding/under installations to demonstrate proposed land use and management through the operational phase and restoration/aftercare after decommissioning.

Designing for Multiple Wind Energy Developments

- 3.13 As larger numbers of wind energy developments are built, it is increasingly necessary to consider their cumulative effects. Some general guidance is provided below.

Guidance for designing multiple developments

- When designing a wind energy development it is important to consider how the scheme fits with other existing, consented and proposed schemes (including within neighbouring planning authorities) to minimise cumulative effects.
- If wind energy development already exists in a particular type of landscape, further wind energy development should continue this pattern of development (e.g. small cluster on hill tops, or single turbines associated with buildings), as long as the existing development is considered appropriate in the context of landscape character.
- Ensure multiple developments do not obscure distinctive landforms and are in scale with ridges and hills.
- If two or more wind energy developments are clearly visible in the same view and appear in the same type of landscape they should appear of similar scale and design (including the number of blades and proportion of rotor diameter to tower height), unless the existing design is considered inappropriate – the closer they are to each other the more important this is.
- Ensure any wind energy scheme, or extension to an existing scheme, takes account of landscape sensitivity as well as any landscape strategies for wind energy development that may be available.
- It will be important to ensure that wind energy developments do not have a defining influence on the overall experience of the landscape and that some open views devoid of turbines are maintained within Bridgend County Borough.
- As multiple wind energy developments are built they may 'compete' with the landscape's original foci – it is important to maintain a hierarchy of focal points so that the original foci can still be appreciated in the landscape.
- Consider views from settlements when designing multiple wind energy developments – avoid 'surrounding' a settlement with wind turbines.
- Consider views from protected landscapes when designing multiple wind energy developments – avoid 'surrounding' a protected landscape with wind turbines.
- Individual wind energy developments should generally appear visually separate from each other unless specifically designed to create the appearance of a single combined wind farm.
- When designing wind farm extensions it will be important that scale of turbines (including the proportion of rotor diameter to tower height) and rotation speeds are compatible.

Summary of Information Required When Submitting a Planning Application

- 3.14 Planning permission is currently required to install any size or number of wind turbines in Wales. For information on Landscape and Visual Impact Assessment (LVIA) planning requirements please refer to Part 3 of the *Planning Guidance for Wind Turbine Development: Landscape and Visual Impact Assessment Requirements* for more detailed information (Gillespies LLP, 2014).

General Siting and Design Guidance for Solar PV Development

- 3.15 This section is designed to provide generic guidance on the siting and design of free-standing solar PV development in Bridgend County Borough. It will help ensure that adverse landscape and visual effects¹³ are addressed satisfactorily, including cumulative landscape and visual effects. The guidelines presented here are in line with existing guidance from the UK¹⁴.
- 3.16 The guidance should be read alongside the guidelines contained within BCBC's [Landscape Character Assessment](#) (Part 3 of the separate Landscape Character Area data sheets which are set out in Chapter 3 of the document).

Generic Guidance on Siting Solar PV Development in the Landscape

- 3.17 The following provides some generic guidance on siting solar PV development in Bridgend County Borough focussing on minimising landscape and visual effects. It is recognised that technologies need to be sited and designed to ensure a reasonable output. In all cases the 'Overall Strategy' for the relevant Landscape Character Area to the proposed development site should be considered when choosing potential sites for wind energy development (as set out in Chapter 4).

Generic guidance for siting solar PV development in the landscape

- Site solar PV development on lower slopes/within folds in gently undulating lowland landscapes or on flat plateau sites rather than on upper slopes or coastal headlands.
- Any PV development on plateau landscapes should generally be set back from edges to minimise effects on views from surrounding areas.
- Site development in landscapes with a sense of enclosure (e.g. provided by woodland or high hedges) rather than in open and unenclosed landscapes.
- Consider views from local viewpoints, popular routes, recognised /iconic views, and designated landscapes when considering the siting of solar PV development in the landscape - site panels in areas where they can be well concealed or integrated into sensitive views.
- When siting development, consider the appearance of the development as viewed from the 'backs' and 'sides' (where frames will be more visible) as well as from the 'front'.
- For sites that are overlooked by higher ground the design of the site and how it integrates with the landscape will be particularly important.
- Small-scale medieval enclosures (including strip fields) are likely to be more sensitive to the introduction of solar PV development than more modern (regular and larger-scale) fields.
- Ensure sites do not span across marked changes in character on the ground.
- Site field-scale PV development away from areas of undeveloped coastline. Ensure siting of solar PV development does not adversely affect the distinctive characteristics and special qualities of the Glamorgan Heritage Coast (designated in 1972) - the more visible a development is in the landscape, the higher the risk that it may affect scenic quality/natural beauty.
- Site field-scale PV development away from areas valued for their remoteness, areas free from human influence and perceived 'untamed' naturalness e.g. the upland moors.
- Significant effects on views from important viewpoints (including views which are integral to the character of conservation areas and viewpoints in sensitive areas including recognised /iconic views), popular tourist and scenic routes and settlements should be minimised.

¹³ Landscape impacts (or effects) derive from changes in the physical landscape, which may give rise to changes in character and how it this is experienced. This may in turn affect the perceived value ascribed to a landscape. Visual impacts (or effects) relate to the changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual amenity.

¹⁴ This includes the recently produced *Planning Guidance for the Development of Large-scale Ground-mounted Solar PV Systems*. BRE National Solar Centre and Cornwall Council, available at http://www.solar-trade.org.uk/media/NSC_Planning_Guidance_reduced.pdf

- Sites in naturalistic landscapes will be more sensitive than sites in areas containing existing hard surfacing or built elements (e.g. urban areas, brownfield sites or large-scale horticulture).
- Consider providing enhanced management of landscape features, habitats and historic assets as part of a development, including contributing to wider landscape scale targets and projects in Bridgend's Local Biodiversity Action Plan and the guidelines in Bridgend's Landscape Character Assessment.
- Consider how panels will be transported to site – many rural lanes are very narrow and have high hedges or stone walls either side. Damage should be avoided, but if damage occurs reinstatement will be required.
- Ensure siting of solar PV development does not harm the special qualities of the landscape as recorded in Bridgend's Landscape Character Area descriptions.
- Protect the cultural and heritage values of areas listed on the Cadw register of *Outstanding or Special Historic Interest in Wales*, Conservation Areas (including views integral to their character), the setting to listed buildings (where the character of the landscape is an important part of a listed building's setting) and registered Historic Parks and Gardens (including views to and from, particularly designed views)¹⁵ – see map at Figure 2.4 and individual LCA maps at Chapter 4.

Detailed Layout and Design

- 3.18 The next stage in planning a solar PV development is the detailed layout and design. Alternative site layouts should be investigated to compare the effects of different designs and to find the optimum layout and design of a solar PV development. PPW (Section 4.11) states that good design should be inclusive and acknowledges the community involved in the design process. The landscape and visual impact assessment (LVIA) may aid this process. The following should be considered:
- Layout and number of panels (including extent).
 - Site access and transporting panels to site.
 - Location of onsite cables.
 - Location and restoration of construction compounds.
 - Type of security arrangements.
 - Location and design of cabinets/ building(s) to house inverters, transformers, switchgear/ substations and spare parts.
 - Land management changes (hedges and land beneath panels) including opportunities for appropriate habitat creation/ enhancement, following the guidance of the appropriate Landscape Character Area (section 3 of the LCA data sheets included in Chapter 3 of the Landscape Character Assessment).
- 3.19 The following themed boxes provide generic guidance on the detailed layout and design of solar PV development in Bridgend County Borough.

Siting and design of solar PV panels

- Ensure the area of development is in scale with the landscape in which it lies – it is likely that areas with smaller scale fields will accommodate smaller developments (information on landscape scale contained within the Landscape Character Assessment may provide an indication of suitable development sizes).
- Fit panels comfortably into the fields (for example avoiding straight edges in irregular landscapes).
- Existing trees and hedgerows should be retained and protected. Trees should be protected in accordance with BS 5837:2012 Trees in relation to design, demolition and construction as appropriate, and hedges and hedgerows should be protected to similar standards. The location of the protective fences needs to be informed by professional judgement but a minimum distance of 4m from the base of the hedge or hedgerow would be expected.
- Careful consideration should be given to the location of solar panels so that vegetation does not have to be felled as a result of shading.

¹⁵ BCBC's Conservation and Design Team or Cadw should be approached directly to obtain advice on development that could affect these historic and cultural heritage assets.

- Minimise height of panels so that they will be as unobtrusive as possible in the landscape – in areas with hedgerows aim to site them below the height of the hedge.
- When designing the layout of panels, consider the appearance of the development as viewed from the 'backs' and 'sides' (where frames will be more visible) as well as from the 'front'.
- Dark, recessive colours in natural hues and non-reflective materials for structures associated with the PV panels (including frames, fencing and ancillary structures) are generally considered to be less visually intrusive than shiny materials and bright colours.
- Landform modelling (less than 2m high) can sometimes assist in reducing the visual/landscaping impact of a proposed solar installation. However, it should be in keeping with landscape character, not have detrimental visual/landscape effect itself and management should be consistent with neighbouring uses.
- Ensure the panels/arrays follow contours and fit within existing enclosure patterns - avoid siting panels that are remote from the rest of the group.
- Maintain land uses on the site that fit with the character of the area and manage vegetation under the solar panels to avoid the site becoming overgrown e.g. by grazing – mulching large areas should be avoided (including plastics to suppress weed growth), particularly on visible sites. Land use should be set out in a landscape management strategy for the lifespan of the development.
- On greenfield sites minimise trenching and concrete foundations - use pile driven or screw anchored bases (as opposed to concrete bases) where archaeological constraints allow. On decommissioning ensure the ground is fully restored - any concrete should be broken up, removed from site and the area backfilled and reseeded.

In addition, when designing a scheme across multiple fields the following guidance should be considered:

- Preserve the legibility of field patterns by minimising the number of adjacent fields that are developed and setting PV panels back from the edges of fields. This will also enable effective hedgerow management.
- Designing a site layout around existing hedgerows/ woodland will help to break up the massing of panels.
- Seek to avoid dominating character in a local area – maintain a diversity of landcover types in any one area.

Ancillary features

- Use existing access points and minimise introduction of new tracks into the landscape – consider using existing tracks or laying temporary surfaces to transport panels onto site where possible. Avoid access tracks between rows of panels as far as possible.
- Avoid use of urbanising elements in rural situations, such as kerbs, and minimise areas of hard surfacing, urban style fencing, gates and lighting (particularly in the darkest landscapes).
- Ensure on-site cables are buried underground (without damage to existing hedgerows or archaeology) to minimise effects on landscape character and visual amenity - grid connections should be underground wherever possible.
- House inverters in existing buildings where possible, particularly where these are of local vernacular and located near the site.
- Cabinets or buildings should be carefully sited and should generally avoid high or exposed locations – use existing and locally occurring vegetation to screen such features.
- Ensure new buildings constructed as part of a solar PV development match the local vernacular, in terms of colours used and scale.
- Use existing or new landscape features to integrate security features into the landscape e.g. security fencing. Set fences back from hedge boundaries on the site's perimeter to reduce their overall height when viewed from outside the site and use planting to screen views of the fences.
- Landscape features used for security or screening should be in character with the landscape – different features may be appropriate for different landscapes e.g. ditches, berms (bunds), tall crops, hedges or tree lines. Ensure any planting is of locally occurring species and in character with the landscape.
- Minimise the use of security lighting – aim to use passive infra-red (PIR) technology where possible and ensure that any visible lighting is designed and installed in a manner which minimises glare or light spill into

the surrounding landscape (para. 13.13.2 of PPW encourages a balance between the provision of lighting and protection of the natural and historic environment and retention of dark skies).

Land use / landscape enhancement

- Screening development will be important – however, letting hedgerows grow higher should only be employed where it fits with local landscape character, restores traditional management practices, does not result in deterioration of the hedge and does not produce unreasonable shading of panels. Use native or locally naturalised tree and shrub species for any screening.
- Consider opportunities to provide enhanced management of landscape features and habitats as part of a development, including contributing to wider landscape scale targets and projects in Bridgend's Biodiversity Action Plan and Landscape Character Assessment.
- Encourage traditional management of farmland including maintaining small fields, hedgerows, stone walls and the grazing of land. Allow hedge tree regeneration or, where appropriate, planting of native or locally naturalised tree species in hedges.
- Any development must be reversible and enable full restoration of the site to its original state once the installation is decommissioned.
- Developers should provide:
 - a design statement to set out how the design has evolved, how the design responds to landscape character, and how visual issues have been addressed.
 - agreed mitigation measures accompanied by a 'concept landscape design plan' showing any proposals for landscape and ecological mitigation.
 - details of proposed land management for land surrounding/under installations to demonstrate proposed land use and management through the operational phase and 5 years after decommissioning.

Designing for Multiple Developments

- 3.20 Cumulative effects of multiple schemes are a significant issue for planning authorities to deal with. The general guidance below can assist in minimising cumulative effects.

Guidance for designing multiple solar PV developments in the landscape

- Ensure any solar PV development takes account of landscape sensitivity as well as any landscape strategies for solar PV development that may be available.
- When designing a solar PV development it is important to consider how the scheme fits with other existing, consented and proposed schemes (including within neighbouring planning authorities) to minimise cumulative effects.
- Aim for similarity of design between schemes that fall in the same type of landscape (in terms of siting, layout, scale, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response.
- When designing extensions it will be important that scale and appearance of panels are compatible.
- Individual solar PV developments should generally appear visually separate unless specifically designed to create the appearance of a single combined development.
- It will be important to ensure that solar PV developments do not have a defining influence on the overall experience of the landscape and that some open views devoid of PV developments are maintained within Bridgend County Borough (i.e. ensure that rural character remains in Bridgend – ensuring PV developments do not dominate).
- Ensure the area of development is in scale with the landscape in which it lies.
- If two or more solar PV developments are clearly visible in the same view and appear in the same Landscape Character Area they should appear of similar scale (unless the first development is considered too large for its landscape context) and their design should relate to the underlying landscape in the same

way.

- Consider views from settlements when designing multiple solar PV developments – avoid ‘surrounding’ a settlement.

Summary of Information Required When Submitting a Planning Application

- 3.21 The following summary sets out the landscape and visual information that will be required when making a planning application for a solar PV development. Most ground-mounted solar PV developments require planning permission, but developers should contact the local planning authority if they are unsure of whether consent is required.

Requirement for full Environmental Impact Assessment (EIA)

- 3.22 The Screening criteria specified for Schedule 2 developments (which include industrial installations for the production of electricity, such as solar PV) as set out in the Environmental Impact Assessment (EIA) Regulations for England, Scotland, Wales and Northern Ireland state that **any development of more than 0.5 hectares should be screened for requiring an EIA**. The requirement for full EIA will generally depend upon the scale of the development and its visual impact. This decision will be made at screening stage by the local planning authority.
- 3.23 Information to be submitted with a planning application should be proportional to the size of the scheme, and can be discussed with the Council in advance of submission.

Landscape and visual assessment / appraisal

- 3.24 A landscape and visual appraisal will be expected to be submitted to accompany any planning application. For EIA developments a full Landscape and Visual Impact Assessment (LVIA) should be provided, both in accordance with guidance in the Landscape Institute and Institute for Environmental Management and Assessment (2013) *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition* (published by Routledge). The accompanying statement of clarification (available to download from <http://www.landscapeinstitute.org/knowledge/GLVIA.php>) provides some additional information about the difference between appraisals/assessments for EIA and non-EIA developments.

Written report

- 3.25 The written assessment/appraisal should be clear and logical in its layout and presentation. It should be a balanced document providing an unbiased account of the landscape and visual effects, with reasoned and justifiable arguments. It should consider:
- A summary description of the development (including area coverage of the panels in hectares, orientation and positioning of the panels, access arrangements (e.g. temporary or permanent access tracks), location of any compounds, and all ancillary elements).
 - Effects on landscape features/fabric including consideration of loss of elements (e.g. hedges, trees).
 - Effects on landscape character including consideration of direct changes that will occur to the character of the landscape in which the proposal is located and the indirect changes to character of landscapes from where the solar PV development will be visible – this should include how the development will affect perceptions of character and how widespread and prominent the changes will be.
 - Effects on landscape values including consideration of potential change to special qualities of protected landscapes (e.g. the Vale of Glamorgan Heritage Coast and Bridgend’s Special Landscape Areas).
 - Effects on visual amenity of receptors (with reference to representative assessment viewpoints which should be selection in consultation with the the local planning authority).
- 3.26 A glossary of technical terms used in the assessment and a reference list would also be helpful.
- 3.27 For EIA developments, a **non-technical summary** should be provided to enable a non-specialist to understand the landscape and visual effects of the proposal – this should include:
- a summary description of the development (as above), the aspects of landscape character and visual amenity likely to be significantly affected; and
 - the mitigation measures to be implemented.

Use of maps, illustrations and visualisations

3.28 The report should be accompanied by maps and illustrations – the number and detail of which will be proportional to the scheme in question, and may also vary according to the sensitivity of the site and the potential for cumulative effects. However, as a guide, the following illustrations will typically be required as part of a LVIA:

- **Location plan** (based on Ordnance Survey 1:25,000 scale mapping showing contours);
- **A site layout plan** (based on Ordnance Survey 1:500 scale mapping) showing position of arrays, access arrangements (e.g. temporary or permanent access tracks), location of any compounds, and all ancillary elements in the context of the physical landscape fabric (e.g. other buildings, nearby dwellings, woodland, hedges, rivers and ponds). This may already form part of the planning application in which case it can be cross-referenced to;
- **Study area plan at A3**. The scale of mapping will be determined by the extent of the study area, which should be agreed with the Council.
- **A map or information indicating which Bridgend Landscape Character Areas and LANDMAP aspect areas (showing overall evaluations)** fall within the study area;
- **A map showing national and local landscape designations and open access land** within the study area;
- **Mapping of Historic Parks and Gardens, Cadw registered historic landscapes and Conservation Areas** may also be relevant to the LVIA (this information may also be recorded in the cultural heritage assessment).

3.29 Applications for smaller (non-EIA) proposals may not need to submit all of the above information, but this depends on the nature of the scheme. Applicants for non-EIA schemes are advised to discuss with the Council to agree what information should be submitted with their planning application.

Zones of Theoretical Visibility

3.30 It will be important to consider views to the site, including widely recognised iconic views and acknowledged important views to, from, or between heritage assets. The need for ZTV should be discussed with the Council, depending on the scale of the development and its location (e.g. in the context of any landscape designations).

- **ZTV indicating the extent of visibility** (including the proportion of the site which will be theoretically visible if possible, and clearly indicating distance radii from the site);
- **A map showing viewpoint locations overlaid onto the ZTV** (this may be combined with the above map if relevant);
- **ZTV overlaid onto Bridgend's Landscape Character Areas and any landscape designations** (if considered useful);
- **Photographs and visualisations** for viewpoints to illustrate the location and extent of development in the landscape, provided and reproduced at a viewing distance of 40-50cm (this could comprise a photograph of the site and shading of field(s) to be affected by panels).

Cumulative assessment

3.31 If existing or proposed solar PV schemes are located within proximity to the application site a cumulative assessment may be required. This requirement should be discussed with the Council, including the extent of the search area used to identify other schemes. Additional information required for a cumulative assessment (in addition to the above) should include:

- **Location map for all operational, consented and application sites** within the study area, presented on a 1:50,000 or 1:25,000 OS base with concentric distance bands.
- **Cumulative ZTV (CZTV) for existing and proposed solar PV schemes in combination with the proposed development** (more than one CZTV may be useful to show different assessment scenarios).
- **CZTVs overlaid onto Bridgend's Landscape Character Areas, LANDMAP aspect areas (showing their evaluations), landscape designations and cumulative assessment viewpoints** where this helps understand the assessment.

- **Photographs or visualisations of up to 360 degrees** to show the proposed development in the context of other developments - annotated with site name, status (operational, consented, application), distance to each development, and clearly labelled to indicate how the images should be held and viewed.

4 Landscape Sensitivity Assessment and Guidance by Landscape Character Area



4 Landscape Sensitivity Assessment and Guidance by Landscape Character Area

Purpose

This Section of the Supplementary Planning Guidance is designed to provide a robust evidence base for informing future planning and management decisions on wind and field-scale solar photovoltaic (PV) developments across the County Borough. It uses the framework of the 15 Landscape Character Areas (LCAs) to provide an assessment of sensitivity to wind and solar PV developments that is strongly linked to local landscape character. A strategy and tailored guidance for accommodating future development is also included for each LCA.

How to use the Landscape Sensitivity Assessments and Guidance

- 4.1 The 'User Guide' on the following page provides a checklist of how to use the information contained in the following Landscape Character Area (LCA) assessments, as well as the preceding chapters of the SPG. It is designed for both developers and decision-makers to help them consider landscape character and sensitivity when making proposals for wind energy or solar PV developments. It is arranged under three key stages, and sets out a series of questions as prompts to assist in using available information within this SPG to shape proposals / assist in planning decisions.
- 4.2 The remainder of this chapter contains the individual LCA assessments, in the following order:
- | | |
|-------------------------------------------------|----------|
| 1) Llangynwyd Rolling Uplands and Forestry | Page 60 |
| 2) Llynfi Valley Floor and Lower Slopes | Page 68 |
| 3) Llynfi & Garw Uplands and Forestry | Page 74 |
| 4) Bettws Settled Farmland | Page 80 |
| 5) Garw Valley Floor and Lower Slopes | Page 87 |
| 6) Mynydd Llangeinwyr Uplands | Page 93 |
| 7) Ogmere Valley Floor & Lower Slopes | Page 100 |
| 8) Ogmere Forest and Surrounding Uplands | Page 107 |
| 9) Hirwaun Common and Surrounding Ridges | Page 116 |
| 10) Coity Rural Hinterland | Page 123 |
| 11) Merthyr Mawr Farmland, Warren and Coastline | Page 129 |
| 12) Newton Down Limestone Plateau | Page 137 |
| 13) Porthcawl Coastline and Settled Farmland | Page 144 |
| 14) Kenfig Dunes and Coastline | Page 152 |
| 15) Cefn Cribwr Ridge and Settled Farmland | Page 159 |
- 4.3 The LCAs above are mapped in Figure 4.1, showing their location within the County Borough.

Stage 1 – Policy context

- Has the applicant considered how the development accords with the relevant LDP policies, as set out in Chapter 2?

Stage 2 – Landscape sensitivity

- What size development is proposed (number/height of turbines for wind energy development, or footprint for solar PV)?
- Which Landscape Character Area (LCA) is the proposed development in (see Figure 4.1)?
- Is the site characteristic of the wider LCA (refer to the key characteristics listed at the front of the relevant LCA assessment)?
- What is the sensitivity rating for the LCA and type/scale of development being proposed?

Stage 3 – Detailed siting and design considerations

- Does the development accord with the generic guidance for that type of development contained in Chapter 3 of this SPG? If not, what aspects of the proposed development conflict with which parts of the guidance?
- Does the siting and design of the scheme accord with the '**LCA-specific guidance for development**' for the relevant LCA? If not, what aspects of the proposed development conflict with which parts of the guidance?
- If the development conflicts with any guidance can the impacts be mitigated?
- If the proposal was developed in the landscape, would this be consistent with the **Overall strategy** for the LCA?

Stage 4 – Cumulative impact

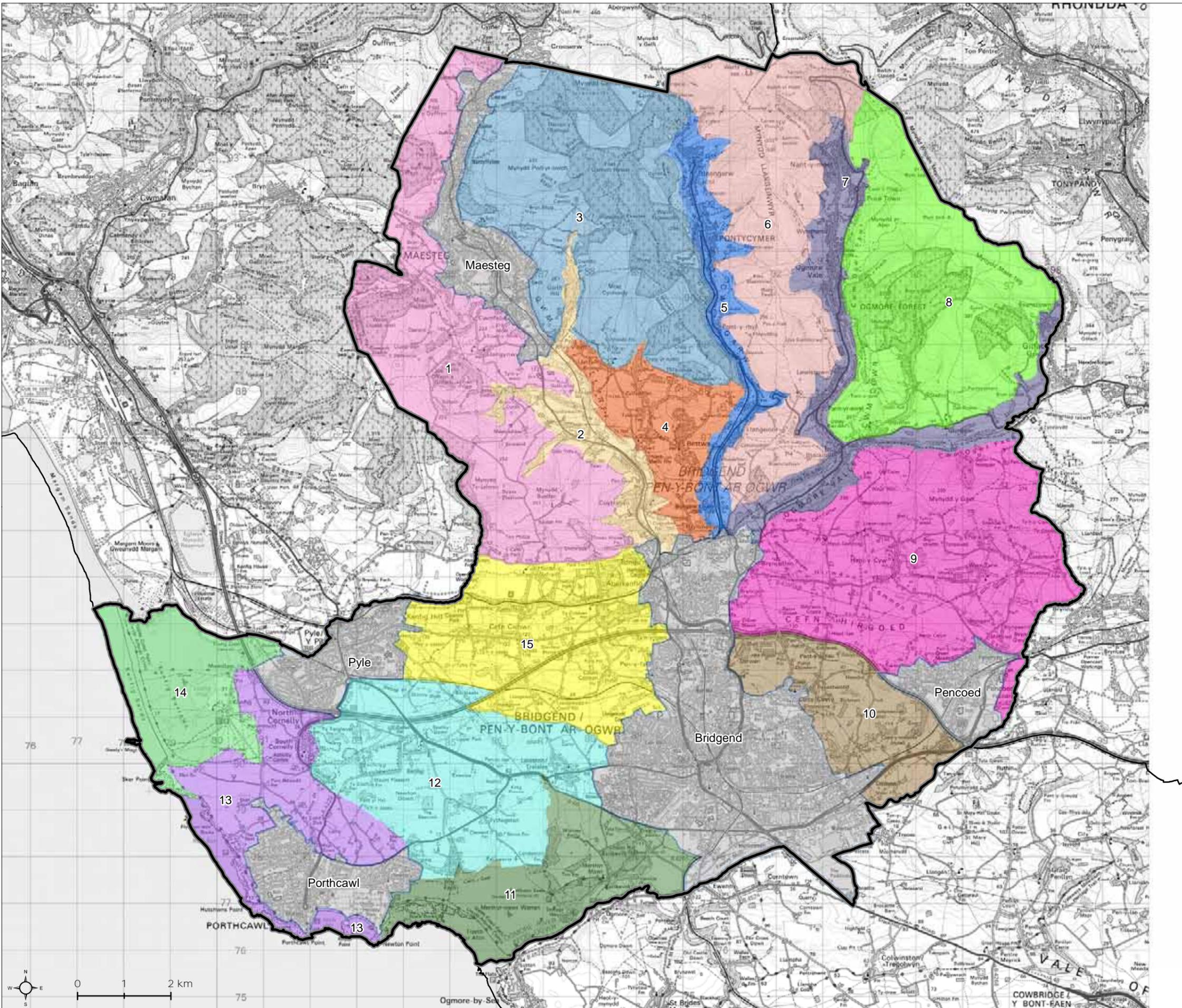
- Is the development in line with the guidance on '**Designing for multiple developments**' set out in the Chapter 3 of this SPG and the '**Guidance for siting multiple developments**' included for the relevant LCA?
- If not, which guidance does it conflict with?
- Will wind energy/solar PV developments have a defining influence on the overall character of the LCA? Make reference to the key characteristics of the relevant LCA description contained at the beginning of the relevant LCA assessment.

Renewables in the Landscape: Supplementary Planning Guidance

Figure 4.1

Landscape Character Area Framework

-  Bridgend County Borough Boundary
-  1 Llangynwyd Rolling Uplands and Forestry
-  2 Llynfi Valley Floor and Lower Slopes
-  3 Llynfi & Garw Uplands and Forestry
-  4 Bettws Settled Farmland
-  5 Garw Valley Floor and Lower Slopes
-  6 Mynydd Llangeinwyr Uplands
-  7 Ogmores Valley Floor & Lower Slopes
-  8 Ogmores Forest and Surrounding Uplands
-  9 Hirwaun Common and Surrounding Ridges
-  10 Coity Rural Hinterland
-  11 Merthyr Mawr Farmland, Warren and Coastline
-  12 Newton Down Limestone Plateau
-  13 Porthcawl Coastline and Settled Farmland
-  14 Kenfig Dunes and Coastline
-  15 Cefn Cribwr Ridge and Settled Farmland
-  Urban Area

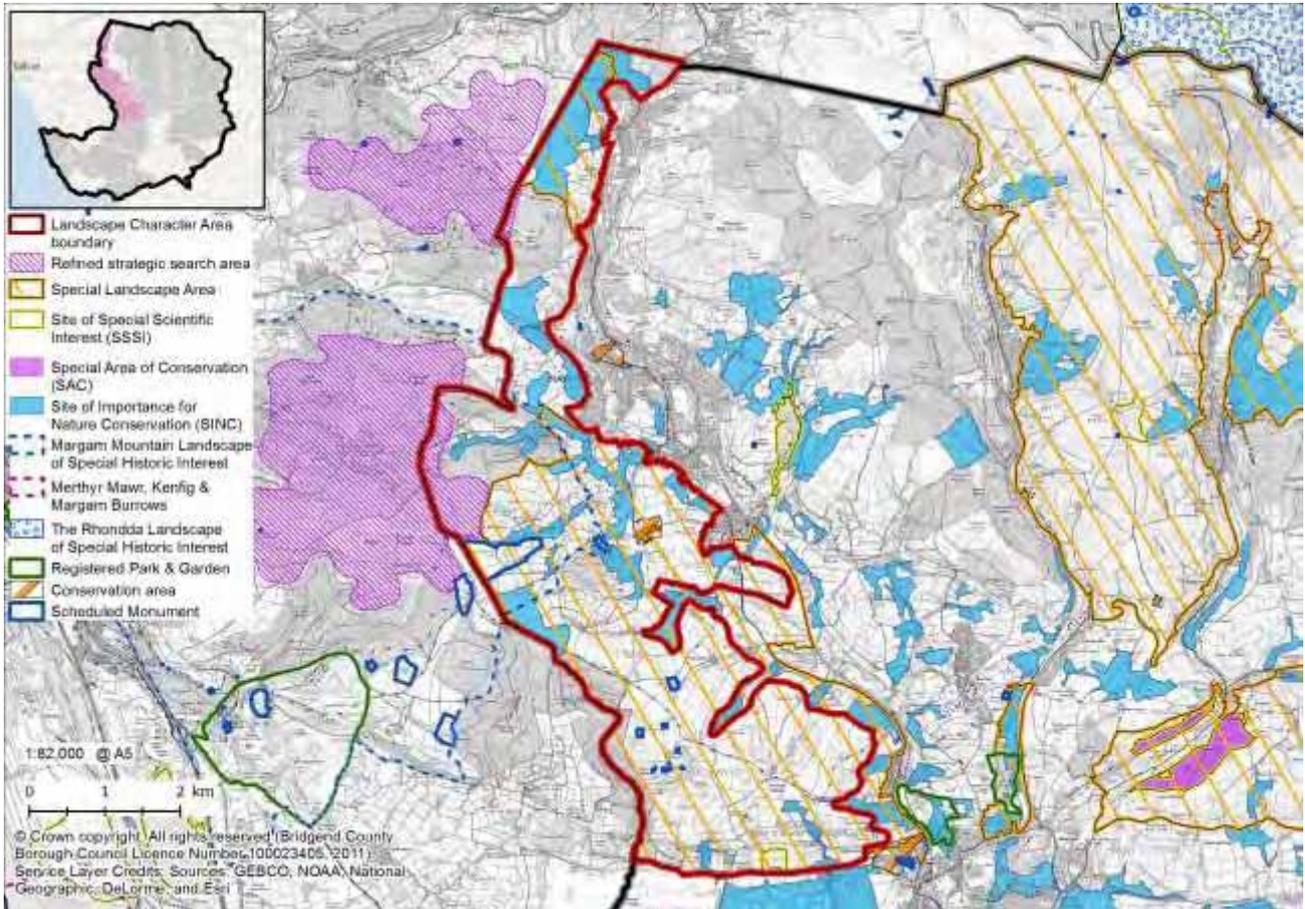


Map Scale @ A3: 1:80,000



LCA 1: Llangynwyd Rolling Uplands and Forestry

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This LCA is located along the north-western fringes of the County Borough, to the west of Maesteg. All of the landscape is defined as 'Upland' in LANDMAP's Visual & Sensory aspect (Level 2).

The southern half of the LCA falls within the Western Uplands SLA, and a section in the north falls entirely within the Foel y Dyffryn SLA. Other designations include Cwm Risca SSSI, Margam Mountain Landscape of Special Historic Interest, Bwlwarcaw hillfort and Llangynwyd Castle Scheduled Monuments, Llangynwyd Conservation Area and a number of SINC's.

3.4% of the LCA in the west falls within the refined TAN 8 Strategic Search Area *Margam Mountain* and less than 1% of land in the north-west falls within the *Foel y Dyffryn* SSA.

LCA 1: Key Landscape Characteristics

- Strongly undulating upland landscape with a series of north-east facing slopes and hill summits ranging from 120 to 365 metres AOD.
- Distinctive topography influenced by the heavily dissected Upper Coal Measures plateau greatly modified by the effects of glaciation.
- Landscape crossed by a number of fast-flowing springs and streams, flowing into the Llynfi Valley below.
- Dense coniferous forestry plantations on some slopes and hill summits (e.g. Garn Wen and Waun Lluest-wen) with linear broadleaved woodlands found along valley sides.
- Dark, straight plantation edges providing a stark contrast to the adjacent muted grasslands on rounded slopes.
- Pastoral landscape with significant tracts of rough sheep and pony grazing on higher ground (particularly in the north).
- A strong pattern of irregular fields enclosed by hedgerows, tree belts and stone walls.
- Elevated land around Mynydd Ty-talwyn including large, regular semi-improved pastures divided by fencing.
- Valued habitats including heathland, blanket bog, acid grassland, fen and marsh (with significant areas defined as SINC's).
- Broadleaved semi-natural woodland on slopes and valleys, and nationally important marshy grassland (supporting marsh fritillaries) at Cwm Risca Meadow SSSI.
- Patches of bracken, gorse and rush pasture found throughout.
- Land west of Llangynwyd within the Margam Mountain Landscape of Special Historic Interest, with scheduled archaeological features including Y Bwlwarcau hillfort and the medieval Llangynwyd Castle.
- Cluster of nationally important medieval house platforms and settlement remains around Mynydd Ty Talwyn.
- Nucleated hill-top village of Llangynwyd (a Conservation Area), with prominent 15th century square church tower forming a local landmark.
- Farmsteads and small groups of dwellings thinly dispersed elsewhere.
- A small number of minor roads, tracks and footpaths cross through the landscape. The Ogwr Ridgeway Walk passes through the southern part of the LCA, and areas of higher ground are open access land.
- A strongly rural and tranquil landscape despite the close proximity of nearby development at Maesteg.
- Tranquil qualities eroded by the presence of pylon lines, telecommunications masts and urban fringe land uses close to Maesteg, including a golf course.
- Southern ridgelines affording panoramic views across the County Borough, including wind farm developments on distant skylines.
- Intervisibility with Maesteg a strong feature of the northern half of the LCA.

LCA 1: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Distinctive undulating upland landscape with elevated slopes and hill summits carved by fast-flowing springs and streams.	
Land cover pattern and presence of human scale features	<p>Predominantly pastoral landscape of irregular fields bounded by hedgerows, tree belts and stone walls with rough grazing on the higher ground. Near Mynydd Ty-talwyn fields are larger and more regular and bound by fencing. Broadleaved woodland is found along slopes and valleys, with areas of coniferous plantation on higher ground. Semi-natural habitats including heathland, blanket bog, acid grassland, fen and marsh are also found in this LCA.</p> <p>Human scale features include the hill-top village of Llangynwyd and farmsteads scattered throughout the landscape, while the development of Maesteg is adjacent to this LCA. The areas of woodland and plantation, hedgerows and stone walls also form human scale features in the landscape.</p>	
Historic landscape character	This landscape has several distinctive and significant heritage assets, namely Y Bwlwarcu hillfort and medieval Llangynwyd Castle, found in the Margam Mountain Landscape of Special Historic Interest (which covers 20% of the LCA). The key features of the historic landscape include the prehistoric and medieval settlement and associated field systems. Llangynwyd is also designated as a Conservation Area due to its medieval and post-medieval historic importance and associations.	
Skylines	Pylons and telecommunications masts intrude on some of the LCA's skylines, whilst the prominent square church tower at the hill-top village of Llangynwyd forms a local landmark. Otherwise, the majority of skylines are open and undeveloped, occasionally marked by plantations.	
Key views and vistas	<p>There are panoramic views across the County Borough from the high ridgelines in the south of the LCA, including to Cefn Cribwr (LCA 15) and beyond across the south-west of the County Borough (across the Bristol Channel to Exmoor in clear conditions). The northern half of the LCA has strong intervisibility with the valley settlement of Maesteg (LCA 2).</p> <p>Distant wind energy developments (Ffoch Nest/Pant-y-Wal, Taf Ely to the east, and Ffynnon Oer within Neath Port Talbot CB) also feature in views from elevated positions. Within the LCA itself Llangynwyd church tower is a prominent local landmark.</p>	
Scenic and special qualities	<p>70% of this LCA falls within the Western Uplands Special Landscape Area (SLA), valued for its rural agricultural character despite being close to Maesteg. Llangynwyd is identified as having importance due to its historic and cultural associations. A further 8% of the LCA is designated within the Foel y Dyffryn SLA, valued for the visual backdrop provided to settlements on the valley floor and the presence of Biodiversity Action Plan Habitats.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the open, traditionally grazed uplands with high levels of tranquillity, the historic field and settlement patterns, important semi-natural habitats and archaeological features and panoramic views.</p>	
Perceptual qualities	This is a strongly rural and tranquil landscape, a sparse settlement pattern, and patches of woodland and semi-natural habitats lead to a sense of naturalness, although this is impacted by existing human influence in the form of pylons and views of urban development and wind turbines in the distance.	
Summary of landscape sensitivity	<p>Although this is a large-scale landscape with some existing development such as pylons, telecommunications masts and views of nearby development which may indicate reduced sensitivity to wind energy development, many features and characteristics of the landscape may increase levels of sensitivity. These include in particular the landscape's sense of tranquillity and rural character, valuable semi-natural habitats and the setting of nationally important heritage assets, which results in the landscape being particularly sensitive to developments of 'very large' turbines.</p> <p>The following locational variations in terms of the above summary should be taken into account:</p> <ul style="list-style-type: none"> The area within the Western Uplands Special Landscape Area would be highly sensitive to the development of 'large' and 'very large' turbines due to its smaller scale landscape patterns and strong historic associations (including Llangynwyd Conservation Area). 	
Sensitivity to different turbine heights	Very Small (15-25m)	L
	Small (26-50m)	L-M
	Medium (51-75m)	M
	Large (76-110m)	M
	Very large (111-150m)	M-H

<p>Commentary on different cluster sizes</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	<p>Although this is a large-scale landscape with existing man-made structures on skylines, the distinctive topography, presence of frequent human-scale features and the landscape's function as a rural backdrop to views from Maesteg, Bridgend and Cefn Cribwr mean that it would be highly sensitive to 'large' and 'very large' clusters of wind turbines.</p>
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SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 1: Llangynwyd Rolling Uplands and Forestry in relation to wind energy development is included below:

- The distinctive undulating upland topography, with largely undeveloped skylines forming a backdrop to views from nearby settlements.
- Panoramic views from high ridgelines in the south across the County Borough and views to the prominent church tower of Llangynwyd, which forms a local landmark and human-scale feature.
- Important historic features which are set within the Margam Mountain Landscape of Special Historic Interest, including Y Bwlwarcau hillfort and Llangynwyd Castle Scheduled Monuments.
- Areas of valued semi-natural habitats (some of which are designated), including heathland, blanket bog, acid grassland, fen and marsh.
- The scenic qualities of the upland landscape, traditionally grazed by sheep with high levels of tranquillity and predominantly pastoral landscape contributing to a locally valued rural character.

LCA 1: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>Baiden Farm currently has two turbines permitted, both in the small (15-25m) size category.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development (outside the SSAs)
<p>The overall strategy for the LCA, outside the Margam Mountain and Foel y Dyffryn Strategic Search Areas (SSAs), is as follows:</p> <p>In line with TAN 8, the overall strategy is to maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p> <p>For locations within the Margam Mountain SSA and Foel y Dyffryn SSA (see map on the front page), it is accepted that change to landscape character could result from wind energy development.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The LCA’s important heritage features including Y Bwlwarcau hillfort, Llangynwyd Castle and Llangynwyd Conservation Area are protected.• The siting of wind turbines and their ancillary equipment avoids areas of valuable open upland habitats such as heathland, blanket bog, acid grassland, fen and marsh.• The presence of wind turbines does not impact on the characteristic views, particularly to the Llangynwyd church tower and the panoramic open views from southern ridgelines across the wider County Borough and beyond.• The strong rural and often remote character, locally valued due to the close proximity of urban development, is retained.• Wind energy development does not overwhelm the human scale of the landscape features found in the south, including the settlement of Llangynwyd, scattered farmsteads, trees and stone walls.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Although it is accepted that change to landscape character could result from wind energy development within the SSAs, outside the SSAs multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’¹⁶).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response¹⁷.

¹⁶ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

¹⁷ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 1: Landscape Sensitivity Assessment for Solar PV Development

Criteria	Landscape attributes and descriptions	
Landform	Distinctive undulating upland landscape with some prominent slopes and hill summits.	
Sense of openness/enclosure	A mixed landscape with some areas of pastoral land and upland – the latter with a more open feel. Some areas of coniferous plantation and tracts of broadleaved woodland provide shelter and enclosure. Fields are bounded by a mixture of hedgebanks, tree belts and stone walls.	
Field pattern and scale	A mainly pastoral landscape with a strong pattern of small, irregular medieval fields bounded by a mixture of hedgebanks, tree belts and stone walls. In some elevated areas fields are large and more regular and enclosed by fences.	
Land cover	The agricultural land is generally pastoral, with rough grazing found on higher ground. Broadleaved woodland is found along slopes and valleys, with areas of coniferous plantation on higher ground. Semi-natural habitats including heathland, blanket bog, acid grassland, fen and marsh are also found in this LCA.	
Historic landscape character	This landscape has several distinctive and significant heritage assets, namely Y Bwlwarcaw hillfort and medieval Llangynwyd Castle, found in the Margam Mountain Landscape of Special Historic Interest (which covers 20% of the LCA). The key features of the designated historic landscape include the prehistoric and medieval settlement and associated field systems. Llangynwyd is also designated as a Conservation Area due to its medieval and post-medieval historic importance and associations.	
Key views and vistas	<p>There are panoramic views across the County Borough from the high ridgelines in the south of the LCA, including to Cefn Cribwr (LCA 15) and beyond across the south-west of the County Borough (across the Bristol Channel to Exmoor in clear conditions). The northern half of the LCA has strong intervisibility with the valley settlement of Maesteg (LCA 2).</p> <p>Distant wind energy developments (Ffoch Nest/Pant-y-Wal, Taf Ely to the east, and Ffynnon Oer within Neath Port Talbot CB) also feature in views from elevated positions. Within the LCA itself Llangynwyd church tower is a prominent local landmark.</p>	
Scenic and special qualities	<p>70% of this LCA falls within the Western Uplands Special Landscape Area (SLA), valued for its rural agricultural character despite being close to Maesteg. Llangynwyd is identified as having importance due to its historic and cultural associations. A further 8% of the LCA is designated within the Foel y Dyffryn SLA, valued for the visual backdrop provided to settlements on the valley floor and the presence of Biodiversity Action Plan Habitats.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the open, traditionally grazed uplands with high levels of tranquillity, the historic field and settlement patterns, important semi-natural habitats and archaeological features and panoramic views.</p>	
Perceptual qualities	The strong rural and tranquil character of this landscape with its dispersed and sparse settlement pattern, and patches of woodland and semi-natural habitats lead to a sense of naturalness, although this is impacted by existing human influence in the form of pylons and views of urban development and wind turbines in the distance.	
Summary of landscape sensitivity	<p>There are some parts of the landscape that are more enclosed by plantations and woodlands, and larger, more regular field patterns also exist – which might indicate a lower landscape sensitivity to solar PV development. However, the open character of the landscape, the presence of prominent elevated slopes, the characteristic small scale, historic field pattern, presence of valued semi-natural habitats, sense of tranquillity and important setting to historic features could all result in increased sensitivity to the development of solar PV.</p> <p>The following locational variations in landscape sensitivity should be taken account of:</p> <ul style="list-style-type: none"> The open moorland in the northern part of the LCA (within the Foel y Dyffryn SLA) would be highly sensitive to the development of any solar PV. 	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	M
	Medium (>5-10ha)	M-H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 1: Llangynwyd Rolling Uplands and Forestry in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> Strong historic pattern of irregular fields enclosed by hedgerows, tree belts and stone walls. The open tracts of traditionally grazed uplands and other valued semi-natural upland habitats including 		

heathland, blanket bog and acid grassland.

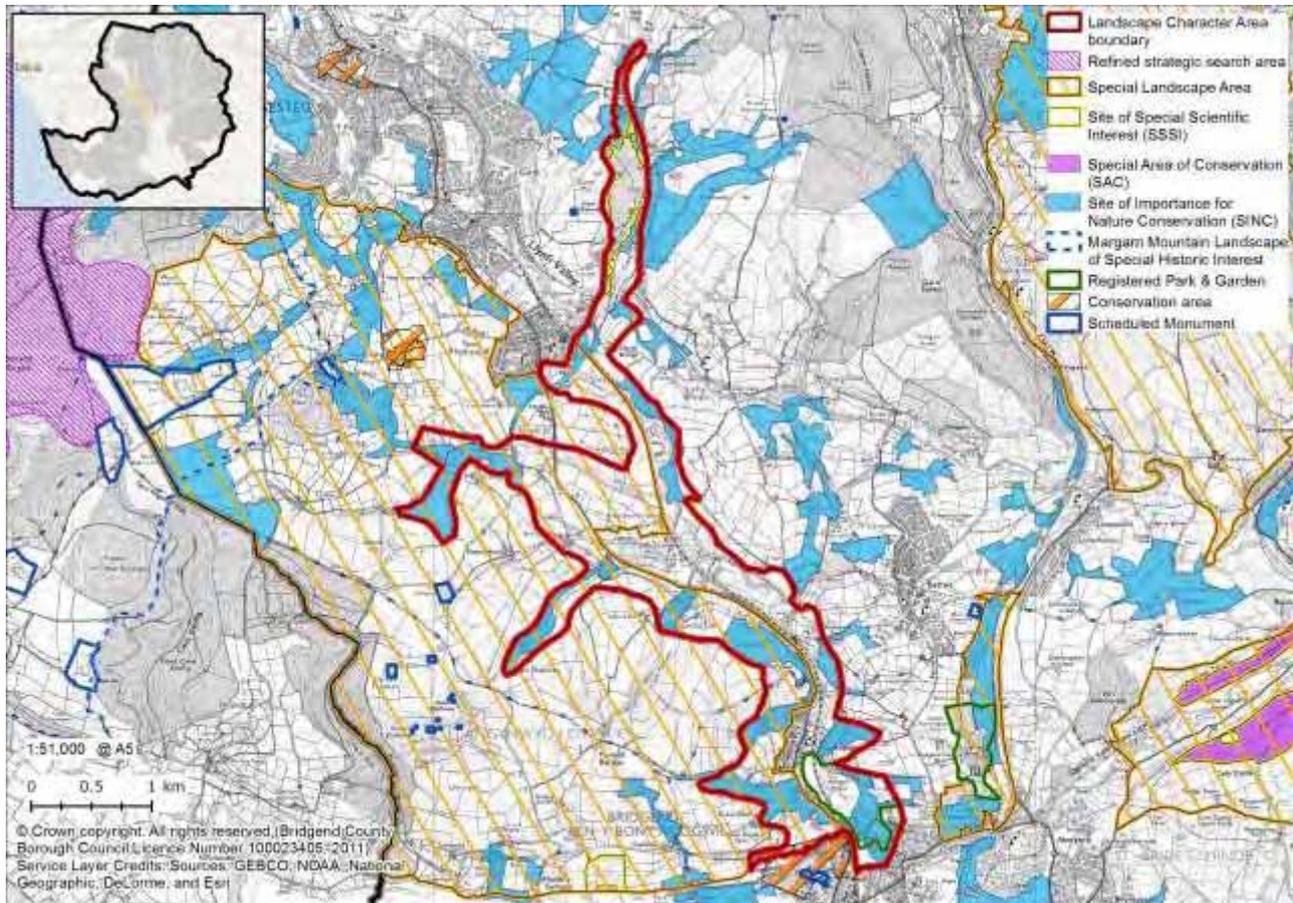
- Important historic features which are set within the Margam Mountain Landscape of Special Historic Interest, including Y Bwlwarcu hillfort and Llangynwyd Castle Scheduled Monuments.
- Its strongly rural and tranquil character, valued due to the close proximity of the LCA to urban development.

LCA 1: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The strong field pattern, which is historic in origin and recognised as a characteristic feature in the Margam Mountain Landscape of Special Historic Interest, is not degraded by solar PV development.• Important heritage features including Y Bwlwarcaw hillfort, Llangynwyd Castle and Llangynwyd Conservation Area are protected.• Valuable semi-natural habitats associated with upland areas such as heathland, blanket bog, acid grassland, fen and marsh are retained.• The strong rural and tranquil character, locally valued due to the close proximity of urban development, is retained.• Characteristic views to the LCA from surrounding urban developments and the role of the landscape as a backdrop to valley floor settlements are retained.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 2: Llynfi Valley Floor and Lower Slopes

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This LCA comprises the valley floor and lower slopes of the Llynfi Valley between Bridgend and Maesteg. All of the LCA is classed as 'Lowland Valley' in LANDMAP's Visual & Sensory aspect (Level 2).

The western half of the LCA falls within the Western Uplands Special Landscape Area (SLA). Other designations include Cwm Du Woodlands SSSI, Coytrahen House Registered Park and Garden, part of Tondu Conservation Area and a number of SINCs.

LCA 2: Key Landscape Characteristics

- South-easterly flowing Llynfi river, with valley sides dissected by frequent tributaries creating a landform of rounded spurs between incised valleys.
- Views to prominent hill summits either side – rising dramatically to over 350 metres at Craig-yr-hudol in the east, and overlooked by the hill summit of Mynydd Baedan (251 metres) in the west.
- Geology dominated by an extensive, heavily dissected plateau of Upper Coal Measures, with glacial boulder clay found on some lower valley slopes, and alluvial deposits along the valley's length.
- Tributary valleys and the undeveloped fringes of the Llynfi River frequently clothed in broadleaved and riparian woodland, creating a sense of enclosure and shelter.
- Lower valley slopes of semi-improved and improved grassland, with relatively large, regular fields bounded by mixed-species hedgerows (oak, ash, hazel, holly).
- Fields on higher slopes defined by dry stone walls, wire fences and occasional weak hedgerows.
- Riparian vegetation and broadleaved semi-natural woodlands on valley sides (including sessile oak woodlands at Cwm Du Woodlands SSSI) – dominated by oak and ash with understoreys including holly, hazel, hawthorn and elder.
- Patches of purple moor grass, rush pasture and scrub contributing to semi-natural character.
- Grade II listed 18th century Coytrahen House estate on the south-eastern banks of the Llynfi. Valued for large-scale walled and terraced gardens in an attractive woodland setting.
- Linear roadside development of 19th century terraces and modern housing at Coytrahen, with occasional hamlets and farmsteads nestled within tributary valleys.
- Valley floor crossed by the snaking forms of the railway line and A4063 linking Bridgend and Maesteg.
- Central valley landscape dominated by the large form of the Bridgend Paper Mills with landmark chimneys, along with further smaller industrial developments and sewage works dotted along the valley floor.
- Perceptual qualities dominated by the sound and movement of traffic on the main transport corridors, along with views/noise from the mills (and high smoke plumes visible from long distances).
- Undeveloped slopes and branch valleys, with sometimes dense woodland cover, providing a relative sense of tranquillity and naturalness to these parts of the landscape.

LCA 2: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Narrow, small-scale valley of the Llynfi River with adjoining tributaries and prominent hill summits either side (within adjacent LCAs). The LCA includes steep lower valley slopes.	
Land cover pattern and presence of human scale features	Small-medium fields of semi-improved and improved grassland bound by mixed species hedgerows on the lower slopes and stone walls or wire fences on higher ground. Broadleaved and riparian woodland is found along undeveloped valley and tributary slopes. There are semi-natural habitats of purple moor grass, rush pasture and scrub. Human scale features include frequent trees, development at Coytrahen, and occasional hamlets and farmsteads along the tributary valleys.	
Historic landscape character	The south of the LCA includes the Grade II listed 18 th century Coytrahen House estate with its walled gardens and wooded parkland.	
Skylines	As this LCA covers the Llynfi Valley, which sits below the neighbouring uplands (LCAs 1, 3 and 4), skylines are not prominent. However, the large paper mill chimneys (and their smoke plumes) form local landmarks that are strongly visible along the main central valley. Views along the valley also frequently feature woodlands and linear development.	
Key views and vistas	The valley is highly intervisible with the surrounding uplands and ridges, and this relationship is identified as a quality that should be protected and conserved in the LCA description. It also provides a rural setting to the southern fringes of Maesteg.	
Scenic and special qualities	53% of this LCA falls within the Western Uplands Special Landscape Area, valued for its rural, agricultural character despite close proximity to industrial settlements. The sensitive features of this landscape, as recorded in the LCA description, include valuable semi-natural habitats, the historic landscape associated with Coytrahen House estate, the tranquil character along the undeveloped slopes and intervisibility with the surrounding uplands.	
Perceptual qualities	Activity from the main transport corridors and industrial developments along the main valley floor dominate much of this area, although the undeveloped slopes and tributary valleys with dense woodland cover provide a contrasting sense of tranquillity and naturalness.	
Summary of landscape sensitivity	Existing development and infrastructure in this landscape could indicate that it has relatively low levels of sensitivity. However, the LCA's locations of tranquil, undeveloped character, the presence of the Grade II Listed Coytrahen estate, and the narrow, intricate nature of the valley landform could increase the landscape's sensitivity to wind energy development. This landscape would be highly sensitive to the development of 'medium' to 'very large' turbines (of 51 metres or above) due to its small landscape scale.	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	Although this landscape has existing areas of development, the enclosed and often intricate scale of the valley landform and the presence of valued areas of semi-natural woodland and wetland habitats mean that it would be highly sensitive to any clusters greater than 'small' in scale.	
Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)		
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 2: Llynfi Valley Floor and Lower Slopes in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> The tranquil and undeveloped character of the tributary valleys and slopes, and role of the LCA as a rural setting to the southern edges of Maesteg. The nationally important 18th century Grade II listed Coytrahen House estate and its wooded setting. The high levels of intervisibility with the surrounding uplands of LCAs 1, 3 and 4. Areas of semi-natural habitats, including semi-natural broadleaved woodland (some designated as SSSI), purple moor grass, rush pasture and scrub. 		

LCA 2: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are no existing or permitted wind energy schemes within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy wind energy development within this LCA is as follows:</p> <p>To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Wind energy development does not impact upon the tranquil and undeveloped character of the tributary valleys and the valley slopes.• Wind turbines do not encroach into the upland fringes, but is linked to existing valley development.• The valued areas of semi-natural habitats, including semi-natural broadleaved woodland, purple moor grass, rush pasture and scrub are retained.• The important heritage assets and historic landscape character associated with the Grade II Listed Coytrahen House estate on the Llynfi River are protected.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’¹⁸).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response¹⁹.

¹⁸ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

¹⁹ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 2: Landscape Sensitivity Assessment for Solar PV Development

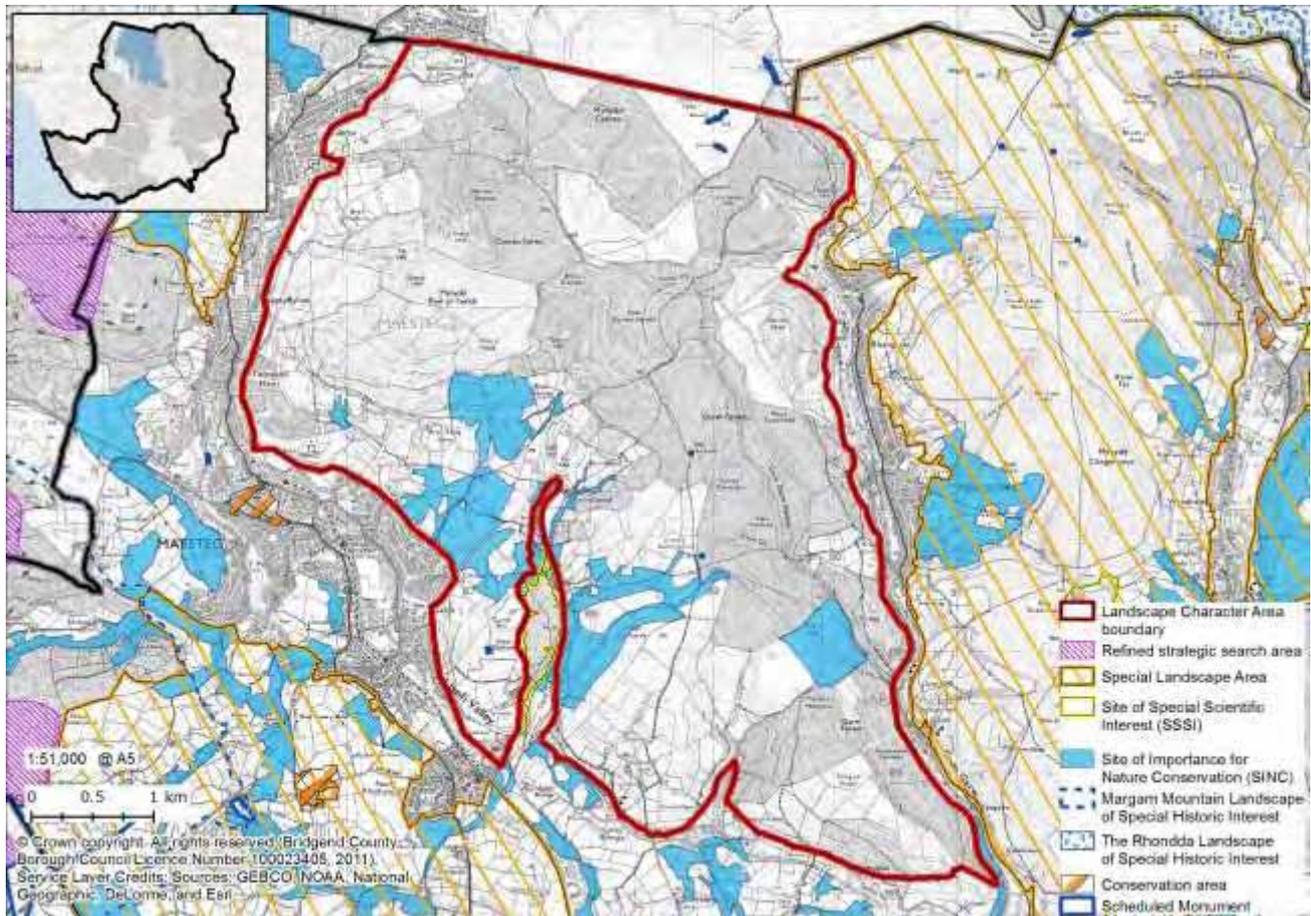
Criteria	Landscape attributes and descriptions	
Landform	Narrow, small-scale valley of the Llynfi River with adjoining tributaries and prominent hill summits either side (within adjacent LCAs). The LCA includes steep lower valley slopes.	
Sense of openness/enclosure	The undeveloped smaller tributary slopes in this LCA are often covered in dense woodland which provides a strong sense of enclosure and shelter, although the main valley floor has a more open feel due to less tree cover and the presence of transport infrastructure and development.	
Field pattern and scale	Fields in this LCA are generally small-medium and a mixture of patterns, with boundaries of mixed species hedgerows. On higher slopes, fields are marked by stone walls, fences or more sparse hedgerows.	
Land cover	The valley sides are used for pasture (and very occasional arable) and the undeveloped tributary valleys are cloaked in semi-natural broadleaved and riparian woodland, increasing the sense of enclosure. Valuable semi-natural habitats such as purple moor grass, rush pasture and scrub are found in patches through the LCA. Meanwhile, the main valley floor serves as a key transport corridor (followed by the A4063 and main railway line) and includes the large industrial complex of Bridgend Paper Mills and housing development at Coytrahen.	
Historic landscape character	The main heritage feature in this landscape is the Grade II listed 18 th century Coytrahen House estate with its walled gardens that is set with attractive woodland.	
Key views and vistas	The valley is highly intervisible with the surrounding uplands and ridges, and this is identified as a characteristic in need of protection in the LCA. It also provides a rural setting to the southern fringes of Maesteg. The large paper mill chimneys (and their smoke plumes) form local landmarks that are strongly visible along the main central valley.	
Scenic and special qualities	53% of this LCA falls within the Western Uplands Special Landscape Area, valued for its rural, agricultural character despite close proximity to industrial settlements. The sensitive features of this landscape, as recorded in the LCA description, include valuable semi-natural habitats, the historic landscape associated with Coytrahen House estate, the tranquil character along the undeveloped slopes and intervisibility with the surrounding uplands.	
Perceptual qualities	Activity from the main transport corridors and industrial developments along the main valley floor dominate much of this area, although the undeveloped slopes and tributary valleys with dense woodland cover provide a contrasting sense of tranquillity and naturalness.	
Summary of landscape sensitivity	Although the LCA contains existing human influence and enclosure provided by woodland cover that could result in a lower level of sensitivity to solar PV development, other characteristics that might heighten sensitivity include the presence of prominent valley slopes overlooked by adjacent remote uplands, and valuable tracts of semi-natural habitat and woodland.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	M
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 2: Llynfi Valley Floor and Lower Slopes in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> • The presence of open slopes overlooked by the surrounding upland landscapes (LCAs 1, 3 and 4). • Valuable semi-natural habitats, for instance riparian vegetation and woodland, purple moor grass, rush pasture and scrub. • The undeveloped character of the smaller tributary valleys and valley slopes. • The 18th century Grade II listed Coytrahen House estate and its attractive woodland setting. • The landscape's levels of relative tranquillity and rural character away from the transport corridors, and its importance as a setting to the southern fringes of Maesteg. 		

LCA 2: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The landscape's valued semi-natural habitats are protected – including designated areas of broadleaved semi-natural woodland, purple moor grass, rush pasture and scrub.• Solar PV development does not affect the valued heritage and historic landscape features of the Grade II listed Coytrahen House and estate.• Locally valued areas of tranquillity and naturalness within the tributary valleys are retained.• Solar PV development is not located in areas that are highly visible from the surrounding uplands of LCAs 1, 3 and 4.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 3: Llynfi & Garw Uplands and Forestry

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This LCA comprises an exposed upland landscape in the north of the County Borough, sitting to the east of Maesteg. All of the LCA is classified as 'Upland' in LANDMAP's Visual & Sensory aspect (Level 2).

There are no Special Landscape Areas within this LCA. Other designations include Scheduled Monuments on Mynydd Caerau and a number of SINCs.

LCA 3: Key Landscape Characteristics

- Strongly rolling upland landscape with steep slopes and rounded hill summits, reaching a maximum of 556 metres AOD at Mynydd Caerau.
- High land underlain by Upper Coal Measures with complex dip characteristics, forming distinctive rounded hill summits. Upper slopes draining into the Llynfi Valley comprise frequently bedded Middle Coal Measures, with some deposits of glacial boulder clay.
- Functions as a water catchment for the adjacent Llynfi and Garw valleys, with many fast-flowing tributaries and waterfalls carving through the landscape to meet the rivers below.
- Extensive tracts of mature larch and Norway spruce forestry on hill summits and slopes (including Garw Forest), forming prominent geometric blocks.
- Bands of semi-natural broadleaved woodland along streams (oak, ash and birch dominated) and field boundaries, with wind-sculpted, stunted oaks featuring on lower slopes.
- Apart from forestry, the main land use is rough moorland sheep grazing, with enclosed semi-improved pastures on lower slopes with areas of purple moor grass/ rush pasture.
- Large enclosures marked by fencing or lines of wind-sculpted trees.
- Valued habitats include patches of broadleaved semi-natural woodland, marshy grassland, bog, scrub, bracken, acid grassland and heathland, with a number of locally designated SINCS.
- Disused spoil tips, mines and quarries on hillsides are evidence of the area's industrial past.
- Prehistoric round cairns crown hill summits, including a nationally important cluster on Mynydd Caerau and further examples within Garw Forest. The remains of a medieval platform house are also found on Garth Hill.
- Very sparse settlement limited to a handful of scattered farmsteads on lower slopes.
- The town of Maesteg lies to the west of the LCA within the Llynfi Valley, with the only road access into the landscape from the town terminating at the entrance to a former coal mining area below the Garw Forest.
- A large proportion of the forest is open access land, accessible by forestry access tracks and public footpaths/bridleways. There is also a significant area of open access land at Mynydd Bach.
- A strong sense of remoteness and bleakness, particularly in adverse weather conditions.
- Expansive, panoramic views across the county borough and beyond (Brecon Beacons to the north, Bristol Channel and Somerset to the south).
- Lower slopes have strong visual connections with the adjacent Llynfi and Garw valleys and their associated settlements.

LCA 3: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	The landform is strongly rolling with steep slopes and rounded hills. Small-scale tributary valleys carve through the moorland into the major valleys below.	
Land cover pattern and presence of human scale features	Extensive coniferous forestry plantation is found on the high ground and slopes, whilst broadleaved woodland is found along undeveloped streams. Agricultural use on the higher slopes is generally open rough sheep grazing, with large semi-improved pastures on lower ground. Patches of semi-natural habitat typical of uplands are scattered throughout. Human scale features include scattered farmsteads on lower ground, stone walls and distinctive stunted oak trees marking field boundaries on the edge of the moorland.	
Historic landscape character	Evidence of past industrial activity is found throughout the landscape in the form of disused tips, mines and quarries. Several of the prehistoric cairns found on the hill summits throughout the LCA are Scheduled Monuments.	
Skylines	Undeveloped skylines are either open or are wooded due to coniferous plantations and trees along streams and field boundaries. Prehistoric cairns crown some hill summits.	
Key views and vistas	The landscape is undeveloped and remote, with expansive views in clear conditions across to the Brecon Beacons in the north and the Bristol Channel and Exmoor coast in the south. The lower slopes have strong views of, and provide a backdrop to the adjacent valleys (LCA 2 and 5) and their settlements – including Maesteg, Pontycymer and Blaengarw.	
Scenic and special qualities	The sensitive features of this landscape, as recorded in the LCA description, include the openness and sense of remoteness of much of the landscape, industrial and prehistoric archaeological features, valuable semi-natural habitats and the expansive views from the LCA.	
Perceptual qualities	The landscape's lack of development evokes a sense of remoteness and relative 'wildness', although this is impacted upon around its fringes by views of development in the adjacent valleys and distant wind turbines (e.g. Ffynnon Oer and Maerdy wind farms in Neath Port Talbot CB).	
Summary of landscape sensitivity	Although this is a large-scale landscape with relatively consistent land cover patterns, its lack of development, exposed and remote nature, along with the variable landform and nationally important archaeological features (including on skylines) are likely to increase levels of sensitivity to wind turbine developments.	
Sensitivity to different turbine heights	Very Small (15-25m)	L
	Small (26-50m)	L-M
	Medium (51-75m)	M
	Large (76-110m)	M-H
	Very large (111-150m)	H
Commentary on different cluster sizes	Although this is a large-scale landscape, it is likely to be highly sensitive 'very large' clusters of wind turbines, which would remain out of scale with the underlying landform.	
Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)		
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 3: Llynfi and Garw Uplands and Forestry in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • The prominent, undeveloped skylines that form a backdrop to views from nearby valley settlements. • Open landscape with extensive areas of traditionally grazed moorland and distinctive stunted oaks. • The landscape's role as a setting to industrial and prehistoric heritage and archaeological features, including nationally important prehistoric cairns on hill summits. • The strong sense of remoteness and relative wildness. • The expansive, unbroken views to both Brecon Beacons and the Bristol Channel • Locally designated semi-natural habitats including broadleaved woodland, marshy grassland, bog, scrub, bracken, acid grassland and heathland. 		

LCA 3: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>A development of nine wind turbines (medium sized cluster) with a maximum tip height of 118m (very large) has been consented at Llynfi Afan in the north of this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy wind energy development in this LCA is as follows:</p> <p>To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The naturalistic, upland backdrop provided by the LCA to settlements in the adjacent valleys (LCAs 2 and 5) is retained.• Wind energy development does not detract from the strong sense of remoteness and relative ‘wildness’ associated with the landscape.• Wind energy development does not detract from the role of the landscape as a setting for valued industrial and prehistoric heritage assets.• Valued naturalistic upland habitats are protected - including patches of marshy grassland, bog, scrub, bracken, acid grassland and heathland.• It continues to be possible to appreciate the expansive, unbroken views across the County Borough and further afield (Brecon Beacons to the north and Bristol Channel/Exmoor to the south).• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Within the LCA, multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’²⁰).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response²¹.

²⁰ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

²¹ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 3: Landscape Sensitivity Assessment for Solar PV Development

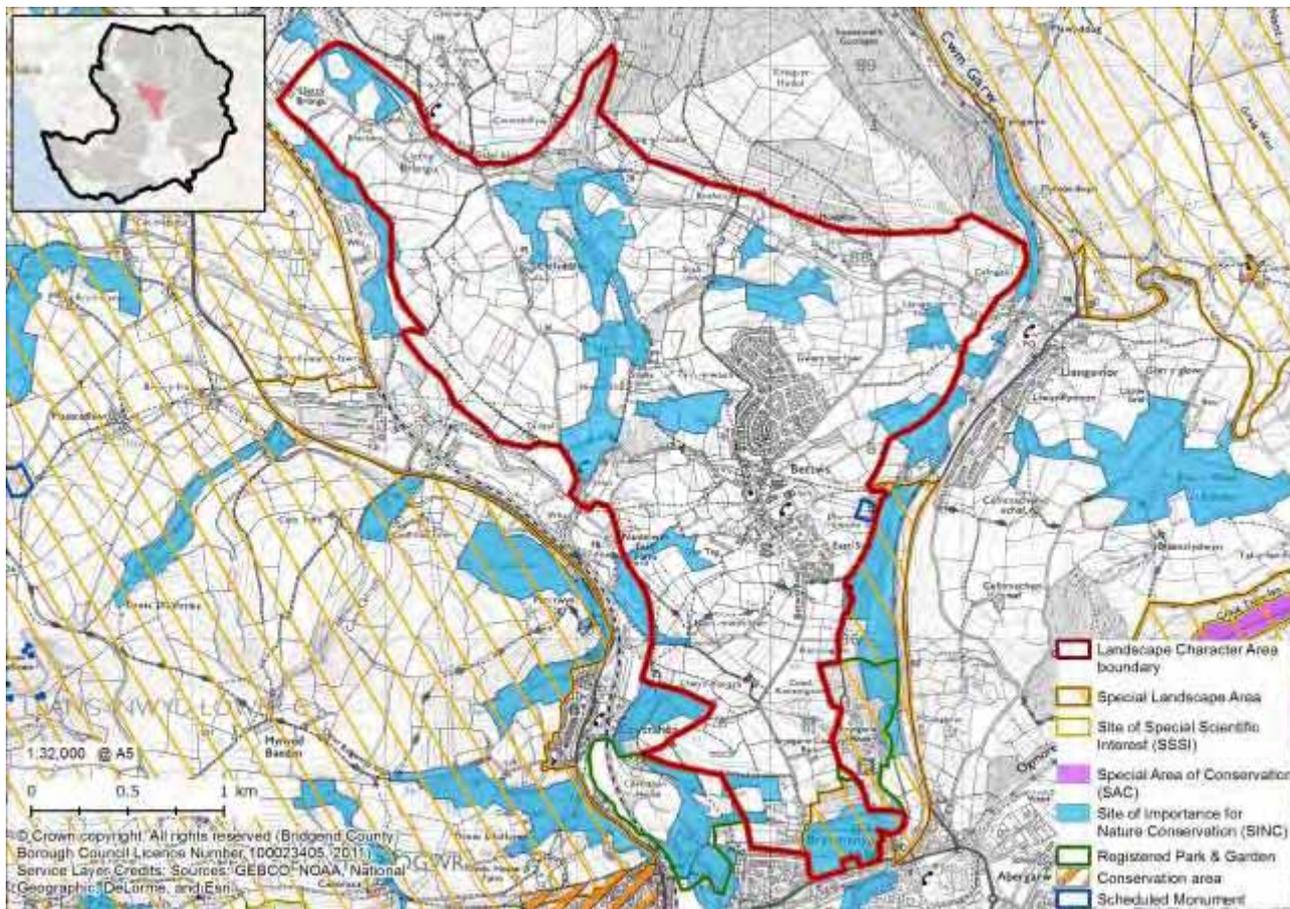
Criteria	Landscape attributes and descriptions	
Landform	The landform is strongly rolling with steep slopes and rounded hills. Small-scale tributary valleys carve through the moorland into the major valleys below.	
Sense of openness/enclosure	The undeveloped, upland nature of this landscape results in a high level of exposure and open character. Woodland is generally limited to blocks of coniferous plantation or small bands of broadleaved woodland along streams and field edges.	
Field pattern and scale	The higher land of the LCA is open rough grazing. Lower slopes are divided into medium to large-scale fields of semi-improved pasture. These form a combination of regular and irregular patterns reflecting different periods of enclosure.	
Land cover	The main land cover consists of large geometric blocks of coniferous plantation on the hill summits and upper slopes, interspersed with areas of open rough grazing. Lower slopes are defined by rough pastures and areas of semi-natural habitats including broadleaved woodland, marshy grassland, bog, scrub, bracken, acid grassland and heathland. Human settlement and development is very limited.	
Historic landscape character	Evidence of past industrial activity is found throughout the landscape in the form of disused tips, mines and quarries. Several of the prehistoric cairns found on the hill summits throughout the LCA are Scheduled Monuments.	
Key views and vistas	The landscape is undeveloped and remote, with expansive views in clear conditions across to the Brecon Beacons in the north and the Bristol Channel and Exmoor coast in the south. The lower slopes have strong views of, and provide a backdrop to the adjacent valleys (LCA 2 and 5) and their settlements – including Maesteg, Pontycymer and Blaengarw.	
Scenic and special qualities	The sensitive features of this landscape, as recorded in the LCA description, include the openness and sense of remoteness of much of the landscape, industrial and prehistoric archaeological features, valuable semi-natural habitats and the expansive, unbroken views from the LCA.	
Perceptual qualities	The landscape's lack of development evokes a sense of remoteness and relative wildness, although this is impacted upon around its fringes by views of development in the adjacent valleys and distant wind turbines (e.g. Ffynnon Oer and Maerdy wind farms in Neath Port Talbot County Borough).	
Summary of landscape sensitivity	Although the LCA includes some large-scale fields and levels of enclosure that may lower sensitivity to solar PV development, its steep, highly visible slopes, function of the landscape as a rural, naturalistic backdrop to views, and remote and undeveloped nature could increase sensitivity.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	M-H
	Small (>1-5ha)	H
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 3: Llynfi and Garw Uplands and Forestry in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> • The landscape's elevated and highly visible slopes that form a rural backdrop to views from valley settlements. • Strong sense of openness, remoteness and relative wildness. • Expansive, unbroken views across the County Borough and beyond as a result of the elevation of the landscape. • The presence of nationally important heritage and archaeological features from the industrial and prehistoric ages, including ancient burial cairns. • Locally designated semi-natural habitats including broadleaved woodland, marshy grassland, bog, scrub, bracken, acid grassland and open heathland. 		

LCA 3: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The naturalistic, upland backdrop provided by the LCA to settlements in the adjacent valleys (LCAs 2 and 5) is retained.• Valued naturalistic upland habitats are protected - including patches of marshy grassland, bog, scrub, bracken, acid grassland and heathland.• The important heritage assets, including prehistoric burial cairns and 19th century industrial remnants, are protected from development.• Solar panels do not mask the pattern of historic irregular fields found on lower slopes.• Avoid siting development on the most prominent upper slopes that are highly visible from the surrounding valleys and further afield.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 4: Bettws Settled Farmland

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This Landscape Character Area is centred on the hilltop village of Bettws, north of Bridgend and sandwiched between the Llynfi and Garw valleys. All of the LCA is classified as 'Lowland' in LANDMAP's Visual & Sensory aspect (Level 2).

A small part of the LCA in the south-west falls within the Pen-y-Bont ar Ogwr Special Landscape Area. Other designations include Plas-y-Bettws relict garden (a Scheduled Monument) and a number of SINC's.

LCA 4: Key Landscape Characteristics

- Strongly undulating landscape with generally southerly facing slopes, with the elevated hill summit at Bettws rising up to 160 metres AOD.
- Upper Coal Measures geology sitting below the main coalfield plateau to the north, with numerous springs and streams flowing through the landscape to meet the Llynfi Valley.
- Bands of broadleaved semi-natural woodland following stream courses, linking with mature hedgerows and in-field trees to produce a well-wooded character.
- Medium-scale irregular semi-improved grassland fields, with some rush pastures along streams.
- Mature hedgerows and lines of trees form traditional field boundaries, with regular wooden-fenced horse paddocks a feature around Bettws.
- Valued semi-natural woodland habitats, wet grassland and rush pastures along stream-sides, with significant areas designated as SINC.
- Relicts of 19th century industry in evidence around Tyle-Coch, including disused tips, shafts and a Grade II listed tramway bridge. A dismantled railway line runs along the northern LCA boundary.
- Historic core of Bettws includes the 17th century stone-built parish church of St David's (Grade I).
- Nationally important relicts of Plas-y-Bettws garden overlooking the Garw Valley.
- Settlement concentrated at Bettws, whose historic core is surrounded by post-war housing estates spreading along the hillside and sitting prominently on the elevated hill summit.
- Elsewhere scattered farmsteads and hamlets are linked by quiet rural lanes and occasional rights of way, including the Ogwr Ridgeway Walk.
- A largely peaceful, rural landscape eroded locally by prominent housing development at Bettws (occupying a high hill summit).
- Views to the urban edge of Bridgend in the south and ridgeline housing at Pont Rhyd-y-cyff in the west. Important views east and west to the higher undeveloped land of LCAs 1 and 6.

LCA 4: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Strongly undulating, often intricate lowland landscape with south facing slopes and the prominent hill summit of Bettws, with streams draining into the adjacent Llynfi and Garw valleys.	
Land cover pattern and presence of human scale features	<p>Much of the landscape comprises medium-scale irregular semi-improved grassland fields, with significant areas of rush pastures in wetter locations. Bands of broadleaved woodland cover are also found along many of the field edges and water courses. The settlement of Bettws occupies a prominent hill-top position in the centre of the LCA.</p> <p>Frequent human scale features include the settlement of Bettws, scattered farmsteads, hamlets, trees, woodland and hedgebanks.</p>	
Historic landscape character	The landscape has several features of historical significance and importance. The core settlement of Bettws is 17 th Century and includes the Grade I listed building of St David's Church. There are also extensive remains from the industrial period of the 19 th century, particularly disused mines, tramways and railways. Plas-t-Bettws relict garden is a Scheduled Monument.	
Skylines	Bands of woodland found on the edges of farmland and lining streams provide a wooded character to some skylines. In the west, pylon lines intrude on the skyline. Housing development at Bettws is located on the most elevated skyline in the LCA.	
Key views and vistas	Views to the remote uplands (LCAs 1, 3 and 6) are identified as a key characteristic of this landscape. It is also intervisible with the adjacent Llynfi and Garw valleys (LCAs 2 and 4), the northern fringes of Bridgend and ridgeline housing at Pont Rhyd-y-cyff in the west. In clear conditions, long views are afforded from high ground across Bridgend towards the coast and beyond to the Bristol Channel and Exmoor.	
Scenic and special qualities	<p>2% of the LCA falls within the Bryngarw Country Park Special Landscape Area, recognised for habitats of high value, including riparian woodland.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the valued semi-natural habitats and wooded character, historic settlement and cultural relicts and an overall high level of peace and tranquillity. Some of these could be affected to a degree by wind energy development.</p>	
Perceptual qualities	This landscape has a peaceful, rural and often historic feel throughout, although this is detracted from locally by the development at Bettws. The area forms a valued rural buffer between the urban developments at Bridgend and Pont Rhyd-y-cyff and the remote uplands of LCAs 1 and 6.	
Summary of landscape sensitivity	Although this landscape includes areas of modern development and man-made structures on skylines, its overarching rural and tranquil character and the presence of valued semi-natural habitats and historic assets all heighten sensitivity. The role of the LCA as a rural backdrop to views from settlements – including Bridgend – also increases sensitivity, particularly to the development of 'large' and 'very large' turbines which would be out of scale in the predominately intricate landform.	
Sensitivity to different turbine heights	Very Small (15-25m)	L
	Small (26-50m)	M
	Medium (51-75m)	M-H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	The complex and often intricate landform and the presence of frequent human scale features mean that it would be highly sensitive to wind turbine clusters greater than 'small' in size.	
Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)		
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 4: Bettws Settled Farmland in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • The elevated character of the landscape's rural skylines, forming a backdrop to views from Bridgend and the adjacent valleys. • Levels of relative peace and tranquillity associated with the sparsely settled rural area surrounding Bettws. • Historic settlement core of Bettws with its 17th Century parish church (Grade I listed). 		

- Important cultural remains, including the relicts of Plas-y-Bettws garden and industrial features around Tyle-Coch.
- Its strongly wooded character, with semi-natural woodlands, mature hedgebanks and in-field trees contributing to the human scale of the LCA.
- Its valued tracts of semi-natural habitat, including areas of rush pasture and wet grassland (many designated as SINC).

LCA 4: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or operational wind energy schemes within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development within this LCA is as follows:</p> <p>To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Protect the role of the landscape’s rural skylines in providing a backdrop to views, including from the northern fringes of Bridgend.• The setting of important heritage features, such as disused 19th century mining relicts and the Grade I listed St. David’s Church, is respected.• The rural and tranquil character of large parts of the landscape is retained.• The development of turbines and their ancillary equipment avoids valued naturalistic habitats including semi-natural woodland, wet grassland and rush pastures.• The human scale features of the landscape, such as the scattered farmsteads and hamlets, in-field trees and hedgebanks are not overwhelmed by the presence of wind energy development.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 4: Landscape Sensitivity Assessment for Solar PV Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Strongly undulating lowland landscape with south facing slopes and the prominent hill summit of Bettws, with streams draining into the adjacent Llynfi and Garw valleys.	
Sense of openness/enclosure	The presence of bands of mature hedgebanks and broadleaved semi-natural woodland along streams and field edges contributes to a strongly wooded character of the area and provides a degree of enclosure and shelter..	
Field pattern and scale	The fields of semi-improved grassland are generally small to medium scale and irregular in form, with mature hedgebanks and lines of trees forming field boundaries.	
Land cover	Much of the landscape comprises semi-improved grassland fields, frequently bounded by hedges and ancient hedgebanks, with some rush pastures in wetter areas. Bands of broadleaved woodland cover are also found along many of the field edges and water courses. The settlement of Bettws is found on the main hill summit in the centre of the LCA.	
Historic landscape character	The landscape has several features of historical significance and importance. The core settlement of Bettws is 17 th Century and includes the Grade I listed building of St David's Church. There are also extensive remains from the industrial period of the 19 th century, particularly disused mines, tramways and railways. Plas-t-Bettws relict garden is a Scheduled Monument.	
Key views and vistas	Views to the remote uplands (LCAs 1, 3 and 6) are identified as a key characteristic of this landscape. It is also intervisible with the adjacent Llynfi and Garw valleys (LCAs 2 and 4), the northern fringes of Bridgend and ridgeline housing at Pont Rhyd-y-cyff in the west. In clear conditions, long views are afforded from high ground across Bridgend towards the coast and beyond to the Bristol Channel and Exmoor.	
Scenic and special qualities	2% of the LCA falls within the Bryngarw Country Park Special Landscape Area, recognised for habitats of high value, including riparian woodland. The sensitive features of this landscape, as recorded in the LCA description, include the valued semi-natural habitats and wooded character, historic settlement and cultural relicts and an overall high level of peace and tranquillity. Some of these could be affected to some degree by solar PV development.	
Perceptual qualities	This landscape has a peaceful and rural feel throughout, although this is detracted from locally by the development at Bettws . The area forms a valued rural buffer between the urban developments at Bridgend and Pont Rhyd-y-cyff and the remote uplands of LCAs 1 and 6.	
Summary of landscape sensitivity	Although the LCA's enclosed character and the presence of existing human activity and development could reduce the sensitivity of the landscape to wind energy development, its rural nature with high levels of relative tranquillity, historic sense of place and valuable semi-natural habitats heighten levels of sensitivity.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	M
	Medium (>5-10ha)	M-H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 4: Bettws Settled Farmland in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • The visual prominence of some south-facing slopes – including from the northern edges of Bridgend. The landscape forms a valued rural backdrop to views from the settlement and adjacent valleys. • Areas of small-scale, irregular fields bounded by ancient hedgebanks. • Levels of relative peace and tranquillity associated with the sparsely settled rural area surrounding Bettws. • Important cultural remains, including the relicts of Plas-y-Bettws garden and industrial features around Tyle-Coch. • Areas of naturalistic character, including semi-natural woodlands, mature hedgebanks, in-field trees, rush pasture and wet grassland (many designated as SINC). 		

LCA 4: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
Guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The levels of tranquillity associated with the sparsely settled farmland around Bettws, are retained.• Valued naturalistic habitats of semi-natural woodland, wet grassland and rush pastures are protected from development.• The LCA's historic hedgebanks with ancient trees are protected.• The LCA's important heritage features, such as disused 19th century mining relicts, are protected from development.• Solar PV development is not located on the more prominent slopes in the strongly undulating landform, particularly those that form valued backdrop to views from other landscapes and settlements (e.g. Bridgend and Pont Rhyd-y-cyff).• Solar PV development does not mask the well-preserved pattern of historic irregular fieldscapes associated with the LCA.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 5: Garw Valley Floor and Lower Slopes

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This LCA comprises the settled valley floor and lower slopes of the Garw Valley to the north of Bridgend. The majority of the LCA is classed as 'Lowland Valley' in LANDMAP's Visual & Sensory aspect (Level 2), with some of the higher slopes falling within the 'Upland' category.

The lower reaches of the valley fall within the Bryngarw Country Park Special Landscape Area (SLA), and the eastern slopes of the valley fall within the Northern Uplands SLA.

LCA 5: Key Landscape Characteristics

- Valley system following the course of the Garw from its source at the head of the valley to the Brynmenyn confluence (on the northern fringes of Bridgend).
- Overlooked by elevated uplands on either side, including the extensive forestry of the Garw Forest to the west.
- River cutting deeply into the surrounding coalfield plateau in its upper courses, with slopes becoming gentler and less dramatic as it widens and flows south.
- Fragments of broadleaved woodland and scrub in-between development on the lower valley slopes. This includes ornamental plantings associated with Bryngarw Country Park.
- Improved and semi-improved pastures on lower slopes enclosed by a network of hedgerows, grown-out lines of trees and woodland belts, with higher slopes defined by rough grazing land.
- Patches of valued semi-natural habitat tracing the valley's transition from its upland source, including acid grassland, heath, scrub, marshy grassland and oak-dominated broadleaved woodlands (including several SINCs).
- Rich cultural heritage relating to the 19th century coal mining industry, including remnant shafts, coal workings and lines of workers' terraces.
- Historic buildings interspersed within the sprawling settlements, including Grade II listed chapels.
- Grade II listed house and registered parkland estate of Bryngarw House, managed by BCBC as a Country Park.
- Literary connections with Nina Bawden's bestselling children's novel, *Carrie's War* (1973).
- Linear settlement occupying a significant part of the valley floor, with terraces and 20th century development displaying a range of vernacular styles extending along and up valley sides.
- Landscape traversed by the main A4064 (which terminates at Blaengarw), with minor roads linking housing up valley sides. National Cycle Route 883 follows a disused railway line along the valley floor.
- Pockets of tranquillity and naturalistic character in contrast to areas of dense development, including the woodlands and grounds of Bryngarw Country Park and the moorland fringes around Blaengarw.
- Strong intervisibility with the surrounding uplands and forestry.

LCA 5: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Tightly enclosed valley of the Garw, located between two upland LCAs (3 and 6). Steep valley slopes become shallower to the south of the area.	
Land cover pattern and presence of human scale features	<p>The lower slopes of the valley are characterised by small-scale improved and semi-improved pastures enclosed by hedgerows, giving way to more open rough grazing land on the higher slopes. There are patchy areas of valuable semi-natural habitat throughout the LCA, including acid grassland, heath, scrub, marshy grassland and broadleaved woodlands. The valley floor and lower slopes are dominated by settlement and transport corridors.</p> <p>Hedgerows, frequent trees and rows of terraces within valley settlements bring a human scale to the landscape.</p>	
Historic landscape character	Heritage assets of this landscape are found in the form of 19 th century coal industry remnants and listed buildings including the Grade II listed chapels and Bryngarw House Country Park.	
Skylines	Due to the valley landform, skylines in this LCA are not prominent, although views along the valley are frequently marked by woodland and development.	
Key views and vistas	The landscape has high levels of intervisibility with the surrounding uplands (LCAs 3 and 6) and their associated forestry plantations.	
Scenic and special qualities	<p>38% of the LCA falls within the Northern Uplands Special Landscape Area, valued for the semi-natural broadleaved woodland and the role of the lower valley slopes as an urban/rural interface.</p> <p>Additionally, Bryngarw Country Park SLA covers 11% of this LCA, and is designated due to the presence of an early Tudor house and ornamental gardens as well as high value habitats including riparian woodland.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the pastures enclosed by hedgerows on the lower slopes, the valuable semi-natural habitats, the setting of rich cultural and archaeological heritage, pockets of tranquillity the landscape provides in between areas of development and the intervisibility with the surrounding uplands.</p>	
Perceptual qualities	Although a fairly developed landscape, there are important localised areas of relative tranquillity and naturalistic character that, including valued semi-natural habitats, woodland and the grounds of Bryngarw House Country Park.	
Summary of landscape sensitivity	Although this landscape has significant levels of existing development that could reduce sensitivity to wind energy development, the constrained form of the steep-sided valley, pockets of tranquillity forming a rural setting to the valley settlements, its heritage assets and important semi-natural habitats, could increase sensitivity.	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	The enclosed and constrained nature of the valley (particularly in its upper courses) and small field sizes means this landscape is likely to be highly sensitive to any clusters of wind turbines.	
Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)		
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 5: Garw Valley Floor and Lower Slopes in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • Locally valued pockets of tranquillity in-between and surrounding areas of development. • The role of the valley slopes in providing a rural setting to the LCA's settlements and transition to the adjacent naturalistic uplands. • Rich cultural and archaeological heritage, including 19th century industrial relicts and historic chapels. • Small-scale pastures enclosed by a strong network of hedgerows, tree lines and woodland belts, with open rough grazing land grading into the adjacent uplands. 		

LCA 5: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or operational wind energy developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy developments within the LCA is as follows:</p> <p>To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Wind energy development does not detract from the valued areas of tranquillity located in between existing valley development.• The LCA’s relicts from the 19th century coal mining industry and the Grade II listed parkland estate of Bryngarw House, are protected from development.• The valuable semi-natural habitat cover of acid grassland, heath, scrub, marshy grassland and oak-dominated broadleaved woodlands is retained.• Wind turbines do not encroach into the upland fringes, but is linked to existing valley development.• Wind turbines do not overwhelm the often small scale of the landscape and its frequent human scale features, including buildings, trees and hedgerows.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’²²).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response²³.

²² “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

²³ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 5: Landscape Sensitivity Assessment for Solar PV Development

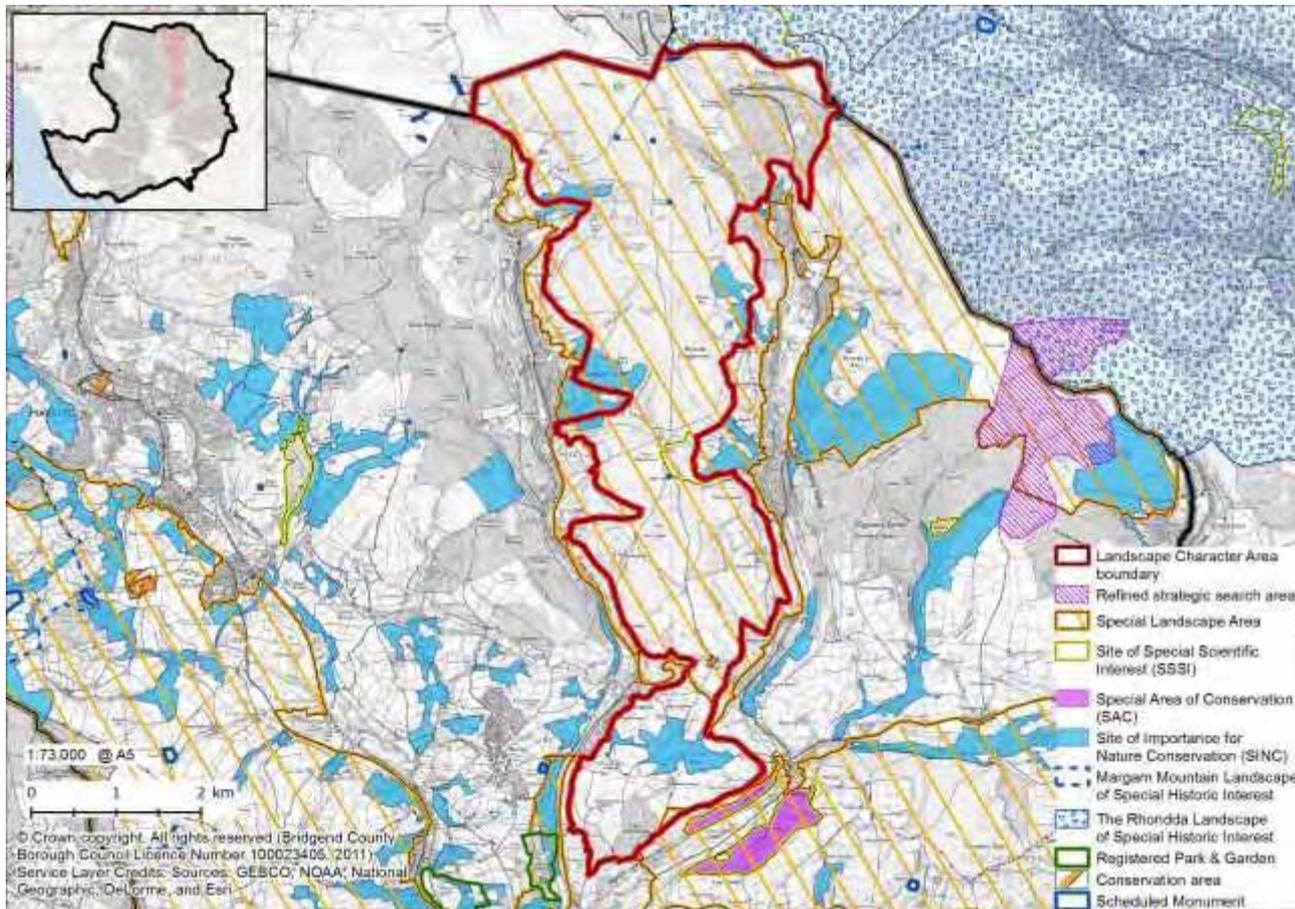
Criteria	Landscape attributes and descriptions	
Landform	Valley system following the course of the Garw from its source at the head of the valley to the Brynmenyn confluence. The river cuts deeply into the surrounding coalfield plateau in its upper courses, with slopes gradually becoming gentler and less dramatic as it widens and flows south	
Sense of openness/enclosure	The undeveloped lower slopes of the LCA comprise fields of pasture enclosed by hedgerows, lines of trees and woodland belts that may provide a sense of enclosure. Land on the upper slopes in rough grazing land that is unenclosed and more open. Dense settlement also provides enclosure within the valley floor.	
Field pattern and scale	Varied pattern of pastoral fields, with some smaller irregular fields and areas of larger rectilinear enclosures. More open rough grazing land is found on the upper slopes.	
Land cover	The lower slopes of the valley are characterised by improved and semi-improved pastures enclosed by hedgerows, giving way to more open rough grazing land on the higher slopes. There are patchy areas of valuable semi-natural habitat throughout the LCA, including acid grassland, heath, scrub, marshy grassland and broadleaved woodlands. The valley floor is dominated by settlement and road infrastructure, including Blaengarw, Pont-y-rhyl and Llangeinor.	
Historic landscape character	Heritage assets of this landscape are found in the form of 19 th century coal industry remnants and listed buildings including the Grade II listed chapels and Bryngarw House Country Park.	
Key views and vistas	The landscape has high levels of intervisibility with the surrounding uplands (LCAs 3 and 6) and their associated forestry plantations. Views along the valley are frequently marked by woodland and development.	
Scenic and special qualities	<p>38% of the LCA falls within the Northern Uplands Special Landscape Area, valued for the semi-natural broadleaved woodland and the role of the lower valley slopes as an urban/rural interface.</p> <p>Additionally, Bryngarw Country Park SLA covers 11% of this LCA, and is designated due to the presence of an early Tudor house and ornamental gardens as well as high value habitats including riparian woodland.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the pastures enclosed by hedgerows on the lower slopes, the valuable semi-natural habitats, the setting of rich cultural and archaeological heritage, pockets of tranquillity the landscape provides in between areas of development and the intervisibility with the surrounding uplands.</p>	
Perceptual qualities	Although a fairly developed landscape, there are localised areas of tranquillity and naturalistic character that are valued, including important semi-natural habitats and the grounds of Bryngarw House Country Park.	
Summary of landscape sensitivity	Although this landscape has includes some areas of enclosure (owing to dense woodland cover) and relatively high levels of existing development compared to the surrounding uplands, its visually prominent and often steep slopes, the valued pockets of tranquillity and presence of important semi-natural habitats all increase sensitivity levels to solar PV energy development.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	M
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 5: Garw Valley Floor and Lower Slopes in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> • The presence of steep, intricate and highly visible valley slopes overlooked by adjacent remote uplands. • Areas of historic, small-scale pastoral fields forming irregular patterns. • Valued semi-natural habitats including acid grassland, heathland, scrub, marshy grassland and oak-dominated woodland. • Rich cultural and archaeological heritage, including 19th century industrial relicts and historic chapels. • Pockets of tranquillity in-between and surrounding areas of development. 		

LCA 5: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Solar PV developments avoid the most visually prominent slopes, particularly in the north of the LCA where they are more steep and intricate.• The valuable semi-natural habitat cover of acid grassland, heath, scrub, marshy grassland and oak-dominated broadleaved woodlands is protected.• Solar PV development does not intrude on areas valued for their relative levels of tranquillity away from the valley settlements.• The LCA's important heritage features, including relicts from the 19th century coal mining industry and the Grade II listed parkland estate of Bryngarw House, are protected.• Solar PV development does not mask the historically important, small-scale irregular field patterns found in parts of the LCA.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 6: Mynydd Llangeinwyr Uplands

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

Found in the north-eastern part of the County Borough, this remote, upland LCA is located between the Garw and Ogmore valleys. LANDMAP's Sensory and Visual aspect (Level 2) classifies all of the landscape as 'Upland'.

A large proportion of the LCA falls within the Northern Uplands Special Landscape Area (SLA), with a small part in the south included within the wider Mynydd y Gaer SLA.

LCA 6: Key Landscape Characteristics

- Exposed, elevated plateau landscape sitting dramatically above the Garw and Ogmore valleys, rising to 568 metres on the hill summit of Werfa.
- Upper Coal Measures geology greatly influenced by the effects of glaciation, with truncated streams and waterfalls plunging down hillsides to meet the larger valleys below.
- Prominent Craig Ogwr tors and ridgeline in the north-east of the LCA, displaying outcrops of the Coal Measures geology in cliffs and scree slopes (designated as a RIGS).
- An open landscape with little tree cover – the coniferous plantations at the head of the Ogmore Valley standing out prominently against the muted moorland backdrop.
- Lower-lying farmland in the south including linear belts of woodland along field boundaries and mixed plantation at Parc Cefnmachen.
- Largely unenclosed uplands with rough sheep grazing.
- Small, irregular fields at lower elevations (particularly in the south), comprising semi-improved pastures enclosed by hedgerows, grown-out hedgebanks and stone walls.
- Upland habitats including locally important tracts of acid grassland with patches of heathland, scrub, marshy grassland and flushes.
- Cwm Cyffog SSSI valued for its blanket bog, heathland and rare populations of White Beak-sedge.
- Nationally important archaeological features on hill summits including a prehistoric round barrow, cairns and the defensive dyke of Bwlch yr Afan.
- Sparsely settled, with occasional hamlets, a few farms and the small village of Llangeinor (a Conservation Area) nestled on the lower southern slopes and linked by minor roads.
- Road access limited to the southern part of the LCA, with the A4093 linking Ogmore and Bettws.
- Uplands traversed by footpaths and bridleways, including the Ogwr Ridgeway Trail which passes through the southern part of the landscape. Most of the LCA is designated as statutory open access land.
- Spectacular panoramas across the Vale of Glamorgan and Bristol Channel to the south and the Brecon Beacons to the north.
- Intervisibility with the adjacent valley settlements is a feature of the lower fringes of this LCA.
- Telecommunications masts on the high summit of Werfa and above Blackmill, with long views westwards towards Ffynnon Oer windfarm in Neath Port Talbot.
- An overall remote and wild landscape, with a great degree of exposure.

LCA 6: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Large-scale upland landscape between the Garw and Ogmore valleys, forming an exposed plateau with prominent tors and ridgeline of the Craig Ogwr in the north-east.	
Land cover pattern and presence of human scale features	<p>The main landcover is unenclosed rough grazing, with tracts of valuable semi-natural upland habitats such as acid grassland with patches of heathland, scrub, marshy grassland and flushes. In the south, the landscape comprises irregular medium to large pastures. Woodland is limited to coniferous plantations and belts of woodland in the lower reaches of the LCA along field boundaries. Settlement in the landscape is sparse and minimal, with the main settlement at the small village of Llangeinor.</p> <p>Human scale features are sparse on the higher ground, but more frequent at lower elevations, including trees, hedgerows, stone walls and occasional farmsteads.</p>	
Historic landscape character	Notable prehistoric features are found in this landscape in the form of round barrows, cairns and dykes on hill summits. Several of these are Scheduled Monuments. Additionally, the settlement of Llangeinor is a designated Conservation Area.	
Skylines	The landscape is defined by its open, elevated skylines occasionally marked by historic monuments and the lines of plantations. These are strongly visible from the surrounding landscapes, forming an upland backdrop to nearby valley settlements including Blaengarw, Price Town, Lewistown and Pant-yr-arwel, as well as Bridgend and Bettws from the south. Telecommunications masts mark the high summit of Werfa and the hill above Blackmill.	
Key views and vistas	There are panoramic views afforded from this LCA across the County Borough and beyond, including north towards the Brecon Beacons and south across the Bristol Channel and towards Exmoor. Telecommunications masts within and existing wind farms outside the County Borough form man-made landmarks (including Ffynnon Oer in Neath Port Talbot; Maerdy and Ferndale in Rhondda Cynon Taf).	
Scenic and special qualities	<p>85% of this LCA is contained within the Northern Uplands Special Landscape Area, designated for its largely intact, attractive upland views and important upland semi-natural habitats.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include its open, remote and wild character, prominent geological features, valued upland habitats, prehistoric features and long, uninterrupted views to the Brecon Beacons and Bristol Channel. Some of these could be affected to a degree by wind energy development.</p>	
Perceptual qualities	The majority of the LCA is a remote and exposed upland landscape, with some of the lower fringing areas impacted in parts by views of existing development. The south of the LCA includes more human influence in the form of enclosed pastoral farmland interspersed with open common land (e.g. Bryn-y-Wrach).	
Summary of landscape sensitivity	<p>Although this is a large-scale landscape with some skylines already marked by man-made structures, its overall open, remote and wild character, role as an upland backdrop to views from adjacent settlements and landscapes, the presence of nationally important historic landmarks on elevated sites and valued areas of semi-natural habitat all increase sensitivity to wind energy development.</p> <p>The following locational variations of sensitivity should be taken into account:</p> <ul style="list-style-type: none"> The enclosed land in the south of the LCA²⁴ and outside the Northern Uplands SLA would be particularly sensitive to turbines of medium-scale or above, due to the presence of more frequent human-scale features and intricate landscape patterns. 	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	M-H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	<p>Although this is a large-scale landscape with expanses of consistent landcover, it would be highly sensitive to 'large' or 'very large' wind turbine clusters. The enclosed land in the south would also be highly sensitive to 'medium' clusters.</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	

²⁴ Comprising pastoral farmland below 230m AOD interspersed with pockets of common land.

SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 6: Mynydd Llangeinwyr Uplands in relation to wind energy development is included below:

- 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.

LCA 6: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or operational wind energy schemes within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development in this LCA is as follows:</p> <p>The overall strategy is to maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The characteristic remote and undeveloped character of the landscape is protected.• The important areas of upland habitat and commons are avoided as the sites for wind turbines or ancillary developments, including blanket bog, heathland, acid grassland, scrub and marshy grassland.• The heritage assets within the landscape are protected, including nationally important prehistoric cairns on hill summits, and the Conservation Area of Llangeinor.• Wind turbines do not impact upon the spectacular, uninterrupted panoramic views from the LCA, including north to the Brecon Beacons and south over the County Borough towards the Bristol Channel (and across to Exmoor in clear conditions).• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Although it is accepted that change to landscape character could result from wind energy development within the SSA, outside the SSA multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’²⁵).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response²⁶.

²⁵ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

²⁶ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 6: Landscape Sensitivity Assessment for Solar PV Development

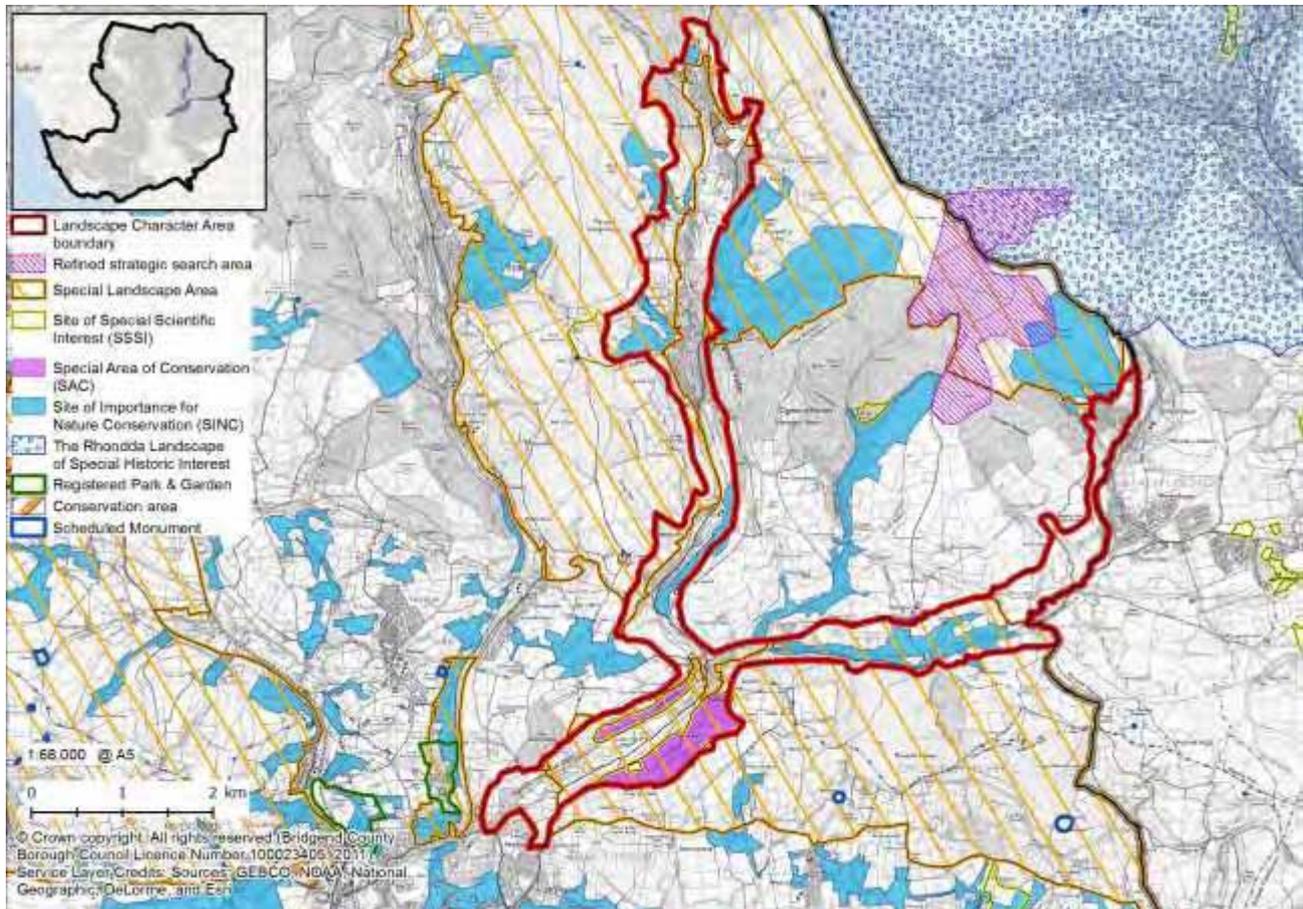
Criteria	Landscape attributes and descriptions	
Landform	Large-scale upland landscape between the Garw and Ogmore valleys, forming an exposed plateau with prominent slopes, tors and ridgeline of the Craig Ogwr in the north-east. Undulating land in the south slopes down towards the Brynmenyn confluence north of Bridgend.	
Sense of openness/enclosure	The upland areas that make up the majority of this LCA are generally unenclosed and exposed and there are few trees. Lower areas (particularly in the south) is characterised by fields enclosed by mature hedgerows and hedgebanks which provide localised shelter.	
Field pattern and scale	Medium-scale, irregular fields are only found in the lower elevations of this landscape, and are interspersed with areas of open common (e.g. Bryn-y-Wrach). Hedgerows, mature hedgebanks and stone walls form the field boundaries.	
Land cover	The main landcover is unenclosed rough grazing, with tracts of valuable semi-natural upland habitats such as acid grassland with patches of heathland, scrub, marshy grassland and flushes. Woodland is limited to coniferous plantations and belts of woodland in the lower reaches of the LCA along field boundaries. Pastoral fields characterise the south of the LCA.	
Historic landscape character	Notable prehistoric features are found in this landscape in the form of round barrows, cairns and dykes on hill summits. Several of these are Scheduled Monuments. Additionally, the settlement of Llangeinor is a designated Conservation Area.	
Key views and vistas	There are panoramic views afforded from this LCA across the County Borough and beyond, including north towards the Brecon Beacons and south across the Bristol Channel and towards Exmoor. Telecommunications masts within and existing wind farms outside the County Borough form man-made landmarks (including Ffynnon Oer in Neath Port Talbot; Maerdy and Ferndale in Rhondda Cynon Taf).	
Scenic and special qualities	85% of this LCA is contained within the Northern Uplands Special Landscape Area, designated for its largely intact, attractive upland views and important upland semi-natural habitats. The sensitive features of this landscape, as recorded in the LCA description, include its open, remote and wild character, prominent geological features, valued upland habitats, prehistoric features and long, uninterrupted views to the Brecon Beacons and Bristol Channel.	
Perceptual qualities	This is a remote and exposed upland landscape, with some of the lower fringing areas impacted in parts by views of existing development.	
Summary of landscape sensitivity	<p>Although this is predominantly a plateau landscape with some enclosure provided by tree/woodland cover, the large expanses of naturalistic upland habitats, prominent slopes, irregular field pattern on lower slopes and function of the LCA as an upland backdrop to adjacent settlements and the wider County Borough all increase levels of landscape sensitivity to solar PV development.</p> <p>The following locational variations of sensitivity should be taken into account:</p> <ul style="list-style-type: none"> The unenclosed and naturalistic upland plateaux within the Northern Uplands SLA, comprising a significant proportion of the LCA, would be highly sensitive to any solar PV developments. 	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	M-H
	Small (>1-5ha)	H
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 6: Mynydd Llangeinwyr Uplands in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> The presence of some prominent slopes, tors and the distinctive Craig Ogwr ridgeline. The remote and naturalistic landscape character, with the majority of the LCA being devoid of development or overt human influence. The open landscape character defined by unenclosed, rough sheep grazing and traditionally managed commons. Valued upland habitats, including acid grassland, heathland, scrub and wetlands (including Cwm Cyffog SSSI). Nationally important archaeological features from the prehistoric period on hill summits. Irregular historic field patterns found in the lower elevations of the LCA. 		

LCA 6: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Solar PV development avoids the most prominent slopes that form a rural, undeveloped backdrop to views from settlements and other LCAs.• Solar PV development does not mask the irregular field patterns found on the lower elevations in this LCA.• The open, remote character of the landscape is protected, including areas of historically important common land.• Important areas of upland habitat are avoided as sites for development, including blanket bog, heathland, acid grassland, scrub and marshy grassland.• The significance of heritage assets is protected, including nationally important prehistoric cairns on hill summits and the Conservation Area of Llangeinor.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 7: Ogmore Valley Floor and Lower Slopes

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

The majority of the LCA is classed as 'Lowland Valley' in LANDMAP's Visual & Sensory aspect (Level 2), with some of the higher slopes falling within the 'Upland' category.

The majority of Cwm Ogwr Fach lies within the Mynydd y Gaer Special Landscape Area (SLA), and the slopes of the Cwm Ogwr Fawr fall within the Northern Uplands SLA. Other designations include the Blackmill Woods SAC and SSSI, Nantymoel Conservation Area and a number of SINC's.

LCA 7: Key Landscape Characteristics

- Narrow, steep sided valley system comprising the two branches of the River Ogmore (Cwm Ogwr Fawr and Cwm Ogwr Fach). These are met by the Garw at the Brynmenyn confluence north of Bridgend.
- Valleys cutting deeply into the surrounding coalfield plateau, with a series of incised re-entrant valleys and spurs creating dramatic landform features with evidence of their glacial past.
- Frequently heavily wooded valley sides; a mixture of coniferous plantations – particularly in the upper Ogmore – and semi-natural broadleaved woodland.
- Mature hedgerows and lines of trees along field boundaries emphasise the landscape's wooded character.
- Pastoral fields on lower slopes enclosed by a network of hedgerows and woodland belts, with upper slopes defined by rough grassland grazed by sheep.
- Patches of bracken and gorse evoking an upland feel.
- SAC and SSSI ancient sessile oak woodlands at Blackmill, contributing greatly to local character particularly due to their close proximity to built development.).
- Swathes of important semi-natural habitat in-between areas of development, including acid grassland, heath, scrub, marshy grasslands and valued oak-dominated woodlands.
- Rich cultural heritage relating to the 19th century coal mining industry, including disused shafts, coal workings and former railway lines converted to cycle paths (national routes 883 and 4).
- Landscape around Evanstown and Gilfach Goch formed the basis for the famous 1939 novel *How Green Was My Valley* (Richard Llewellyn).
- Linear settlements stretching along valley floors, with rows of former mine workers' terraces sprawling up valley sides in a ribbon effect (e.g. the Nantymoel Conservation Area).
- The characterful terraces are intermixed within a range of 20th century and modern developments displaying varying styles and materials.
- Settlements linked by busy roads including the main A4061 and A4093, eroding levels of tranquillity throughout.
- Large-scale industrial warehouses at Blackmill forming prominent features within the wooded valley.
- Strong visual and cultural links between the valleys and the surrounding uplands, with views to higher ground introducing a relative sense of remoteness to the busy valley floors.
- The settlement of Evanstown overlooked by wind turbines at Fforch Nest.

LCA 7: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Two narrow, steep sided valleys of the Cwm Ogwr Fawr and Cwm Ogwr Fach that converge into the Ogmere River north of Bridgend.	
Land cover pattern and presence of human scale features	<p>The valley slopes are heavily wooded with a mixture of coniferous plantation and ancient and semi-natural broadleaved woodlands, some of which are designated SAC and SSSI. On the lower slopes agricultural land in the form of pastoral fields bound by hedgerows and belts of woodland are found. Pockets of important semi-natural habitat such as acid grassland, heath, scrub and marshy grassland are found between developed areas.</p> <p>Linear settlements along the valley floors provide a human scale to the landscape, along with the hedgerow trees on the valley slopes and old workers' terraces on the valley sides.</p>	
Historic landscape character	This landscape has a rich cultural heritage relating to the activity of the coal mining industry of the 19 th century, including abandoned shafts, coal workings and former railway lines. The distinctive rows of miners' terraces in Nantymoel are designated as a Conservation Area.	
Skylines	Skylines are not prominent owing to the valley landform, although views down the valleys are frequently framed by the wooded valley slopes. Large-scale industrial warehouses form conspicuous features in Blackmill.	
Key views and vistas	The valleys have strong visual links with the surrounding undeveloped uplands (LCAs 6, 8 and 9), providing a contrasting sense of remoteness to the developed valley floors. Existing wind turbines at Fforch Nest and Pant-y-Wal (in LCA 8), as well as Taff Ely wind farm (in Rhondda Cynon Taf) are visible above the settlement of Evanstown.	
Scenic and special qualities	<p>23% of this LCA falls within the Northern Uplands Special Landscape Area (SLA), valued for attractive upland views within and out over Ogmere Vale and the experience of exposure and wilderness. Another 32% of the LCA falls within the Mynydd y Gaer SLA, designated due to its role as the interface between open uplands and lower agricultural land, and the internationally designated areas of woodland on the valley slopes.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the valued swathes of semi-natural broadleaved woodland, locally important semi-natural habitats including acid grassland, heath and scrub, and the strong intervisibility with the largely undeveloped uplands. Some of these could be affected to a degree by wind energy development.</p>	
Perceptual qualities	There is evidence of human influence on much of this landscape in the form of the linear settlements, historic and current industrial activity and transport corridors, particularly on the valley floor. On the slopes, the views to higher ground give a sense of remoteness, as do the patches of upland fringe habitat such as heath, scrub and bracken.	
Summary of landscape sensitivity	Although this landscape already has areas of large scale industrial development, the sensitivity of the landscape to wind energy development is increased by the frequent occurrence of human scale features, valued semi-natural habitats, the strong intervisibility with the remote uplands and the role of the landscape as a setting for heritage features.	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	M-H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	<p>The enclosed and constrained nature of the valley and its extensive woodland cover means that the LCA is likely to be highly sensitive to any clusters of wind turbines.</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 7: Ogmere Valley Floor and Lower Slopes in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • Strong intervisibility with surrounding remote, naturalistic uplands. • Strong wooded character (including internationally important oak woodlands at Blackmill) with valued semi-natural habitats, including acid grassland, heath, scrub and marshy grasslands. • Rich industrial heritage, including disused shafts, coal workings and former workers' terraces (e.g. 		

Nantymoel Conservation Area).

- The varied land cover of wooded slopes, pastoral fields, semi-natural habitats and linear settlements.

LCA 7: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are no permitted or operational wind energy developments located within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development in the LCA is as follows:</p> <p>To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The strong wooded character of the valley sides is protected.• The development of wind turbines and their ancillary equipment avoids designated semi-natural habitats that are valued as tranquil pockets between areas of development.• Wind energy development does not adversely affect the landscape’s rich cultural heritage, including the special historic/architectural interest of the Nantymoel Conservation Area.• Wind turbines do not encroach into the upland fringes, but is linked to existing valley development.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’²⁷).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response²⁸.

²⁷ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

²⁸ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 7: Landscape Sensitivity Assessment for Solar PV Development

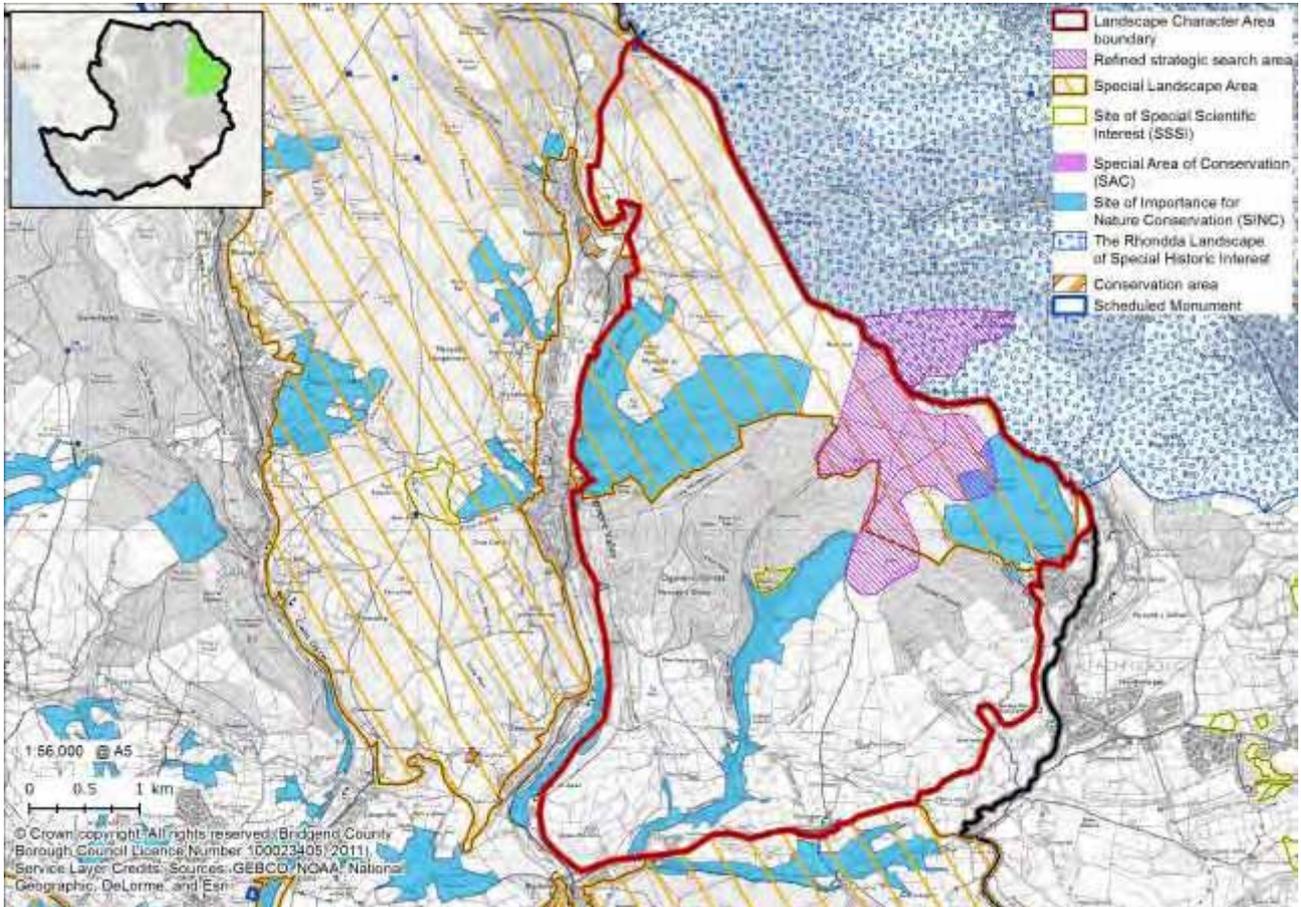
Criteria	Landscape attributes and descriptions	
Landform	Two narrow, steep sided valleys of the Cwm Ogwr Fawr and Cwm Ogwr Fach that converge into the Ogmores River north of Bridgend.	
Sense of openness/enclosure	The heavily wooded valley sides provide a sense of enclosure, as do the fields that are bounded by mature hedgerows and lines of trees. The upper slopes are more open as they form the transition to the adjacent uplands.	
Field pattern and scale	The field pattern of this LCA is varied, with the fields on the slopes of Cwm Ogwr Fawr smaller and more irregular in shape than the regular rectilinear field pattern along the Cwm Ogwr Fach.	
Land cover	The valley slopes are heavily wooded with a mixture of coniferous plantation and ancient and semi-natural broadleaved woodlands, some of which are designated SAC and SSSI. On the lower slopes agricultural land in the form of pastoral fields bound by hedgerows and belts of woodland are found. Pockets of important semi-natural habitat such as acid grassland, heath, scrub and marshy grassland are found between developed areas.	
Historic landscape character	This landscape has a rich cultural heritage relating to the activity of the coal mining industry of the 19 th century, including abandoned shafts, coal workings and former railway lines. The distinctive rows of miners' terraces in Nantymoel are designated as a Conservation Area.	
Key views and vistas	The valleys have strong visual links with the surrounding undeveloped uplands (LCAs 6, 8 and 9), providing a contrasting sense of remoteness to the developed valley floors. Existing wind turbines at Fforch Nest and Pant-y-Wal (in LCA 8), as well as Taff Ely wind farm (in Rhondda Cynon Taf) are visible above the settlement of Evanstown.	
Scenic and special qualities	<p>23% of this LCA falls within the Northern Uplands Special Landscape Area, valued for attractive upland views within and out over Ogmores Vale and the experience of exposure and wilderness. Another 32% of the LCA falls within the Mynydd y Gaer Special Landscape Area, designated due to its role as the interface between open uplands and lower agricultural land, and the internationally designated areas of woodland on the valley slopes.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the valued swathes of semi-natural broadleaved woodland, locally important semi-natural habitats including acid grassland, heath and scrub, and the strong intervisibility with the undeveloped uplands. Some of these could be affected to a degree by solar PV development.</p>	
Perceptual qualities	There is evidence of human influence on much of this landscape in the form of the linear settlements, historic and current industrial activity and transport corridors, particularly on the valley floor. On the slopes, the views to higher ground give a sense of remoteness, as do the patches of upland fringe habitat such as heath, scrub and bracken.	
Summary of landscape sensitivity	Although this landscape is fairly enclosed due to the heavily wooded valley sides, has existing development and some rectilinear fields that could reduce the sensitivity of the landscape to solar PV development, the presence of steep valley slopes, designated semi-natural habitats and areas of small, irregular fields could increase sensitivity.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	M
	Medium (>5-10ha)	M-H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 7: Ogmores Valley Floor and Lower Slopes in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> • Steep valley slopes overlooked by the surrounding remote and naturalistic uplands. • Important semi-natural habitats, including acid grassland, heath, scrub and marshy grasslands. • Rich industrial heritage, including disused shafts, coal workings and former mine workers' terraces (e.g. Nantymoel Conservation Area). • Nationally and internationally important swathes of semi-natural broadleaved woodland, including at Blackmill (SAC and SSSI designated). • Areas of small, irregular field patterns of historic origin. 		

LCA 7: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The strong wooded and naturalistic character of the valley sides is protected.• The designated semi-natural habitats that are valued as tranquil pockets between areas of development are retained.• Solar PV development is not located on the undeveloped, upper valley sides that are adjacent to the surrounding remote and naturalistic uplands (LCAs 6, 8 and 9).• The field pattern of the valley sides, particularly the small, irregular fields on the Cwm Ogwr Fawr, is not masked by the development of solar arrays.• Solar PV development does not adversely affect the landscape's rich cultural heritage, including the special historic/architectural interest of the Nantymoel Conservation Area.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 8: Ogmore Forest and Surrounding Uplands

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This is an upland landscape in the north eastern corner of the County Borough, with significant parts covered by the Ogmore Forest. It lies on the boundary with Rhondda Cynon Taf County Borough. All of the LCA is classed as 'Upland' in LANDMAP's Visual & Sensory aspect (Level 2).

The northern half of this LCA falls within the Northern Uplands Special Landscape Area (SLA). Other designations include Daren y Dimbath SSSI, Bwlch y Clawdd Dyke (a Scheduled earthwork) and a number of SINCs.

8% of the LCA around Gilfach Goch falls within the Northern Uplands TAN 8 Refined Strategic Search Area.

LCA 8: Key Landscape Characteristics

- Highly undulating plateau and ridge landscape of Upper Coal Measures dissected by steeply incised valleys, draining into the Cwm Ogwr Fawr to the west and Cwm Ogwr Fach to the south.
- Hill summits and ridges reaching over 500 metres AOD in the north of the LCA.
- Fast-flowing streams and springs draining off the uplands and passing under stone hump-backed bridges in their lower courses.
- Forestry plantations (including the Ogmere Forest) with abrupt linear edges on ridges and hill summits, with riparian and broadleaved woodlands on valley sides.
- Rough grazing by sheep predominating (including on upland commons).
- Enclosed land on valley sides, with marginal pastures divided by hedges and mature hedgebanks forming tree lines.
- Patches of gorse, bracken and rush pasture conveying an upland feel.
- Large tracts of semi-improved/semi-natural acid grassland, marshy grassland, heath, bracken and scrub.
- Locally important swathes of broadleaved semi-natural woodland are found within Cwm Dimbath and on the western slopes of Mynydd yr Aber.
- Daren y Dimbath SSSI important for its assemblage of rare Atlantic Ferns.
- Bwlch y Clawdd Dyke (a Scheduled earthwork) situated in a prominent upland position along the county borough boundary, with cairns topping hill summits elsewhere.
- Evidence of the landscape's coal mining heritage, with disused tips on slopes.
- The only settlements are occasional small villages, hamlets and scattered farmsteads nestled on the southern slopes above the Ogmere Valley.
- Minor lanes providing access, whilst a large proportion of the uplands is designated open access land and crossed by rights of way.
- A largely unsettled and inaccessible landscape, heightening senses of remoteness and wildness with exposure to the elements. This is reduced on the fringes of the LCA close to valley settlements.
- Spectacular panoramic views from high ground to the Brecon Beacons and Bristol Channel.

LCA 8: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	A large scale undulating landscape with plateaux and ridges reaching to over 500m AOD in some areas. Steep sided valleys carve through the landscape.	
Land cover pattern and presence of human scale features	<p>Large areas of semi-improved and semi-natural grassland with associated upland habitats such as heath, bracken and scrub are interspersed with forestry plantation on the ridges and hills. On the valley sides and slopes, pastures enclosed by hedges and stone walls and areas of broadleaved semi-natural woodlands are found.</p> <p>Human-scale features include occasional small villages, hamlets and scattered farmsteads located on the southern slopes above the Ogmere Valley. Elsewhere, forestry plantations, patches of scrub and valley woodlands provide a human scale to the landscape.</p>	
Historic landscape character	The coal mining heritage of the landscape is evident through disused tips. Important historic remains such as the Scheduled Monument of Bwlch y Clawdd Dyke and cairns on hilltops are found in this LCA. None of the LCA is listed on the Register of Outstanding or Special Landscapes in Wales.	
Skylines	The LCA's elevated skylines are prominent and open, frequently crowned by conifer plantations. Some hilltops are topped by ancient burial cairns. The eastern edge of the LCA includes the recent Forch Nest and Pant-y-Wal windfarms, with turbines featuring prominently on the skylines.	
Key views and vistas	The open, upland nature of this landscape results in long views of the Brecon Beacons to the north and the Bristol Channel to the south. The LCA also forms a backdrop to settlements located within the adjacent branches of the Ogmere Valley (LCA 7, e.g. Nantymoel, Ogmere Vale and Evanstown) and Rhondda, Cynon Taf County Borough (e.g. Tonypanydy). It also has strong intervisibility with LCAs 6 and 9, including Taff Ely windfarm which lies just outside LCA 9 across the County Borough boundary.	
Scenic and special qualities	<p>42% of this LCA falls within the Northern Uplands Special Landscape Area, valued for its attractive upland views over the Ogmere Vale and to other upland areas, its 'wild', exposed character and its strong sense of place²⁹.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, are the open rough grassland grazed by sheep, valuable upland habitats, important archaeological remnants and the unsettled remote openness of the landscape, with long panoramic views. Some of these could be affected to a degree by wind energy development.</p>	
Perceptual qualities	Significant parts of the landscape are unsettled, remote and inaccessible, which is impacted in part by the presence of existing wind farms. Nevertheless, the absence of development over much of the landscape and its elevated landform also results in a strong exposure to the elements. Levels of tranquillity are reduced on lower slopes where parts of the landscape are influenced by adjacent valley settlements and main roads.	
Summary of landscape sensitivity	<p>Although this is a large-scale landscape that is influenced by human activity (in the form of farming, forestry and wind farms), its steep sided valleys, naturalistic land cover patterns including areas of unenclosed moorland, important archaeological features, elevated skylines forming a backdrop to views and its largely undeveloped, remote character all heighten sensitivity to wind energy development.</p> <p>Human influence is greater in the southern half of the LCA³⁰, lessening sensitivity, while areas of unenclosed naturalistic land cover in the north have a higher sensitivity. The complex undulating landform and variations in scale mean that the landscape would be particularly sensitive to the development of 'very large' turbines.</p> <p>The following locational variations in terms of the above discussion should be taken into account:</p> <ul style="list-style-type: none"> The lower farmed slopes in the south of the LCA³¹ would have a higher sensitivity to turbines of over 75 metres or clusters of more than five turbines, due to smaller scale enclosed landscape patterns and presence of human-scale features including farm buildings. 	
Sensitivity to different turbine heights	Very Small (15-25m)	L
	Small (26-50m)	L-M
	Medium (51-75m)	M
	Large (76-110m)	M
	Very large (111-150m)	M-H

²⁹ Summarised from TACP (March 2010) *Designation of Special Landscape Areas*. Report for Bridgend County Borough Council.

³⁰ This area coincides with the LANDMAP Visual & Sensory (Level 2) unit 'Mynydd y Glyn' (ID: CynonVS142).

³¹ *Ibid.*

<p>Commentary on different cluster sizes</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	<p>Although this is a relatively large-scale landscape, it is still likely to be highly sensitive to 'very large' clusters of wind turbines, which would remain out of scale with the underlying landform.</p>
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SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

The key sensitive features and characteristics of the LCA in relation to wind energy development are summarised as follows:

- Valued upland habitats distributed throughout, including acid and marshy grasslands and heathland, as well as rare Atlantic ferns at Daren y Dimbath SSSI.
- Prominent undeveloped, elevated skylines often marked by ancient burial cairns and forming a backdrop to views from settlements in the Ogmere Valley and from within Rhondda Cynon Taf.
- Significant archaeological and industrial remains, including Bwlch y Clawdd Dyke (a Scheduled Monument).
- The special qualities of the Northern Uplands SLA, particularly its 'wild' and exposed character with a strong sense of place and attractive upland views across the Ogmere Vale and to other uplands.

LCA 8: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently two operational wind farms lying adjacent to each other within this LCA: Fforch Nest and Pant-y-Wal. These appear in the landscape as one development, comprising a total of 21 turbines ('large' cluster), each with a tip height of up to 115m (in the 'very large' height bracket). Twelve of the turbines within the combined scheme fall within the Northern Uplands TAN 8 Refined Strategic Search Area (SSA) within the County Borough.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development (outside the SSA)
<p>The overall strategy for the LCA, outside the Northern Uplands Strategic Search Areas (SSA), is as follows:</p> <p>In line with TAN 8, the overall strategy is to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p> <p>For locations within the Northern Uplands SSA (see map on front page), it is accepted that change to landscape character could result from wind energy development. As outlined above, developments are already present in this part of the landscape.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Wind energy development does not detract from the sense of tranquillity and remoteness of the landscape, especially in the areas most remote from human influence.• Wind energy developments do not detract from the heritage significance of valued archaeological features, including ancient burial cairns on hill summits.• The panoramic views from summits are protected, including those valued as part of the Northern Uplands SLA (over the Ogmere Vale and towards other uplands).• The important naturalistic upland habitats are retained, including acid and marshy grasslands, heathland and bracken.• The presence of wind turbines does not detract from the landscape's role as a remote upland backdrop to settlements within the Ogmere Valley (LCA 7) and Rhondda Cynon Taf.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Although it is accepted that change to landscape character could result from wind energy development within</p>

the SSA, outside the SSA multiple wind energy developments should:

- Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the 'Key landscape Characteristics' section (and with reference to the definition of 'landscape capacity'³²).
- Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response³³.

Within the enclosed farmland to the south of the LCA³⁴:

- Any groups of 'medium' (51-75m) turbines should maintain a clear visual hierarchy from 'very small' (15-25m) on-farm/domestic turbines, and aim for a consistent design and size of turbine.

³² "Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type..." (Countryside Agency and SNH, 2002).

³³ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

³⁴ This area coincides with the LANDMAP Visual & Sensory (Level 2) unit 'Mynydd y Glyn' (ID: CynonVS142).

LCA 8: Landscape Sensitivity Assessment for Solar PV Development

Criteria	Landscape attributes and descriptions	
Landform	A highly undulating landscape with plateaux and ridges reaching to over 500m AOD in some areas. Steep sided valleys carve through the landscape.	
Sense of openness/enclosure	A mixed landscape with some remote areas of open access land and commons on the uplands, but a more enclosed feel around the forestry plantations and pastoral land on valley sides divided by hedges and mature hedgebanks.	
Field pattern and scale	Medium-scale fields (a mixture of historic irregular and regular enclosures) are found on the valley sides, comprising marginal pastures bounded by hedges and mature hedgebanks. Elsewhere the LCA is characterised by open rough grazing land.	
Land cover	Large areas of semi-improved and semi-natural grassland with associated upland habitats such as heath, bracken and scrub are interspersed with forestry plantations on the ridges and hills. On the valley sides, pastures enclosed by hedges and hedgebanks and areas of broadleaved woodlands are found.	
Historic landscape character	The coal mining heritage of the landscape is evident through disused tips. Important historic remains such as the Scheduled Monument of Bwlch y Clawdd Dyke and cairns on hilltops are found in this LCA. Some agricultural fields on the lower slopes are historic in origin.	
Key views and vistas	The open, upland nature of this landscape results in long views of the Brecon Beacons to the north and the Bristol Channel to the south. The LCA also forms a backdrop to settlements located within the adjacent branches of the Ogmore Valley (LCA 7, e.g. Nantymoel, Ogmore Vale and Evanstown) and Rhondda, Cynon Taf County Borough (e.g. Tonypany). It also has strong intervisibility with LCAs 6 and 9, including Taff Ely windfarm which lies just outside LCA 9 across the County Borough boundary.	
Scenic and special qualities	<p>42% of this LCA falls within the Northern Uplands Special Landscape Area, valued for its attractive upland views over the Ogmore Vale and to other upland areas, its 'wild', exposed character and its strong sense of place³⁵.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, are the open rough grassland grazed by sheep, valuable upland habitats, important archaeological remnants and the unsettled remote openness of the landscape, with long panoramic views. Some of these could be affected to a degree by solar PV development.</p>	
Perceptual qualities	The absence of human influence of much of the landscape contributes to a strong sense of remoteness and exposure to the elements. Levels of tranquillity are reduced on lower slopes where parts of the landscape are influenced by adjacent valley settlements.	
Summary of landscape sensitivity	<p>Although this landscape includes some areas of enclosure associated with forestry plantations and hedged medium-scale fields, the presence of prominent ridges and slopes which form a backdrop to views, valued tracts of open rough grazing land and semi-natural habitats, and perception of remoteness all heighten levels of sensitivity to solar PV developments.</p> <p>The following locational variations in landscape sensitivity should be taken account of:</p> <ul style="list-style-type: none"> The unenclosed and naturalistic upland plateaux, comprising a significant proportion of the LCA³⁶, would be highly sensitive to any solar PV developments. 	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	M-H
	Small (>1-5ha)	H
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H

³⁵ Summarised from TACP (March 2010) *Designation of Special Landscape Areas*. Report for Bridgend County Borough Council.

³⁶ This relates to all parts of the LCA apart from the enclosed farmed slopes to the south, which is coincident with the LANDMAP Visual & Sensory (Level 2) unit 'Mynydd y Glyn' (ID: CynonVS142)

SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 8: Ogmore Forest and Surrounding Uplands in relation to solar PV development is included below:

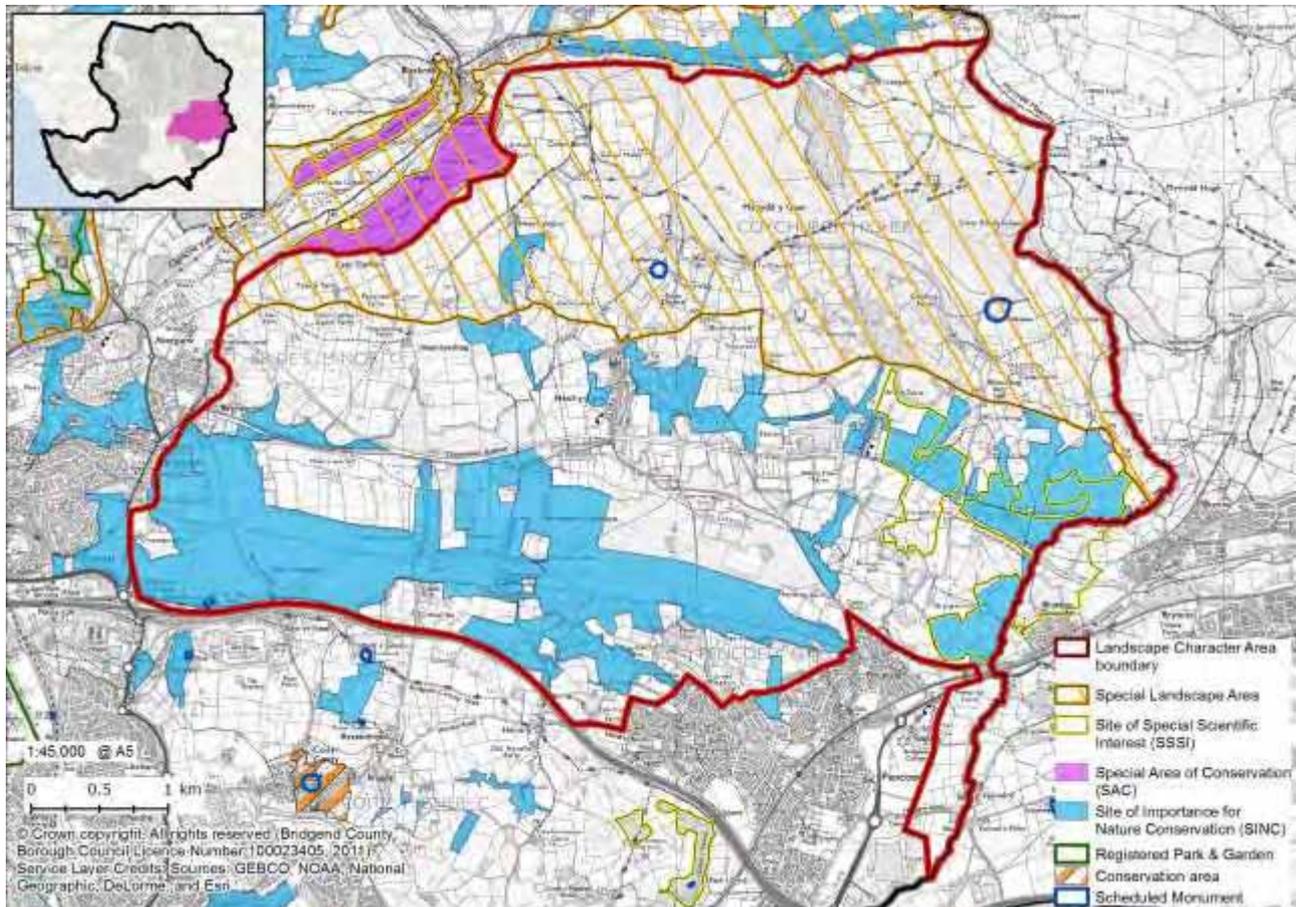
- The landscape's role in providing a backdrop to views, including settlements in the Ogmore Valley, Rhondda Cynon Taf and other upland LCAs.
- Valued upland habitats, including acid and marshy grasslands, heathland and rare Atlantic ferns at Daren y Dimbath SSSI.
- The predominantly open and relatively remote nature of the landscape.
- The field patterns (some historic in origin) of the agricultural enclosures located on the lower slopes.
- Significant archaeological and industrial remains, including Bwlch y Clawdd Dyke (a Scheduled Monument).
- The special qualities of the Northern Uplands SLA, particularly its 'wild' and exposed character with a strong sense of place and attractive upland views across the Ogmore Vale and to other uplands.

LCA 8: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
Guidance for development
<p>When siting and designing solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The strong remote, open and naturalistic character of the landscape is retained.• The most visually prominent slopes and ridges are avoided as sites for development.• The field patterns on hill slopes are not masked by the development of solar arrays.• The valued naturalistic upland habitats are retained, including acid and marshy grasslands, heathland and bracken.• Solar PV development does not detract from the landscape's role as a remote, upland backdrop to views from settlements within the Ogmere Valley (LCA 7) and Rhonda Cynon Taf.• The heritage significance of valued archaeological assets is not adversely affected by the presence of solar PV developments.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 9: Hirwaun Common and Surrounding Ridges

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

Found in the east of the County Borough, this LCA is flanked by the urban areas of Pencoed to the south and Bridgend to the south-west. It comprises large areas of common land and open ridgelines, and includes the Rockwool Factory. LANDMAP classifies the southern half of the LCA as 'Lowland' and the northern half as 'Upland'.

The northern half of the LCA falls within the Mynydd y Gaer Special Landscape Area (SLA). Other designations include Brynna a Wern Tarw SSSI, Hirwaun Common SINC and several Scheduled Monuments.

LCA 9: Key Landscape Characteristics

- Strongly undulating landscape with prominent ridgelines at Mynydd y Gaer to the north (295 metres) and the narrow Cefn Hirgoed in the south (130 metres).
- Complex geology, with Mynydd y Gaer marking the southern extent of Upper Coal Measures, Cefn Hirgoed ridgeline formed of resistant Millstone Grit and the LCA's low-lying land overlying sandstone.
- Incised river valleys dissecting Mynydd y Gaer, grading to a low-lying valley bottom criss-crossed by minor streams and springs.
- Coniferous plantations on Mynydd y Gaer and semi-natural woodland on the slopes of Allt y Rhiw forming the largest areas of continuous tree cover in the LCA.
- Open, largely treeless commons and ridges contrasting with surrounding enclosed farmland, with bands of wet woodland along springlines, tree lines forming prominent field boundaries and occasional in-field specimens.
- Large tracts of unimproved grassland, rush pasture and rough upland vegetation predominantly grazed by sheep. Sheep-grazed pastures and wet meadows found elsewhere.
- Blocks of historically important registered common land enclosed by fencing along roadsides, with some edges near housing converted to pony paddocks.
- Enclosed land defined by small to medium-scale irregular and regular fields bounded by square-cut hedges, tall hedgebanks and lines of trees.
- Broadleaved semi-natural woodland on valley sides, unimproved grasslands and heath (e.g. species-rich neutral grassland and wet heath at Brynna a Wern Tarw SSSI; acid grassland/heath at Hirwaun Common SINC).
- Scattered scrub, bracken and trees add to a varied landscape mosaic.
- Strategically-sited Iron Age hillforts on Mynydd y Gaer and a spur overlooking Cwm Llwyd, as well as medieval pillow mounds on Cefn Hirgoed (all Scheduled Monuments).
- Mixed local vernacular, with rendered 19th century terraces and a range of 20th century/modern housing at Heol-y-Cyw.
- Busy B4280 road cutting through the landscape – which forms a route connecting Bridgend with the M4.
- Tracts of registered common land providing valued recreational opportunities.
- A strongly rural landscape with an exposed, upland feel on higher ground.
- Strong intervisibility between the two ridges, with the white/cream rendered housing of Heol-y-Cyw visible in views from Cefn Hirgoed.
- The Rockwool Factory chimney and reservoirs on Hirwaun Common standing out strongly against their muted naturalistic backdrop.
- Extensive ridgetop views to the uplands to the north and the south-east coast in clear conditions. Views east from Mynydd y Gaer dominated by wind turbines on Mynydd Maendy (within RCT County Borough).

LCA 9: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Strongly undulating, large-scale landform with prominent ridgelines and steep river valleys, with minor streams and springs producing areas of smaller scale landform.	
Land cover pattern and presence of human scale features	<p>Mixed land cover comprised of extensive coniferous plantations and semi-natural woodland on the slopes. On the uplands there are exposed and open commons with large tracts of unimproved grassland and heaths that form important semi-natural habitats. At lower elevations, agricultural fields are enclosed by hedges and lines of trees.</p> <p>Human scale features are found in the form of mixed housing styles at Hoel-y-Cyw, the busy B4280 road and industrial development such as the Rockwool Factory.</p>	
Historic landscape character	The rich archaeological heritage of this landscape is identified through the Scheduled Monuments that are located here, including Iron Age hillforts and medieval pillow mounds located on hill summits.	
Skylines	The LCA is characterised by open, expansive skylines, some marked by plantations and bands of woodland. Pylons and the Rockwool Factory chimney form prominent man-made features on some skylines. Cefn Hirgoed and Hirwaun Common form an elevated rural backdrop to views from Pencoed and north-eastern Bridgend.	
Key views and vistas	From the ridgetops there are extensive views north to the uplands beyond the Ogmore Valley (LCAs 6 and 8), as well as south east to the Vale of Glamorgan coast. Views to the east are frequently dominated by the turbines of Taff Ely wind farm, which appears to form an extension of the LCA's skyline in the north-east (within Rhondda Cynon Taff). Fforch Nest and Pant-y-Wal windfarms form landmark features in views from Mynydd y Gaer.	
Scenic and special qualities	<p>39% of this LCA falls within the Mynydd y Gaer Special Landscape Area (SLA), valued for the open and exposed nature of the higher ground and the contrasting hedgerow bound fields on the agricultural fields and lower elevations.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the open enclosed commons with a strong rural character and extensive views, large areas of semi-natural habitat and woodland and the presence of nationally important archaeological features. Some of these could be affected to some degree by wind energy development.</p>	
Perceptual qualities	On the higher commons there is an exposed upland feel, and the landscape remains very rural, although in some areas human development intrudes on this perception in the form of modern housing, pylons, the main B4280 road and views of Mynydd Maendy wind farm to the east.	
Summary of landscape sensitivity	Although this is a large-scale landscape in many places, with some existing development (including on open skylines), it is still predominantly rural and both the openness of the commons and views from and to the area are recognised as being in need of conservation/protection in the LCA description. The prevalence of semi-natural land cover and archaeological features could also result in increased levels of sensitivity to wind energy development.	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	M
	Large (76-110m)	M-H
	Very large (111-150m)	H
Commentary on different cluster sizes	The presence of expansive tracts of semi-natural land, common land and intricate valleys mean that this LCA is likely to be highly sensitive to any clusters larger than 'small' in scale.	
Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)		

SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 9: Hirwaun Common and Surrounding Ridges in relation to wind energy development is included below:

- Strong rural character, with a sense of remoteness on higher ground.
- Nationally important archaeological features, including Iron Age hillforts and medieval pillow mounds.
- Extensive views from ridges, to the coastline and the nearby uplands of LCA 8.
- Large areas of locally and nationally important semi-natural habitat including broadleaved woodland and open tracts of species rich neutral grassland and wet heath on commons.

LCA 9: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or operational wind energy schemes in this LCA. However, just beyond the boundary within Rhondda Cynon Taf County Borough lies Taff Ely windfarm, currently comprising a total of twenty 72 metre turbines (within the 'medium' category). A forthcoming re-powering scheme will replace these turbines with seven 110m turbines (within the 'large' category). Although outside the County Borough, this wind farm is sited on a skyline that appears as a continuation of this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development in this LCA is as follows:</p> <p>To maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The role of the landscape's elevated rural skylines as a backdrop to views from Bridgend and Pencoed is protected.• The strong rural character of the landscape is retained.• The exposed, open feel of the higher ground is protected.• The valued semi-natural habitats are protected from development, including areas of broadleaved woodland, open species rich neutral grassland and wet heath.• The significance of the LCA's archaeological features such as Iron Age hillforts and medieval pillow mounds is not affected by the presence of wind turbines.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the 'Key landscape Characteristics' section (and with reference to the definition of 'landscape capacity'³⁷).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response³⁸.• Where a site for development is intervisible with other wind turbine developments (within the same or different landscapes), cumulative landscape and visual impacts will need to be considered. For this LCA, this includes consideration of the current Taff Ely windfarm.

³⁷ "Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type..." (Countryside Agency and SNH, 2002).

³⁸ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 9: Landscape Sensitivity Assessment for Solar PV Development

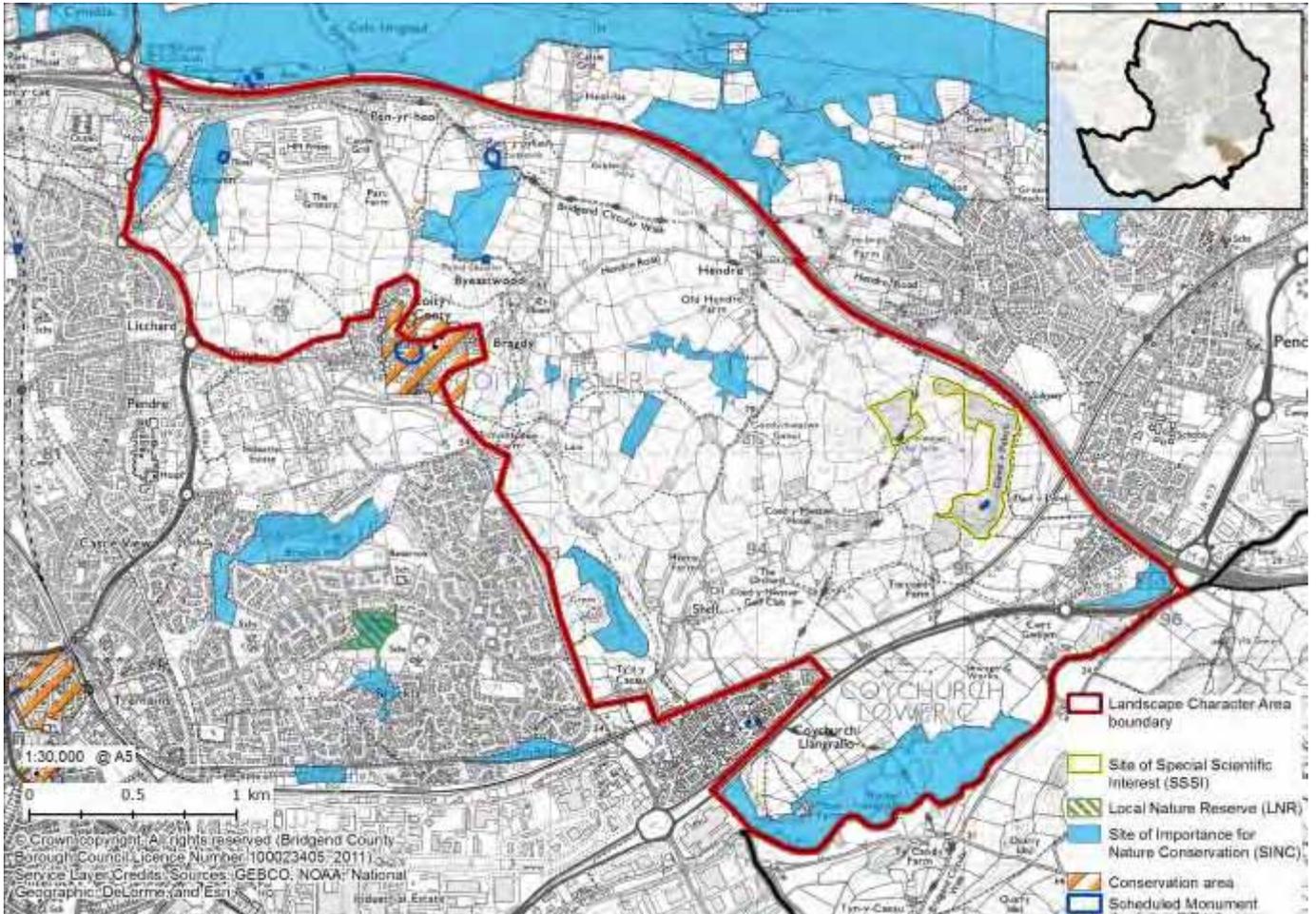
Criteria	Landscape attributes and descriptions	
Landform	Strongly undulating landform with prominent ridgelines and slopes. The landscape is incised by steep river valleys, with minor streams and springs.	
Sense of openness/enclosure	The sense of enclosure across the landscape is varied according to the land use in the locality. Fields that are bounded by high hedges or tree belts and areas with high woodland cover will have a greater sense of enclosure. The open commons have an exposed feel.	
Field pattern and scale	Varied field pattern with small to medium scale fields of both regular and irregular shapes. In some upland areas there are large tracts of unimproved grassland and rough grazing.	
Land cover	Mixed land cover comprised of extensive coniferous plantations and semi-natural woodland on the slopes. On the uplands there are exposed and open commons with large tracts of unimproved grassland and heaths that form important semi-natural habitats. At lower elevations, agricultural fields are enclosed by hedges and lines of trees.	
Historic landscape character	The rich archaeological heritage of this landscape is identified through the Scheduled Monuments that are located here, including Iron Age hillforts and medieval pillow mounds located on hill summits.	
Key views and vistas	From the ridgetops there are extensive views north to the uplands beyond the Ogmore Valley (LCAs 6 and 8), as well as south east to the Vale of Glamorgan coast. Views to the east are frequently dominated by the turbines of Taff Ely wind farm, which appears to form an extension of the LCA's skyline in the north-east (within Rhondda Cynon Taff). Fforch Nest and Pant-y-Wal windfarms form landmark features in views from Mynydd y Gaer.	
Scenic and special qualities	<p>39% of this LCA falls within the Mynydd y Gaer Special Landscape Area, valued for the open and exposed nature of the higher ground and the contrasting hedgerow bound fields on the agricultural fields and lower elevations.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the open enclosed commons with a strong rural character and extensive views, large areas of semi-natural habitat and woodland and the presence of nationally important archaeological features. Some of these could be affected to some degree by solar PV energy development.</p>	
Perceptual qualities	On the higher commons there is an exposed upland feel, and the landscape remains very rural, although in some areas human development intrudes on this perception in the form of modern housing, pylons, the main B4280 road and views of a wind farm to the east.	
Summary of landscape sensitivity	Although this landscape has areas that are fairly enclosed or are impacted by existing development, the sensitivity of the landscape to solar PV development is increased by the presence of prominent, elevated slopes, its highly rural character, rich archaeological heritage and open and exposed commons supporting valued habitats.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	M
	Medium (>5-10ha)	M-H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 9: Hirwaun Common and Surrounding Ridges in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> • Elevated and highly visible slopes and ridgelines forming a backdrop to views from across and beyond the LCA. • Strong rural, pastoral character, with a sense of remoteness on higher ground. • Extensive views from ridges, to the coastline and the nearby uplands of LCAs 6 and 8. • Large expanses of nationally and locally important semi-natural habitat, including broadleaved woodland and open species-rich grasslands and wet heath. • Nationally important archaeological features, including Iron Age hillforts and medieval pillow mounds. 		

LCA 9: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA- specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Solar PV developments should avoid the most open, visible slopes and ridgelines.• The strong rural character of the landscape with an exposed feel on higher ground is protected.• The valued semi-natural habitats of broadleaved woodland, species rich neutral grassland and wet heath are protected.• The distinctive mixed field pattern (including small, irregular sized fields that are particularly sensitive to solar PV development) is not masked by solar PV development.• The open commons are not fragmented by the development of solar PV schemes.• Solar PV development does not affect the value and significance of the landscape's Scheduled archaeological features.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 10: Coity Rural Hinterland

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This is a sparsely settled landscape located in the south east of the County Borough, providing a rural buffer between the settlements of Bridgend and Pencoed. All of the LCA is classified as 'Lowland' in LANDMAP's Visual & Sensory aspect (Level 2).

There are no Special Landscape Areas within this LCA. Other designations include Coed y Mwstwr RIGS, Coed y Mwstwr Woodland SSSI, several Scheduled Monuments, part of Coity Conservation Area and a number of SINCs.

LCA 10: Key Landscape Characteristics

- Strongly undulating lowland landscape, varying in height from 114 metres AOD to around 30 metres AOD.
- Underlying rocks of Triassic sandstones and mudstones, with a band of limestone in the south-east outcropping along the Coed y Pebyll ridge.
- Locally distinct cave systems at Coed y Mwstwr (designated as a RIGS).
- Includes the distinct sinuous valley of Nant-Bryn-glas and a number of springs.
- Bands and blocks of broadleaved woodland linking to hedgerows (often grown out into tree lines) to produce a strong sense of enclosure and wooded character.
- Distinctive small-scale field pattern of improved and semi-improved pastures, marked by a strong framework of mature hazel, holly and hawthorn hedges with frequent oak and ash standards.
- Horse paddocks divided by wooden fencing on the fringes of Hendre.
- Remnant common land in the north-west and around Coychurch softening the urban edge.
- Semi-natural broadleaved woodlands of nature conservation interest, including the Coed y Mwstwr Woodland SSSI (mixed woodland with a rich limestone ground flora).
- Patches of scrub and neutral grassland also valued locally.
- Rich archaeological heritage including prehistoric earthworks and a burial chamber near Byeastwood, and Ogof y Pebyll cave (which displays evidence of prehistoric occupation).
- A 19th century historic estate character is associated with the landscape around Coed y Mwstwr, which also includes a golf course.
- Sparsely settled, with occasional nucleated hamlets and farmsteads linked by winding lanes, single tracks and a network of footpaths, including the Bridgend Circular Walk.
- Areas of open access land (commons) providing valued recreational spaces.
- HM Prison Parc located in the north-west of the LCA, largely screened by woodland. Large parts of the landscape inaccessible by road.
- Varied local vernacular, with examples of traditional local stone vernacular at Bragdy and Byeastwood, and the Victorian red brick Grade II listed Victorian mansion of the Coed-y-Mwstwr Hotel.
- A highly rural and tranquil landscape in strong contrast to the neighbouring built form of Bridgend.
- Peaceful, unspoilt qualities interrupted by the sound of the M4 traffic along the northern edges, as well as the A473 and main railway line to the south.
- Views from the higher land in the south across the Vale of Glamorgan interrupted by the visual prominence of Bridgend Industrial Estate.
- Unspoilt views to the north characterised by the wooded/semi-natural ridgelines of LCA 8 and the uplands beyond.

LCA 10: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Medium scale strongly undulating lowland landscape, including the sinuous valley of Nant-Bryn-glas.	
Land cover pattern and presence of human scale features	Small-scale pastoral fields are bounded by mature hedges, with frequent oak and ash trees sometimes adjoining bands of woodland. There are also areas of horse paddocks, common land, and a 19 th century historic estate at Coed y Mwstwr. Human scale features include occasional hamlets and farmsteads and frequent trees.	
Historic landscape character	This landscape has a rich archaeological heritage of prehistoric, medieval and post medieval features, with several Scheduled Monuments. Important historic features are also associated with the 19 th century Coed-y-Mwstwr estate, including several Grade II and Grade II* listed buildings. Parts of Coity Conservation Area are within the LCA, with views afforded to the nationally important medieval castle within the village.	
Skylines	Skylines in this LCA are often marked by woodland and trees, and are occasionally marked by historic features, including a prehistoric burial chamber at Coity. . The skylines of areas of open access common land are more open. The LCA forms a valued rural backdrop to views from Bridgend to the west, and Pencoed to the east.	
Key views and vistas	Elevated land affords expansive views to the south across the Vale of Glamorgan, interrupted by Bridgend Industrial Estate, whilst views to LCA 8 in the north are unspoilt and have a wooded and semi-natural character.	
Scenic and special qualities	The sensitive features of this landscape, as recorded in the LCA description, include the strong wooded character, areas of scrub, semi-improved grassland and commons, distinctive small scale field pattern and estate land and the important prehistoric heritage sites and cave systems. Some of these could be affected to a degree by wind energy development.	
Perceptual qualities	This landscape is very rural and tranquil, particularly in the context of its doorstep location to the urban area of Bridgend. The sparsely settled nature of the landscape, coupled with the semi-natural woodland and pastoral fields provide a peaceful, unspoilt quality, although this is interrupted in places by the M4 and urban development of Bridgend.	
Summary of landscape sensitivity	Although the views from and tranquil qualities of this rural landscape are already interrupted in places by existing development, the sensitivity of the LCA to wind development is increased by the occurrence of small scale pastoral fields, elevated undeveloped skylines forming a valued backdrop to views from adjacent urban areas, frequent human scale features and the presence of nationally important heritage features.	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	M-H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)	Although this is a medium-scale landscape with existing urban and industrial influences on the fringes of Bridgend, its small-scale field pattern and historic character means that it is likely to be highly sensitive to any clusters larger than 'small' in scale.	
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 10: Coity Rural Hinterland in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • Strongly undulating landscape with wooded rural skylines forming a backdrop to views from Bridgend and Pencoed. • Rural, tranquil character with long, uninterrupted views from higher ground to the coast to the south and the uplands to the north. • Its wealth of heritage features, and the 19th century estate character associated with Coed y Mwstwr. • Areas of scrub, semi-improved grassland and remnant commons evoking a naturalistic landscape character. 		

LCA 10: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or operational wind energy schemes within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development in this LCA is as follows:</p> <p>To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Wind energy development does not dilute the overall rural, tranquil feel of the landscape.• The significance of heritage features and 19th century estate character of the landscape around Coed y Mwstwr is respected.• The character and setting of Coity Conservation Area with its medieval castle is respected in any proposals.• The development of wind turbines and their ancillary equipment avoids valued patches of semi-natural broadleaved woodland, scrub and neutral grassland.• The unspoilt views north to LCA 8 from wooded ridgelines are protected.• Wind energy development does not overwhelm the human scale of the LCA’s landscape features, including hedgerows, farmsteads, hamlets and frequent trees.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’³⁹).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response⁴⁰.

³⁹ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

⁴⁰ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 10: Landscape Sensitivity Assessment for Solar PV Development

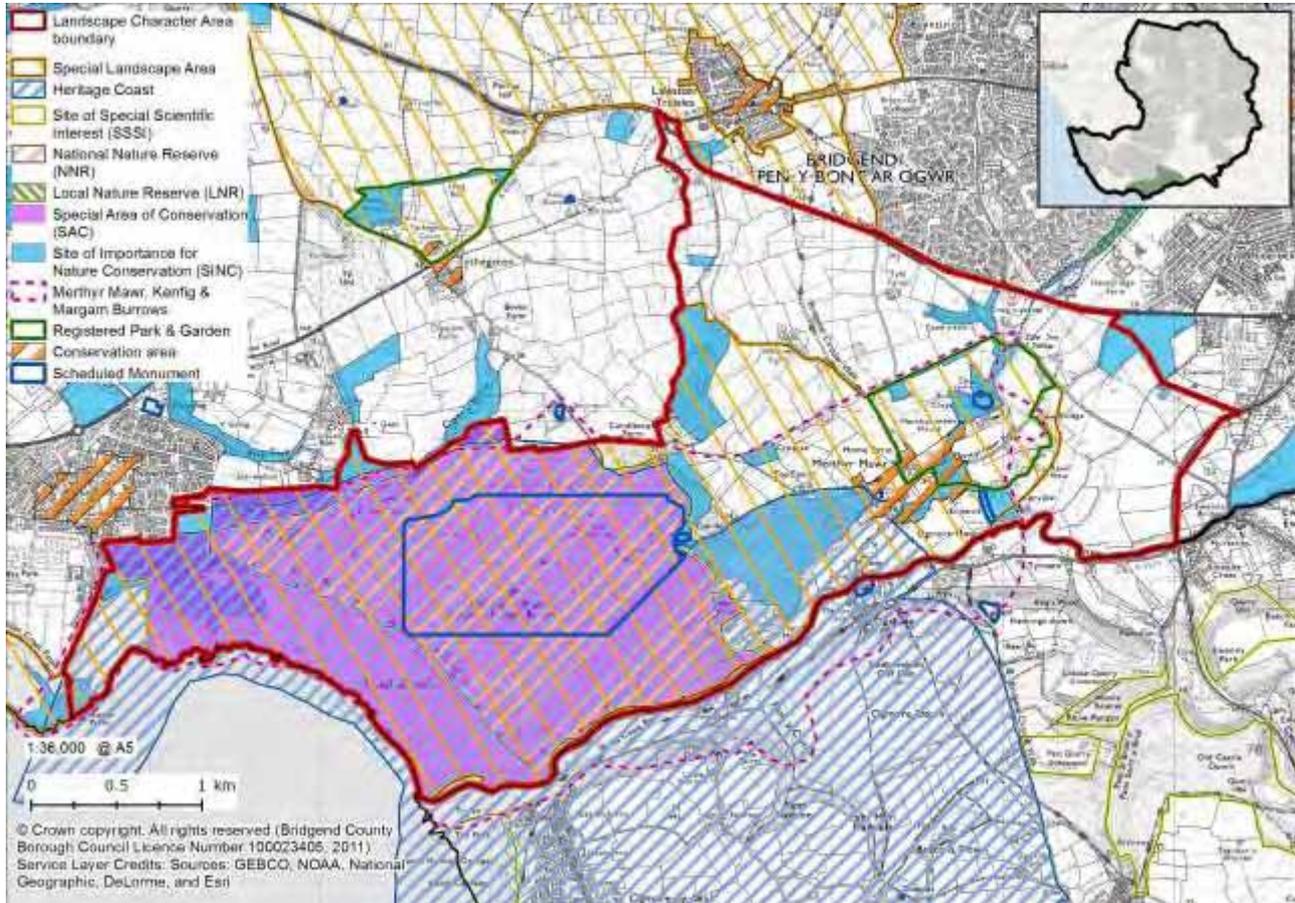
Criteria	Landscape attributes and descriptions	
Landform	Strongly undulating lowland landscape, including the sinuous valley of Nant-Bryn-glas.	
Sense of openness/enclosure	The strong wooded character of the area with fields enclosed by mature hedgebanks provides a sense of enclosure to much of the landscape, although there are more open areas found on the remnant commons around settlement edges.	
Field pattern and scale	The field pattern in this landscape is predominantly small-scale, with occasional modern pony paddocks.	
Land cover	Small scale pastoral fields are bound by mature hedges of hazel, holly and hawthorn, with frequent oak and ash trees. In some areas bands of woodland adjoin these hedges. There are also areas of horse paddocks, common land, and a 19 th century historic estate at Coed-y-Mwstwr, which includes a golf course.	
Historic landscape character	This landscape has a rich archaeological heritage of prehistoric, medieval and post medieval features, with several Scheduled Monuments. Important historic features are also associated with the 19 th century Coed-y-Mwstwr estate, including several Grade II and Grade II* listed buildings and designed parkland. Parts of Coity Conservation Area are within the LCA, with views afforded to the nationally important medieval castle within the village.	
Key views and vistas	Elevated land affords expansive views to the south across the Vale of Glamorgan, interrupted by Bridgend Industrial Estate, whilst views to LCA 8 in the north are unspoilt and have a wooded and semi-natural character.	
Scenic and special qualities	This landscape is very rural and tranquil, particularly in the context of its doorstep location to the urban area of Bridgend. The sparsely settled nature of the landscape, coupled with the semi-natural woodland and pastoral fields provide a peaceful, unspoilt quality, although this is interrupted in places by the M4 and urban development of Bridgend.	
Perceptual qualities	This landscape is very rural and tranquil in comparison to the urban area of Bridgend to the south. The sparsely settled nature of the landscape, coupled with the semi-natural woodland and pastoral fields provide a peaceful, unspoilt quality, although this is interrupted in places by the M4 and urban development of Bridgend.	
Summary of landscape sensitivity	Although this landscape has a high level of enclosure resulting from the abundance of woodland and mature hedgebanks which could indicate a lower sensitivity to solar PV development, the small scale pastoral fields, predominantly rural or semi-natural landcover and its rural, tranquil and historic landscape character all increase levels of sensitivity.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	M
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 10: Coity Rural Hinterland in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • The distinctive historic, small-scale field pattern marked by a strong hedgerow network. • Its rural, tranquil character on the doorstep of adjacent urban areas (Bridgend and Pencoed); forming a backdrop to landscapes beyond. • Historic landscape character with a number of prehistoric sites and estate land around Coed y Mwstwr. • Areas of scrub, semi-improved grassland and remnant commons providing a naturalistic landscape character. 		

LCA 10: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The strongly rural character and levels of relative tranquillity are protected.• Solar PV energy development protects the significance of heritage features, the 19th century Coedy Mwstwr estate and Coity Conservation Area.• Locally valued patches of semi-natural broadleaved woodland, scrub and neutral grassland are avoided as sites for development.• The distinctive small scale, historic pattern of pastoral fields is not masked by the development of solar arrays.• Solar PV developments avoid the most elevated, sloping land – particularly sites that form a backdrop to views from Bridgend, Pencoed and the remote uplands of LCA 8.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 11: Merthyr Mawr Farmland, Warren and Coastline

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

Located to the south west of Bridgend Town, this LCA comprises the distinctive sand dunes and coastline of Merthyr Mawr Warren (within the Glamorgan Heritage Coast), along with farmland of an estate character around Merthyr Mawr village. The Warren is classified as 'Coastal' in LANDMAP's Visual & Sensory aspect (Level 2) and the inland farmland as 'Lowland'.

The majority of the LCA falls within the Merthyr Mawr Special Landscape Area (SLA). Other designations include Merthyr Mawr Warren SAC, SSSI and NNR, Newton Fault RIGS, several Scheduled Monuments, Merthyr Mawr village Conservation Area and the Grade II* Registered Park and Garden of Merthyr Mawr House. Much of the landscape is designated as of Outstanding Historic Importance and all of the coastal area lies within the Glamorgan Heritage Coast.

LCA 11: Key Landscape Characteristics

- Coastal landscape within the Glamorgan Heritage Coast, dominated by the high sand dunes of Merthyr Mawr, reaching up to 80m AOD, backed by rolling estate farmland.
- Dunes comprising of wind-blown sand forming a superficial layer over Lower Carboniferous Limestone. A band of Oolitic Limestone and Lower Lias strata contains the dunes. The Newton Fault RIGS shows the contrast between the Carboniferous and Triassic strata.
- Sandy beach with shingle and beach cobble occurring in places.
- Landscape drained by the River Ogmore along its southern boundary. Ground water aquifers within the limestone bedrock (emergency water supplies to local communities).
- Varied woodland pattern creating landscape interest, including small spinneys within the sand dunes, broadleaved woodland fringing the River Ogmore, mixed estate plantations and in-field parkland trees.
- Buildings within Merthyr Mawr village nestled within tree groups, frequently Scots Pine.
- Well-developed, loamy brown earths supporting predominantly pastoral farming, wood pasture and parkland, with some arable fields and wet meadows on the floodplain.
- Regular fields enclosed by estate stone walls, railings or low-cut hedges.
- Internationally important habitats on Methyr Mawr Warren including sand dunes, saltmarsh, limestone grasslands and swamp habitats. Dune slacks amongst the most species-rich in the UK.
- Broadleaved estate plantations, patches of semi-natural woodland and remnant unimproved grasslands, many designated as SINC.
- Historic and archaeological features of national importance including the Norman-origin Ogmore Castle (within the Vale of Glamorgan but strongly associated with this landscape), 14th century fortified manor house of Candleston Castle, Chapel Hill Iron Age hillfort, and the early medieval Vervil Dyke.
- Evidence beneath the dunes of occupation from the Neolithic period. Much is designated a Landscape of Outstanding Historic Importance.
- Grade II* Merthyr Mawr House and parkland, with pleasure grounds, specimen trees and estate plantations.
- Distinctive village and medieval church of Merthyr Mawr designated as a Conservation Area, including well-maintained stone cottages with thatched or slate roofs.
- Limestone local vernacular creating unity in the landscape – used in buildings, walls and bridges.
- Settlement limited to the historic nucleated village of Merthyr Mawr, with scattered farmsteads linked by minor rural lanes and tracks.
- The Warren crossed by the Wales Coast Path, with the Bridgend Circular Walk providing links from the town to Merthyr Mawr village and Candleston Castle.
- A peaceful and strongly rural landscape on the doorsteps of Bridgend and Porthcawl, with important visual connections with the surrounding coast and seascapes.
- Sand dunes are a popular recreational destination, with increased traffic on the rural roads during peak times impacting on otherwise high levels of tranquillity.

LCA 11: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Predominantly large-scale coastal landscape with a beach of sand, shingle and cobble backed by the high sand dunes of Merthyr Mawr Warren. Beyond the sand dunes the landscape comprises small to medium-scale rolling estate farmland.	
Land cover pattern and presence of human scale features	<p>Varied landcover, which is mainly semi natural or agricultural in nature. Internationally important habitats are found in and around the sand dunes, including saltmarsh, limestone grassland and swamp. The farmland beyond the dunes is predominantly pastoral, and there are woodland cover within the LCA is varied; with small spinneys within the dunes, broadleaved woodland fringing the River Ogmore, estate plantations and in field parkland trees.</p> <p>Frequent human scale features within the farmland include the village and medieval church at Merthyr Mawr, scattered farmsteads, stone walls and frequent specimen and woodland trees.</p>	
Historic landscape character	A large portion of this LCA (67%) is designated as a Landscape of Outstanding Historic Importance in Wales owing to its long history of human occupation, and includes several nationally significant heritage features including the Scheduled Monuments of Merthyr Mawr Warren, Candleston Castle and St Rogue's Chapel. The Grade II* Listed Merthyr Mawr House estate influences the character of the land surrounding the village, which is also a Conservation Area	
Skylines	The skylines are open or wooded, and generally free from development. In the north of the LCA, some skylines are interrupted by pylon lines crossing the estate farmland. Traeth yr Afon beach and the high dunes of the warren form dramatic and distinctive coastal features, forming a backdrop to views along the coast, including from Porthcawl and Ogmore-on-Sea (within the Vale of Glamorgan).	
Key views and vistas	The high sand dunes provide a frontage for the County Borough from the sea. There are also important visual connections from the Warren and beach in this LCA with the surrounding coastline and across the Bristol Channel to the North Somerset Coast. The ancient, nationally important remains of Ogmore Castle are prominent in views down the Ogmore Valley on the edge of the County Borough. There are some views across the estate farmland from the A48, but these are often restricted by woodland.	
Scenic and special qualities	<p>53% of this LCA falls within the Glamorgan Coast Heritage Coast, valued for the natural undeveloped character of the coastline, historical remnants and geological and ecological scientific value.</p> <p>74% of the LCA is contained in the Merthyr Mawr Warren Special Landscape Area, valued for its dune systems, parklands and historical remains.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the visually prominent sand dunes, internationally important coastal habitats and nationally important archaeological and cultural heritage features. Some of these might be affected to a degree by wind energy development.</p>	
Perceptual qualities	Peaceful and strongly rural landscape, with the expansive coastal habitats, farmland and historic and parkland Merthyr Mawr House Estate providing an area of relative tranquillity on the doorstep of the urban areas of Bridgend and Porthcawl.	
Summary of landscape sensitivity	<p>Although parts of this landscape are large-scale, its distinctive landform of elevated sand dunes and rolling farmland, strong rural, tranquil nature of the landscape on the doorstep of urban areas, its nationally important historic features and landscapes, internationally valued coastal habitats and strong visibility in views along the coast all increase levels of sensitivity to wind energy development.</p> <p>The following locational variations to sensitivity should be taken into account:</p> <ul style="list-style-type: none"> Merthyr Mawr Warren and Traeth Yr Afon beach would be highly sensitive to the development of any scales of wind turbine development. 	
Sensitivity to different turbine heights	Very Small (15-25m)	M-H
	Small (26-50m)	H
	Medium (51-75m)	H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	<p>Although this landscape includes some large-scale landforms, the internationally important sand dunes and historic landscapes associated with this LCA mean that it would be highly sensitive to all but single turbine developments. Merthyr Mawr Warren and Traeth Yr Afon beach would be highly sensitive to the development of any scales of wind turbine.</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	

SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 11: Merthyr Mawr Farmland, Warren and Coastline in relation to wind energy development is included below:

- Visually prominent sand dunes, reaching some 80 metres AOD and forming a distinctive coastal frontage to the County Borough and scenic backdrop to views from Porthcawl and Ogmore-by-Sea.
- Internationally important coastal habitats within the Merthyr Mawr Warren SAC, SSSI and NNR.
- Merthyr Mawr village Conservation Area, with strong local vernacular and surrounding estate character (associated with the Grade II* parkland estate surrounding Merthyr Mawr House).
- The nationally important historic character and relicts found within the landscape, most of which is designated as a Landscape of Outstanding Historic Interest in Wales.

LCA 11: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or operational wind energy schemes within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy wind energy development in this LCA is as follows:</p> <ul style="list-style-type: none">• To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The role of the sand dunes as a frontage to the County Borough is not damaged by wind turbines.• Wind turbines do not negatively impact upon the landscape as a setting for important heritage features including the Scheduled Monuments of Merthyr Mawr Warren, Candleston Castle, Ogmere Castle and St Rogue’s Chapel.• Wind turbines do not affect the setting of Merthyr Mawr village Conservation Area.• Wind energy development does not degrade the peaceful and strongly rural character of the landscape.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’⁴¹).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response⁴².

⁴¹ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

⁴² For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 11: Landscape Sensitivity Assessment for Solar PV Development

Criteria	Landscape attributes and descriptions	
Landform	Predominantly coastal landscape with a beach of sand, shingle and cobble (Traeth yr Afon) backed by the high and frequently steep sand dunes of Merthyr Mawr Warren. Beyond the sand dunes the landscape comprises rolling estate farmland with some open and relatively steep slopes.	
Sense of openness/enclosure	The coastal parts of the LCA are generally open and exposed to the elements, with small spinneys within the dunes providing limited enclosure. Within the farmland backing the coast enclosure is provided by broadleaved woodland fringing the River Ogmore, mixed estate plantations and field boundaries of stone walls, railings, or low-cut hedges.	
Field pattern and scale	Predominantly pastoral fields are generally regular in shape and of medium scale. There are some larger fields of arable cultivation on slopes south of Merthyr Mawr village.	
Land cover	Varied landcover, which is mainly semi natural or agricultural in nature. Internationally important habitats are found in and around the sand dunes, including saltmarsh, limestone grassland and swamp. The farmland beyond the dunes is predominantly pastoral, and there are woodland cover within the LCA is varied; with small spinneys within the dunes, broadleaved woodland fringing the River Ogmore, estate plantations and in field parkland trees.	
Historic landscape character	A large portion of this LCA (67%) is designated as a Landscape of Outstanding Historic Importance in Wales owing to its long history of human occupation, and includes several nationally significant heritage features including the Scheduled Monuments of Merthyr Mawr Warren, Candleston Castle and St Rogue's Chapel. The Grade II* Listed Merthyr Mawr House estate influences the character of the land surrounding the village, which is also a Conservation Area.	
Key views and vistas	The high sand dunes provide a frontage for the County Borough from the sea. There are also important visual connections from the warren and beach in this LCA with the surrounding coastline and across the Bristol Channel to the North Somerset Coast. The ancient, nationally important remains of Ogmore Castle are prominent in views down the Ogmore Valley on the edge of the County Borough. There are some views across the estate farmland from the A48, but these are often restricted by woodland.	
Scenic and special qualities	<p>53% of this LCA falls within the Glamorgan Coast Heritage Coast, valued for the natural undeveloped character of the coastline, historical remnants and geological and ecological scientific value.</p> <p>74% of the LCA is contained in the Merthyr Mawr Warren Special Landscape Area, valued for its dune systems, parklands and historical remains.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the visually prominent sand dunes, internationally important coastal habitats and nationally important archaeological and cultural heritage features. Some of these might be affected to a degree by solar PV development.</p>	
Perceptual qualities	Peaceful and strongly rural landscape, with the expansive coastal habitats, farmland and historic and parkland Merthyr Mawr House Estate providing an area of relative tranquillity on the doorstep of the urban areas of Bridgend and Porthcawl.	
Summary of landscape sensitivity	<p>Although this landscape has areas of rolling farmland (including arable) with regular, medium-sized fields and enclosure provided by trees and woodland that could indicate a lower sensitivity to solar PV development, the presence of internationally important semi-natural habitats, nationally important historic landscapes and the role of the dunes in providing a prominent frontage to the County Borough all increase levels of sensitivity.</p> <p>The following locational variations should be taken into account:</p> <ul style="list-style-type: none"> Merthyr Mawr Warren and Traeth Yr Afon beach would be highly sensitive to the development of any scales of solar PV development. 	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	M
	Small (>1-5ha)	M-H
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 11: Merthyr Mawr Farmland, Warren and Coastline in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> Internationally important open coastal habitats within the Merthyr Mawr Warren SAC, SSSI and NNR. 		

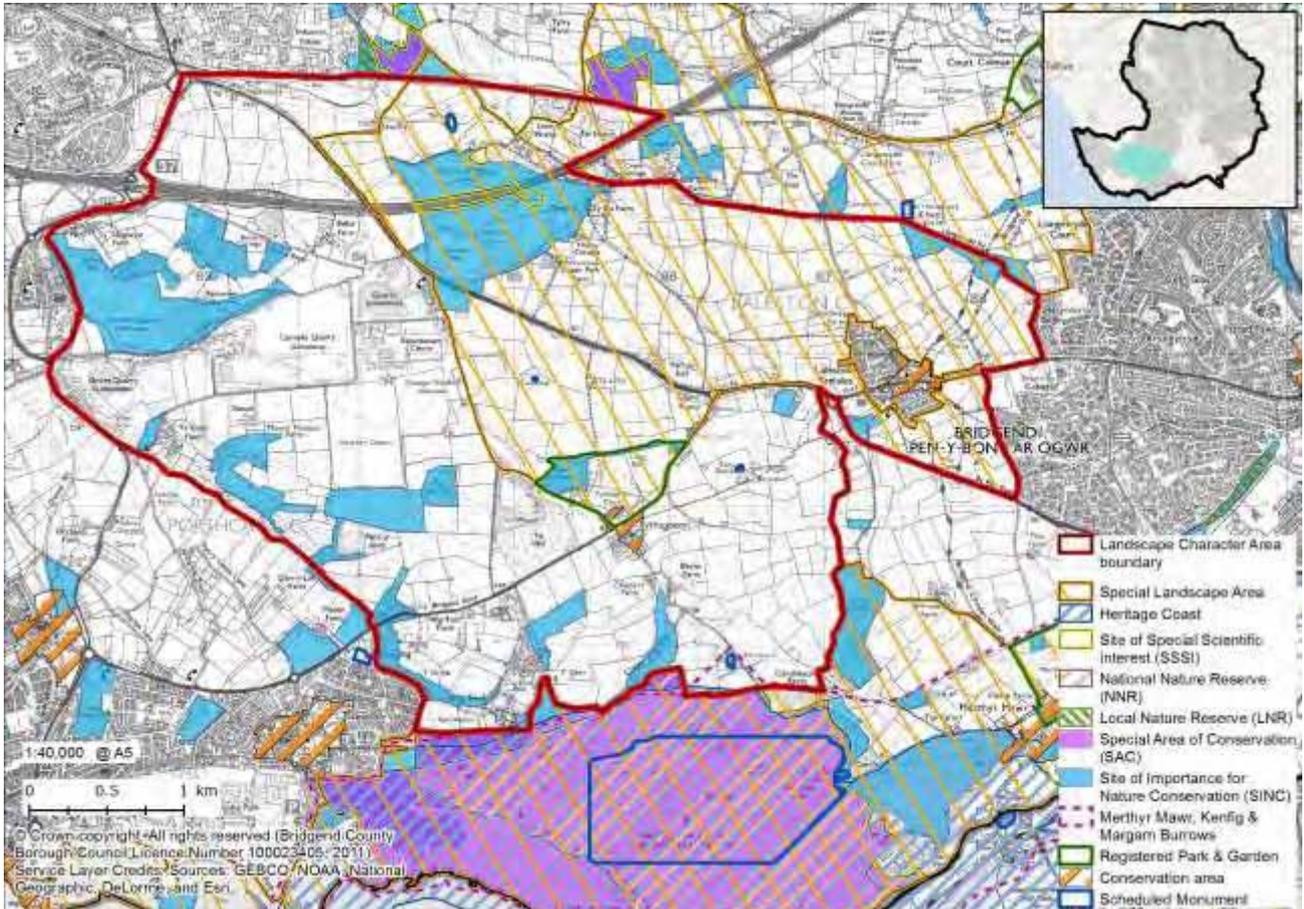
- Visually prominent sand dunes, reaching some 80 metres AOD and forming a distinctive coastal frontage to the County Borough and scenic backdrop to views from Porthcawl and Ogmore-by-Sea.
- Merthyr Mawr village Conservation Area, with strong local vernacular and surrounding estate character (the Grade II* Merthyr Mawr House parkland estate).
- The nationally important historic character and relicts found within the LCA, much of which is designated as a Landscape of Outstanding Historic Interest in Wales

LCA 11: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-Specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The internationally important and designated coastal and dune habitats, including sand dunes, saltmarsh, swamp, unimproved grassland and broadleaved woodland, are protected and not degraded by solar PV development.• Solar PV development does not negatively impact on heritage features or their setting, such as the Merthyr Mawr Warren and the Grade II* parkland near to Merthyr Mawr village Conservation Area (as well as the Conservation Area itself).• The open and unenclosed character of much of the landscape is retained.• Solar PV energy development does not detract from the role of the sand dunes as a frontage for the County Borough.• Solar PV development does not adversely affect the usage of this landscape as a recreational resource for local people and visitors to the County Borough.• Solar PV development within the farmland backing the Warren should avoid the most open, visible slopes and take advantage of areas of dense woodland and tree cover for screening panels.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 12: Newton Down Limestone Plateau

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This LCA is located in the south-central part of the County Borough, located between the settlements of Bridgend, Porthcawl and Pyle. It is a distinctive elevated limestone plateau defined by a steep scarp slope to the south and west, classified by LANDMAP as 'Lowland' (Level 2 of the Visual & Sensory aspect).

The eastern half of the LCA falls within the Laleston Special Landscape Area. Other designations include Gaen and Pant Mawr quarries RIGS, Stormy Down SSSI, RIGS and SINC, Tythegston Court Grade II Registered Park and Garden, Tythegston and Laleston Conservation Areas and several Scheduled Monuments.

LCA 12: Key Landscape Characteristics

- Gently undulating plateau, with occasional hill summits rising to just over 100 metres AOD. Southern boundary defined by a steep scarp slope dropping away from Newton Down towards the coast.
- Primarily Carboniferous Limestone geology, with a band of Mercia Mudstones to the north-west and Lower Lias to the east. Glacial till, sand and gravel found around the northern fringes. The disused Gaen and Pant Mawr quarries are designated as RIGS.
- SSSI-designated rock exposures on Stormy Down (also a RIGS), containing a mixture of marine and terrestrial fossil remains (of fish, molluscs and dinosaurs) from the Triassic period.
- Intensively farmed landscape around Tythegston softened by the presence of parkland trees, retaining an estate character.
- Mixed and broadleaved plantations on prominent ridgelines (e.g. The Beacons).
- Improved pasture with some fields of arable cultivation.
- Closely trimmed hedgerows or walls dividing a regular pattern of medium-large fields on the plateau, becoming smaller and more irregular on slopes.
- Bracken, semi-improved grassland and broadleaved plantation on Stormy Down (designated as a SINC).
- Other locally important habitats including broadleaved semi-natural woodlands on slopes, patches of relict calcareous grassland on the downs, and scrub colonising the limestone cliffs of Cornelly Quarry.
- Small Grade II listed house, garden and parkland at Tythegston Court (late 18th century).
- Prehistoric barrows and settlement remains found on some hill summits, with the medieval motte of Stormy Castle being a feature in the north.
- Industry relating to the landscape's rich mineral resource forming a key historic driver of the local economy in the wider region (including the steelworks of Neath Port Talbot).
- A lightly settled landscape fringing onto dense development at Bridgend, Pyle and Porthcawl – with nucleated villages at Tythegston and Laleston. Dispersed farms linked by minor roads and tracks.
- Local vernacular of limestone buildings with slate roofs – with examples of historic significance within the Conservation Areas of Tythegston and Laleston.
- Main A48 and A4106 passing through the landscape, linking Bridgend, Porthcawl and Pyle. The M4 and mainline London-Swansea railway line cuts through the northern part of the landscape.
- The Bridgend Circular Walk passes through the east of the LCA, and Stormy Down provides open access for further recreational opportunities.
- Industrial land uses and infrastructure dominating parts of the plateau, including Cornelly Quarry and several other disused quarries.
- Industrial structures on Stormy Down, including a solar farm, prominent in views from across the plateau and beyond (e.g. from Cefn Cribwr).
- Views south from the Newton Down scarp slope to development at Porthcawl and its coastal hinterland. The northern part of the LCA has views to the ridgetop settlement of Cefn Cribwr.

LCA 12: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Medium-large scale gently undulating plateau with occasional hill summits. The south of the LCA is defined by a steep scarp slope dropping away from Newton Down towards the coast.	
Land cover pattern and presence of human scale features	<p>An intensively farmed landscape, primarily pastoral with some areas of arable cultivation in medium-large scale regular fields. The field pattern is smaller and more irregular on slopes. There is parkland associated with the historic Tythegston Court and pockets of semi-natural habitat including bracken, semi-improved grassland and broadleaved semi-natural woodlands and plantations. On parts of the plateau, industrial land uses such as quarries, processing buildings and an existing solar farm dominate.</p> <p>Human scale features include the villages of Tythegston and Laleston, scattered farms, parkland trees and areas of plantations on slopes.</p>	
Historic landscape character	The landscape contains several important historical features including Grade II listed buildings and parkland at Tythegston Court and the Scheduled Monuments of Stormy Castle and prehistoric barrows and settlements on hill summits.	
Skylines	Some of the skylines in this LCA are marked by prominent pylon lines, telecommunications masts, large scale agricultural buildings and industrial structures. Others are characterised by landmark plantations (e.g. The Beacons) and prehistoric monuments.	
Key views and vistas	From this LCA, views to the south are of the urban development of Porthcawl and the coastal hinterland, and views to the north are of the ridgetop settlement of Cefn Cribwr in LCA 15, and beyond to the uplands of LCA 1. Long views south stretch across the Bristol Channel to Exmoor. The elevated character of the landscape, with its prominent scarp slope, forms a backdrop to the south coast of the County Borough (including Porthcawl). The LCA also features in views from Pyle (to the north-west) and Bridgend (to the east).	
Scenic and special qualities	<p>38% of this LCA falls within the Laleston Special Landscape Area, valued for the mixed farmland landscape bounded by hedgerows, internationally designated grassland habitat and the historical estate character.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the strong rural character of the sparsely settled landscape, the open and elevated downland that is highly intervisible with other landscapes in the County Borough, nationally and regionally important geological and semi-natural habitats and historic features and settlements.</p>	
Perceptual qualities	Although sparsely settled, this landscape is influenced by human activity, with intensive farming, prominent industrial development around Stormy Down and infrastructure and views to development at Porthcawl and Cefn Cribwr. Several main transport routes cut through the landscape, including the M4 and the London-Swansea railway line, which erode levels of tranquillity locally. Overall though, a strong rural character prevails.	
Summary of landscape sensitivity	Although this landscape has a gently undulating landform, and contains areas of industrial land use and development on skylines, the presence of important historical features, valuable semi-natural habitats, its function as a rural backdrop to views from long distances and overall strong rural character all increase levels of sensitivity to wind energy development.	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	L-M
	Medium (51-75m)	M
	Large (76-110m)	M-H
	Very large (111-150m)	H
Commentary on different cluster sizes	<p>Although the landform of this LCA is relatively simple and large-scale within the context of the County Borough, its strong rural character and presence of valued pockets of semi-natural habitats (including the open Stormy Down) mean it would be highly sensitive to 'large' or 'very large' clusters of turbines.</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	

SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 12: Newton Down Limestone Plateau in relation to wind energy development is included below:

- The distinctive, wooded scarp slope dropping steeply down from the limestone plateau, forming a prominent backdrop to views from the south coast and Porthcawl.
- The open downland, providing an elevated backdrop to other landscapes and urban settlements in the County Borough and surrounding urban areas.
- The historic villages of Tythegston and Laleston, both designated as Conservation Areas.
- The strongly rural and historic character of much of the landscape.
- Nationally important historic features, including prehistoric sites in elevated positions and the 18th century Grade II Listed Tythegston estate.

LCA 12: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently two permitted energy schemes within this LCA, at Stormy Down (single turbine of 26m ('small' size category)) and Newton Down (two turbines of 125m ('very large' size category)).</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development in this LCA is as follows:</p> <p>In line with TAN 8, the overall strategy is to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The most prominent, undeveloped skylines are avoided as sites for new development, including those visible from the surrounding urban areas.• Wind energy development does not detract from the open and tranquil feel of the unenclosed downland at Stormy and Newton Downs.• The setting of valued heritage assets such as Tythegston Court and Stormy Castle is respected.• The strong rural character of the landscape is protected.• The remaining pockets of semi-natural habitats, including rich limestone grassland, bracken, broadleaved woodlands and scrub, are retained.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the 'Key landscape Characteristics' section (and with reference to the definition of 'landscape capacity'⁴³).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response⁴⁴.

⁴³ "Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type..." (Countryside Agency and SNH, 2002).

⁴⁴ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 12: Landscape Sensitivity Assessment for Solar PV Development

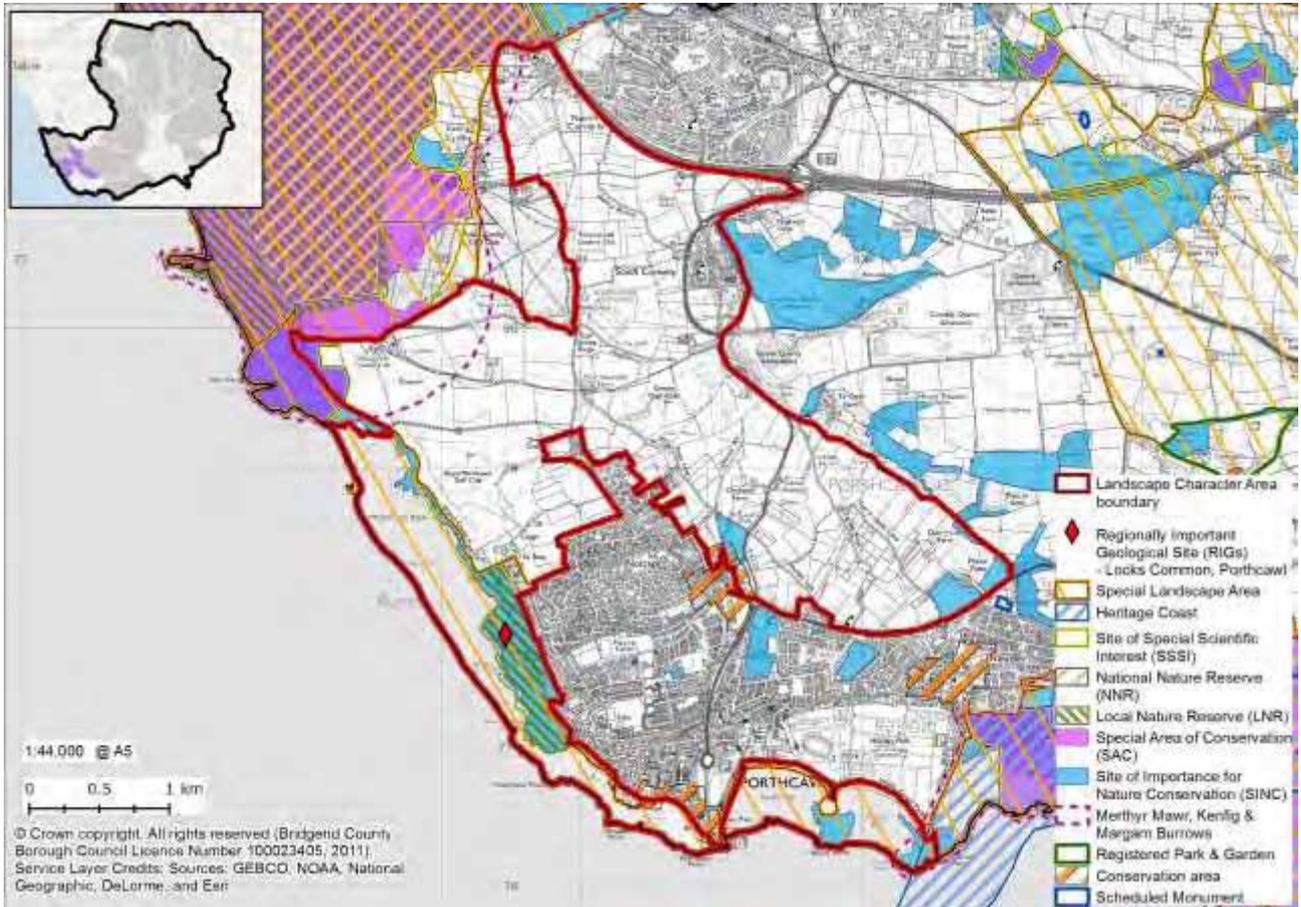
Criteria	Landscape attributes and descriptions	
Landform	Gently undulating plateau with occasional hill summits rising to some 100m AOD. The south of the LCA is defined by a steep scarp slope dropping away from Newton Down towards the coast.	
Sense of openness/enclosure	A fairly open landscape due to the gentle undulating nature of the landform and close-cut hedges that serve as field boundaries. Plantations and woodland on slopes provides a greater sense of enclosure in these locations.	
Field pattern and scale	Fields are mostly regular in pattern and medium to large in size. On slopes fields are smaller and more irregular.	
Land cover	An intensively farmed landscape, primarily pastoral with some areas of arable cultivation. There is parkland associated with the historic Tythegston Court and pockets of semi-natural habitat including bracken, semi-improved grassland and broadleaved semi-natural woodlands and plantations. On parts of the plateau, industrial land uses such as quarries, processing buildings and an existing solar farm dominate.	
Historic landscape character	The landscape contains several important historical features including Grade II listed buildings and parkland at Tythegston Court and the Scheduled Monuments of Stormy Castle and prehistoric barrows and settlements on hill summits.	
Key views and vistas	From this LCA, views to the south are of the urban development of Porthcawl and the coastal hinterland, and views to the north are of the ridgetop settlement of Cefn Cribwr in LCA 15, and beyond to the uplands of LCA 1. Long views south stretch across the Bristol Channel to Exmoor. The elevated character of the landscape, with its prominent scarp slope, forms a backdrop to the south coast of the County Borough (including Porthcawl). The LCA also features in views from Pyle (to the north-west) and Bridgend (to the east).	
Scenic and special qualities	<p>38% of this LCA falls within the Laleston Special Landscape Area, valued for the mixed farmland landscape bounded by hedgerows, internationally designated grassland habitat and the historical estate character.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the strong rural character of the sparsely settled landscape, the open and elevated downland that is highly intervisible with other landscapes in the County Borough, nationally and regionally important geological and semi-natural habitats and historic features and settlements.</p>	
Perceptual qualities	This landscape is influenced by human activity, with intensive farming, prominent industrial development and infrastructure and views to development at Porthcawl and Cefn Cribwr. Several main transport routes cut through the landscape, including the M4 and the London-Swansea railway line, eroding local levels of tranquillity. Overall though, a strong rural character prevails.	
Summary of landscape sensitivity	Although this landscape has a gently undulating landform, medium-large regular fields and existing industrial land uses and development which could reduce its sensitivity to solar PV development, the relatively open nature of the LCA, the important historic features and semi-natural habitats, prominent scarp slope and high intervisibility with other areas of the County Borough increase levels of sensitivity.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	L-M
	Medium (>5-10ha)	M
	Large (>10-15ha)	M-H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 12: Newton Down Limestone Plateau in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> • The distinctive, wooded scarp slope dropping steeply down from the limestone plateau, forming a prominent backdrop to views from the south coast and Porthcawl. • A lightly settled landscape with a strong rural and historic character. • The open, elevated downland, providing strong intervisibility with other landscapes in the County Borough and surrounding urban areas. • Important patches of semi-natural habitat, including species-rich limestone grasslands, bracken and scrub. • The historic villages of Tythegston and Laleston, both designated as Conservation Areas, and the Grade II listed Tythegston Court and parkland. 		

LCA 12: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There is currently one existing solar PV energy development on Stormy Down, which covers 2.2 hectares and is in the 'small' size category.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The most open locations on the prominent south-facing scarp slope are avoided as sites for solar PV development.• The strong rural character of the landscape is protected.• Solar PV development avoids the most open areas in the landscape (e.g. open downland) and those that are highly visible within the landscape (including from other parts of the County Borough).• Areas of semi-natural habitat including broad-leaved semi-natural woodlands, limestone grassland, bracken and scrub are protected.• The field pattern of small, irregular fields on the slopes is protected and not masked by solar PV development.• Solar PV development does not damage or degrade the setting of important heritage features such as Tythegston Court and Stormy Castle.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
• Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 13: Porthcawl Coastline and Settled Farmland

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This LCA comprises the coastline surrounding Porthcawl, from Newton Point to Sker Rocks, extending inland to the base of the limestone scarp defining LCA 12. It is classified as a combination of 'Coastal' and 'Flat Lowland/Levels' in LANDMAP's Visual & Sensory aspect (Level 2).

The coastal edge falls within the Porthcawl Coast Special Landscape Area (SLA). Other designations include Locks Common RIGS and LNR and several SINC.

LCA 13: Key Landscape Characteristics

- Simple, low coastal plateau rising gently inland to approximately 50 metres AOD (at the edge of the limestone scarp slope).
- Simple topography underlain by complex geology; Lower Carboniferous limestone outcropping along the coast (including at Locks Common RIGS). Remainder of the LCA sits above a band of Mercian mudstones.
- Limestone pavements and rocky headlands punctuating wide sandy bays: Trecco Bay, Sandy Bay and Rest Bay.
- Tree/woodland cover generally limited to outgrown hedgerows, shelterbelts and secondary woodland colonising unmanaged land.
- The coast is open and exposed to the elements.
- South-west facing hinterland the most agriculturally productive in the borough, with small rectangular improved pasture fields dominating. Significant areas converted to pony paddocks.
- Square-cut hedgerows, stone walls and wire fences conveying a tidy, well-managed appearance to the farmed landscape.
- Amalgamated pony paddocks divided by pony tape or fencing.
- Rocky shores, cliffs and maritime grassland valued along the coast (Locks Common LNR, Pink Bay, Rhych Point and Newton Point SINCS).
- Occasional areas of semi-natural broadleaved woodland (e.g. Nottage Court Wood SINC) and fragments of unimproved grassland and wetlands inland (e.g. Pink Bay Pond SINC).
- Ancient tumuli near Kenfig Dunes, and a number of Listed Buildings within the landscape, such as the Grade II Listed remains of Sker House (originally built as a Cistercian monastic grange and made famous as the basis of R. D. Blackmore's book *The Maid of Sker*).
- Former tramline and railway bridge (Grade II Listed) on the outskirts of Nottage, and a dismantled railway line providing evidence of the landscape's industrial past (particularly links with nearby quarrying).
- Villages of Mawdlam and South Cornelly on the eastern edge of the LCA, with road links from the nearby M4.
- Sparse settlement elsewhere, with farmsteads and individual properties dispersed throughout and displaying mixed 20th century vernacular styles.
- Significant tracts of land under recreational uses— including the Royal Porthcawl and Grove golf courses, outdoor adventure centre and caravan/camping sites.
- Coastal edge is open access land, crossed by the Wales Coast Path, with some lengths following minor roads. The A4229 crosses through the eastern part of the LCA linking the M4 with Porthcawl.
- Views along the coast and seascape; in clear conditions across to the North Somerset coastline.
- Beaches popular for surfing and other watersports.
- A rural landscape influenced by the proximity of development at Porthcawl, major road corridors and views of the Port Talbot steelworks.

LCA 13: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Simple medium-scale landform comprising a coastal plateau rising gently inland to 50 metres AOD. Limestone pavements and rocky headlands punctuate the wide sandy bays of Trecco Bay, Sandy Bay and Rest Bay.	
Land cover pattern and presence of human scale features	<p>The inland areas of this LCA are primarily under agricultural use as pasture or pony paddocks in fields of varying shapes and sizes. There are also some fragments of semi-natural habitat including broadleaved woodland, unimproved grasslands and wetlands. The coastal areas comprise important coastal habitats such as rocky shores, cliffs and maritime grassland. Royal Porthcawl and Grove Golf Courses fall entirely within the LCA.</p> <p>Human scale features include the villages of Mawdlam and South Cornelly, hedgerows, occasional farmsteads and individual properties.</p>	
Historic landscape character	A number of important heritage features can be found in this landscape; including ancient burial mounds and a number of listed buildings such as Grade II listed Sker House and the former industrial tramline and railway bridge on the outskirts of Nottage (also designated a Conservation Area). Some of this LCA (8%) also encompasses the Merthyr Mawr, Kenfig and Margam Burrows Landscape of Outstanding Historic Interest, which have produced a wealth of archaeological remains from evidence of early prehistoric human settlement to the medieval period and more recent history.	
Skylines	The skylines of the LCA's coastline are exposed and open, facing onto Swansea Bay. Parts of the coast are visible in clear conditions from across the Bristol Channel. Whilst the skylines of some of the pastoral fields are bounded by a mixture of close cut hedgerows with few trees resulting in limited features on the skyline, there are areas where fields are bounded by more outgrown hedgerows or shelterbelts, giving a wooded feel to the generally low lying skylines.	
Key views and vistas	There are views from this LCA of the surrounding coastline of Swansea Bay (dominated by Port Talbot steelworks) and the Vale of Glamorgan and across the Bristol Channel to North Somerset. Much of the LCA is also defined by views of the urban area and resort developments associated with Porthcawl. It is also overlooked by the scarp and elevated land of LCA 12.	
Scenic and special qualities	<p>21% of this LCA falls within the Porthcawl Coast Special Landscape Area, valued for important intertidal habitats, valued seascapes and providing the setting for Sker House.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the undeveloped, geologically significant coastline with long views along the coastline and across the sea, the important archaeological legacy located here, strong pattern of small pastoral fields further inland, and valuable semi-natural habitats. Some of these might be affected to a degree by wind energy development.</p>	
Perceptual qualities	This is a landscape with a strong rural quality and feel, although this is impacted upon by nearby urban and industrial development and the main A4229 and M4 road corridors. The more open, naturalistic coastal area is frequently used for recreational activities such as surfing and other watersports in the summer months, but conveys a sense of relative wildness and exposure during the winter and in times of rough sea conditions.	
Summary of landscape sensitivity	<p>Although the landform of the LCA inland is simple, of a medium scale and has existing visual links to areas of industrial development which could reduce sensitivity levels to wind energy development, sensitivity is increased by the uninterrupted views of the coastline and across the Bristol Channel, role of the landscape as a rural backdrop and scenic coastal frontage to Porthcawl, varied landscape patterns and frequent human-scale features, valuable semi-natural habitats and the undeveloped nature of the coastline.</p> <p>The following localised variations to sensitivity should be taken into account:</p> <ul style="list-style-type: none"> The undeveloped coastal edge⁴⁵ would be highly sensitive to the development of any wind turbines. 	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	M-H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	Although this landscape has a simple medium-scale landform and existing industrial influence, its varied landscape patterns and presence of important coastal and farmland habitats mean that it would be highly sensitive to any clusters greater than 'small' in size. The undeveloped coastal edge would be highly sensitive to the development of any turbines.	
Single turbine Small (<5 turbines) Medium (6-10)		

⁴⁵ Including Sandy Bay, Trecco Bay and Rest Bay.

Large (11-25) Very large (>25)	
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES	
<p>A summary list of the key sensitive features and characteristics for LCA 13: Porthcawl Coastline and Settled Farmland in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> • The small scale of the landscape's field patterns and frequent human-scale features. • Long, uninterrupted views along the coastline and surrounding seascape, including across the Bristol Channel to North Somerset. • Sections of undeveloped, geologically important coastline forming a scenic frontage to Porthcawl and the County Borough. • Important archaeological sites and historic features, including those related to the wider area's industrial past. • The landscape's pockets of strong rural character and relative tranquillity away from the main roads, and its function as a valued pastoral backdrop to Porthcawl. 	

LCA 13: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are currently no permitted or operational wind energy schemes located within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment, nor the guidance that follows.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development in this LCA is as follows:</p> <p>To maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The predominately rural character of the landscape, and its function as a pastoral backdrop to Porthcawl, is protected.• The role of the coastal landscape as a scenic frontage to the County Borough is retained.• The setting of heritage assets, including ancient tumuli, industrial relicts and the Grade II listed Sker House, is not adversely impacted by wind turbines.• Wind turbines do not interrupt valued long views across Swansea Bay, the Vale of Glamorgan and the Bristol Channel towards the Exmoor coast.• Important naturalistic habitats, including maritime grassland, unimproved grassland, wetlands and semi-natural broadleaved woodland, are protected.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’⁴⁶).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response⁴⁷.

⁴⁶ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

⁴⁷ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 13: Landscape Sensitivity Assessment for Solar PV Development

Criteria	Landscape attributes and descriptions	
Landform	Simple medium-scale landform comprising a coastal plateau rising gently inland to 50 metres AOD. Limestone pavements and rocky headlands punctuate the wide sandy bays of Trecco Bay, Sandy Bay and Rest Bay.	
Sense of openness/enclosure	Tree and woodland cover in the landscape is limited, and most field boundaries are low square-cut or grown-out hedgerows, walls or wire fences. The coastal areas are unclosed, open and exposed. Hedgerows provide some level of enclosure inland, but overall, this is a relatively open landscape.	
Field pattern and scale	Fields vary in shape and size, with some areas of distinctive, small scale rectilinear patterns and some larger enclosures, including amalgamated pony paddocks.	
Land cover	The inland areas of this LCA are primarily under agricultural use as pasture or pony paddocks. There are also areas of semi-natural habitat including broadleaved woodland, unimproved grasslands and wetlands. The coastal areas comprise important coastal habitats such as rocky shores, cliffs and maritime grassland. The LCA also includes all of Royal Porthcawl and Grove golf courses.	
Historic landscape character	A number of important heritage features can be found in this landscape; including ancient burial mounds and a number of listed buildings such as Grade II listed Sker House and the former industrial tramline and railway bridge on the outskirts of Nottage (also designated a Conservation Area). Some of this LCA also encompasses the Merthyr Mawr, Kenfig and Margam Burrows Landscape of Outstanding Historic Interest, which have produced a wealth of archaeological remains from evidence of early prehistoric human settlement to the medieval period and more recent history.	
Key views and vistas	There are views from this LCA of the surrounding coastline of Swansea Bay (dominated by Port Talbot steelworks) and the Vale of Glamorgan and across the Bristol Channel to the Exmoor coast. Much of the LCA is also defined by views of the urban area and resort developments associated with Porthcawl.	
Scenic and special qualities	<p>21% of this LCA falls within the Porthcawl Coast Special Landscape Area, valued for important intertidal habitats, valued seascapes and providing the setting for Sker House.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the undeveloped, geologically significant coastline with long views along the coastline and across the sea, the important archaeological legacy located here, strong pattern of small pastoral fields further inland, and valuable semi-natural habitats. Some of these may be affected by solar PV development.</p>	
Perceptual qualities	This is a landscape with a strong rural quality and feel, although this is impacted upon by nearby urban and industrial development and the main A4229 and M4 road corridors. The more open, naturalistic coastal area is frequently used for recreational activities such as surfing and other watersports in the summer months, but conveys a sense of relative wildness and exposure during the winter and in times of rough sea conditions.	
Summary of landscape sensitivity	<p>Although the sensitivity of this landscape to solar PV development is reduced due to the simple, gently undulating landform and views of existing human influence nearby, its open character, prominent undeveloped coastal edge small field sizes, the presence of important heritage assets and semi-natural habitats all increase sensitivity.</p> <p>The following locational variations in landscape sensitivity should be taken account of:</p> <ul style="list-style-type: none"> The prominent, open and undeveloped coastal edge⁴⁸ would be highly sensitive to any scale of solar PV development. The distinctive small-scale, rectilinear fields found in parts of the LCA⁴⁹ would also be highly sensitive to medium scale developments. 	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	L-M
	Medium (>5-10ha)	M-H
	Large (>10-15ha)	H
	Very large (>15ha)	H

⁴⁸ Including Sandy Bay, Trecco Bay and Rest Bay.

⁴⁹ Around Mawdlam in the north and near Newton in the east.

SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 13: Porthcawl Coastline and Settled Farmland in relation to solar PV development is included below:

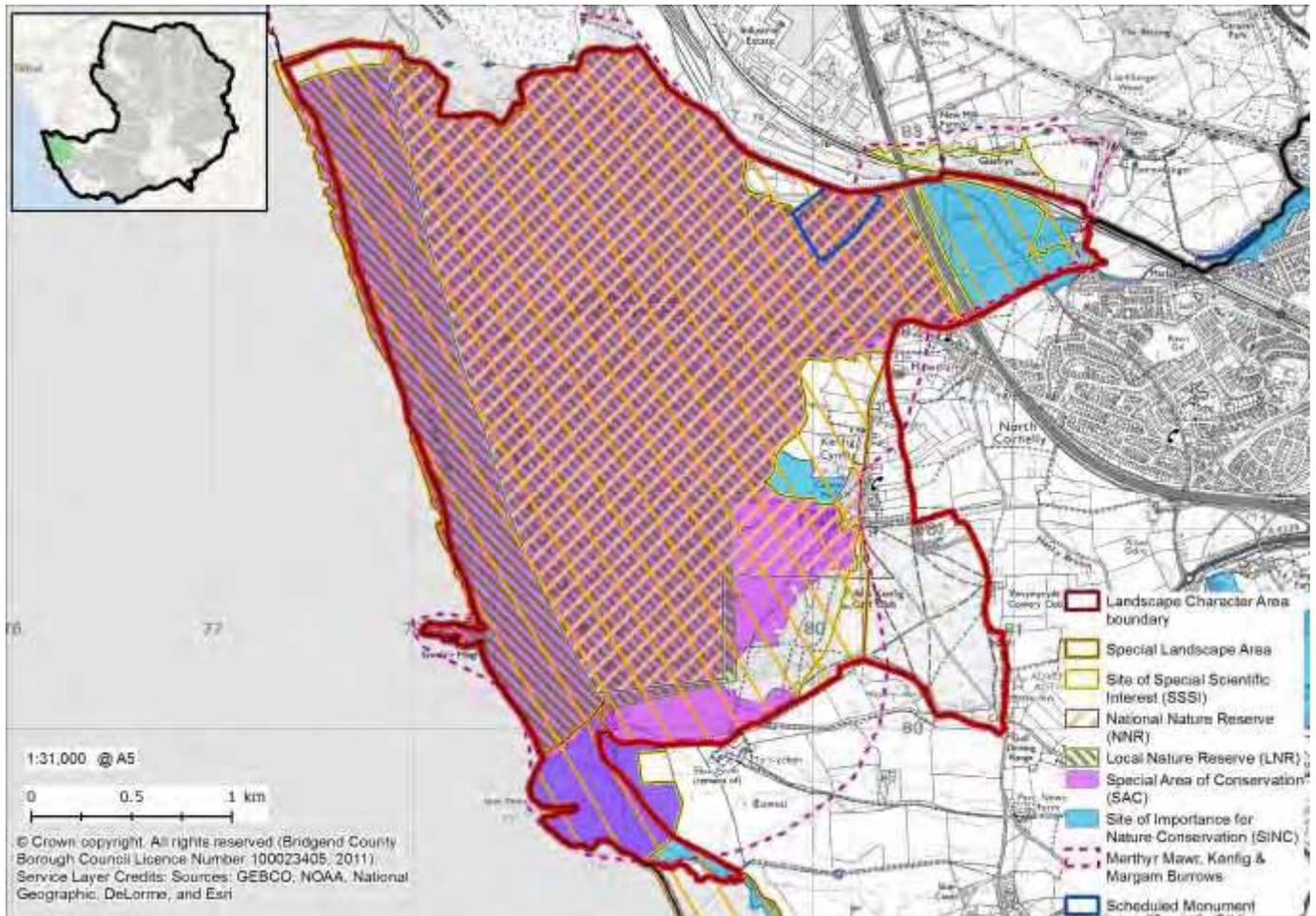
- Sections of undeveloped, geologically important coastline forming a scenic frontage to Porthcawl and the County Borough.
- Strong pattern of small pastoral fields backing the coast and the urban area of Porthcawl.
- Long, unrestricted views along the coastline and surrounding seascape, including across the Bristol Channel to the Exmoor coast.
- The open character of much of the landscape.
- The presence of valued semi-natural habitats and nationally important heritage assets.

LCA 13: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
Guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• Important naturalistic habitats, including maritime grassland, unimproved grassland, wetlands and semi-natural broadleaved woodland, are protected.• The distinctive small scale rectilinear pattern of pastoral fields in parts of the LCA is not masked by the development of solar arrays.• The character and setting of heritage assets, including ancient tumuli, remnants from the industrial revolution and Grade II listed Sker House, is not affected by solar PV development.• The rural feel of the landscape is retained, with important pockets of relative tranquillity.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

LCA 14: Kenfig Dunes and Coastline

LCA Location Map



LCA LOCATION AND SNAPSHOT

This LCA is centred on Kenfig Dunes and Sands, located on the coast in the far west of the County Borough next to Pyle, and on the border with Neath Port Talbot County Borough. The majority of the landscape is defined as 'Coastal' in LANDMAP's Visual & Sensory aspect (Level 2).

The majority of the LCA falls within the Kenfig Burrows Special Landscape Area (SLA), with a small section in the far south falling within the Porthcawl Coast SLA. Other designations include Kenfig SAC, SSSI and NNR, the Scheduled Monument of Kenfig Castle and medieval borough, and the majority of the LCA is designated as a Landscape of Outstanding Historic Importance.

LCA 14: Key Landscape Characteristics

- Landscape dominated by one of the largest sand dune systems in Wales, comprising superficial deposits of wind-blown sand over Mercia Mudstones.
- LCA meets the sea at Kenfig Sands – a westerly-facing, wide sandy beach exposed to the prevailing westerly winds.
- The landscape includes Kenfig Pool – the largest freshwater lake in South Wales.
- Nationally and internationally valued wildlife habitats including dune grassland, slack, scrub and woodland as part of the Kenfig SAC, SSSI and NNR. The coastal habitats support internationally important bird populations.
- Pyle and Kenfig Golf Course in the south-east of the LCA, with significant tracts of dune habitats – grasslands, scrub and bracken – interspersed within and between the fairways.
- A Landscape of Outstanding Historic Interest in Wales owing to its rich buried archaeological remains, including the early medieval castle and fortified borough of Kenfig (a Scheduled Monument submerged in the sand, which has been described as ‘the Pompeii of Britain’).
- Notorious wrecking site of Sker Rocks marking the southern edge of the LCA, with remains of historic wrecks still visible at low tide.
- Largely unsettled landscape, with the nature reserve’s visitor centre, car park, a caravan park and row of 20th century housing overlooking the dunes in the east.
- Dunes are designated open access land, crossed by the Wales Coast Path and a series of waymarked trails, providing a popular site for informal recreation (particularly for dog walkers and beach users).
- Much of the LCA inaccessible by road, enhancing a strong sense of relative remoteness across much of the landscape.
- The eastern fringes of the LCA include a busy minor road and the M4; the distant hum of traffic is perceived from within the dunes.
- Wild and naturalistic character of the coastal landscape also broken by the proximity of development at Pyle and northern coastal views dominated by Port Talbot steelworks.

LCA 14: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	Predominantly unsettled large-scale undulating sand dune landscape, fronted by the wide sandy beach of Kenfig Sands and including large freshwater lake of Kenfig Pool.	
Land cover pattern and presence of human scale features	<p>Land cover is mainly sand dunes and associated nationally and internationally designated semi-natural habitats, such as dune grassland, slack and scrub. Recreational use of the area is also visible in the land cover, particularly Pyle and Kenfig golf course, which also contains semi-natural dune habitats such as grasslands, scrub and bracken.</p> <p>Human scale features are limited to occasional patches of scrub within the dunes, and recreational facilities in the east such as a caravan park, row of housing and the nature reserve visitor centre.</p>	
Historic landscape character	The majority (92%) of this LCA is designated as a Landscape of Outstanding Historic Interest in Wales on merit of the nationally important buried archaeological features found here, including the Scheduled Monument of Kenfig Castle and Medieval Town.	
Skylines	Skylines are open and undeveloped, characterised by the form of the hummocky sand dunes. The nationally important ruins of Kenfig Castle are visible above the dunes.	
Key views and vistas	The highly distinctive dunes provide a scenic frontage for the County Borough from the sea and across Swansea Bay, and are also part of the setting of settlements in adjacent LCA 13, such as Mawdlam and North Connelly. The urban area of Pyle and the Port Talbot steelworks frequently feature in views north from the LCA, as is the distinctive upland of Mynydd Margam (within Neath Port Talbot).	
Scenic and special qualities	<p>88% of this LCA falls within the Kenfig Burrows Special Landscape Area (SLA), valued for its distinctive and extensive sand dune systems that are internationally designated. A further 3% of the LCA is within the Porthcawl Coast SLA, recognised for important intertidal habitats and seascapes.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the distinctive, characteristic sand dunes, the internationally designated dune and coastal habitats, the nationally significant archaeological features and the role of the landscape providing a wild and naturalistic landscape close to urban development.</p>	
Perceptual qualities	The undeveloped and unsettled quality of this landscape results in a perception of an exposed and wild area with high levels of relative tranquillity, particularly given the proximity of nearby populations and infrastructure. These qualities are detracted from locally by the nearby M4 and other transport routes, and the noise and visual impact of urban and industrial developments in close proximity to the LCA.	
Summary of landscape sensitivity	<p>Although this is a large-scale landscape with few human scale features, it is likely to be highly sensitive to wind energy development. In particular, the distinctive setting provided by the undeveloped sands and dunes to the County Borough, the internationally important dune habitats themselves, and their nationally important cultural heritage mean that the LCA would be highly sensitive to the development of turbines.</p> <p>Locations within the dunes would be unsuitable for any scale of wind turbine development.</p>	
Sensitivity to different turbine heights	Very Small (15-25m)	M-H
	Small (26-50m)	H
	Medium (51-75m)	H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	<p>The high levels of sensitivity within this LCA mean that it would be highly sensitive to any turbine clusters.</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 14: Kenfig Dunes and Coastline in relation to wind energy development is included below:</p> <ul style="list-style-type: none"> The role the LCA plays in forming a distinctive, undeveloped coastal frontage to the County Borough. The high visibility of the LCA itself in views from along the coast, including adjacent landscapes within Neath Port Talbot County Borough. 		

- A wild, naturalistic and unsettled landscape standing in contrast to nearby urban and industrial areas and busy transport infrastructure.
- Highly characteristic and distinctive sand dune systems, designated due to their international and national importance for semi-natural habitats (SAC, SSSI and NNR) and heritage features (Landscape of Outstanding Historic Importance in Wales).

LCA 14: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales.</p> <p>There are no permitted or operational wind energy developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for wind energy development
<p>The overall strategy for wind energy development in this LCA is as follows:</p> <p>The overall strategy is to maintain landscape character, as per the ‘key landscape characteristics’ set out on the second page of this LCA assessment.</p>
Guidance for development
<p>When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The role of the landscape as a distinctive frontage to the County Borough is retained.• Valuable, internationally designated habitats including dune grassland, slack, scrub and woodland are retained.• The unsettled, remote character of the dunes is not degraded by the presence of wind turbines.• The role of the landscape as a setting for designated heritage features such as Kenfig Castle is not effected by the siting of wind turbines.• Opportunities at the site for informal recreation are not affected by wind energy development.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Although it is accepted that change to landscape character could result from wind energy development within the SSA, outside the SSA multiple wind energy developments should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the ‘Key landscape Characteristics’ section (and with reference to the definition of ‘landscape capacity’⁵⁰).• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response⁵¹.

⁵⁰ “Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type...” (Countryside Agency and SNH, 2002).

⁵¹ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 14: Landscape Sensitivity Assessment for Solar PV Development

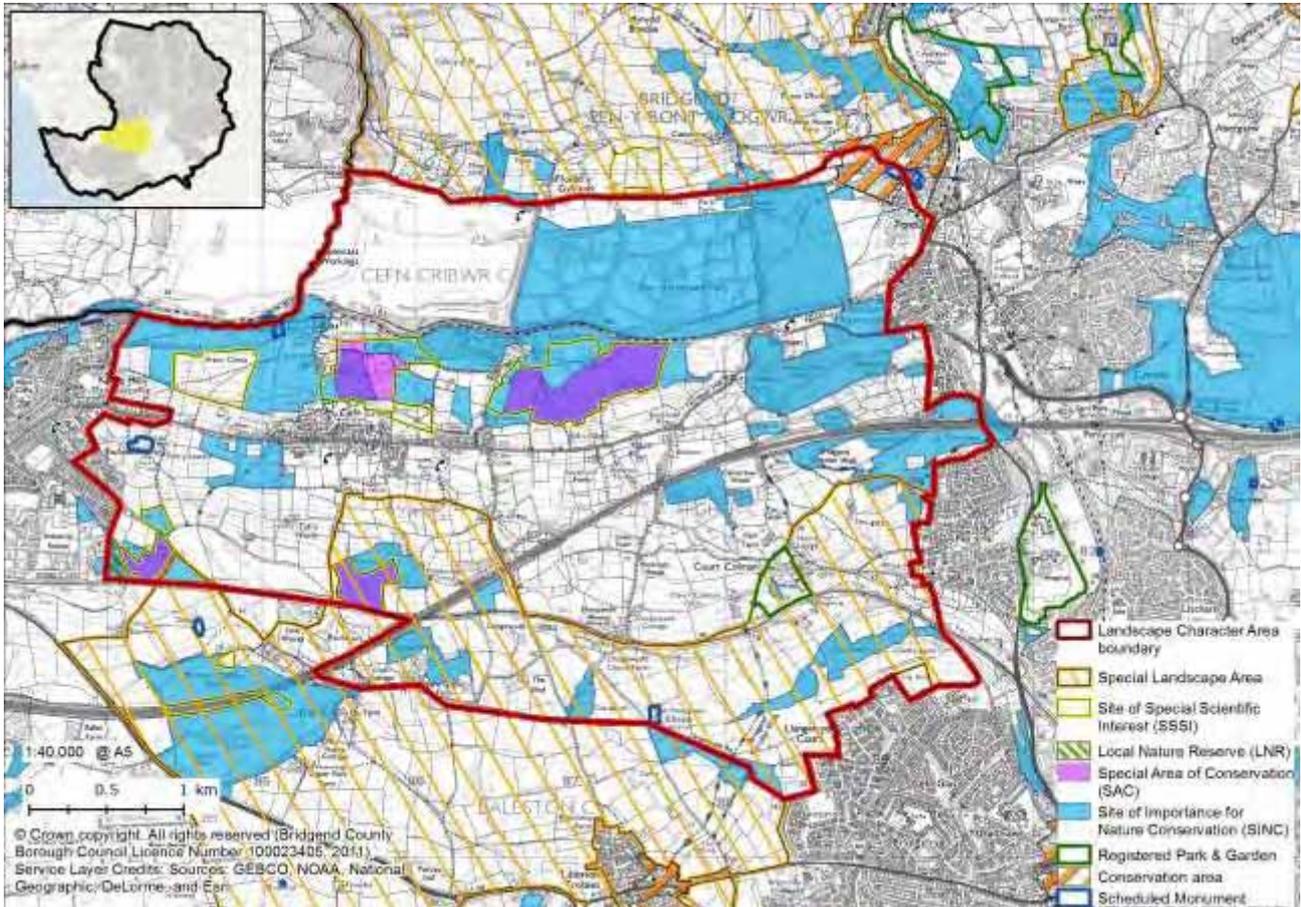
Criteria	Landscape attributes and descriptions	
Landform and scale	Large-scale undulating sand dune landscape, fronted by the wide sandy beach of Kenfig Sands and including large freshwater lake of Kenfig Pool.	
Sense of openness/enclosure	The landscape is defined by its open character and exposure to the elements, with little tree cover. Fields fringing the eastern edge of the dunes are enclosed by hedgerows and scrub, providing a degree of enclosure in this part of the LCA.	
Field pattern and scale	Fields are limited to a few small-scale regular sized rectilinear fields on the edge of Kenfig village (fringing the dunes).	
Land cover	Land cover is mainly sand dunes and associated semi-natural habitats, such as dune grassland, slack and scrub. Recreational use of the area is also visible in the land cover, particularly Pyle and Kenfig golf course, which also contains semi-natural dune habitats such as grasslands, scrub and bracken. The landscape also includes a caravan park and car parking serving the Nature Reserve.	
Historic landscape character	The majority of this LCA is designated as a Landscape of Outstanding Historic Interest in Wales as a result of the nationally important buried archaeological features found here, including the Scheduled Monument of the ruins of Kenfig Castle and Medieval Town.	
Key views and vistas	The highly distinctive dunes provide a scenic frontage for the County Borough from the sea and across Swansea Bay, and are also part of the setting of settlements in adjacent LCA 13, such as Mawdlam and North Cornelly. The urban area of Pyle and the Port Talbot steelworks frequently feature in views north from the LCA.	
Scenic and special qualities	<p>88% of this LCA falls within the Kenfig Burrows Special Landscape Area (SLA), valued for its distinctive and extensive sand dune systems that are internationally designated. A further 3% of the LCA is within the Porthcawl Coast SLA, recognised for important intertidal habitats and seascapes.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the distinctive, characteristic sand dunes, the internationally designated dune and coastal habitats, the nationally significant archaeological features and the role of the landscape providing a wild and naturalistic landscape close to urban development.</p>	
Perceptual qualities	The undeveloped and unsettled quality of this landscape results in a perception of an exposed and wild area with high levels of relative tranquillity, particularly given the proximity of nearby populations and infrastructure. These qualities are detracted from locally by the nearby M4 and other transport routes, and the noise and visual impact of urban and industrial developments in close proximity to the LCA.	
Summary of landscape sensitivity	The undeveloped nature of Kenfig Sands and Dunes, along with their national importance for biodiversity and as a cultural heritage asset means that this large proportion of the LCA would be highly sensitive to any solar PV developments. Although areas of enclosed farmland exist on the fringes of the dunes, these form a sloping backdrop to the National Nature Reserve (and Kenfig Pool), and as such would also be highly sensitive to any solar PV developments.	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	H
	Small (>1-5ha)	H
	Medium (>5-10ha)	H
	Large (>10-15ha)	H
	Very large (>15ha)	H
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
<p>A summary list of the key sensitive features and characteristics for LCA 14: Kenfig Dunes and Coastline in relation to solar PV development is included below:</p> <ul style="list-style-type: none"> • The role the LCA plays in forming a distinctive, undeveloped coastal frontage to the County Borough, visible from across Swansea Bay. • A wild and naturalistic landscape with an overall lack of modern development or agricultural practices. • Highly characteristic and distinctive sand dune systems, designated due to their international and national importance for semi-natural habitats (SAC, SSSI and NNR) and heritage features (Landscape of Outstanding Historic Importance in Wales). 		

LCA 14: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>None of this LCA is likely to be suitable for solar PV development, so a strategy has not been included.</p>
Guidance for siting multiple developments within the LCA
<p>N/A</p>
Guidance for development
<p>N/A</p>

LCA 15: Cefn Cribwr Ridge and Settled Farmland

LCA Location Map



Please note that while this LCA assessment for wind and solar PV development provides an initial indication of landscape sensitivity and guidance for accommodating developments in the landscape, it should not be interpreted as a definitive statement on the suitability of individual sites for a particular development. All developments will need to be assessed on their own merits.

LCA LOCATION AND SNAPSHOT

This LCA is located between the settlements of Pyle and Bridgend in the west of the County Borough, and is defined by the prominent ridgeline and settlement of Cefn Cribwr. It is classified by LANDMAP as 'Rolling Lowland' (Visual & Sensory aspect, Level 2).

There are no Special Landscape Areas (SLAs) within this LCA. Other designations include the Cefn Cribwr Grasslands SAC, Waun Cimla SSSI, Pany Castell SSSI, Waun-Fawr SSSI, Caeau Cefn Cribwr SSSI, Bryn-Bach SSSI, Frog Pond LNR and a number of SINCs (including Parc Slip Nature Park). The LCA also includes a number of Scheduled Monuments, including Tondy Ironworks, Cefn Cribwr Ironworks, Pen-y-Castell Iron Age hillfort, Cefn Cross prehistoric standing stone and the medieval remains of Llangewydd church. Court Colman is a Grade II Listed Registered Park and Garden.

LCA 15: Key Landscape Characteristics

- Broad valley at the southern edge of the Coalfield plateau, rising steeply up to the prominent Millstone Grit ridge of Cefn Cribwr (132 metres). Land falls away from the ridge to the south, comprising an intricate landscape of undulating slopes.
- Numerous springs and streams draining from the ridge, with ponds and water-filled former quarries on the valley floor.
- Open cast workings (filled with water) forming a major feature in the western part of the valley.
- Extensive mixed plantations at Parc Slip Nature Park (a reclaimed spoil tip) and conifer-dominated woodland at Pennsylvania Wood on the eastern end of the ridge.
- Frequent bands of woodland following streamlines and estate plantings around Court Colman.
- Pastoral farming dominates, with medium-scale fields bounded by thick hedgerows with frequent hedgerow trees, or wooded banks. Boundaries on higher ground with bracken, bramble and gorse, conveying an upland feel.
- Tightly grazed horse paddocks in some locations, as well as remnant commons and unmanaged land on the fringes of settlements.
- Farming becomes more intensive, with larger improved pasture fields, on the fringes of LCA 12.
- Parc Slip Nature Park with ponds, meadows, rush pasture, neutral grasslands and mixed plantation woodland.
- SAC-designated fen meadows with purple moor grass, neutral grassland and scrub; SSSI-designated marshy grasslands with species-rich neutral grassland, wet heath and semi-natural woodland (supporting the locally rare bog myrtle plant and marsh fritillary butterflies).
- A number of SINCs, including acid grassland, bracken and scrub on Penfai Common, and the Local Nature Reserve of Frog Pond Wood (broadleaved woodland and freshwater pond).
- Nationally important archaeological features including Tondy Ironworks, Cefn Cribwr Ironworks, Pen-y-Castell Iron Age hillfort, Cefn Cross prehistoric standing stone and the medieval remains of Llangewydd church.
- Grade II Listed Court Colman (now a hotel) surrounded by ornamental and mixed estate woodlands and specimen trees.
- Main settlement at Cefn Cribwr, with colourful Victorian terraces interspersed with 20th century developments stretching in linear form along the ridgetop.
- Elsewhere settlement is sparse, with individual properties and farmsteads linked by rural roads and sunken lanes frequently passing through wooded 'tunnels'.
- Parc Slip Nature Park crossed by a number of footpaths. Areas of open access land (e.g. Pennsylvania Wood, Ty'n y garn), lengths of the Bridgend Circular Walk and rights of way providing opportunities for recreation elsewhere.
- Long, panoramic views from Cefn Cribwr across the surrounding landscape; including to Pyle and Bridgend, southwards towards the Bristol Channel and beyond, and north to the uplands. Strong intervisibility between the ridgeline and the opposite slopes of Mynydd Baedan (LCA 1).
- Landscape intersected by the M4 and mainline rail corridors. Along with pylon lines, these introduce prominent man-made features into an otherwise highly rural landscape.

LCA 15: Landscape Sensitivity Assessment for Wind Energy Development

Criteria	Landscape attributes and descriptions	
Landform and scale	A medium scale broad valley found on the southern edge of the Coalfield Plateau, with the ridge of Cefn Cribwr rising up 132 metres. Land falls away from the ridge to the south, comprising an intricate landscape of undulating slopes.	
Land cover pattern and presence of human scale features	<p>Pastoral farming in medium-scale fields dominates, with larger more intensively farmed fields adjacent to LCA 12. Parc Slip Nature Park contains a wealth of semi-natural habitats, including purple moor grass, neutral grassland, rush pasture and wet heath. There are also extensive mixed woodland plantations in the nature park, whilst bands of woodland are found along watercourses elsewhere. The area surrounding Court Colman has a strong estate character with ornamental woodland.</p> <p>Human scale features include the settlement at Cefn Cribwr, individual rural properties and farmsteads and frequent hedgerow, woodland and in-field trees.</p>	
Historic landscape character	There are several nationally important heritage features found within this landscape, ranging from the Tondy and Cefn Cribwr Ironworks to prehistoric stones at Cefn Cross and the medieval Llangewydd church. This LCA also partially encompasses the Tondy Conservation Area. The LCA includes the Grade II Listed Court Colman (now a hotel) surrounded by ornamental and mixed estate woodlands and specimen trees.	
Skylines	Cefn Cribwr is a prominent and distinctive ridgeline in the north of the LCA, marked by the linear settlement of the village itself. Elsewhere, skylines are generally wooded or open, although in places they are crossed by pylon lines.	
Key views, vistas and landmark features (visible in views)	The Cefn Cribwr ridge and settlement is prominent in views from nearby LCAs (particularly LCA 1 to the north and the Stormy Down ridgeline in the south (LCA 12)) and offers long panoramic views south over the coastline towards the Bristol Channel and beyond. The western part of the LCA abuts the settlement of Pyle, with long views across to Port Talbot steelworks to Swansea Bay. Distant views are also possible from elevated locations to the uplands, including LCA 8 with Fforch Nest and Pant-y-Wal wind farms.	
Scenic and special qualities	<p>26% of this LCA falls within the Laleston Special Landscape Area, valued for the mixed farmland landscape bounded by hedgerows, internationally designated grassland habitat and the historical estate character.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the distinctive Millstone Grit ridge of Cefn Cribwr which offers panoramic views, internationally important designated semi-natural habitats including fen meadows, strong wooded, hedged and rural character and nationally significant heritage features.</p>	
Perceptual qualities	This is generally a highly rural landscape with sparse settlement and an abundance of pastoral farming and important semi-natural habitats, although there is intrusion of modern influence in places, particularly pylon lines, the M4, mainline railway line and the ridgetop settlement of Cefn Cribwr (which includes 20 th century housing spreading along the ridge).	
Summary of landscape sensitivity	Although this landscape has some existing development on skylines and locations of consistent landcover and large-scale fields, the LCA's levels of sensitivity to wind energy development are increased by its rural nature and historic estate character in parts, varied semi-natural habitats (including SAC-designated fen meadows) and the presence of nationally important heritage features. The frequency of human-scale features, particularly trees, also presents increased levels of sensitivity to wind turbines.	
Sensitivity to different turbine heights	Very Small (15-25m)	L-M
	Small (26-50m)	M
	Medium (51-75m)	M-H
	Large (76-110m)	H
	Very large (111-150m)	H
Commentary on different cluster sizes	<p>Although much of this landscape comprises a medium-scale broad valley, the presence of significant areas of internationally and nationally important habitats and intricate landform characterising much of the LCA means that it would be highly sensitive to any clusters larger than 'small' in scale.</p> <p>Single turbine Small (<5 turbines) Medium (6-10) Large (11-25) Very large (>25)</p>	
SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES		
A summary list of the key sensitive features and characteristics for LCA 15: Cefn Cribwr Ridge and Settled Farmland in relation to wind energy development is included below:		

- The prominent Cefn Cribwr ridgeline, forming a distinctive landscape feature with strong intervisibility with the nearby uplands (LCA 1).
- Strongly rural character away from areas of development, with an historic estate influence around Court Colman.
- Internationally important fen meadows (within the Cefn Cribwr Grasslands SAC) and a range of other semi-natural habitats, including purple moor grass, neutral grasslands, marshy grasslands, wet heath and rush pasture.
- The intricate and undulating landform to the south of the LCA.
- Important historic features that are nationally significant, including Tondu and Cefn Cribwr Ironworks and Cefn Cross prehistoric standing stones.
- The strong wooded character found throughout the landscape in plantations, hedgerows and along watercourses, reinforcing the human scale of the landscape.

LCA 15: Strategy and guidance for wind energy development

Permitted and operational schemes within the LCA

Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme. A sub-regional database that contains up-to-date information on wind turbine developments in the County Borough and surrounding authorities can be found online at: <http://viewer.giscloud.com/map/184616/wind-turbines-in-se-wales>.

There is currently one operational wind energy development, comprised of a single 35m (small category) turbine at Hare Grove Farm.

Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.

Overall strategy for wind energy development

The overall strategy for wind energy development in this LCA is as follows:

To maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.

LCA-specific guidance for development

When siting and designing any wind energy developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:

- Wind energy development does not overwhelm the human scale of the LCA and its frequent landscape features, including hedgerows, woodlands and specimen trees.
- Wind turbines do not impact upon the landscape's valued heritage features including Pen-y Castell Iron Age hillfort and Court Colman estate (with Grade II listed house).
- The highly rural and tranquil character of much of the landscape is protected.
- The distinctive 'wooded tunnels' formed by sunken rural roads in the south of the LCA are not damaged by the delivery of wind turbines.
- Valued semi-natural habitats are protected from development – including areas of fen meadow, purple moor grass, neutral grasslands, marshy grasslands, wet heath and rush pasture.
- The development of larger scale wind turbines avoids locations within the more intricate, smaller scale land to the south of the LCA.
- Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the [Landscape Character Assessment](#), developers should consider multi-functional opportunities associated with supporting biodiversity (see [Biodiversity SPG](#)), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.

Guidance for siting multiple developments within the LCA

Multiple wind energy developments should:

- Collectively not become a key characteristic or have a defining influence on the character of the landscape as summarised in the 'Key landscape Characteristics' section (and with reference to the definition of 'landscape capacity'⁵²).
- Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response⁵³.

⁵² "Landscape capacity refers to the degree to which a particular landscape character area is able to accommodate change without significant effects on its character, or overall change of landscape character type..." (Countryside Agency and SNH, 2002).

⁵³ For more detailed guidance please refer to the SNH guidance document *Siting and Designing Windfarms in the Landscape* (December 2009).

LCA 15: Landscape Sensitivity Assessment for Solar PV Development

Criteria	Landscape attributes and descriptions	
Landform	A medium scale broad valley found on the southern edge of the Coalfield Plateau, with the ridge of Cefn Cribwr rising up 132 metres. Land falls away from the ridge to the south, comprising an intricate landscape of undulating slopes.	
Sense of openness/enclosure	Significant treed areas, including plantations and semi-natural woodland, as well as thick hedgerows with frequent hedgerow trees and wooded banks, providing a sense of enclosure. Tracts of fen and wet grassland habitats and remnant commons on higher ground are more open (e.g. Ty' n-y-garn).	
Field pattern and scale	Farming is predominantly pastoral, with medium scale fields bounded by hedgerows. This pattern changes near to LCA 12, where farming is more intensive and fields are larger in size.	
Land cover	Pastoral farming dominates the agricultural land, with larger more intensively farmed fields adjacent to LCA 12. Parc Slip Nature Park contains a wealth of semi-natural habitats, including purple moor grass, neutral grassland, rush pasture and wet heath. There are also extensive mixed woodland plantations in the nature park, whilst bands of woodland are found along watercourses elsewhere. The area surrounding Court Colman has a strong estate character with ornamental woodland.	
Historic landscape character	There are several nationally important heritage features found within this landscape, ranging from the Tondy and Cefn Cribwr Ironworks to prehistoric stones at Cefn Cross and the medieval Llangewydd church. This LCA also partially encompasses the Tondy Conservation Area. The LCA includes the Grade II Listed Court Colman (now a hotel) surrounded by ornamental and mixed estate woodlands and specimen trees.	
Key views, vistas and landmark features (visible in views)	The Cefn Cribwr ridge and settlement is prominent in views from nearby LCAs (particularly LCA 1 to the north and the Stormy Down ridgeline in the south (LCA 12)) and offers long panoramic views south over the coastline towards the Bristol Channel and beyond. The western part of the LCA abuts the settlement of Pyle, with long views across to Port Talbot steelworks to Swansea Bay. Distant views are also possible from elevated locations to the uplands, including LCA 8 with Fforch Nest and Pant-y-Wal wind farms.	
Scenic and special qualities	<p>26% of this LCA falls within the Laleston Special Landscape Area, valued for the mixed farmland landscape bounded by hedgerows, internationally designated grassland habitat and areas of historical estate parkland.</p> <p>The sensitive features of this landscape, as recorded in the LCA description, include the distinctive Millstone Grit ridge of Cefn Cribwr which offers panoramic views, internationally important designated semi-natural habitats including fen meadows, strong wooded, hedged and rural character and nationally significant heritage features.</p>	
Perceptual qualities	This is generally a highly rural landscape with sparse settlement and an abundance of pastoral farming and important semi-natural habitats, although there is intrusion of modern influence in places, particularly pylon lines, the M4, mainline railway line and the ridgetop settlement of Cefn Cribwr (which includes 20 th century housing spreading along the ridge).	
Summary of landscape sensitivity	<p>Although this landscape has areas with a high level of enclosure and existing development in places, the presence of significant tracts of internationally and nationally valued semi-natural habitats and the highly rural, sparsely settled feel of the landscape with an historic character increase levels of sensitivity to solar PV energy development.</p> <p>The following locational variations in landscape sensitivity should be taken account of:</p> <ul style="list-style-type: none"> The small scale field patterns on the ridge's slopes, and the historic estate landscape around Court Colman would be highly sensitive to developments greater than 'small' in scale. Larger, more intensively managed fields close to the border with LCA 12 would be less sensitive to developments of up to 'medium' in scale (in carefully selected sites). 	
Sensitivity to different scales of solar PV development	Very Small (<1ha)	L-M
	Small (>1-5ha)	L-M
	Medium (>5-10ha)	M-H
	Large (>10-15ha)	H
	Very large (>15ha)	H

SUMMARY OF SENSITIVE LANDSCAPE CHARACTERISTICS AND FEATURES

A summary list of the key sensitive features and characteristics for LCA 15: Cefn Cribwr Ridge and Settled Farmland in relation to solar PV energy development is included below:

- The prominent Cefn Cribwr ridgeline and slopes, forming a distinctive landscape feature with strong intervisibility with the nearby uplands (LCA 1 and the Stormy Down ridgeline (LCA 12)).
- The intricate landform of the southern half of the LCA, with some visible slopes.
- Strongly rural and historic character away from areas of development.
- Internationally important fen meadows (within the Cefn Cribwr Grasslands SAC) and a range of other semi-natural habitats, including purple moor grass, neutral grasslands, marshy grasslands, wet heath and rush pasture.
- Important historic features that are nationally significant, including Tondu and Cefn Cribwr Ironworks and Cefn Cross prehistoric standing stones.
- The strongly pastoral character of the landscape, with an historic estate influence around Court Colman.

LCA 15: Strategy and guidance for solar PV development

Permitted and operational schemes within the LCA
<p>Please note that the Council holds up-to-date records of all proposed and operational developments that can be provided on request for anyone considering a particular scheme.</p> <p>There are currently no permitted or existing solar PV developments within this LCA.</p> <p><i>Please note that the presence of operational or proposed schemes within the LCA has not influenced the results of the Landscape Sensitivity Assessment.</i></p>
Overall strategy for solar PV development
<p>The overall strategy for solar PV development within this LCA is as follows:</p> <p>To ensure that solar PV development does not become a defining characteristic of the landscape and to maintain landscape character, as per the 'key landscape characteristics' set out on the second page of this LCA assessment.</p>
LCA-specific guidance for development
<p>When siting and designing any solar PV developments in this LCA, the generic guidance detailed in Chapter 3 should be taken into account. In addition, within this LCA particular care will need to be taken to ensure:</p> <ul style="list-style-type: none">• The highly rural, pastoral character of the landscape with locally important levels of tranquillity is retained.• Solar PV development avoids locations on the prominent Cefn Cribwr ridgeline and more open slopes within the LCA. or• Internationally important and locally valued semi-natural habitats are protected – including areas of purple moor grass, neutral grasslands, marshy grasslands, wet heath and rush pasture.• The character and setting of nationally important archaeological and cultural features such as Pen-y Castell Iron Age hillfort and the Court Colman estate (with Grade II listed house), is not affected by solar PV development.• Opportunities are sought to adopt a Green Infrastructure approach for all development. As well as protecting and enhancing landscape character in line with the guidelines set out in Part 3 of the Landscape Character Assessment, developers should consider multi-functional opportunities associated with supporting biodiversity (see Biodiversity SPG), recreational activities (LDP Policy COM11), agricultural activities, flood mitigation etc.
Guidance for siting multiple developments within the LCA
<p>Multiple solar PV developments within the LCA should:</p> <ul style="list-style-type: none">• Collectively not become a key characteristic or have a defining influence on the character of the landscape.• Be of a similar scale and design (in terms of siting, layout, form and relationship to key characteristics) to maintain a simple image and reinforce links between landscape characteristics and design response within the LCA.

Appendix A: Renewables in the Landscape Supplementary Planning Guidance Consultation Responses

Organisation	Section No.	Page No.	Representation	Reasoned response	Decision and Action
1 The Coal Authority			<p><u>Background on The Coal Authority</u> The Coal Authority is a Non-Departmental Public Body sponsored by the Department of Energy and Climate Change (DECC). The Coal Authority was established by Parliament in 1994 to: undertake specific statutory responsibilities associated with the licensing of coal mining operations in Britain; handle subsidence claims which are not the responsibility of licensed coalmine operators; deal with property and historic liability issues; and provide information on coal mining.</p> <p>The main areas of planning interest to the Coal Authority in terms of policy making relate to:</p> <ul style="list-style-type: none"> • the safeguarding of coal in accordance with the advice contained in The National Planning Policy Framework and Planning Practice Guidance in England, Scottish Planning Policy in Scotland, and Minerals Planning Policy Wales and MTAN2 in Wales; • the establishment of a suitable policy framework for energy minerals including hydrocarbons in accordance with the advice contained in The National Planning Policy Framework and Planning Practice Guidance in England, Scottish Planning Policy in Scotland, and Minerals Planning Policy Wales and MTAN2 in Wales; and • ensuring that future development is undertaken safely and reduces the future liability on the tax payer for subsidence and other mining related hazards claims arising from the legacy of coal mining in accordance with the advice in The National Planning Policy Framework and Planning Practice Guidance in England, Scottish Planning Policy in Scotland, and Planning Policy Wales and MTAN2 in Wales. <p><u>Background on Coal Mining Issues in Bridgend</u> <u>Coal Mining Legacy</u> As you will be aware, the Bridgend area has been subjected to coal mining which will have left a legacy. Whilst most past mining is generally benign in nature, potential public safety and stability problems can be</p>	<p>The Council welcomes the comments from the Coal Authority however the principle function of the SPG is to provide guidance in the assessment of impacts for wind turbines and solar farms within the different landscapes of the County Borough. The Council is aware of the significant issues of mining legacy within the County Borough and these will be taken account of as material considerations as part of the planning application process, with appropriate consultation with the Coal Authority at that stage. This is reinforced in paragraph 1.8 of the SPG which states that ..."when considering planning applications for renewable energy developments the LPA will consider all material considerations relevant to the determination of the planning application."</p> <p>The Council will take into account the advice provided by the Coal Authority and the need to provide a Coal Mining Risk Assessments as part of the planning application process where necessary.</p>	No change.

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			<p>triggered and uncovered by development activities.</p> <p>Problems can include collapses of mine entries and shallow coal mine workings, emissions of mine gases, incidents of spontaneous combustion, and the discharge of water from abandoned coal mines. These surface hazards can be found in any coal mining area, particularly where coal exists near to the surface, including existing residential areas.</p> <p>Within the Council area there are approximately 1,814 recorded mine entries and around 159 coal mining related hazards have been reported to The Coal Authority. A range of other mining legacy features are present, in total The Coal Authority High Risk Development Area covers approximately 15% of the Council area.</p> <p>Mine entries may be located in built up areas, often under buildings where the owners and occupiers have no knowledge of their presence unless they have received a mining report during the property transaction. Mine entries can also be present in open space and areas of green infrastructure, potentially just under the surface of grassed areas. Mine entries and mining legacy matters should be considered by Planning Authorities to ensure that site allocations and other policies and programmes will not lead to future public safety hazards. No development should take place over mine entries even when treated.</p> <p>Although mining legacy occurs as a result of mineral workings, it is important that new development recognises the problems and how they can be positively addressed. However, it is important to note that land instability and mining legacy is not always a complete constraint on new development; rather it can be argued that because mining legacy matters have been addressed the new development is safe, stable and sustainable.</p> <p><u>Surface Coal Resources, Deep Coal Resources, Development and Prior Extraction</u></p> <p>As you will be aware, the Bridgend area contains coal resources which are capable of extraction by surface mining operations. In addition there are deep coal resources which are licenced for extraction by underground methods.</p> <p>Whilst renewable energy is classified as temporary</p>		

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			<p>development it can have an impact on the sterilisation of mineral resources. Although it is not necessary to consider the impact on the sterilisation of surface coal resources due to national policy in MTAN2, consideration does need to be had to the potential relationship between wind turbines and any operational or proposed underground coal workings. Care needs to be taken to prevent operational sterilisation of the actual or planned underground workings due to the costs associated with potential subsidence liability that may arise with wind turbines. This is because wind turbines by their very nature are structures which require absolute stability.</p> <p><u>Specific Comments on the Bridgend Supplementary Planning Guidance - Renewables in the Landscape (Draft)</u></p> <p>The comments and/or changes which The Coal Authority would like to make or see in relation to the above document are:</p> <p>Representation No.1</p> <p>Site/Policy/Paragraph/Proposal – Wind Turbines</p> <p>Comment – The Coal Authority would like to see the following wording included: <i>“Coal mining legacy exists in areas of Bridgend, The Coal Authority has defined ‘Development High Risk Areas’ within these areas in accordance with the requirements of the Welsh National Validation List it will be necessary for a planning application to be accompanied by a Coal Mining Risk Assessment. Wind turbines should not be located directly over mine entries or within their zones of influence, this should be considered in the detailed site layout. It may be necessary to incorporate remedial measures to ensure that the ground is safe and stable where other mining legacy features are present. Consideration also needs to be had to the potential relationship between wind turbines and any operational or proposed licenced underground coal workings. Care needs to be taken to prevent operational sterilisation of the actual or planned licenced underground workings due to the costs associated with potential subsidence liability that may arise with wind turbines sited over underground workings.”</i></p> <p>Representation No.2</p>		

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				<p>Site/Policy/Paragraph/Proposal – Solar PV</p> <p>Comment – The Coal Authority would like to see the following wording included: <i>“Coal mining legacy exists in areas of Bridgend, The Coal Authority has defined ‘Development High Risk Areas’ within these areas in accordance with the requirements of the Welsh National Validation List it will be necessary for a planning application to be accompanied by a Coal Mining Risk Assessment. Solar PV farms should not propose to site and panels directly over mine entries or within their zones of influence, this should be considered in the detailed site layout. Detailed layouts should propose to fence off the zones of influence of mine entries to prevent public safety issues arising from delivery plant accidentally traversing over the mine entries.”</i></p> <p>CONCLUSION The Coal Authority welcomes the opportunity to make these comments. We are, of course, willing to discuss the comments made above in further detail if desired and would be happy to negotiate alternative suitable wording to address any of our concerns.</p>		
2	Glamorgan Gwent Archaeological Trust			<p>Thank you for consulting us on this. We welcome the SPG for this type of energy provision, as both wind turbines and solar farms have both a direct physical impact on buried and upstanding archaeological remains, and also an indirect visual impact.</p> <p>We make the following comments regarding detailed points in the document:</p> <p>1.3: Archaeological and Historical Sites: there are hundreds of sites on the Bridgend Historic Environment Record curated by GGAT. Less than 2% of these are on average Scheduled Ancient Monuments: Cadw have responsibility for the SAMs and must be consulted if any development is proposed that may impact them. For sites with non-statutory designations, archaeological mitigation work may be required both pre and post determination to ensure that development complies with Planning Policy Wales Chapter 6: Conserving the Historic Environment, and the Welsh Office Circulars 60/96 and 61/96. Early consultation with GGAT Archaeological Planning, as the advisors to Bridgend County Borough Council, is advisable.</p>	<p>The Council welcomes the comments from Glamorgan Gwent Archaeological Trust (GGAT) and the advice provided regarding the protection of and potential impacts of renewable energy development on the County Borough's many varied heritage assets. Any potential impact will be properly considered as a material consideration at the pre-application and planning application stage of development through early engagement and appropriate consultation with CADW, GGAT and the Council's conservation officers to understand the issues and/or mitigate any adverse effects of development. This will ensure compliance with policies in the LDP, PPW, Welsh Office circulars and the forthcoming Heritage Act.</p> <p>In addition figure 2.3 and location maps within the SPG identifies the extent and location of a number of significant historic designations and heritage assets in the</p>	No change.

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				<p>2.1 Landscape. This should not be confused with a Registered Historic Landscape, or Registered Parks and Gardens. The Register is compiled by Cadw, ICOMOS and NRW and any developments of a large scale within a Registered area may need an ASIDOHL report undertaken and submitted (Assessment of the Impact of a Development on a Historic Landscape: guidance is available online from Cadw's website which details methodology http://cadw.wales.gov.uk/docs/cadw/publications/LandscapeRegisterGoodPractice_EN.pdf). The landscape assessment quoted in the document dates from the Landmap exercise and whilst it is comprehensive and includes aspects of historic landscape, does not relate solely to Registered Landscapes.</p> <p>The impact of a development on the setting of Scheduled Ancient Monuments, Listed Buildings and archaeological features without statutory designations also has to be taken into consideration, and Cadw have produced Conservation Principles, to provide further detailed guidance when dealing with such issues, details at: http://cadw.wales.gov.uk/docs/cadw/publications/ConservationPrinciples_EN.pdf.</p> <p>It should also be noted that archaeological features and finds exist outside Registered and Scheduled areas and may require pre-planning and conditioned archaeological mitigation. All archaeological work undertaken in relation to planning issues should be undertaken to the Standards and Guidance of the Institute for Archaeologists and it is our policy to recommend that either a Registered Organisation with the IfA or a member with MIfA level membership should undertake the work. Thank you for the opportunity to comment, please do not hesitate to contact us if you require further advice or information.</p>	<p>County Borough within each Landscape Character Area and as such these are taken account of in the sensitivity assessments.</p>	
3	South Wales Police			In relation to the SPG I have no observations to make.		
4	Suzy Davies, AM			<p>I will not be submitting a detailed response to the consultation but I would be grateful if the following points might be taken into account when the responses are being considered.</p> <ol style="list-style-type: none"> Supplementary guidance specific to exploratory applications for gas extraction. Clearly not a renewable source of energy, but should the guidance on renewable energy 	<p>The Council welcomes the comments received. With respect to the issue of exploratory proposals for gas extraction it should be noted that this SPG provides guidance and a consistent approach to the assessment of the visual impact of proposed developments for wind turbines and solar farms, within the context of the different and varied landscapes of the</p>	No change.

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				<p>cover the balance a Council may need to strike between different sources, not lease between different renewable sources? Essentially, TAN 8 is also just guidance and the 93/7% split in favour of on-shore wind and can be overcome by a greater local preference for other renewably sourced energy.</p> <p>2. Heritage landscape. There is already guidance on this but Welsh Government will be bringing forward its draft Heritage Act soon. That will have implications for scatter sites and sites which contribute to specific sense of place. Although the new legislation will not be available before your work is completed, how will the new guidance provide for potential strengthening of protection of sites of heritage interest.</p>	<p>County Borough. It is not the function of this SPG to explore the balance or preference for different energy sources, including for gas extraction.</p> <p>With respect to the protection of heritage landscapes and all other heritage assets within the context of the emerging Heritage Act, any impact of renewable energy developments will be properly considered as a material consideration as part of the planning application process. This will be achieved through early engagement and appropriate consultation with the Council's conservation officers and will ensure compliance with policies in the LDP, PPW, Welsh Office circular and the forthcoming Heritage Act. Please also see GGAT response above.</p>	
5	WYG Group			<p>The following comments relate to LCA 8: Ogmere Forest and Surrounding Uplands (pages 100-105 of the draft SPG).</p> <p>LCA8: Key Landscape Characteristics</p> <ol style="list-style-type: none"> 1. (Second bullet) The hill summits referred to are outside the character area and within the forestry plantations on Mynydd Williams Meyrick and Mynydd Ton (which are located in Rhondda Cynon Taf). 2. (Tenth and eleventh bullets) In our opinion, the Daren y Dimbath SSSI and the Bwlch y Clawdd Dyke (which is at the very northern tip of LCA 8) cannot be regarded as key landscape characteristics of LCA 8. 3. The evidence of the coal mining heritage in the area is much more characteristic than isolated heritage or ecological features. 4. (Thirteenth bullet) "The only settlements are occasional small villages ..." In our opinion, occasional or scattered farms are a key characteristic of the LCA and not villages. The only 'villages' in the LCA are Glynogwr and other small clusters of properties along the A4093, which defines the southern boundary 	<p>LCA8: Key Landscape Characteristics</p> <ol style="list-style-type: none"> 1. Mynydd William Meyrick trig point is on the boundary line of Bridgend and Rhondda Cynon Taf and is considered as being within BCB. There are also extensive tracts of mountain top areas well in excess of 500m and above the prominent ridgeline and escarpment within the north-eastern part of the LCA. 2. Disagree. 3. Coal mining heritage as evidenced in the landscape is noted in bullet point 12 of the Key Landscape Characteristics. 4. Disagree – the description acknowledges the existence of scattered farmsteads as a key characteristic. 5. Disagree – this is an accurate description in this context of conveying a sense of 	<p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p>

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			<p>of the LCA.</p> <p>5. (Fifteenth bullet) “A largely unsettled and inaccessible landscape...” Large swathes of the LCA are open access land, especially the upland; those parts of the LCA that are not access land are generally the lower level enclosed agricultural land, which are crossed by public footpaths and the bridleways.</p> <p>6. There is no mention in the Key Landscape Characteristics section of the existing wind turbines at Pant-y-wal and Fforch Nest. Do these not contribute to these characteristics? Please note that the front cover of the final report on <i>Landscape Character Assessment for Bridgend County Borough</i> (LUC, July 2013) is of these existing wind farms. It seems odd, therefore, that they should not be mentioned in this section.</p> <p>LCA8: Landscape Sensitivity Assessment for Wind Energy Development</p> <p>7. Skylines: This refers to the “turbines featuring prominently” (that is, “easily seen without the need for close examination of the landscape”). Given this, it is more surprising that they are not mentioned at all in as a “key landscape characteristic”.</p> <p>8. Scenic and special qualities: The reference “...these could be affected to a degree by wind energy development...” infers, correctly, that these effects are not significant.</p> <p>9. Summary of landscape sensitivity: This refers to the “remote character” of the LCA. Although there is a sense of remoteness, the “human influences” extend beyond those quoted: the mining remains, conifer forestry, etc extend to the northern part of the area, which seems to be identified in the LCA as less affected by human influences.</p> <p>10. Summary of landscape sensitivity: This says: “Human influence is greater in the southern half of the LCA.” In fact, the existing Pant-y-wal and Fforch Nest wind farms are located in</p>	<p>‘inaccessibility’ due to elevation, remoteness and wildness, unrelated to ‘access’ in the traditional sense via networks of footpaths and bridleways.</p> <p>6. The descriptors focus on the key ‘inherent’ qualities of the landscape rather than acknowledging whether it is influenced by the presence of existing or proposed renewable energy developments (refer to paragraph 2.23 of the SPG). The existence of recent wind farms of Fforch Nest and Pant y Wal is however acknowledged under the ‘skyline’ assessment criteria within the eastern part of the LCA, as a landscape attribute.</p> <p>LCA8: Landscape Sensitivity Assessment for Wind Energy Development</p> <p>7. The descriptors focus on the key ‘inherent’ qualities of the landscape rather than acknowledging whether it is influenced by the presence of existing or proposed renewable energy developments (refer to paragraph 2.23 of the SPG). The existence of recent wind farms of Fforch Nest and Pant y Wal is however acknowledged under the ‘skyline’ assessment criteria within the eastern part of the LCA, as a landscape attribute.</p> <p>8. Comment noted – however it is not ‘inferred’ in the statement that effect on scenic and special qualities are not going to be significant as this can only be determined on a case by case basis.</p> <p>9. The existing wording adequately</p>	<p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p>

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			<p>the centre of the LCA not its southern half.</p> <p>11. Summary of landscape sensitivity: The statement “complex undulating landform and variation in scale”, occurs only on the side slopes of the area, but seems to have been applied to the <u>whole</u> area. The existing wind turbines at Pant-y-wal and Fforch Nest are on an upland plateau.</p> <p>12. Sensitivity to different turbine heights: The assessment of very large (111-150m) turbines in this LCA as M-H (red) is disputed. The existing turbines are 115m and therefore fall in this category: nowhere in this assessment is the change regarded as “significant”.</p> <p>13. Commentary on different cluster sizes: The conclusion of “highly sensitive” is disputed. The existing turbines “fit” with the landscape.</p> <p>Overall strategy for wind energy development (outside the SSA)</p> <p>14. The reference to the overall strategy being “in line with TAN 8” is inappropriate. TAN8 identified a much larger SSA than the “refined” SSA now included in the LDP. Moreover, TAN8 Annex D paragraph 8.4 notes that: “Within <u>and immediately adjacent</u> to the SSAs, the implicit objective is to <u>accept</u> landscape change <u>i.e. significant change in landscape character</u> from wind turbine development” (underlining added). LDP Policy ENV18 expressly allows for wind farm developments outside the refined SSA.</p> <p>LCA-specific guidance for development</p> <p>15. (First bullet) In our opinion, no part of the LCA could be described as “remote from human influences”; even the northernmost part is bounded by the Bwlch road, with popular car park, aside from the extensive conifer plantations, evidence of past mining, views of urban settlements in the valleys, etc.</p> <p>16. (Third bullet) “The panoramic views from summits...”: as noted above, the summits are</p>	<p>addresses the point of human influences on the landscape including within the northern part of the LCA.</p> <p>10. Paragraph 2.23 makes it clear that the results of the sensitivity assessment are not influenced by the presence of existing or proposed renewable energy developments in the landscape, it focuses on the inherent landscape sensitivity. As such the Council consider the ‘summary’ is accurate in its overall assessment.</p> <p>11. The Council consider the ‘summary’ is accurate in its overall assessment. The existence of plateau areas within the landscape is recognised in the first bullet point in the LCA8: Key Landscape Characteristics:-</p> <ul style="list-style-type: none"> • “Highly undulating plateau and ridge landscape of the Upper Coal measures...” <p>12. Paragraph 2.23 makes it clear that the results of the sensitivity assessments are not influenced by the presence of existing or proposed renewable energy developments in the landscape, including the very large operational and proposed turbines within LCA8.</p> <p>13. The Council agree with the commentary conclusion, that the landscape of LCA8 is likely be highly sensitive to ‘very large’ clusters of wind turbines (more than 25).</p> <p>14. The reference to the overall strategy being ‘in line with TAN8’ is not inappropriate. TAN8 makes it explicit (Paragraph 2.4</p>	<p>No change.</p> <p>No change.</p> <p>No change.</p> <p>No change.</p>

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			<p>within the forestry plantations on Mynydd William Meyrick and Mynydd Ton (in Rhondda Cynon Taf); the views are available from the ridge-tops and plateaux.</p> <p>Guidance for siting multiple developments with the LCA</p> <p>17. The guidance seeks wind turbines of “similar” scale etc, but note that wind turbines of different scales are already seen together at Taf Ely/Mynydd Portref and it is not apparent in the views available – and as consented development, “acceptable”.</p>	<p>refers) that the, 7 SSAs across Wales were ‘broad brush’ and that the subsequent refinement exercise was a matter for LPAs to undertake in a robust manner. This has resulted in refined SSA boundaries which are delineated on the adopted Bridgend LDP Proposals Map. Outside of these areas the TAN8 objective is to maintain the landscape character i.e. no significant change to landscape character from wind turbine development, (as is stated in the SPG’s overall strategy for LCA8 by maintaining the key landscape characteristics). The strategy notes that it is accepted that change to landscape character could result from wind energy development within the ‘refined’ Northern Uplands SSA, where wind energy developments are already present (or consented).</p> <p>15. Remote from human influence is a relative term to describe varying levels and different aspects of human influence across the LCA. As noted in the Landscape Sensitivity Assessment, a large part (42%) of the LCA falls within the Northern Uplands Special Landscape Area, as identified by Policy ENV3(2) of the adopted LDP. This SLA, especially away from valley settlements has an exposed and wild character, where intrinsically human influence is less evident than other parts of the LCA outside of the SLA.</p> <p>16. Disagree. The summit of Mynydd William Meyrick is adjacent to the forestry area and therefore views are extensive.</p>	<p>No change.</p> <p>No change.</p>

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					17. Disagree – General guidance for the siting of multiple developments, in seeking wind turbines be of similar scale and design when seen together is considered to represent sound advice. Such guidance is also recognised by other similar design guidance relating to the siting of windfarms in the landscape. The existence of different scales of wind turbines as seen in Taff Ely and elsewhere maybe considered 'acceptable' on a case-by-case basis, but their existence should not be allowed to dilute this SPG's overall strategy guidance.	
6	RWE			<p>This response is made on behalf of RWE Innogy UK Ltd to Bridgend County Borough Council's consultation on the Renewables in the Landscape Supplementary Planning Guidance.</p> <p>RWE Innogy UK is a leading developer and operator of renewable electricity generation projects in Wales. We currently operate a wide portfolio of projects in Wales and the UK including onshore and offshore wind farms, hydroelectric projects and biomass generation.</p> <p>Generally, the SPG prepared by BCBC is a well written and well-structured document. The SPG provides useful, evidenced guidance on matters which are expected to be considered by developers of renewable energy projects and, equally, by the Local Planning Authority in making decisions on such projects. The objective nature of the SPG is welcomed and it is made clear throughout that each project will be dealt with on a case-by-case basis.</p>	The Council welcomes the comments from RWE Innogy UK.	No change.
7	Natural Resources Wales			<p>A few interim comments on this SPG:</p> <p>a) How does the study relate to the Gillespies LLP guidance on LVIA requirements and Landscape Sensitivity and Capacity? The assessment criteria are slightly different to the Gillespies study?</p> <p>b) Do the assessment criteria relate to</p>	The purposes of the SPG and Gillespies Guidance on LVIA requirements are very different. The primary purpose of the SPG is to provide a strategic-level assessment of the relative sensitivities of the County Borough's landscapes to wind (and solar) energy developments and act as a 'first step' in helping to direct developments, strategically to the least sensitive	No change. However the Council will investigate to improve map resolution in the final document as they appear on the Councils website.

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				<p>LANDMAP and if so how? It is assumed that this is through the Bridgend Landscape Character Assessment.</p> <p>It would be helpful if the scale parameters for wind turbines matched the LLP Gillespies (& NRW draft guidance) for the small, medium, large, very large categories, rather than used slightly different parameters.</p> <p>c) Para. 3.30 could refer to the Gillespies LLP guidance on appropriate ZTVs?</p> <p>d) The maps for each LCA and keys are not easy to read – could be the resolution?</p>	<p>landscapes. The SPG is 'indicative' and is not intended to replace site-level assessments i.e. LVIA or be used in isolation to make decisions on individual applications or to decide whether an EIA is required or not.</p> <p>The primary function of the Gillespies guidance is to help LPAs determine whether an EIA will be required for a particular development. However the Gillespies document is usefully cross referenced in the SPG in paragraph 3.14, with respect to what is required when submitting a planning application.</p> <p>Because the documents have very different primary purposes it would be of no benefit to use common 'scale' and 'cluster' parameters, as any number of combinations of proposal could occur between the two.</p> <p>With respect to the assessment criteria's relationship with LANDMAP it is confirmed that this formed the basis for the desktop study to determine the Landscape Character Area boundaries.</p> <p>It is noted that the quality of the maps within the document make the key difficult to read and the Council will endeavour to improve the resolution of the maps before final publication of the document.</p>	
8	Suncredit			<p>The SPG is an admirable, welcome and proactive step by BCBC to help developers such as ourselves select the most suitable sites for solar farms and ensure that their site design and layout are well thought out and fit into the landscape. However, we believe that the SPG is one dimensional as is it founded entirely on landscape sensitivity analysis and ignores many other real world drivers that dictate where and how solar farms can be sited and developed. Consequently, if the flawed foundation of the SPG is not appropriately and adequately addressed it will preclude many potentially good solar sites from coming forward and being developed to the detriment of the many Council policies</p>	<p>The primary purpose of this SPG is to provide guidance and a consistent approach to the assessment of the visual impact of proposed developments for wind turbines and solar farms within the context of the different and varied landscapes of the County Borough.</p> <p>It is not a primary function of the document to identify suitable areas for development although the guidance can act as a 'final step' in helping to direct developments, strategically to the least sensitive</p>	No change.

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			<p>designed to promote, maximise and encourage the rapid growth of renewable energy.</p> <p>Our biggest concern is that the SPG has failed to recognise, reflect and accommodate the reality of the size and scale of current UK solar farm developments. The SPG effectively imposes a maximum size for a solar farm of 15ha = @ 5MW as the landscape sensitivity analysis suggest that there is no area, location or site within BCBC that is acceptable from a landscape sensitivity perspective for any larger schemes. The attached SolarBuzz pie chart shows that only 6% of the solar farms developed in Q4 2013 and Q1 2014 were below 5MW. So, blind adherence to the SPG would effectively reject 94% of the UK's recent solar farm developments. The SPG clearly does not accord with reality especially as the BCBC planning officers have recommended that the 28ha 15MW Court Colman solar farm be approved when compliance to the SPG would result in it being considered a totally inappropriate site for a solar farm.</p> <p>Most responsible solar farm developers adhere and comply to the 4 stage development process set out on p51 of the SPG:</p> <p>Stage 1 Policy context Stage 2 Landscape sensitivity Stage 3 Detailed siting and design considerations Stage 4 Cumulative impacts</p> <p>So, it is extremely frustrating that the SPG does not provide any assistance to solar farm developers in identifying suitable areas or sites for development. The SPG is essentially a negative guide as it entirely focuses on excluding areas from solar development rather than trying to identify suitable locations for development. In the context of BCBC's renewable energy policies this is not helpful and must be addressed.</p> <p>The SPG completely ignores the biggest key driver and constraint to the siting and development of solar farms – grid availability and capacity. The location and availability of a cost effective grid connection will inevitably drive and require compromises in the location, siting, design, layout and visibility within the landscape of any solar farm development. The SPG fails to recognise that such compromises are inevitable and so must be accommodated by any planning guidance if</p>	<p>landscapes.</p> <p>It is not the intention of the SPG to entirely exclude areas from solar development and the document makes it clear throughout that each proposal will be dealt with on its merit and on a case-by-case basis.</p>	

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			<p>commercial solar projects are to be forthcoming.</p> <p>For your information, we attach a GoogleEarth constraints analysis that shows that there is no fear of BCBC being submerged under a sea of solar panels as it clear that there are only a very limited number of viable locations and sites for commercial scale solar farm projects. Unfortunately, these potential “real world” sites do not accord or overlap very well with the “theoretical” siting guidance of the SPG. The mismatch between our “real world” constraints analysis and the SPG preferential areas is that we have taken into consideration some of the key solar drivers and constraints that have been completely ignored by the one dimensional SPG analysis:</p> <ol style="list-style-type: none"> 1 Steep slopes 2 North facing slopes 3 Agricultural land grade classifications 4 Forestry and woodland areas <p>Of particular note in the SPG is that the land identified and designated as being most suitable for even small scale solar projects is largely Grade 2 agricultural land and as such would not be considered or put forward for development by any responsible solar developer.</p> <p>In short, the SPG is fundamentally and inherently flawed as strict adherence to its guidelines would result in no commercial scale solar farms planning applications ever being consented. It is a NIMBY’s charter! We are certain that this is not what BCBC envisaged when it was drawn up. Consequently, we request that BCBC rethink the SPG to develop some more practical and pragmatic guidance founded upon the “real world” solar constraints and overlaying and interweaving these with the landscape sensitivity analysis to arrive at some pragmatic and useful guidance. The object and intent of the SPG must surely be to facilitate commercial solar farm schemes to ensure BCBC’s renewable energy policies and targets are attained whilst ensuring that they are well sited, well designed and not too obtrusive in the landscape. To achieve this will entail compromises that are not envisaged or considered acceptable under the current draft SPG.</p>		

Late Representations Received

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Appendix B: Contact details for further information

Bridgend Planning Department
Regeneration and Development
Communities Directorate
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