LDĀDESIGN

Castle Road Battery Energy Storage System (BESS)

Appendices to the Landscape and Visual Impact Assessment

21st February 2025

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Version: 1.0

Version date: 21st February 2025

Comment Draft

This document has been prepared and checked in accordance with ISO 9001:2015.

1.0 Appendix 1 Glossary

- **Cumulative effects.** The additional changes caused by a proposed development in conjunction with other similar developments or as the combined effect of a set of developments, taken together.
- **Illustrative Viewpoint.** A viewpoint chosen specifically to demonstrate a particular effect or specific issues, which might, for example, be the restricted visibility at certain locations.
- **Landscape Character Areas.** These are single unique areas which are the discrete geographical areas of a particular landscape type.
- **Landscape Character Type.** These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, and historical land use, and settlement pattern, and perceptual and aesthetic attributes.
- **Landscape effects.** Effects on the landscape as a resource in its own right.
- **Landscape character.** A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
- **Landscape quality (or condition).** A measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.
- **Landscape receptors.** Defined aspects of the landscape resource that have the potential to be affected by a proposal.
- **Landscape value.** The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.

- **Magnitude (of effect).** A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term, in duration.
- **Mitigation.** Measures which are proposed to prevent, reduce and where possible offset any significant adverse effects (or to avoid, reduce and if possible, remedy identified effects).
- **Representative Viewpoint.** A viewpoint selected to represent the experience of different types of visual receptor, where larger numbers of viewpoints cannot all be included individually and where the significant effects are unlikely to differ.
- **Sensitivity.** A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.
- **Specific Viewpoint.** A viewpoint because it is key and sometimes a promoted viewpoint within the landscape, including for example specific local visitor attractions, viewpoints in areas of particularly noteworthy visual and/or recreational amenity such as landscapes with statutory landscape designations, or viewpoints with particular cultural landscape associations.
- **Susceptibility.** The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.
- **Visual amenity.** The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of people living, working, recreating, visiting or travelling through an area.
- **Visual effect.** Effects on specific views and on the general visual amenity experienced by people.

- **Visual receptor.** Individuals and/or defined groups of people who have the potential to be affected by a proposal.
- **Visualisation Type 1 Annotated Viewpoint Photograph.** Reproduced at a size which aids clear understanding of the view and context, these simply show the extent of the Site within the view and annotate any key features within the view. Type 1 is the most basic form of visual representation with a focus on the baseline information.
- **Visualisation Type 2 3D Wireline / Model.** This covers a range of computer-generated visualisation, generally without a photographic context. Wirelines and other 3D models are particularly suited to graphically describing the development itself. Type 2 visualisations use basic graphic information to assist in describing a proposed development and its context.
- **Visualisation Type 3 Photomontage / Photowire.** This Type encompasses photomontages and photowires which will commonly be produced to accompany planning applications, LVAs and LVIAs. They provide a reasonable level of locational and photographic accuracy, but are not suitable for the most demanding and sensitive of contexts. Type 3 visualisations do not need to be accompanied by verification data, nor is a precise survey of features and camera locations required. Although minimum standards are set for image presentation, the visualisations do not need to be reproduced with scale representation. Type 3 visualisations offer an appropriate level of detail and accuracy for a range of EIA and non-EIA projects.
- **Visualisation Type 4 Photomontage / Photowire (survey / scale verifiable).** Type 4 photomontages and / or photowires require the use of equipment and processes which provide quantifiable verification data, such that they may be checked for accuracy (as per industry-standard 'AVRs' or 'Verified Views'). Precise survey of features and viewpoint / camera locations may be included where warranted. Type 4 visualisations

are generally reproduced with scale representation. Type 4 visualisations represent the highest level of accuracy and verifiability for use in the most demanding of situations.

- **Zone of Theoretical Visibility.** A map, usually digitally produced, showing areas of land within which a development is theoretically visible.

Definitions taken from the *Guidelines for Landscape and Visual Impact Assessment*, 3rd Edition, Landscape Institute with the Institute of Environmental Management and Assessment, 2013 ('GLVIA3'); and the Landscape Institute Technical Guidance Note *06/19 Visual Representation of Development Proposals*.

2.0 Appendix 2 References

- The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, Landscape Institute with the Institute of Environmental Management and Assessment, 2013
- An Approach to Landscape Character Assessment, Natural England, 2014.
- Special Report – The State of Environmental Impact Assessment Practice in the UK, Institute of Environmental Management and Assessment, 2011
- Landscape Institute Technical Guidance Note 06/19 Visual Representation of development proposals
- Landscape Institute Technical Note 06/17 – Townscape Character Assessment
- Landscape Institute Technical Guidance Note 02/2019 Residential Visual amenity assessment.
- Landscape Institute's Technical Guidance Notes 02-21: Assessing landscape value outside national designations.
- European Landscape Convention, 2000.
- Vale of Glamorgan Local Development Plan 2011-2026, 2017
- Vale of Glamorgan Local Development Plan 2011-2026 Background Paper: Designation of Special Landscape Areas, 2013
- Vale of Glamorgan Local Development Plan 2011-2026 Supplementary Planning Guidance: Trees, Woodlands, Hedgerows and Development, 2013

3.0 Appendix 3 Supporting Information to the Assessment Methodology

3.1. Introduction

1. This appendix contains additional detail regarding the assessment methodology, supplementing the information provided within the LVIA text.

2. The methodology has the following key stages, which are described in more detail in subsequent sections, as follows:

- **Baseline:** includes the gathering of documented information; agreement of the scope of the assessment; site visits and initial reports to the project manager of issues that may need to be addressed within the design.
- **Design:** input into the design / review of initial design / layout / options and mitigation options.
- **Assessment:** includes an assessment of the landscape and visual effects of the scheme, requiring site based work and the completion of a full report and supporting graphics.

3.2. Baseline

3. The baseline study establishes the planning policy context, the scope of the assessment and the key receptors. It typically includes the following key activities:

- A desk study of relevant current national and local planning policy, in respect of landscape and visual matters, for the Site and surrounding areas.
- Agreement of the main study area radius with the local planning authority.
- A desk study of nationally and locally designated landscapes for the Site and surrounding areas.
- A desk study of existing landscape character assessments and capacity and sensitivity studies for the Site and surrounding areas.
- Collation and evaluation of other indicators of local landscape value such as references in landscape character studies or parish plans, tourist information, local walking & cycling guides, references in art and literature.
- The identification of valued character types, landscape elements and features which may be affected by the proposal, including rare landscape types.
- Exchanging information with other consultants working on other assessment topics for the development as required to inform the assessment.
- Draft Zone of Theoretical Visibility ('ZTV') studies to assist in identifying potential viewpoints and indicate the potential visibility of the proposed development, and therefore scope of receptors likely to be affected. The methodology used in the preparation of ZTV studies is described within **Appendix 4**.
- The identification of, and agreement upon, through consultation, the scope of assessment for cumulative effects.

- The identification of and agreement upon, through consultation, the number and location of representative and specific viewpoints within the study area.
- The identification of the range of other visual receptors (e.g. people travelling along routes, or within open access land, settlements and residential properties) within the study area.
- Site visits to become familiar with the Site and surrounding landscape; verify documented baseline; and to identify viewpoints and receptors.
- Input to the design process.

4. The information gathered during the baseline assessment is drawn together and summarised in the baseline section of the report and reasoned judgements are made as to which receptors are likely to be significantly affected. Only these receptors are then taken forward for the detailed assessment of effects (GLVIA3, para 3.19).

3.3. Design

5. The design and assessment stages are necessarily iterative, with stages overlapping in parts. Details of any mitigation measures incorporated within the proposals to help reduce identified potential landscape and visual effects are set out within the LVIA.

3.4. Assessment

6. The assessment of effects includes further desk and site based work, covering the following key activities:

- The preparation of a ZTV based on the finalised design for the development.
- An assessment, based on both desk study and site visits, of the sensitivity of receptors to the proposed development.
- An assessment, based on both desk study and site visits, of the magnitude and significance of effects upon the landscape character, designated and recreational landscape and the existing visual environment arising from the proposed development.
- An informed professional judgement as to whether each identified effect is positive, neutral or adverse.
- A clear description of the effects identified, with supporting information setting out the rationale for judgements.
- Identification of which effects are judged to be significant based on the significance thresholds set out within the LVIA.

3.5. Site

7. The effect of physical changes to the Site are assessed in terms of the effects on the landscape fabric.

3.6. Landscape and Townscape Character Considerations

8. The *European Landscape Convention* (2000) provides the following definition: *"Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors."*

9. And notes also in Article 2 that landscape includes *"natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas"*.

10. *An Approach to Landscape Character Assessment* (Natural England, 2014) defines landscape character as: *"a distinct and recognisable pattern of elements, or characteristics, in the landscape that make one landscape different from another, rather than better or worse."*

11. The susceptibility of landscape character areas is judged based on both the attributes of the receiving environment and the characteristics of the proposed development as discussed under 'susceptibility' within the methodology section of the LVIA. Thus, the key characteristics of the landscape character types/areas are considered, along with scale, openness, topography; the absence of, or presence, nature and patterns of development, settlement, landcover, the contribution of heritage assets and historic landscape elements and patterns, and land uses in forming the character. The condition of the receiving landscape, i.e. the intactness of the existing character will also be relevant in determining susceptibility. The likelihood of material effects on the landscape character areas can be judged based on the scale and layout of the proposal and how this relates to the characteristics of the receiving landscape.

12. The introduction of any development into a landscape adds a new feature which can affect the 'sense of place' in its near vicinity, but with distance, the existing characteristics reassert themselves.

13. The baseline is informed by desk study of published landscape character assessments and field survey. It is specifically noted within *An Approach to Landscape Character Assessment* (Natural England, 2014) that:

Our landscapes have evolved over time and they will continue to evolve – change is a constant but outcomes vary. The management of change is essential to ensure that we achieve sustainable outcomes – social, environmental and economic. Decision makers need to understand the baseline and the implications of their decisions for that baseline.

14. At page 51, it describes the function of 'Key Characteristics in landscape assessment', as follows:

Key characteristics are those combinations of elements which help to give an area its distinctive sense of place. If these characteristics change, or are lost, there would be significant consequences for the current character of the landscape. Key characteristics are particularly important in the development of planning and management policies. They are important for monitoring change and can provide a useful reference point against which landscape change can be assessed. They can be used as indicators to inform thinking about whether and how the landscape is changing and whether, or not, particular policies – for example - are effective and having the desired effect on landscape character.

15. It follows from the above that in order to assess whether landscape character is significantly affected by a development, it should be determined how each of the key characteristics would be affected.

16. The judgement of magnitude therefore reflects the degree to which the key characteristics and elements which form those characteristics will be altered by the proposals.

3.7. Landscape Value Considerations

17. Paragraph 5.19 of GLVIA3 states that:

"A review of existing landscape designations is usually the starting point in understanding landscape value, but the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape- such as trees, buildings or hedgerows -may also have value. All need to be considered where relevant."

18. Paragraph 5.20 of GLVIA3 indicates information which might indicate landscape value, including:

- Information about areas recognised by statute such as National Parks, Areas of Outstanding Natural Beauty;
- Information about Heritage Coasts, where relevant;
- Local planning documents for local landscape designations;
- Information on features such as Conservation Areas, listed buildings, historic or cultural sites;
- Art and literature, identifying value attached to particular areas or views; and
- Material on landscapes of local or community interest, such as local green spaces, village greens or allotments.

19. An assessment of landscape value is made based on the following factors outlined in Table 1 of the Landscape Institute's '*Technical Guidance Notes 02-21: Assessing landscape value outside national designations*': natural heritage; cultural heritage; landscape condition; associations; distinctiveness; recreational; perceptual (scenic); perceptual (wildness and tranquillity); and functional.

20. In addition to the above list, consideration is given to any evidence that indicates whether the landscape has particular value to people that would suggest that it is of greater than 'Community' value.

3.8. Viewpoints and Visual Receptors Considerations

21. A wide variety of visual receptors can reasonably be anticipated to be affected by the proposed development. Within the baseline assessment, the ZTV study and site visits are used to determine which visual receptors are likely to be significantly affected and therefore merit detailed assessment.

22. In line with GLVIA3 guidance, both representative and specific viewpoints may be identified to inform the assessment. In general, the majority of viewpoints will be representative – representing the visual receptors at the distance and direction in which they are located and of the type(s) that would be present at that location.

23. The representative viewpoints have generally been selected in locations where significant effects would be anticipated; though some may be selected outside of that zone – either to demonstrate the reduction of effects with distance; or to specifically ensure the representation of a particularly sensitive receptor.

24. The types of visual receptors likely to be included with the assessment are:

- Users of walking routes or accessible landscapes including Public Rights of Way (PRoW), National and Regional Trails and other long distance routes, Common Land, Open Access Land, permissive paths, land held in trust (e.g. Woodland Trust, National Trust) offering free public access, and other regularly used, permitted walking routes;
- Visitors to and residents of settlements;

- Visitors to specific valued viewpoints;
- Visitors to attractions or heritage assets for which landscape and views contribute to the experience; and
- Users of roads or identified scenic routes.

25. Visual receptors are grouped for assessment into areas which include all of the routes, public spaces and homes within that area. Groups are selected as follows:

- Based around settlements in order to describe effects on that that community – e.g. a settlement and routes radiating from that settlement; or
- An area of open countryside encompassing a number of routes, accessible spaces and individual dwellings; or
- An area of accessible landscape and the routes within and around it e.g. a country park; and
- such that effects within a single visual receptor group are similar enough to be readily described and assessed.

26. With the exception of specific viewpoints, each route, settlement or location will encompass a range of possible views, which might vary from no view of the development to very clear, close views. Therefore, effects are described in such a way as to identify where views towards the development are likely to arise and what the scale, duration and extent of those views are likely to be. In some cases, this will be further informed by a nearby viewpoint and in others it will be informed with reference to the ZTV, aerial photography and site visits. Each of these individual effects are then considered together in order to reach a judgement of the effects on the visual receptors along that route, or in that place.

27. The representative viewpoints are used as ‘samples’ on which to base judgements of the scale of effects on visual receptors. The viewpoints represent multiple visual receptors, and duration and extent are judged when assessing impacts on the visual receptors.

28. For specific viewpoints (key and sometimes promoted viewpoints within the landscape), duration and extent are assessed, with extent reflecting the extent to which the development affects the valued qualities of the view from the specific viewpoint.

3.9. Preparation and use of ZTVs

29. The ZTVs are used to inform the field study assessment work, providing additional detail and accuracy to observations made on site. Photomontages may also be produced in order to assist readers of the assessment in visualising the proposals but are not used in reaching judgements of effect. The preparation of the ZTVs (and photomontages where applicable) is informed by the Landscape Institute’s Technical Guidance Note 06/19 Visual Representation of development proposals.

30. The following points should be borne in mind in respect of the ZTV study:

- Areas shown as having potential visibility may have visibility of the development obscured by local features such as trees, hedgerows, embankments or buildings.

31. A detailed description of the methods by which ZTVs and visualisations are prepared is included in **Appendix 4**.

4.0 Appendix 4 Methodology for Zone of Theoretical Visibility Studies

4.1. ZTV Studies

32. ZTV studies are prepared using the ESRI ArcGIS Viewshed routine. This creates a raster image that indicates the visibility (or not) of the points modelled. LDA Design undertake a ZTV study that is designed to include visual barriers from settlements and woodlands (with heights derived from LiDAR surface mapping data). If significant deviations from these assumed heights are noted during site visits, for example young or felled areas of woodland, or recent changes to built form, the features concerned will be adjusted within the model or the adoption of a digital surface model will be used to obtain actual heights for these barriers. In this instance 2m resolution LiDAR data has been used to include buildings and vegetation in the ZTV model.

33. The model is also designed to take into account both the curvature of the earth and light refraction, informed by the SNH guidance. LDA Design undertake all ZTV studies with observer heights of 2m.

34. The ZTV analysis begins at 1m from the observation feature and will work outwards in a grid of the set resolution until it reaches the end of the terrain map for the project.

35. For all plan production LDA Design will produce a ZTV that has a base and overlay of the 1:25000 Ordnance Survey Raster mapping. The ZTV will be reproduced at a suitable scale on an A3 template to encompass the study area.

4.2. Ground model accuracy

36. Depending on the project and level of detail required, different height datasets may be used. Below is listed the different data products and their specifications:

Table 1: Data products

Product	Distance Between Points	Vertical RMSE Error
LiDAR	50cm – 2m	up to +/- 5cm
Photogrammetrically Derived Heights	2m – 5m	up to +/- 1.5m
Ordnance Survey OS terrain 5	5 m	up to +/- 2.5m
NextMap25 DTM	25 m	+/- 2.06m
Ordnance Survey OS terrain 50	50 m	+/- 4m

37. Site-specific topographical survey data may also be used where available.

4.3. Technical Methodology

Information	Technical Response
Photography	
Method used to establish the camera location	Aerial photography in ESRI ArcGIS along with GPS reading taken on site
Likely level of accuracy of location	Better than 1m
If lenses other than 50mm have been used, explain why a different lens is appropriate	N/A
Written description of procedures for image capture and processing	See paragraph 6I.10.1 point 1 above
Make and type of Panoramic head and equipment used to level head	Manfrotto Levelling Head 338 and Manfrotto Panoramic Head MH057A5
If working outside the UK, geographic co-ordinate system (GCS) used	N/A

5.0 Appendix 5 National Planning Policy

5.1. Future Energy Wales: The National Plan 2040

38. Future Wales – the National Plan 2040 sets out the national development framework with a strategy for addressing key priorities through the planning system.

39. Section 2 – Wales: An Overview, notes on page 31 that:

40. *"Our landscapes are amongst the best in the world and tell the story of our nation from volcanoes, glaciers, mountains and river valleys to castles, farms, industrial heritage and ports…[and that]…a quarter of our country is covered by our three National Parks and five Areas of Outstanding Natural Beauty."*

5.2. Planning Policy Wales Edition 12 (Feb 2024)

41. Planning Policy Wales (PPW, Edition 12, Feb 2024) sets out the national policies with Chapter 6, Distinctive and Natural Places, being the most relevant to the scope of the LVIA.

42. PPW paragraph 6.3.3 (page 139) advises that:

"All the landscapes of Wales are valued for their intrinsic contribution to a sense of place, and local authorities should protect and enhance their special characteristics, whilst paying due regard to the social, economic, environmental and cultural benefits they provide, and to their role in creating valued places."

43. PPW paragraph 6.3.4 (page 140) notes that:

"Where adverse effects on landscape character cannot be avoided, it will be necessary to refuse planning permission."

44. PPW paragraph 6.3.5 (page 140) states that:

"The statutory landscape designations that apply in Wales are National Parks, and AONBs. Planning authorities have a statutory duty to have regard to National Parks and AONB purposes. This duty applies in relation to all activities affecting National Parks and AONBs, whether those activities lie within, or in the setting of, the designated areas."

45. PPW paragraph 6.3.12 (page 142) states that:

"Planning authorities should provide for the conservation and, where appropriate, enhancement of local landscapes. This may include policies for landscape features, characteristics and qualities of local significance, and the designation of Special Landscape Areas (SLA's)...LANDMAP and any associated landscape character assessments (including the register of historic landscapes in Wales) should be used to inform local landscape policies and SPG..."

46. PPW paragraph 6.3.13 (page 142) states that:

"SLAs are non-statutory designations that define local areas of high landscape importance, which may be unique, exceptional or distinctive to the area. Planning authorities should apply these designations where there is good reason to believe that normal planning policies cannot provide the necessary protection."

47. PPW paragraph 6.3.19 (page 143) states that:

"LANDMAP is an important information resource, methodology, and monitoring baseline for the landscapes of Wales, which can help inform planning for the sustainable management of natural resources in an area.

LANDMAP describes and evaluates the physical, ecological, visual, cultural and historic aspects of the landscapes of Wales, and provides the basis of a consistent, quality assured national approach to landscape assessment. LANDMAP assessments can help to inform green infrastructure assessments, SPG on landscape, development management decisions, landscape character assessment, special landscape areas (SLAs), local distinctiveness, design, and landscape sensitivity studies."

48. PPW paragraph 6.3.20 (page 136) notes that:

"LANDMAP is an important information resource, methodology and monitoring baseline for the landscape of Wales, which can help to inform planning for sustainable management of the natural resources in an area...[and that]...LANDMAP assessments can help to inform...development management decisions, landscape character assessments, Special Landscape Areas (SLA's), local distinctiveness, design and landscape sensitivity studies." The Natural Resources Wales LANDMAP database will inform the baseline condition assessments within the LVIA in accordance with PPW paragraph 6.3.20."

49. PPW paragraph 6.3.21 (page 143) notes that:

"Planning authorities should draw upon LANDMAP in the preparation of landscape plans and assessments needed to inform development plans, SPGs and the development management process. LANDMAP assessments should be published."

6.0 Appendix 6 Extracts from Relevant Landscape Character Assessments

Cyfoeth Naturiol Cymru
Natural Resources Wales

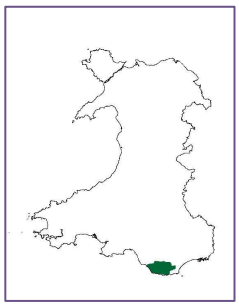
National Landscape Character

31/03/2014

NLCA36

VALE OF GLAMORGAN

Bro Morgannwg - Disgrifiad Cryno



Llwyfan carreg galch yw sylfaen y rhan fwyaf o dirwedd llawr gwlad nodweddiadol y Fro. Mae gwaddodion rhewlifol yn cyfrannu at natur donnog y tir. Defnyddir y tir mewn sawl ffordd nodweddiadol o gefn gwlad, gyda gwrychoedd trwchus, a gwigoedd a choed niferus, yn creu ymdeimlad o amgaeëdigrwydd ac agosatrwydd. Hyn er gwaethaf agosrwydd trefi mawrion megis Caerdydd, Y Barri a Phen-y-bont ar Ogwr, a sawl nodwedd adeiledig fawr yn y Fro ei hun.

Ffin bendant y dirwedd hon yw clogwyni serth glannau'r môr. Mae ychydig draethau tywodlyd, a rhai graeanog hefyd: ond mae llawer o ddelweddau'n dangos daeareg amlwg y parth rhynglanwol, gan gynnwys haenau a phalmentydd. O bennau'r clogwyni gellir gweld ymhell tua Gwlad yr Haf. Un nodwedd amlwg sy'n effeithio ar ran o'r glannau yw gorsaf bŵer fawr, gyfoes, swnllyd Aberddawan.

Yng nghanol y Fro, mae pentrefi cryno, hanesyddol yn adlewyrchu ymdeimlad o hunaniaeth nodweddiadol y Fro, gyda datblygu cyfoes cyfyngedig. Eto, mae'r ardal wedi denu llawer o weithwyr proffesiynol sy'n cymudo i Gaerdydd neu Ben-y-bont, gan ychwanegu ar gymeriad mwy llewyrchus mannau fel y Bont-faen a Llanfleiddan.

Lluniwyd cymeriad hanesyddol yr ardal gan ddylanwadau Eingl-normanaidd. Mae Cestyll Normanaidd, a phentrefi canoloesol wedi'u crynhoi o gwmpas eglwysi, yn nodweddion allweddol. Mae tirwedd gofrestredig Llancarfan yn brydferth i'w ryfeddu, yn ogystal â bod yn enghraifft wych, gymharol ddigyffwrdd o esblygiad hanesyddol. Hyn oll, er gwaethaf bod yn gymharol agos at drefi mawrion.

Summary description

The Vale is a distinctive, gentle lowland landscape, largely comprising a rolling limestone plateau. Glacial till contributes to its undulating topography. A variety of rural land uses characterise the area, reinforced by thick hedgerows, frequent small woodlands and trees, which create a sense of enclosure and intimacy. This is despite the proximity to large towns such as greater Cardiff, Barry and Bridgend, and a number of large built features within the Vale.

The landscape terminates abruptly at the heritage coast with vertical cliffs. There are a few sandy beaches, as well as shingle, but many images depict the exposed geology of the inter-tidal area, including bedding and pavements. There are long distance cliff top views towards Somerset. A notable feature affecting part of the coast is the large, modern, noisy, Aberthaw Power Station.

In the centre of the Vale, compact and historic settlements reinforce the area's distinctive sense of place, but with limited modern development. Yet the area has attracted many professionals, who commute to Cardiff and Bridgend, adding to the more prosperous character of places like Cowbridge and Llanblethian.

The area's historic character was shaped by Anglo-Norman influences. Norman castles and medieval villages centred on churches are key features. The registered landscape of Llancarfan is astoundingly beautiful as well as being a relatively unspoiled gem of historical evolution. All this is despite the relatively close proximity to nearby large towns.

Key Characteristics
Lowland, rolling limestone plateau with glacial till.
Coastal cliffs – mark a sudden edge to the landscape. Species-rich calcareous, neutral and maritime grasslands are found on their tops. Layers of geology characterise their sides and inter-tidal platforms. Wide views over the Bristol Channel. Much is Heritage Coast.
Mixed agricultural land uses - with predominantly rural character
Small woodlands – mainly to the east. Few large woods.
Mixed field patterns and sizes - with hedgerows and hedgebanks, frequent hedgerow trees. Limestone walls define land above the cliffs in the west.
Norman castles and medieval villages centred on churches.
Predominantly still rural - with strong senses of enclosure by historic field boundaries.
A number of large built developments – including Cardiff International Airport and Aberthaw Power Station. Some areas with traffic noise, e.g. in the M4 corridor.
Commuter settlement - modern suburban housing extending but contrasting with historic settlement character.

Visual and Sensory profile

The area forms a distinctive plateau landscape, dissected by a number of rivers including the Ely, Thaw and Waycock. It still evokes a strong rural sense of place with a patchwork of fields, hedgerows and woodlands and trees and extensive open, lowland, farmland.

The most iconic image is that of the Glamorgan Heritage Coast, where the otherwise gentle landscape comes to a very abrupt and dramatic edge, with near vertical cliffs in places, shingle or rock pavement beaches, and the occasional sandy bay to the west. From here there are long views across the Bristol Channel to Somerset and Exmoor. The coastal hinterland is typified by windblown vegetation that has resulted from the prevailing south-westerly wind exposure.

Further inland, the Bonvilston ridge forms a strong landscape element running across the centre of the Vale, reflected in views southwards across the Vale and northwards and into the South Wales Valleys.

The Vale contains a number of historic thatched cottages, typically in rural village settings, historic farm houses, distinctive field patterns (for example around Llancarfan, whose landscape setting is also picturesque). Hensol Forest is distinctive, with a strong sense of enclosure and solitude, despite the close location of the M4 motorway to the north.

Indeed background traffic noise intrudes into parts of the northern and south eastern edges of the Vale, as well as that from the general urban area of Bridgend. Whilst the character is predominantly rural, there are a number of visually prominent built features that contrast this. These include: the power station and adjacent cement works at Aberthaw; Cardiff International Airport to the west of Barry where the frequent movement of aircraft impacts upon the tranquillity of the area; the nearby Royal Air Force station at St Athan which is used for operational training purposes; and the trading estate at Llandow which occupies the site of a former Second World War airfield, including a racing track.

Glamorgan Heritage Coast.

Pendoylan Moors from Pendoylan. © TACP

Idealised rural scene in the Vale: the village pond at St. Brides Major. © LUC

Lower Thaw Valley (the power station chimney is on the horizon, left). © TACP

Lias slopes in the northern Vale, looking towards Bridgend. © TACP

View north from near Gwarne-y-Steeple © LUC

Geological Landscape influences

This broad tract of rolling lowland terrain is flanked to the north by the deeply dissected upland plateaux of the South Wales Valleys and to the south by the Bristol Channel. Higher ground, all under 140m altitude, includes the linear ridge of Cefn Hirgoed, north of the M4, Pantylladron near Cowbridge and St Hilary Down. The area is dissected by several rivers, including the Ely that drains south-eastwards into Cardiff Bay, and the Ogmore and Ewenny which drain south-west and are confluent at the coast near Ogmore-by-Sea. The central part of the area is drained by a network of water courses including the Kenson and Thaw which are confluent near the coast between East Aberthaw and West Aberthaw.

Bedrock geology is dominated by rocks that range from Lower Devonian to Lower Jurassic and record sedimentation in both terrestrial and marine environments. The oldest rocks comprise Devonian conglomerates, sandstones and siltstones which form part of the Old Red Sandstone and record deposition in alluvial fan and river environments. These rocks crop out in the core and northern limb of the Cardiff-Cowbridge Anticline where they are exposed at surface around Stalling Down and Maendy. The Upper Devonian rocks are conformably overlain by a thick sequence of Lower Carboniferous strata that comprise a range of limestone-dominated formations. These rocks form escarpments on both the northern and southern limbs of the Cardiff-Cowbridge Anticline and crop out westwards

along a broad ridge of high ground as far as Porthcawl in the adjacent Swansea Bay, and eastwards to the inliers east and west of Wenvoe in by Cardiff. Triassic rocks crop out extensively to the north-east of Bridgend and around Llanharry, as well as farther south in the vicinity of Pendoylan, Cowbridge and Bonvilston. These rocks include mudstones and sandstones. The overlying marine sequence of Lower Jurassic shales and limestones crops out over a large area around Bridgend and forms a broad, dissected table-land over much of the area to the south and west of Cowbridge. These rocks also form the spectacular coastal cliffs along the southern margin of the area, and one section between Pant y Slade and Trwyn y Witch is a geological SSSI.

Glacial landforms and deposits are mostly attributed to the last glaciation with the principal glacial deposit comprising a variable thickness of till (boulder clay) which commonly forms a characteristic hummocky topography of irregular mounds and ridges, frequently with intervening kettlehole depressions formed by the melting of buried ice masses. The till forms extensive spreads in the northern part of the area where it is generally regarded as forming part of a terminal moraine at the southern limit of a Glamorgan piedmont glacier. Sands and gravels outwashed from the melting ice front are preserved locally as terrace-like features in the main river valleys, for example in the Ogmore Valley beween Bridgend and Ewenny, and in the Thaw Valley between Howe Mill Farm and Gigman Mill.

In post-glacial times, rising sea-levels have caused progressive erosion of the coastal cliffs. Evidence of relatively rapid cliff-line retreat is provided by the impressive hanging valleys of Cwm Mawr and Cwm Bach, as well as by partly eroded historical fortifications and the fallen blocks of Jurassic rock that litter the wave-cut platform and foreshore. The cliffs often contain a rich fossil assemblage, and display one of the classic British examples of lateral changes in ancient sediments.

Soils are mainly well drained silts or loams, with some deep clays fringing watercourses.

Landscape Habitats influences

The Vale of Glamorgan is dominated by generally low-lying, undulating farmland (both arable and pastoral) on generally well draining brown-soils. The arable element is noticeably more prevalent towards the south nearer to the coast. Hedgerows which in many cases are well treed together with in-field trees and smallish deciduous woodland areas provide more ecological interest to the agricultural landscape.

Marshy Grassland is notably absent from this landscape due to the well draining soils. There is, however, one concentration of this habitat in a linear feature north of the M4 towards the north-west at Cefn Cribwr, Cefn Hirgoed and Brynnau-Gwynion, the former of these areas being designated as a SSSI and SAC and the latter as a SSSI together with other valuable grassland areas.

There are very few large areas of woodland though smaller linear deciduous woodland areas follow watercourses, this being a particular feature towards the east, with Nant Whitton woods being particularly noteworthy due to SSSI designation. Some small blocks of coniferous plantation are also present on valley slopes but nowhere is coniferous plantation particularly dominant except in Hensol Forest.

A number of watercourses cross the area, the most significant being the River Ely towards the east. The settlement of Bridgend is a noteworthy feature, together with a number of smaller settlements scattered throughout the Vale.

Much of the west coast is designated as a Site of Special Scientific (SSSI), reflecting the coastal biodiversity. Habitats include species rich neutral, calcareous and maritime grassland, with a number of nationally rare species. The area at Dunraven Bay is additionally designated as a SAC due to the presence of the rare plant, Shore Dock. Further inland, the Carboniferous Limestone outcrop near St Bride's Major supports limestone heath and calcareous grasslands, containing considerable invertebrate interest. The East Aberthaw Coast SSSI on the south coast is also nationally valued for its range of coastal habitats including limestone cliffs, shingle spits, saltmarsh and relict sand dunes.

The land use is mixed – with dairy and sheep pasture, pony paddocks, arable and some pig rearing and rough grazing on the cliff tops in the west. The landscape in the south west is defined by large arable fields with little tree cover apart from occasional conifer shelterbelts around buildings. In contrast, the eastern half of the Vale contains frequent woodland clumps and in-field trees, along with riparian woodlands and small plantations on valley slopes. Added to the often thick hedgerows and frequent hedgerow trees, this creates the impression of a well-wooded landscape.

Historic Landscape influences

The rural landscape of nucleated villages surrounded by rich agricultural land has a distinctive historic character. Notably, in the centre of the coastal plateau, the Llancarfan Valley is recognised as a Landscape of Outstanding Historic Interest, as one of the best surviving and complete examples of the defining historic character of the wider Vale.

The earliest archaeological features are prehistoric ritual and funerary monuments with round barrows, burial chambers and stone cairns. Iron Age hillforts, such as Castle Ditches east of Llancarfan, also provide evidence for early settlement throughout the area.

Today's historic landscape was greatly influenced by strong monastic and Anglo-Norman influences. The foundation stone for a 6th century monastery at Llancarfan survives, despite the monastery being destroyed by the Danes in AD 988 and possessed by the Normans in the 11th century. Llantwit Major was another Early Christian foundation of considerable note. Other Norman remains include prominent castles and moated sites, such as at Penmark and Bridgend.

Many of the settlements in the Vale are centred on large medieval churches, around which villages developed. The value of the land has long been exploited for agriculture, with whitewashed medieval farm buildings with pitched roofs and small windows being particularly distinctive. The area's small woodlands, hedgerows and trees are also of considerable age.

Today's settlement remains largely true to the area's historic pattern of development; with many villages focused on a church or village green. However, many of the Vale villages are remarkable for their expansion, marred by alien architectural styles of the 'executive housing' of the 1970s and 1980s. The settlements are linked by a network of rural lanes, which are often sunken at entry points to settlements. In addition to whitewash, traditional buildings are constructed of distinctive grey limestone or white/cream/coloured render.

Irregular and regular medium to large fields are bounded by a strong network of hedgerows, hedgebanks and frequent hedgerow trees. Cliff-top land in the west is enclosed by dry stone walls.

Cultural Landscape influences

The two largest towns, Cowbridge and Bridgend, differ greatly in cultural character. Astride the former Roman road, the historic core and architecture of the ancient borough and market town of Cowbridge survives largely intact bit is becoming increasingly hemmed in by modern development. It has coalesced with Llanblethian, and together they have become an affluent settlement as if Wales' very own Home Counties, with semi-suburban residential areas, 4x4 vehicles, boutiques, upmarket restaurants and jewellers, being noticeably contemporary cultural phenomena. Vale villages and settlements are popular living places for those who commute to nearby Cardiff and other larger towns for work.

The historic origins of Bridgend are all but subsumed by late C20th growth, with large housing estates and industrial and business parks, a function of the town's proximity to the M4. A notable cultural development is the Macarthur Glen outlet park across the motorway from the Sarn Park services. To the north of the motorway, there is similar, though as yet smaller scale, development around Pencoed, Pontyclun and Llanharan. A wind farm forms a prominent skyline landmark along this stretch of the road.

In the north, Peterston-super-Ely is a commuter dormitory, whose modern character of extensive housing estates is contratsed by the planned but uncompleted Wyndham Park (aka Glyn Cory Garden Village). The once small historic village of Wenvoe is now a prosperous commuter settlement whose past embraces the Neolithic chambered cairn of St Lythans, late mediaeval field patterns and church, small farming village, farmsteads, limestone and haematite quarries, grand but uninspired castellated mansion now a golf club, disused civil airfield and the 750 ft. high Wenvoe TV and radio transmitter mast.

Llantwit Major was one of the first Christian settlements in Wales and a centre of theological learning. Today it's industrial estate, at its eastern edge, provides a very different centre of activity. However it remains a popular visitor destination for it's historic character, its maze of little lanes and old-world shops, narrow streets, picturesque stone cottages and ancient inns. The mediaeval St Illtud's Church dominates its immediate surroundings. The presence of Iron Age hill forts, a Roman villa, mediaeval grange and fine Tudor buildings combine to reinforce the richness of the large village's attributes.

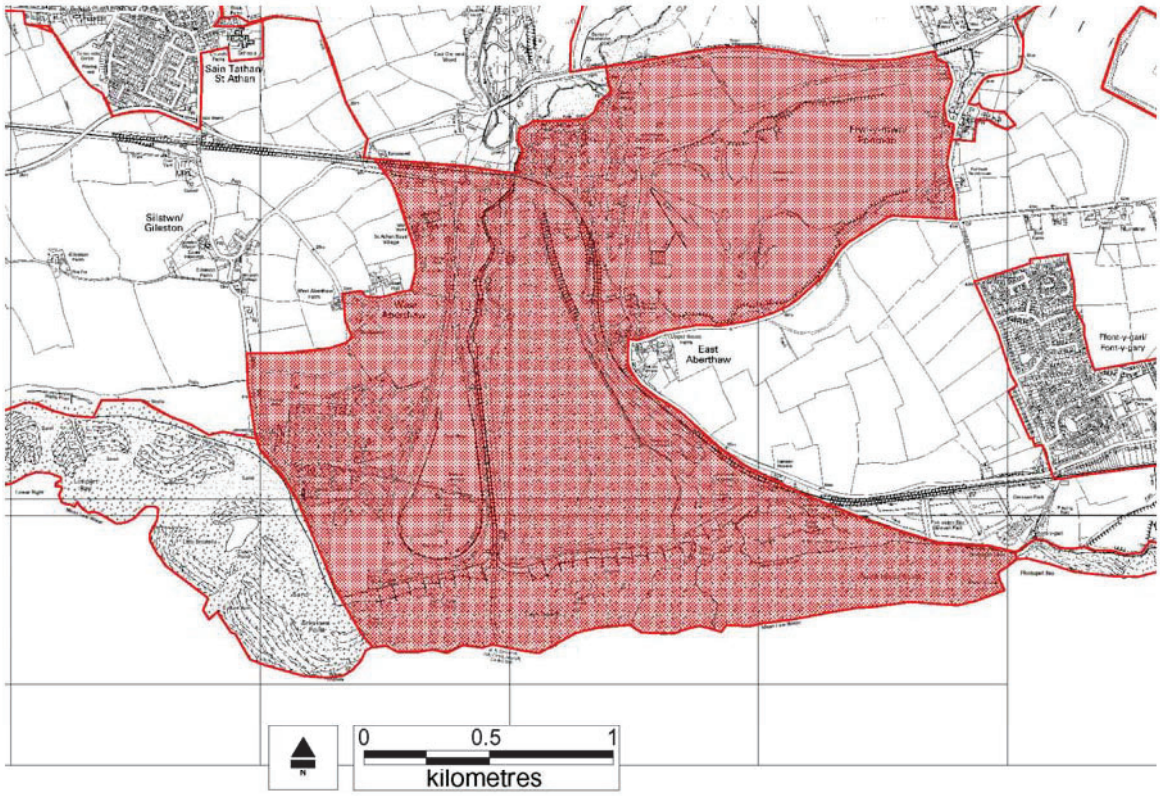
In the south, there are a number of large scale contemporary features. They include Cardiff International Airport, the new railway station both serving it and reflecting the local authority's efforts to encourage alternative transport systems, and the development of the RAF St Athan base as a defence training academy and technical research establishment. Llandow Industrial Estate and Car Racing Circuit contrast with the prevailing cultural character, whilst the Vale Hotel, Golf and Spa Resort are expanding into the parkland of Hensol Castle, that itself is being converted into conference centre and hotel.Developments and associated roads and traffic act erode the rural landscape.

Dyffryn Gardens and house is a popular visitor destination. The Gardens (designed by renowned landscape practitioner Thomas H. Mawson) are being restored. Less visited is the designed landscape around the mediaeval castle of Fonmon.

The coastal settlements and beaches of Southerndown, Ogmore and St Bride's Major have long been popular for day visits from the principal local towns.

LANDSCAPE CHARACTER AREA 4 - THAW ESTUARY

Plan



Photographs

View to Aberthaw Power Station

Description
Area of wave cut platform and estuarine deposits associated with the River Thaw which drains the central Vale landscape and is associated with the Thaw and Waycock lowland river systems. Characterised by the locally iconic features of Aberthaw Power Station and quarry.

Geological Landscapes
Part of a lowland river system, including the lower end of the floodplain. An important estuarine fan feature (aspect area GL514) that exhibits features of coastal erosion.

Landscape Habitats
A mosaic of inland and coastal features, including a range of estuarine habitats including salt marsh and saline lagoons. In addition there are a range of manmade habitats associated with the Power Station, including extensive areas of ash deposition. An important area of salt marsh as recognised by its designation (in part) as a Site of Special Scientific Interest.

Visual and Sensory Landscapes
This part of the Thaw Valley is closely associated with the Power Station and Cement Works, and associated overhead wirescape, running up the valley floor. The area is affected by ash tips and quarrying (aspect area VS569), with areas of standing water and the estuary mouth and its intertidal zone.

Historic and Cultural Landscape
In cultural landscape terms the LCA lies within the extensive agricultural Vale aspect area (CL039). Historically (aspect area HL028), association with extractive industries and the production of power are key associations.

Key Policy and Management Issues

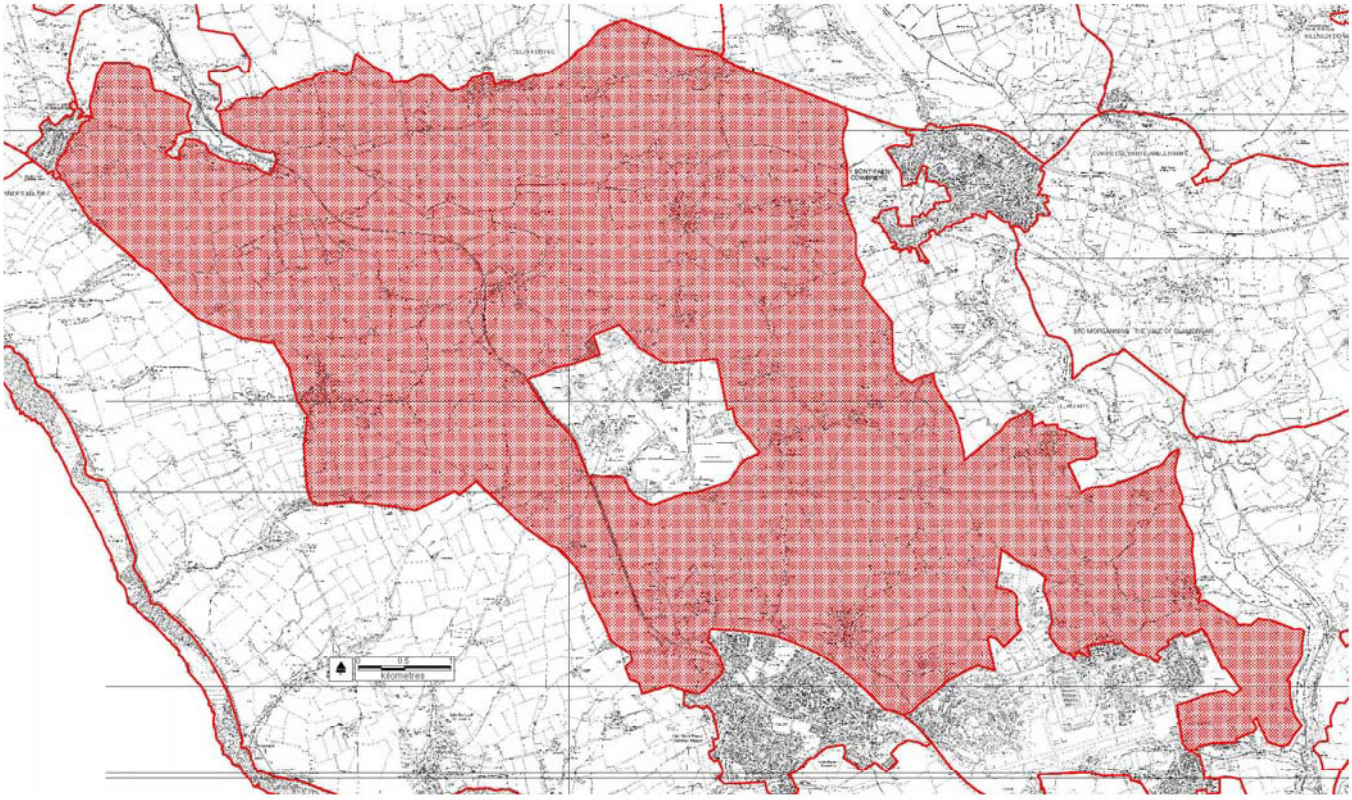
- Maintenance of SSSI area.
- Reducing grazing intensity may be beneficial in areas.
- Potential for habitat/landscape development in quarry and around the Power Station ash pits.
- Ensure any extensions or developments to industrial areas respect landscape character and quality.
- Management of public access to foreshore and protection of coast from erosion.
- Aberthaw estuary would benefit from reclamation of fringes such as river/other wet areas to improve visual quality and diversity.

LCA 4 Thaw Estuary

Aspect	Aspect Area	Area Name	Description	Overall Evaluation	Evaluation Criteria									Management Issues
					1	2	3	4	5	6	7	8	9	
Geological	GL 514	Thaw-Waycock	Active lowland river-flood plain system	Moderate	M	L	L	L						Conserve existing geomorphological integrity
	GL 863	Llanwit-St. Athan	Lowland plateau	Moderate	M	M	M	M						Conserve existing geomorphological integrity
	GL 962	Barry-Rhoose	Lowland plateau	High	H	M	M	M						Conserve existing geomorphological integrity
Landscape Habitats	LH 325	Heritage Coast	Intertidal, Including Muds/Sands, Saltmarsh, Shingle[Trimmed]	Outstanding	O	O	U	U	U	O	O	H		Largely unmanaged apart from limited litter picking. No specific recommendations.
	LH 350	Lower Thaw Valley	Mosaic	High	H	H	M	U	L	H	H	U		The aspect area appears to suffer from heavy grazing. A reduction in grazing intensity may be beneficial.
	LH 839	Aberthaw	Mosaic	Moderate	M	M	U	U	U	U	M	M		Unassessed
	LH 845	Aberthaw Saltmarsh	Mosaic	Outstanding	O	O	U	U	U	U	O	H		Unassessed
	LH 938	The Leys	Artificial Exposures & Waste Tips	Low	L	L	M	U	U	L	L	U		Existing management generally appropriate.
Visual and Sensory	VS 305	Lower Thaw valley floor	Open Lowland Valleys	Moderate	M	M	H	M						Hedgerows deteriorating and power lines unsightly. Improve hedgerows and access.
	VS 317	Barry to Aberthaw cliffs	Cliffs & Cliff Tops	High	H	M	H	M						Development has an adverse effect on area and paths. Restrict development and improve countryside management.
	VS 569	Aberthaw estuary	Derelict/Waste Ground	Low	L	L	L	M						Canalised river and seeding in parts mean area lacks visual interest. Carry out permanent reclamation of fringes of site such as river and other wet areas to improve visual diversity and quality.
	VS 641	Rhoose Hinterland	Mosaic Rolling Lowland	Moderate	M	M	M	M						Hedgerows in decline. Improve field boundary management
	VS 742	Aberthaw Quarry	Excavation	Low	L	L	M	M						Generally works and quarry screened as far as possible. Maintain and improve screening and ensure reclamation is appropriate.
	VS 765	Bristol Channel	Sea	Outstanding	O	O	O	L						Maintain open sea free from development and maintain gravel banks to protect coastline from erosion.
	VS 890	Heritage Coast Hinterland	Open Rolling Lowland	Outstanding	O	H	O	H						Some erosion of character through development. Manage area as Heritage Coast strongly restricting development.
	VS 920	Glamorgan coast intertidal	Intertidal	Outstanding	O	O	O	O						Management of coastal area more positive in heritage area. Protect natural forms and manage access.
	VS 998	Thaw Power Station	Urban	High	L	L	H	M						Well maintained power station building and landscape. Integrate buildings, car parking areas and pedestrian areas.
Historical Landscapes	HL 001	Vale of Glamorgan coastal littoral	Marginal Land	Unassessed										
	HL 028	Aberthaw Industrial	Extractive	Unassessed										
	HL 030	Porthkerry Rural	Regular Fieldscapes	Unassessed										
	HL 036	St Donat\'s, Monknash and St Brides Major	Regular Fieldscapes	Unassessed										
Cultural	CL 003	W Aberthaw Power Station, Cement Works	Industrial	Outstanding	H	H	U	U	H	U	U	U	O	Apparently well maintained as befits large industrial area.
	CL 039	Vale of Glamorgan Rural Landscape	Rural	High	H	O	L	U	O	H	L	H	L	Maintain consistent planning policies to preserve the landscape.

LANDSCAPE CHARACTER AREA 8 - LIAS PLATEAU

Plan



Photographs

View across the Lias Plateau from the A48, looking south

Description
The inland section of the west Vale plateau (see LCA 7) a broad, low dissected plateau which exhibits little visual, sensory or physical evidence of proximity to the coast. Rising up to some 90m AOD, it is bounded to the north by the Northern Vale Lias Slopes (LCA 2) and to the east by the Thaw Valley and the developed areas of St Athan and Llantwit Major. In the centre of the area is a discrete LCA relating to the Llandow Trading Estate (see LCA 9) which has been separated due to it being such an incongruous element within the surrounding rural landscape.

Geological Landscapes
Part of the low, broad, dissected plateau that forms the majority of the western Vale landscape underlain by the extensive limestone and shale beds of the Lias. It is dissected by a number of small streams such as Clemenstone Brook, Sternbridge Brook and Factory Brook that run down into the adjacent lowland valley river system of the Thaw and Ewenny.

Landscape Habitats
A fairly intensively farmed landscape, the LCA is typified by a mosaic of lowland habitats, including hedgerows, hedgerow trees, streams and ditches and scattered small blocks of woodland.

Visual and Sensory Landscapes
An open, rolling plateau with scattered farmsteads. The main settlements are Wick, Colwinston and Llysworney. These are subject to development pressures, evidenced by urban detailing in new developments near villages and inappropriate conversions at some farms. Predominantly an arable farmed landscape with a mixture of medium and large field sizes set in a matrix of hedgerows with hedgerow trees.

Historic and Cultural Landscape
In historic terms the LCA includes aspect area HL051 - Llandow Rural which reflect the agricultural development of the area, as does aspect area CL039 which is the extensive rural Vale landscape. At the eastern edge of the LCA is Llanmihangell Place which is included on the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales.

Key Policy and Management Issues

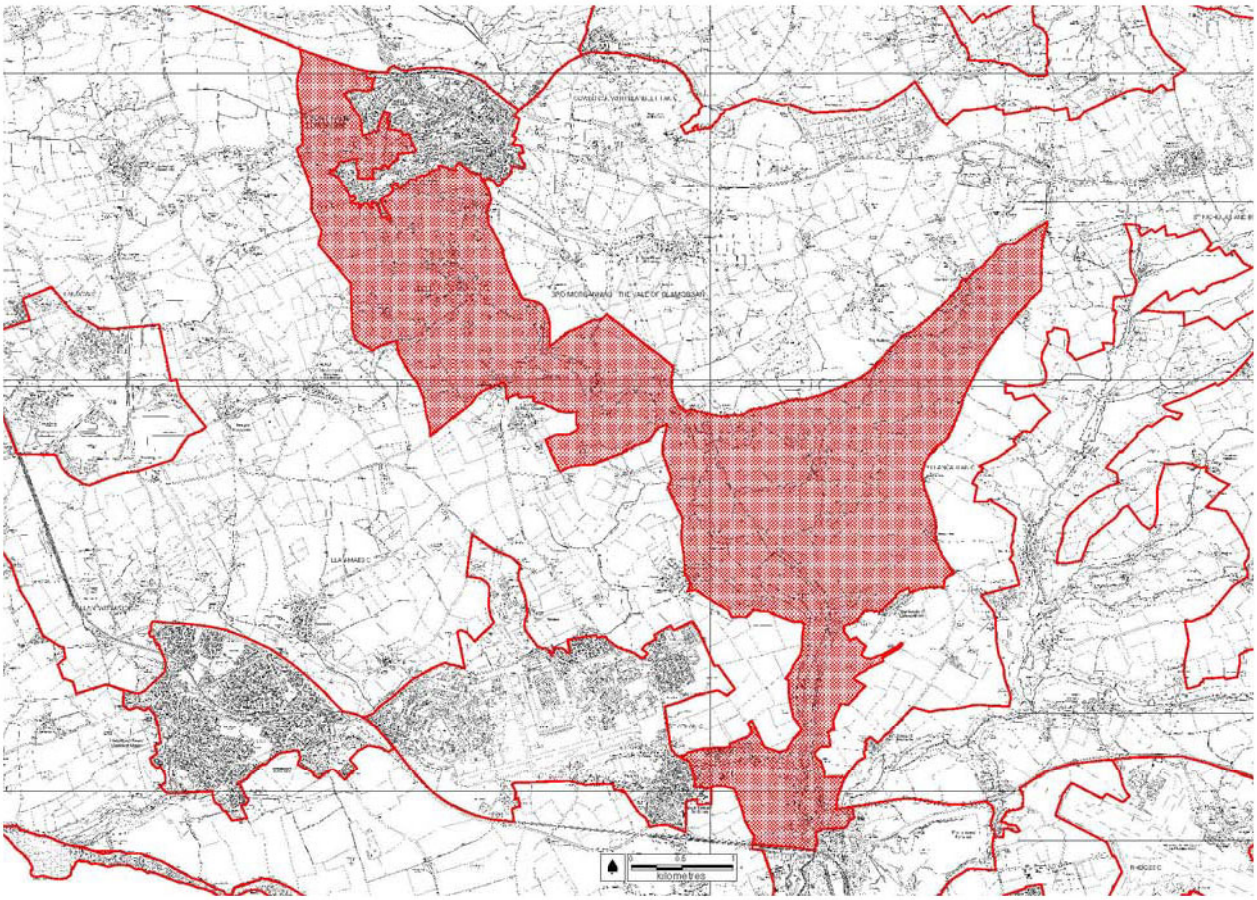
- Longer management of the agricultural landscape features to retain the integrity of the area's character, introducing cover and interest.
- Integration of new developments into the settlement edge landscape.
- Strongly restrict development by managing area as Heritage Coast.
- Management of historic landscape areas and woodlands.

LCA 8 Lias Plateau

Aspect	Aspect Area	Area Name	Description	Overall Evaluation	Evaluation Criteria									Management Issues
					1	2	3	4	5	6	7	8	9	
Geological	GL 514	Thaw-Waycock	Active lowland river-flood plain system	Moderate	M	L	L	L						Conserve existing geomorphological integrity
	GL 747	Ogmorre-St. Brides	Other	Outstanding	H	O	O	O						Conserve existing geomorphological integrity
	GL 863	Llanwit-St. Athan	Lowland plateau	Moderate	M	M	M	M						Conserve existing geomorphological integrity
	GL 885	Alun-Ewenny	Active lowland river-flood plain system	Moderate	H	L	M	M						Conserve existing geomorphological integrity
Landscape Habitats	LH 435	Cowbridge West	Improved Grassland	Moderate	M	L	H	U	L	L	M	U		Intensive agricultural management generally unsympathetic. Encourage less intensive land management practices.
	LH 582	Ogmore-Llantwit Arable Belt	Mosaic	Moderate	M	L	M	U	L	M	L	H		The provision of set aside buffer strips at the edges of the arable fields and sympathetic management of field boundaries would increase biodiversity interest.
Visual and Sensory	VS 110	Lower Thaw valley sides	Mosaic Lowland Valleys	High	H	M	H	H						Woodland management needs improving. Retain and manage wooded slopes and improve boundaries.
	VS 139	Mid Thaw Valley	Mosaic Lowland Valleys	High	H	H	H	H						Retain and manage wooded slopes and protect and improve boundaries.
	VS 805	Lias Plateau	Open Rolling Lowland	Moderate	M	M	M	M						Intensive farming reducing interest in landscape. Introduce cover and interest into landscape
	VS 890	Heritage Coast Hinterland	Open Rolling Lowland	Outstanding	O	H	O	H						Some erosion of character through development. Manage area as Heritage Coast strongly restricting development.
Historical Landscapes	HL 002	Southern Vale Communication Corridor	Communications	Unassessed										
	HL 031	RAF St Athan	Military	Unassessed										
	HL 033	RAF Llandow	Military	Unassessed										
	HL 036	St Donat\'s, Monknash and St Brides Major	Regular Fieldscapes	Unassessed										
	HL 041	Llamihangel Place	Nucleated Settlement	Unassessed										
	HL 046	Pwll-Y-Wrach	Nucleated Settlement	Unassessed										
	HL 049	Thaw River Valley	Water & Wetland	Unassessed										
	HL 051	Llandow Rural	Irregular Fieldscapes	Unassessed										
	HL 052	Llysworney and Llandough	Regular Fieldscapes	Unassessed										
Cultural	CL 028	Rural Village Conservation Areas	Institutions	Outstanding	M	H	L	M	O	H	L	L	U	Ensure designation affords protection. Continue to police designated areas.
	CL 039	Vale of Glamorgan Rural Landscape	Rural	High	H	O	L	U	O	H	L	H	L	Maintain consistent planning policies to preserve the landscape.

LANDSCAPE CHARACTER AREA 19 - LOWER THAW VALLEY

Plan



Photographs

Lower Thaw Valley looking south towards St Athan

Description
A relatively broad, steep sided valley running southwards from Cowbridge to Aberthaw (see LCA 4). The valley sides are formed by the exposed deposits of the dissected plateau, and the steeper slopes are often covered in woodland. The valley suffers from the presence of overhead power lines running northwards from Aberthaw Power Station.

Geological Landscapes
Lower stretch of an active lowland river system (aspect area GL514) cut into the Lias plateau, with local alluvial fans where tributaries enter in the main river (eg: River Kenyon).

Landscape Habitats
The LCA has a range of lowland and riparian habitats associated with the valley floor. The northern section is wider, with more gentle, rounded valley sides and spurs. South of Llanbethery the valley narrows to where it adjoins LCA 4, here the valley sides are much steeper and cloaked in woodland.

Visual and Sensory Landscapes
A wide, sinuous floodplain, with a mosaic of pastoral fields, including areas of rougher vegetation, surrounded by a mixture of gappy hedgerows and fences following the pattern of drainage ditches on the valley floor. The steeper valley sides are visually covered in woodland (eg: Coed Llancadle, Oxmoor Wood, and East Orchard Wood). The eastern side of the valley is characterised by the distinct line of the disused railway that ran northwards from Aberthaw. There are a number of visual detractors, including overhead power lines and the quality of field boundaries. The developments at Aberthaw at the southern end of the valley visually dominant the LCA, and provide detractors to its overall quality.

Historic and Cultural Landscapes
The Thaw is the largest valley that crosses the Vale (aspect area HL049) and is reflected in its function as a routeway for railways and overhead power lines. It is associated with the wider agricultural development of the Vale landscape.

Key Policy and Management Decision

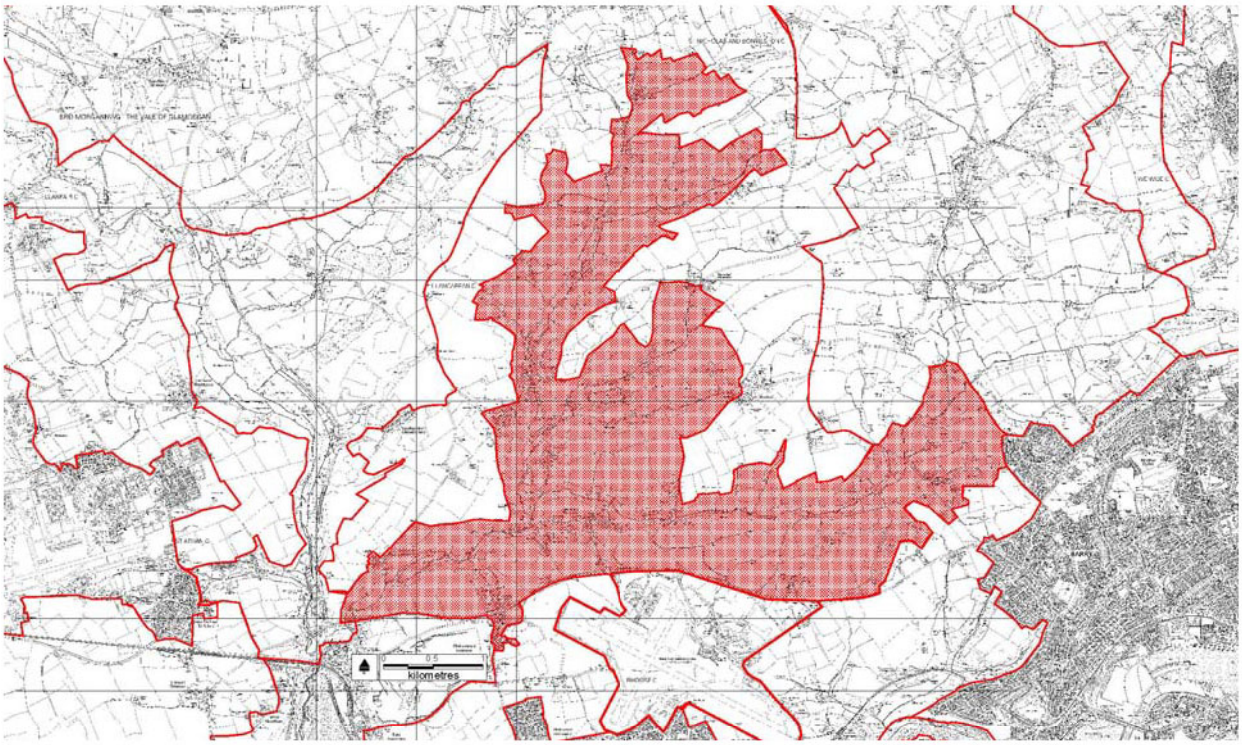
- Management of field boundaries and ditches to retain the integrity of the agricultural landscape.
- Longer term management of valley side woodlands.
- Implications of any future developments at Aberthaw on the valley landscape.
- Less intensive agricultural/grazing practices may be beneficial

LCA 19 Lower Thaw Valley

Aspect	Aspect Area	Area Name	Description	Overall Evaluation	Evaluation Criteria									Management Issues
					1	2	3	4	5	6	7	8	9	
Geological	GL 282	St. Hilary	Other	High	M	M	M	L						Conserve existing geomorphological integrity
	GL 492	Ewenny-Penllyn	Other	Outstanding	O	O	O	O						Conserve existing geomorphological integrity
	GL 514	Thaw-Waycock	Active lowland river-flood plain system	Moderate	M	L	L	L						Conserve existing geomorphological integrity
	GL 658	Penllyn Moor	Active lowland river-flood plain system	High	H	M	M	M						Conserve existing geomorphological integrity
Landscape Habitats	LH 103	Cowbridge	Residential/Green Space	Low	U	U	U	U	U	U	L	M		Encourage 'wildlife-friendly' management practices.
	LH 118	Cowbridge East	Mosaic	Moderate	L	L	H	U	L	M	M	H		Less intensive agricultural management desirable.
	LH 350	Lower Thaw Valley	Mosaic	High	H	H	M	U	L	H	H	U		The aspect area appears to suffer from heavy grazing and a reduction in grazing intensity may be beneficial.
	LH 435	Cowbridge West	Improved Grassland	Moderate	M	L	H	U	L	L	M	U		Encourage less intensive land management practices, particularly field boundaries.
	LH 436	Cowbridge South - Thaw Valley	Mosaic	High	H	M	U	U	U	M	H	H		Unassessed
	LH 582	Ogmore-Llantwit Arable Belt	Mosaic	Moderate	M	L	M	U	L	M	L	H		The provision of set aside buffer strips at the edges of the arable fields and sympathetic management of field boundaries would increase biodiversity interest.
	LH 583	St Athan	Mosaic	Low	L	L	M	U	L	U	L	M		Unassessed
	LH 786	Aberthaw River Valleys	Mosaic	High	H	O	M	U	U	H	H	H		Existing management generally appropriate.
	LH 839	Aberthaw	Mosaic	Moderate	M	M	U	U	U	U	M	M		Unassessed
Visual and Sensory	VS 110	Lower Thaw valley sides	Mosaic Lowland Valleys	High	H	M	H	H						Woodland management needs improving. Retain and manage wooded slopes and improve boundaries.
	VS 139	Mid Thaw Valley	Mosaic Lowland Valleys	High	H	H	H	H						Retain and manage wooded slopes and protect and improve boundaries.
	VS 146	Central Vale Ridges and Slopes	Mosaic Rolling Lowland	High	M	M	M	M						Area in general well managed but need for enhancing woodland and hedgerow cover.
	VS 305	Lower Thaw valley floor	Open Lowland Valleys	Moderate	M	M	H	M						Hedgerows deteriorating and power lines unsightly. Improve hedgerows and access.
	VS 742	Aberthaw Quarry	Excavation	Low	L	L	M	M						Generally works and quarry screened as far as possible. Maintain and improve screening and ensure reclamation is appropriate.
	VS 805	Lias Plateau	Open Rolling Lowland	Moderate	M	M	M	M						Intensive farming reducing interest in landscape. Introduce cover and interest into landscape
	VS 890	Heritage Coast Hinterland	Open Rolling Lowland	Outstanding	O	H	O	H						Some erosion of character through development. Manage area as Heritage Coast strongly restricting development.
Historical Landscapes	HL 002	Southern Vale Communication Corridor	Communications	Unassessed										
	HL 022	A48 Lougher to Chepstow communication co	Communications	Unassessed										
	HL 032	Llancarfan	Irregular Fieldscapes	Unassessed										
	HL 040	Old Beaupre	Nucleated Settlement	Unassessed										
	HL 049	Thaw River Valley	Water & Wetland	Unassessed										
	HL 052	Llysworney and Llandough	Regular Fieldscapes	Unassessed										
Cultural	CL 003	W Aberthaw Power Station, Cement Works	Industrial	Outstanding	H	H	U	U	H	U	U	U	O	Apparently well maintained as befits large industrial area.
	CL 008	Cowbridge and Llanblethian	Places	Outstanding	H	M	O	U	H	H	L	H	U	It appears that planning development is being restricted. Limit the development of light industry and housing.
	CL 028	Rural Village Conservation Areas	Institutions	Outstanding	M	H	L	M	O	H	L	L	U	Ensure designation affords protection. Continue to police designated areas
	CL 039	Vale of Glamorgan Rural Landscape	Rural	High	H	O	L	U	O	H	L	H	L	Maintain consistent planning policies to preserve the landscape.

LANDSCAPE CHARACTER AREA 20 - LOWER WAYCOCK VALLEY

Plan



Photographs

Llancarfan church

River Waycock at Penmark Place

Description
Enclosed lowland valley, part of a wider valley system that runs into the adjacent Thaw valley. Characterised by extensive areas of woodland interspersed with scattered houses and farmsteads. It includes the settlement of Llancarfan, which with its hinterland is one of the best surviving and most complete examples of the historic landscape of the Vale as a whole, reflecting the Anglo-Norman influence on settlement patterns and land management.

Geological Landscapes
Part of a larger active lowland river system that includes the Nant Llancarfan, Lower Waycock and Kenson rivers. These lie in narrow, steeply sided valleys cut into the Lias plateau of this part of the Vale.

Landscape Habitats
A mosaic of floodplain, riparian, grasslands and woodlands associated with this network of streams and rivers.

Visual and Sensory Landscapes
A network of steep sided, enclosed lowland valleys (aspect area VS453) with a mixture of tranquil streams, valley side woodlands and small farms. There is a mosaic pattern of small, hedge bounded fields with substantial areas of woodland, usually on the steeper valley sides (eg: Coed Quinett, Breach Wood, Coed y Crinallt and Kenson Wood). The main settlements are at Penmark and Llancarfan, together with a pattern of scattered farmsteads. It gives the appearance of a well maintained landscape within the framework of a sense of tranquillity and enclosure.

Historic and Cultural Landscapes
The settlement and area around Llancarfan (aspect areas HL032and CI021) is a nationally important example of the effects of the Anglo Norman tradition upon the pattern and character of the landscape. This is recognised by it inclusion on the Register of Landscapes of Outstanding Historic Importance in Wales.

Key Policy and Management Issues

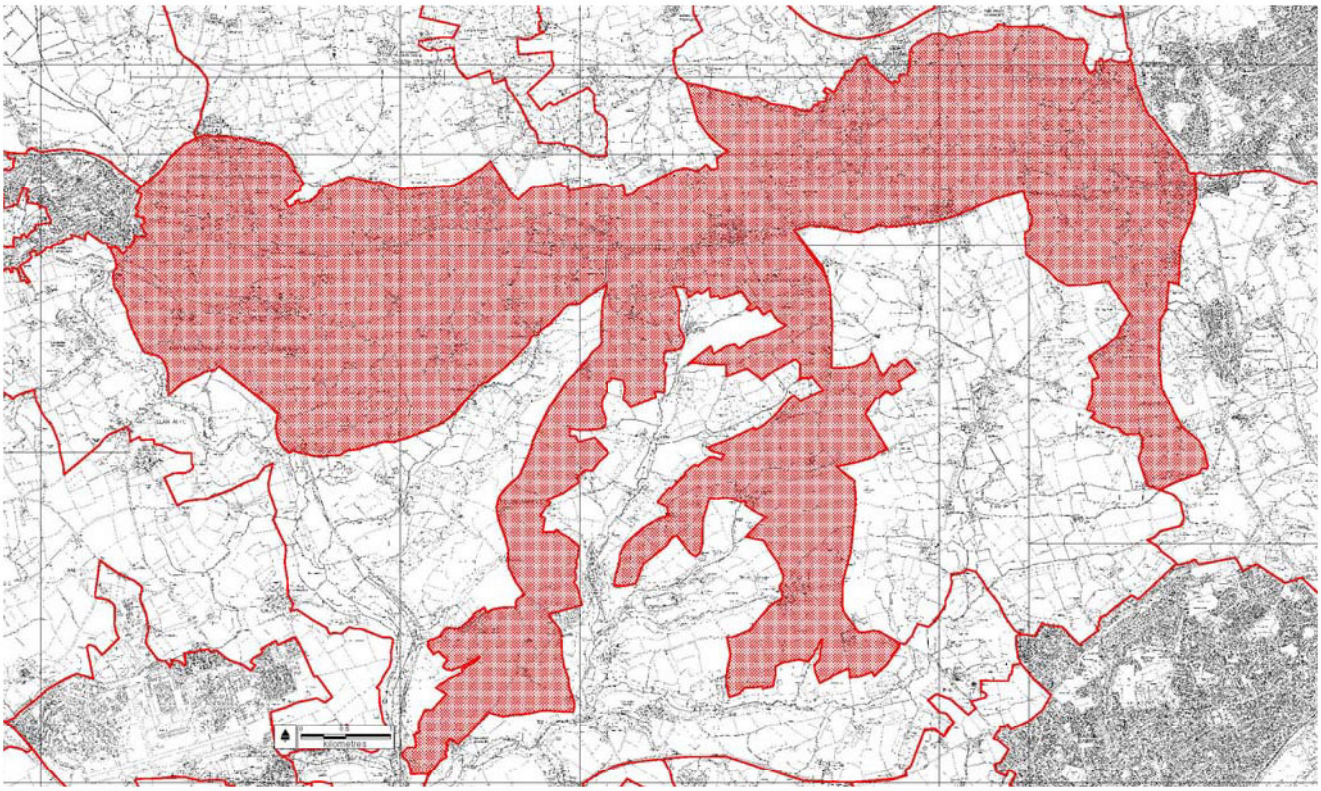
- Longer term management of valley side woodlands.
- Retention and management of the agricultural landscape pattern and features.
- Impact of development upon settlement form and character.
- Longer term management of the identified historic landscape importance of the Llancarfan area as identified in the CCW/CADW/ICOMOS register.

LCA 20 Lower Waycock Valley

Aspect	Aspect Area	Area Name	Description	Overall Evaluation	Evaluation Criteria									Management Issues
					1	2	3	4	5	6	7	8	9	
Geological	GL 170	Moulton	Lowland plateau	Moderate	L	L	M	L						Conserve existing geomorphological integrity
	GL 282	St. Hilary	Other	High	M	M	M	L						Conserve existing geomorphological integrity
	GL 514	Thaw-Waycock	Active lowland river-flood plain system	Moderate	M	L	L	L						Conserve existing geomorphological integrity
	GL 962	Barry-Rhoose	Lowland plateau	High	H	M	M	M						Conserve existing geomorphological integrity
Landscape Habitats	LH 582	Ogmore-Llantwit Arable Belt	Mosaic	Moderate	M	L	M	U	L	M	L	H		The provision of set aside buffer strips at the edges of the arable fields and sympathetic management of field boundaries would increase biodiversity interest.
	LH 786	Aberthaw River Valleys	Mosaic	High	H	O	M	U	U	H	H	H		Existing management generally appropriate.
	LH 839	Aberthaw	Mosaic	Moderate	M	M	U	U	U	U	M	M		Unassessed
	LH 840	Rhoose-Moulton	Mosaic	Moderate	M	M	U	U	U	M	M	M		Sympathetic management of hedgerows in particular may help to increase connectivity within and between local aspect areas.
	LH 958	Barry North	Mosaic	Moderate	H	O	M	U	U	M	M	M		Existing management generally appropriate.
Visual and Sensory	VS 146	Central Vale Ridges and Slopes	Mosaic Rolling Lowland	High	M	M	M	M						Area in general well managed. Enhance woodland and hedgerow cover
	VS 453	Llancarfan and Waycock Valleys	Mosaic Lowland Valleys	High	H	H	H	H						Generally appropriate, some scrub invasion. Retain and enhance intrinsic character through woodland management.
	VS 608	Upper Waycock Valley/Dyffryn Area	Open Lowland Valleys	High	M	H	H	M						Maintain rural character.
	VS 641	Rhoose Hinterland	Mosaic Rolling Lowland	Moderate	M	M	M	M						Hedgerows in decline. Improve field boundary management.
Historical Landscapes	HL 002	Southern Vale Communication Corridor	Communications	Unassessed										
	HL 032	Llancarfan	Irregular Fieldscapes	Unassessed										
	HL 038	Fonmon Castle	Nucleated Settlement	Unassessed										
Cultural	CL 021	Llancarfan	Institutions	Outstanding	L	H	L	U	H	H	L	H	U	Protective designations allow for strong landscape management. Continue as now with high vigilance in relation to inappropriate development
	CL 028	Rural Village Conservation Areas	Institutions	Outstanding	M	H	L	M	O	H	L	L	U	Ensure designation affords protection. Continue to police designated areas
	CL 039	Vale of Glamorgan Rural Landscape	Rural	High	H	O	L	U	O	H	L	H	L	Maintain consistent planning policies to preserve the landscape.
	CL 040	Fonmon Castle	Customs	Moderate	L	O	H	U	M	O	L	U	L	Continue as now.

LANDSCAPE CHARACTER AREA 22 - CENTRAL VALE RIDGES AND SLOPES

Plan



Photographs

Vale and ridge landscape near Bonvilston

Description

A large area of undulating hilly terrain that runs east west from Cowbridge, around the top of the Upper Waycock Valley towards the unitary authority boundary at Culverhouse Cross and including the Wenvoe area, and down to the confluence of the Thaw and Waycock at Llancadle. It forms an important ridgeline across the central Vale landscape, largely agricultural in land use. It affords long distance views across the wider Vale landscape. The LCA is dissected by the A48(T) road which follows the ridgeline across the area. The ridge crest was previously designated as a separate LCA but it has now been combined within this LCA as it is part of a larger geological feature and was not sufficiently significant visually to justify a separate landscape character area.

Geological Landscapes

An area of undulating Lias plateau (aspect area GL942) dissected by the Thaw-Waycock lowland river system. The area rises to 115-125m AOD and forms the background context to the wider river system.

Landscape Habitats

A largely agricultural area it exhibits a range of dry terrestrial habitats, with areas of arable cultivation and grassland, bounded by hedgerows and hedgerow trees. Woodland areas, mostly deciduous, found on the higher ground to the north.

Visually and Sensory Landscapes

The LCA is an area of lowland plateau with a series of enclosed valleys created by the Thaw - Waycock river system. Its northern portion (aspect area VS271) forms a visually important ridgeline in the Bonvilston/St Nicholas area which rises to 137m AOD at Pantylladron between Cowbridge and Bonvilston. This affords extensive views across the Vale. The area is a mixture of arable and pastoral farming within a matrix of hedgerows with hedgerow trees. Field sizes are medium to large, giving an extensive open feel to the area. There are a number of scattered settlements and farms, with the main settlements straddling the A48 corridor. The eastern edge of the LCA which follows the authority boundary includes the developed commercial area at Culverhouse Cross, below Tumbledown. There are some prominent woodland blocks along the northern edge of the LCA eg: Cottrell Wood, Coedarhydyglyn, and Coed Mynydd Coch.

Historic and Cultural Landscapes

Falls within the extensive rural Vale cultural aspect area (CL039), which reflects the agricultural development of the area and its resultant effects upon the landscape. The A48(T) follows the course of an important Roman road route across South Wales. Llantrithyd Place, which forms a remarkable example of an unaltered sixteenth century garden and seventeenth century deer park lies within the LCA and is included on the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales. Association with public entertainment with the location of the Wenvoe TV transmitter, near Downs.

Key Policy and Management Issues

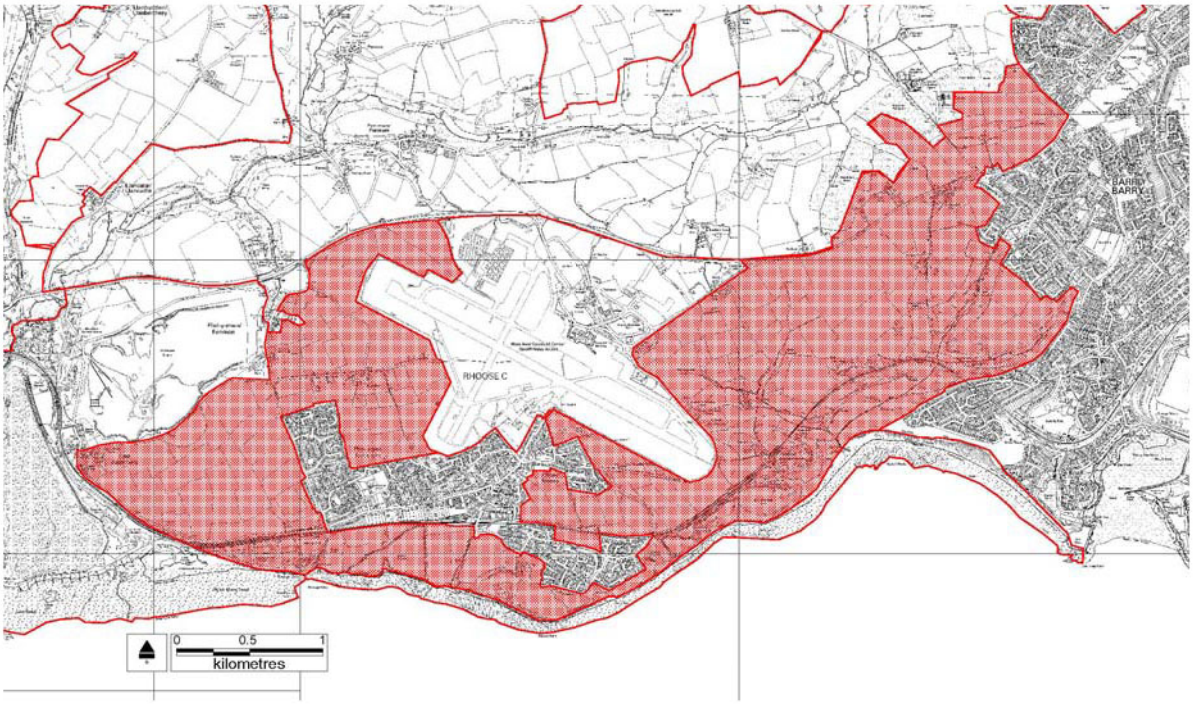
- Retention of the integrity of the agricultural landscape character through management of its principal elements.
- Longer term management of woodlands.
- Integration of settlement edge / new development.
- Management of historic landscape features.

LCA 22 Central Vale Ridges & Slopes

Aspect	Aspect Area	Area Name	Description	Overall Evaluation	Evaluation Criteria									Management Issues
					1	2	3	4	5	6	7	8	9	
Geological	GL 170	Moulton	Lowland plateau	Moderate	L	L	M	L						Conserve existing geomorphological integrity
	GL 263	Pendoylan Moors-Ely	Active lowland river-flood plain system	Moderate	M	L	M	L						Conserve existing geomorphological integrity
	GL 282	St. Hilary	Other	High	M	M	M	L						Conserve existing geomorphological integrity
	GL 514	Thaw-Waycock	Active lowland river-flood plain system	Moderate	M	L	L	L						Conserve existing geomorphological integrity
	GL 532	Pendoylan	Lowland till plain / field	High	H	M	M	M						Conserve existing geomorphological integrity
	GL 614	Coed Hills	Lowland plateau	Moderate	M	L	M	L						Conserve existing geomorphological integrity
	GL 658	Penllyn Moor	Active lowland river-flood plain system	High	H	M	M	M						Conserve existing geomorphological integrity
	GL 749	Wenvoe	Lowland escarpment	High	H	M	M	L						Conserve existing geomorphological integrity
	GL 953	Llanbethery	Lowland plateau	Moderate	L	L	L	M						Conserve existing geomorphological integrity
Landscape Habitats	LH 118	Cowbridge East	Mosaic	Moderate										Less intensive agricultural management desirable.
	LH 160	Coed Mynydd-coch	Mosaic	High	H	M	M	U	U	H	H	U		Unassessed
	LH 403	Ely Valley	Mosaic	High	H	H	U	U	H	L	H	H		Unassessed
	LH 436	Cowbridge South - Thaw Valley	Mosaic	High	H	M	U	U	U	M	H	H		Unassessed
	LH 582	Ogmore-Llantwit Arable Belt	Mosaic	Moderate	M	L	M	U	L	M	L	H		The provision of set aside buffer strips at the edges of the arable fields and sympathetic management of field boundaries would increase biodiversity interest.
	LH 616	Stalling Down Bryn Owen	Mosaic	Moderate	M	M	M	U	M	L	H	U		Greater control of bracken within the aspect area would be beneficial.
	LH 786	Aberthaw River Valleys	Mosaic	High	H	O	M	U	U	H	H	H		Existing management generally appropriate.
	LH 958	Barry North	Mosaic	Moderate	H	O	M	U	U	M	M	M		Existing management generally appropriate.
Visual and Sensory	VS 110	Lower Thaw valley sides	Mosaic Lowland Valleys	High	H	M	H	H						Woodland management needs improving. Retain and manage wooded slopes and improve boundaries.
	VS 146	Central Vale Ridges and Slopes	Mosaic Rolling Lowland	High	M	M	M	M						Area in general well managed but need for enhancing woodland and hedgerow cover
	VS 271	St Nicholas and Bonvilston Ridge Crest	Mosaic Rolling Lowland	High	H	M	M	H						Agricultural management generally good. Maintain tree cover on ridge line to integrate development.
	VS 453	Llancarfan and Waycock Valleys	Mosaic Lowland Valleys	High	H	H	H	H						Generally appropriate, some scrub invasion. Retain and enhance intrinsic character through woodland management.
	VS 608	Upper Waycock Valley/Dyffryn Area	Open Lowland Valleys	High	M	H	H	M						Maintain rural character.
	VS 614	St Nicholas and Bonvilston Ridge Slopes	Mosaic Lowland Valleys	High	H	M	H	H						Broadleaf tree cover is old and deteriorating. Develop woodland cover and hedgerows for better integration.
	VS 683	Ely Valley	Mosaic Rolling Lowland	High	H	H	M	M						Hedgerows poor in places. Maintain rural character of valley.
	VS 817	Stalling and St Hilary Downs	Open Rolling Lowland	High	H	M	H	H						Balance recreation and commoners needs and screen development.
	VS 952	Nant Tre Gof Valley	Mosaic Lowland Valleys	Moderate	M	H	M	M						Well maintained rural area. Maintain rural character.

LANDSCAPE CHARACTER AREA 26 - RHOOSE – PORTHKERRY HINTERLAND

Plan



Photographs

Looking east in the vicinity of Model farm, to the east of Cardiff International Airport

Description

A small area of coastal plateau between Aberthaw and Barry, bounded on the north by the Waycock Valley (LCA 20) and Cardiff International Airport (LCA 18) and on the south by the Fontygary – Porthkerry intertidal landscape zone (LCA 5). Generally an open landscape, excludes the settlements of Fontygary and Rhoose; a key area is the wooded valley area of Porthkerry Country Park which is the confluence of the Cwm Barri and Cwm Cidi, together with Whitelands Brook. This forms a distinctive steeply side incised valley system in the plateau running down to the coast at Porthkerry.

Geological Landscapes

Part of the extensive, broad, lowland dissected coastal plateau of the Vale (aspect area GL863). It shows evidence of past quarrying at Rhoose Point and a system of incised valleys around Porthkerry.

Landscape Habitats

A mosaic of lowland terrestrial habitats with woodland and riparian features at Porthkerry.

Visual and Sensory Landscapes

A somewhat cluttered LCA with a number of adjacent visual detractors – Aberthaw Power Station / Cement Works (LCA 4) Cardiff International Airport (LCA 18) and the settlements of Fontygary and Rhoose. The Porthkerry area is relatively attractive with the network of small wooded valleys and open spaces at the Country Park, if somewhat affected by the railway, adjacent settlements and the airport.

Historic and Cultural Landscapes

Part of the wider agricultural Vale landscape, the area has associations with numeral excavations, together with recreational landscapes at Fontygary Holiday and Leisure Park and Porthkerry Country Park.

Key Policy and Management Issues

- Longer term management of Porthkerry Country Park.
- Pressure of visitor use upon adjacent coastal area.
- Mitigation of impact of Cardiff International Airport upon LCA.
- Maintenance of agricultural landscape elements.

LCA 26 Rhoose- Porthkerry Hinterland

Aspect	Aspect Area	Area Name	Description	Overall Evaluation	Evaluation Criteria									Management Issues
					1	2	3	4	5	6	7	8	9	
Geological	GL 962	Barry-Rhoose	Lowland plateau	High	H	M	M	M						Conserve existing geomorphological integrity
Landscape Habitats	LH 270	Porthkerry	Mosaic	High	H	M	M	U	L	H	H	M		Existing management generally appropriate.
	LH 839	Aberthaw	Mosaic	Moderate	M	M	U	U	U	U	M	M		Unassessed
	LH 840	Rhoose-Moulton	Mosaic	Moderate	M	M	U	U	U	M	M	M		Sympathetic management of hedgerows in particular may help to increase connectivity within and between local aspect areas.
Visual and Sensory	VS 317	Barry to Aberthaw cliffs	Cliffs & Cliff Tops	High	H	M	H	M						Development has an adverse effect on area and paths. Restrict development and improve countryside management.
	VS 641	Rhoose Hinterland	Mosaic Rolling Lowland	Moderate	M	M	M	M						Hedgerows in decline, improve field boundary management
	VS 987	Porthkerry Country Park and Environs	Wooded Lowland Valleys	High	H	M	H	H						Not enough resources are allocated to woodland management. Management strategy needed to integrate recreation.
Historical Landscapes	HL 002	Southern Vale Communication Corridor	Communications	Unassessed										
	HL 003	Porthkerry Country Park	Woodland	Unassessed										
	HL 030	Porthkerry Rural	Regular Fieldscapes	Unassessed										
	HL 032	Llancarfan	Irregular Fieldscapes	Unassessed										
	HL 050	Dyffryn	Regular Fieldscapes	Unassessed										
Cultural	CL 009	Vale of Glamorgan Railway	Infrastructure	High	M	H	H	U	L	H	L	U	M	Continue to maintain and promote use of the line.
	CL 012	Barry	Urban	High	H	H	L	U	M	H	L	H	U	Maintain high standards of design and planning
	CL 028	Rural Village Conservation Areas	Institutions	Outstanding	M	H	L	M	O	H	L	L	U	Ensure designation affords protection. Continue to police designated areas
	CL 038	Rhoose & Fontygary Leisure Park	Urban	High	M	H	H	U	H	U	L	M	L	Restrict development to planned boundaries
	CL 039	Vale of Glamorgan Rural Landscape	Rural	High	H	O	L	U	O	H	L	H	L	Maintain consistent planning policies to preserve the landscape.

7.0 Appendix 7 Consultations with Vale of Glamorgan Council (VoGC) Officers Regarding the Scope of the LVIA and Representative Viewpoints

LDĀDESIGN

Vale of Glamorgan Council
Holton Road
Barry
CF63 4RU
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sflower@valeofglamorgan.gov.uk

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8919
23 July 2024

Pre-App Ref: 2023/00127/PRE
Fonmon BESS, Landscape and Visual Impact Assessment (LVIA) Consultation

Dear Sarah,

LDA Design Consulting Ltd ('LDA Design') has been appointed to provide professional landscape services for the proposed BESS development on the land north of Castle Road, Fonmon on behalf of Windel Energy. Part of LDA Design's commission is to prepare a Landscape and Visual Impact Assessment ('LVIA') that will be submitted as part of the forthcoming planning application.

Before undertaking our assessment, we would like to confirm Vale of Glamorgan Council's agreement to our planned approach to the LVIA in relation to the following:

- The location of the proposed viewpoints to inform the LVIA (illustrated on the attached Preliminary ZTV and Viewpoints);
- The extent of the LVIA's study area; and
- The key reference documents to be used to inform the LVIA.

We would be grateful if you could pass this letter onto the relevant landscape officer to review and confirm their agreement returning any comments as soon as possible.

A First Floor, Hanover House
Queen Charlotte Street
Bristol, BS1 4EX
United Kingdom
T 0117 203 3628

W www.lda-design.co.uk

LDA Design Consulting Ltd
Registered No. 09312403
17 Minster Precincts, Peterborough, PE1 1XX

LVIA Methodology

The findings of the LVIA will be presented in a dedicated report with supporting figures and appendices as necessary. The approach to the assessment will follow LDA Design's established methodology, which considers both impacts on landscape character and visual receptors, drawing upon the established and best practice guidance, which include:

- *The Guidelines for Landscape and Visual Impact Assessment (3rd Edition), Landscape Institute and Institute of Environmental Management and Assessment, 2013;*
- *Visual Representation of Development Proposals (2019) - Landscape Institute Technical Guidance Note 06/19;*
- *Landscape Institute, Technical Guidance Note 02/21 – Assessing landscape value outside national designations (2021);*
- *Natural Resources Wales, LANDMAP Methodology Overview (June 2017); and*
- *Natural Resources Wales, Using LANDMAP in Landscape and Visual Impact Assessment (GN46).*

LVIA Study Area

It is proposed that a 3km study area (defined by a 3km radius from the Site's boundary) is used for the LVIA. It is assessed that the extent of the study area would be sufficient to cover all potential landscape and visual effects that could arise from the proposed development. The 3km extent is derived from the findings of early fieldwork; preliminary Zone of Theoretical Visibility ('ZTV') modelling; desk-based analysis; and professional experience of similar projects of this nature.

Landscape Character

The LVIA will include an assessment of potential effects on landscape character and will consider the Site's physical fabric. The following landscape character assessments have been identified and will be reviewed as part of the LVIA's approach:

- *Natural Resources Wales, LANDMAP.*
- *Vale of Glamorgan County Borough Council Designation of Landscape Character Areas, 2008*

Viewpoints and Visual Receptors

Preliminary ZTV modelling and fieldwork has determined which visual receptors are likely to be affected and merit detailed consideration in the assessment effects. The preliminary ZTV study (presented on the enclosed plan, *LDA Design dwg. 8919_LVIA_PreliminaryZTV+Proposed_Viewpoint_Locations*) has been modelled on indicative component heights of 12 metres height above ground level (agl). The ZTV study shows that theoretical visibility would be broadly contained to areas either in the immediate context of the Site (up to approximately 600m); or to elevated locations between 1 – 2km where vegetation is less prevalent. Beyond 3km, visibility would become more fragmented and less widespread.

It is important to note that the Preliminary ZTV represents a theoretical model of potential visibility of the proposed development which is based on a computer-generated terrain model and often is unable to account for any localised features such as small copses,

hedgerows or individual trees; and/or small elements of built form. Therefore, the extent of visibility on the ground is likely to be less than theoretically indicated.

A selection of viewpoint locations has been identified from the Preliminary ZTV to represent a range of landscape and visual receptors where it is judged that the effects could be experienced from publicly accessible locations. This selection of viewpoints will provide a 'sample' of the potential effects from the study area. During the assessment, additional viewpoint locations might be recorded purposely to either demonstrate the reduction of effects with distance; or to specifically to ensure the representation of a particularly sensitive receptor. Any such views will be presented as 'illustrative views' in support of the assessment.

The proposed representative viewpoints and study area are illustrated on the enclosed plan ***LDA Design dwg. 8919_LVIA_PreliminaryZTV+Proposed_Viewpoint_Locations*** and listed below in **Table 1**: for Vale of Glamorgan Council's considerations:

TABLE 1: PROPOSED REPRESENTATIVE VIEWPOINT LOCATIONS

Viewpoint Reference	Representative Receptors	Direction & Distance	Approx. Grid Reference
Viewpoint 1 – Public footpath P4/5/1 and Castle Road	Users of public rights of way and users of road	2m North-western Site corner	303450 167750
Viewpoint 2 – Castle Road	Users of public rights of ways and users of road	2m South-eastern Site corner	303906 167626
Viewpoint 3 – Fonmon Castle and PRoW P4/6/2	Users of public rights of ways and recreational / accessible landscape	670m North-east	304351 168191
Viewpoint 4 – Port Road and Millenium Heritage Trail LDT	Users of public rights of ways, road users and airport users and workers	1.9km South-east	305819 167315
Viewpoint 4b- PRoW P4/15/1	Users of public rights of ways, airport users and workers	1.7km south-east	305657 167574
Viewpoint 5 – National Cycle Route 24	Users of cycle route and users of road	1.7km North-east	304847 169260
Viewpoint 6 – PRoW S2/71	Users of Public rights of ways	1.3km North-west	302234 167987
Viewpoint 7 – PRoW S2/6/4	Users of public rights of way	1.5km North-west	302572 167987
Viewpoint 8 – Prow L5/14/1	Users of public rights of way	1.2km North	303755 169610

Viewpoint 8b – Millenium Heritage Trail LDT and NCN 24	Users of public rights of ways, road users and cycle lane users	2.6km North-east	304218 170371

In addition to the representative viewpoints listed above, illustrative views will be identified during the assessment process to illustrate particular observations made within the assessment and could be captured from outside the study area if necessary.

Designated Landscapes

No national landscape designations have been identified within the extent of the Site or within the proposed 3km study area. It is acknowledged, however, that the Site falls within the locally designated SLA 2 (*Special Landscape Area: Upper and Lower Thaw Valley*), identified as part of Vale of Glamorgan's Local Development Plan (2017). Consideration of the corresponding policy – 'MG17 Special Landscape Areas' – and its requirements will be addressed within the documentation of the planning application.

Design

The Landscape Architect plays a leading role in the design process; and the masterplanning, design and assessment stages are inevitably iterative with stages overlapping in parts. Details of any mitigation measures incorporated within the proposals to help reduce identified potential landscape and visual effects will be set out in the relevant sections of the LVIA.

Key References

Further to guidance documents already noted in this letter, applicable policies and guidance from the following documents will inform the LVIA where relevant:

- Vale of Glamorgan Local Development Plan (2017); and
- Vale of Glamorgan Designation of Special Landscape Areas Background Paper (2013).

Other published sources will be obtained as the assessment progresses and referenced in the LVIA report where appropriate.

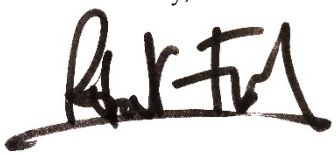
Next Steps

I would be grateful if you could review the information above and confirm your agreement as soon as possible.

Should you have any queries or comments, please do not hesitate to contact me by email at the address detail below. If more convenient to speak over the phone, I would welcome this opportunity.

I look forward to receiving your response.

Yours sincerely,



Robert French
Associate
robert.french@lda-design.co.uk

enc: *LDA Design dwg. 8919_LVIA_PreliminaryZTV+Proposed_Viewpoint_Locations*

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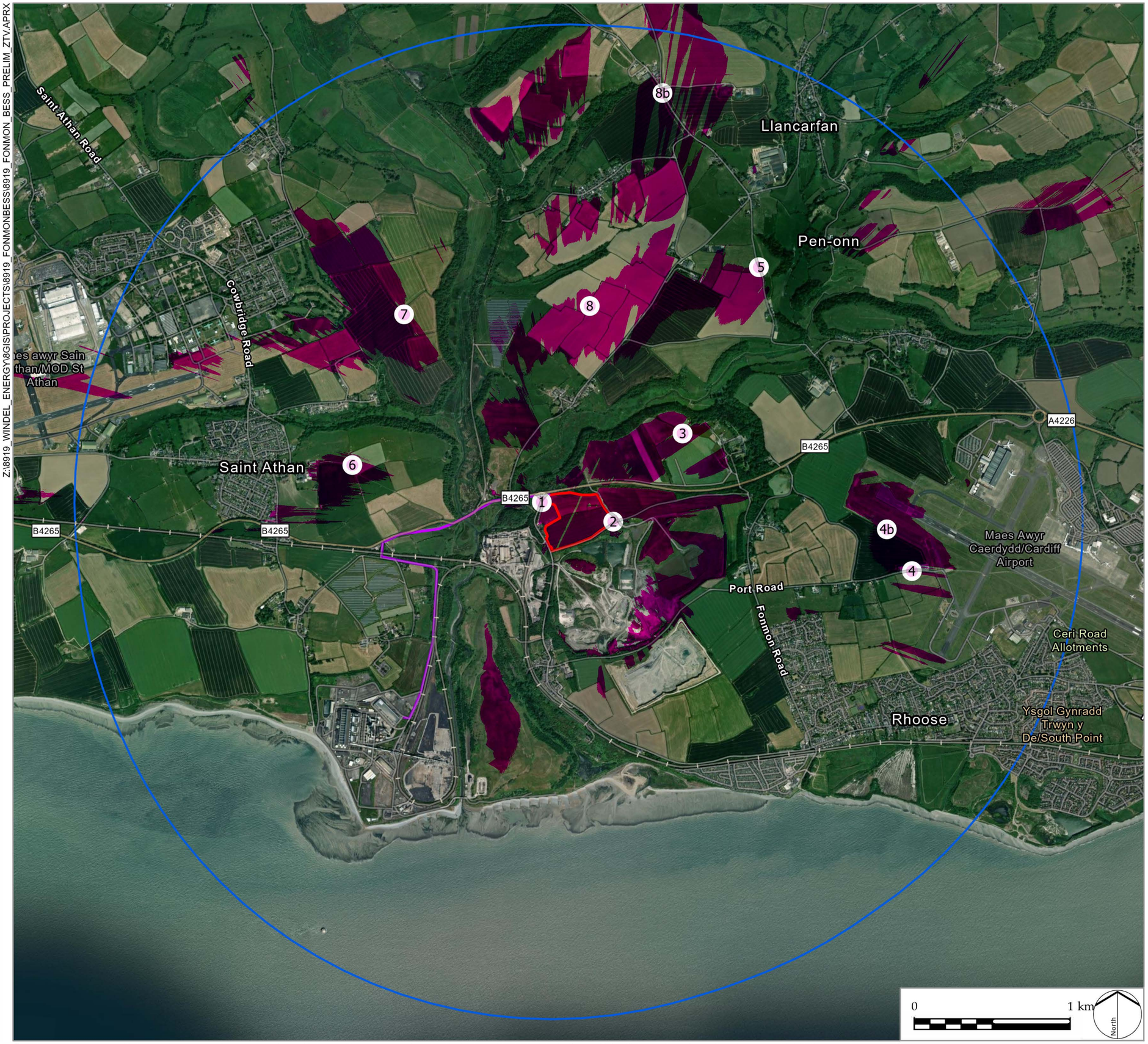

LEGEND

- BESS Site
- Indicative Cable Route
- Study Area (3km)
- Preliminary Viewpoint Locations
- ZTV (Zone of Theoretical Visibility) modelled at 12m agl

This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the viewshed routine in the ESRI ArcGIS Suite. The areas shown are the maximum theoretical visibility, taking into account topography, vegetation and buildings which have been included in the model with the heights obtained from a LiDAR digital surface model.

Due to its resolution, the surface model does not take into account every localised feature such as walls, small hedgerows or small trees and therefore only gives an impression of the extent of visibility.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on LiDAR terrain data with a $1m^2$ resolution, resampled to $2m^2$.

LDĀDESIGN

PROJECT TITLE

FONMON BESS

DRAWING TITLE

Preliminary ZTV (Zone of Theoretical Visibility) and Viewpoints

ISSUED BY	Bristol	T:	0117 203 3628
DATE	July 2024	DRAWN	SK
SCALE @A3	1:24,000	CHECKED	MB
STATUS	Draft	APPROVED	RF

DWG. NO. 8919_LVIA_ZTV

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.

Sources: Ordnance Survey, DataMapWales