



Environmental Statement Chapter 13. Seascape Landscape and Visual Impact Assessment



Contents

13.0	Seascape & Landscape Visual Impact Assessment	1
13.1	Introduction.....	1
13.2	Relevant legislation and policy	2
13.3	Approach and methods	2
13.3.1	Study area	3
13.3.2	Desk study	4
13.3.3	Site visits	5
13.3.4	Identification of regional Seascape Units, local Seascape Units and Landscape Character Areas.....	5
13.3.5	Assessment of effects on seascape and landscape character	6
13.3.6	Baseline visual assessment.....	11
13.4	Baseline conditions.....	24
13.4.1	Study area and context.....	24
13.4.2	Landscape designations.....	26
13.4.3	Statutory designations.....	26
13.4.4	Non statutory designations	28
13.4.5	Analysis of LANDMAP data	33
13.4.6	Analysis of Admiralty Charts.....	35
13.5	Baseline landscape and visual assessment.....	40
13.5.1	Assessment of ZTV	40
13.5.2	Baseline assessment of Regional Seascape Units.....	41
13.5.3	Baseline assessment of Local Seascape Units	44
13.5.4	Baseline assessment of Landscape Character Areas	49
13.6	Mitigation measures.....	68
13.7	Potential effects – construction	68
13.7.1	Introduction.....	68
13.7.2	Potential effects on visual amenity	73
13.8	Potential effects – Operation	80
13.8.1	Potential effects on seascape & landscape character	80
13.8.2	Potential effects on seascape & landscape character from other LCAs.....	100
13.8.3	Cumulative effects on seascape and landscape character.....	111
13.8.4	Potential effects on Visual Amenity	111
13.8.5	Effects on statutory & non statutory designations	166
13.9	Potential effects - decommissioning	174
13.10	Residual effects	174
13.11	Conclusion	175
13.12	References.....	177



13.0 Seascape & Landscape Visual Impact Assessment

13.1 Introduction

- 13.1.0.1 This Chapter assesses the likely effect of the Project on both the seascape and the landscape, and in terms of its effect on landscape character and visual amenity within a study area that is defined and described below.
- 13.1.0.2 For the purpose of this assessment 'seascape' *is defined as landscapes with views of the coast or seas, and coasts and the adjacent marine environment*" (The Landscape Institute & Institute of Environmental Management and Assessment (IEMA), 2013).
- 13.1.0.3 Landscape is defined as "an *area, perceived by people, whose character is the result of the interaction of natural and/or human factors*" (Natural England, 2012).
- 13.1.0.4 The Project is described in detail within Chapter 4 of this ES. The elements that are assessed within this Chapter include elements and effects of:
- i. the **Offshore Works** including: the ca. 9.5km seawall; turbine and sluice gate housing structure and integral semi-goliath gantry crane (referred to as the turbine and sluice gate housing structure); Offshore Building; and lighting; and
 - ii. the **Onshore Works** including: Western Landfall Building incorporating boating centre and hatchery including visitor facilities, O&M, slipway/jetty access point at the western landfall; an information point at the eastern landfall; saltmarsh and dune creation works and parking, access road and associated onshore lighting.
- 13.1.0.5 This Seascape and Landscape Visual Impact Assessment (SLVIA) describes and evaluates the existing seascape/landscape character and visual amenity and assesses the potential physical effects of the Project, including the effects of the lagoon and associated onshore and offshore infrastructure on seascape/landscape character and visual amenity within the study area (defined in Section 13.4.1). The assessment covers the construction, operational and decommissioning phases of the Project. The effects during the operational phase of the Project on designated landscapes, which include Areas of Outstanding Natural Beauty (AONBs), Landscapes of Outstanding/Special Historic Interest, Heritage Coasts, Registered Parks & Gardens, Country Parks, National Trails/Long Distance Paths and National Cycle Routes have also been assessed. Although it is acknowledged that these areas are sensitive receptors in their own right, they have been assessed using the methodology for assessing effects on landscape character and visual amenity as outlined in Section 13.3.
- 13.1.0.6 The assessment of effects takes consideration of the following issues:
- i. Direct and indirect effects on seascape and landscape character and changes to the seascape/landscape;
 - ii. Effects on the visual amenity of the study area and from the selected viewpoints including changes to the composition of views and the perception and response by receptor groups to these changes;
 - iii. Potential cumulative visual effects with other existing, approved or proposed (in planning), or relevant projects within the study area;
 - iv. The magnitude, duration and level of permanence of effects; and



- v. The effects during the construction, operation and decommissioning phases of the Project.

13.2 Relevant legislation and policy

- 13.2.0.1 This assessment of the landscape/seascape and visual effects of the Project was undertaken using a methodology developed by Soltys Brewster Consulting and drawn from the following guidance:
- i. DTI (2005) *Guidance on the Assessment of the Impact of Offshore Wind Farms - Seascape and Visual Impact*;
 - ii. Countryside Council for Wales (CCW), Brady Shipman and Martin and University College Dublin (2001) *Guide to Best Practice in Seascape Assessment*;
 - iii. The Landscape Institute and IEMA (2013) *Guidelines for Landscape and Visual Impact Assessment, Third Edition*;
 - iv. Scottish Natural Heritage (SNH) (2002) *Guidelines on the Environmental Impacts of Windfarms and Small Scale Hydro Electric Schemes*;
 - v. Natural Resources Wales (NRW) (2013) *LANDMAP Information Guidance Note 3 - Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines*;
 - vi. NRW (2013) *LANDMAP Information Guidance Note 4 - LANDMAP and the Cultural Landscape*;
 - vii. The Countryside Agency and SNH (2004) *Landscape Character Assessment Guidance for England and Scotland: Topic Paper 6 - Techniques and Criteria for Judging Capacity and Sensitivity*;
 - viii. Natural England (2012) *Natural England Commissioned Report NECR105 - An Approach to Seascape Character Assessment*;
 - ix. The Landscape Institute (2011) *Photography and Photomontage in Landscape and Visual Impact Assessment - Landscape Institute Advice Note 01/11*;
 - x. Horner and MacLennan and Envision: Prepared for Scottish National Heritage, The Scottish Renewables Forum and the Scottish Society of Directors of Planning (2006) *Visual Representation of Windfarms: Good Practice Guide*;
 - xi. The Highland Council (2010) *Visualisation Standards for Wind Energy Developments*; and
 - xii. Briggs, J and White, S; Prepared for CCW (2009) *Welsh Seascapes and their Sensitivity to Offshore Developments: Method Report*.

13.3 Approach and methods

- 13.3.0.1 This SLVIA methodology has been specifically developed for the Project in accordance with the best practice guidance listed in Section 13.2. In making judgements on effects, the SLVIA makes reference to mapped and documented baseline information and uses photographs and field survey work, together with the professional judgement of experienced landscape assessors. It draws together existing desktop information which was then verified and supplemented by survey work in the field.
- 13.3.0.2 The desktop study included a review of relevant planning policy and existing published seascape and landscape character assessments in order to identify any elements or parts of the defined study area which are recognised for their seascape/landscape or visual



qualities. Potential visual effects on the seascape or the landscape are assessed as separate but linked issues. Both require a combination of quantitative and qualitative evaluation. The magnitude of effects is derived from the extent to which physical changes to the seascape or the landscape cause a change in character and how the seascape and the landscape is valued. Visual effects are related to changes in the composition of views and people's perception of (and responses to) these physical changes.

- 13.3.0.3 For both seascape and landscape, the significance of effects are derived from the assessment of value, sensitivity and magnitude of change and informed by experienced professional judgement.
- 13.3.0.4 The first stage of the methodology (Section 13.3.4) sets out the criteria used to establish the Regional Seascape Units (RSU), Local Seascape Units (LSU), and Landscape Character Areas (LCA) during the baseline assessment stage of the SLVIA.
- 13.3.0.5 Following this initial stage, Section 13.3.5 sets out the criteria that have been used to establish the significance of effects on seascape and landscape character during the construction, operational and decommissioning phase of the Project.
- 13.3.0.6 Section 13.3.6 defines the criteria that has been used to determine the significance of effects on visual amenity during each phase of the Project from the selected viewpoint locations.
- 13.3.0.7 The final section of the methodology, Section 13.3.7 sets out the criteria used to determine the cumulative effects on seascape/landscape character and the cumulative effects on visual amenity within the 15km study area.
- 13.3.0.8 A photomontage has been produced from each of the agreed viewpoints to illustrate the before and after effects of the proposed Project. These were produced by iCreate and the methodology used for their production is included within Appendix 13.1 of this chapter.

13.3.1 Study area

- 13.3.1.1 There is no definitive guidance on the size of the study area for the type of development that is being proposed, as this is the first of its kind. However as noted in the DTIs 'Guidance on the Assessment of the Impact of Offshore Windfarms, "At 15km away the earth's curvature hides low lying land, leaving just the hills and showing little other detail"¹. Therefore, a study area of 15km from the centre of the Project is considered to be an appropriate size of study area for this SLVIA. The centre of the Project was accurately identified and plotted onto the OS map base using the computer software used to produce the ZTV. The study area is shown in Figure 13.07, Volume 2.

Scoping

- 13.3.1.2 The local planning authorities (City and County of Swansea Council (CCSC), and Neath Port Talbot County Borough Council (NPTCBC), as well as Bridgend County Borough Council which is nearby and NRW were consulted regarding the viewpoints chosen for the purpose of visual impact assessment. The consultees were also given the opportunity to comment on the final viewpoint selection. All comments received were taken into account in determining the requirements for detailed assessment. A summary of responses is given in Table 13.1.

¹ DTI, Guidance on the Assessment of the Impact of Offshore Wind Farms: Seascape and Visual Impact Report, (2006) Page 22, Figure 11

**Table 13.1 Summary of consultee responses**

Consultee	Summary of Response
BCBC	No comments received.
NRW	Confirmation that initial 12no. viewpoints selected are acceptable. However, requested additional viewpoints from the following locations: I. adjacent to Crymlyn Burrows II. Swansea Bay Campus development III. PROW above Port Talbot steelworks/Margam IV. View from the sea (especially from Mumbles side of Swansea Bay) Suggested that the current viewpoint located within Margam Park (VP14 - E280432 N186162) be relocated to the memorial stone that overlooks the park SS813 864). Confirmed that 15km study area is acceptable and that no night time photography is required. Effects from navigational lighting to be assessed using 3D fly through model. NRW requested that high/low water photography from low lying/seafront viewpoints must take place 2 hours either side of low or high water on an intermediate to spring tide. All other locations can be photographed outside of this window as long as it is clear from the photographs that the tide within Swansea Bay is either in or out.
NPTCBC	NPTCBC were satisfied with the viewpoints proposed.
CCSC	Confirmation that of the initial 12no. viewpoints selected Viewpoints 1, 2, 3, 5, 6, 7, 9, 10, 11 and 13 are acceptable. It was suggested that VP4 (E267232 N193504) be relocated to the corner of Granville Road and Headland Road, where less obstructed views towards the Project maybe available. An additional viewpoint from Ysgol Street or Pant Street should be included in order to assess views from the Port Tennant district of Swansea. Suggested that a location within Clyne Park could be used instead of from within the adjacent golf club (VP8 - E260174 N190615) Additional view from Pant y Celyn Road in the Townhill district of Swansea requested. Noted that VP12 (E266259 N192477) is located at the end of Swansea Point promenade and not within SA1. Request that viewpoint relocated to within the SA1 development boundary. Request that the proposed Atlantic Array wind farm development is referenced within any cumulative assessment (see below). Request that Regional Seascape Units are further broken down into Local Seascape Units in order for a more detailed assessment of effects to the seascape. It was agreed that the seaward extent of each Local Seascape Unit will extend to the 10m depth contour as identified on the Admiralty Chart

13.3.2 Desk study

- 13.3.2.1 The desktop study included a review of published OS maps and Admiralty Charts, relevant planning policies and existing seascape and landscape character assessments (including the Welsh Seascapes and their Sensitivity to Offshore Developments: Method Report (CCW, 2009) and NRW (2013) LANDMAP Level 3). This desk-based exercise allowed for the



identification of broad, distinct, recognisable and common character areas within the 15km radius study area. These are referred to as Regional Seascape Units (RSU) and Landscape Character Areas (LCA). In addition to these broad character areas, Local Seascape Units (LSU) were also identified to allow for a finer level of assessment of the potential effects of the Project within Swansea Bay.

13.3.3 Site visits

- 13.3.3.1 Initial field assessments were carried out between December 2012 and January 2013 to confirm and verify the broad RSU and LCA and the LSU identified through the desk study. A preliminary layout of the Offshore Works was assessed and evaluated in terms of its location in relation to the surrounding seascape and landscape. Preliminary viewpoints were also visited at this initial field assessment stage to enable early consultation with the local authorities and NRW on viewpoints to be used within the visual assessment.
- 13.3.3.2 Following comments received from consultees over the choice of viewpoints (refer to Table 13.1) and iterative changes to the lagoon layout, further site assessment work was carried out. This included an assessment of effects on seascape/landscape character, plus effects on visual amenity from the agreed viewpoint locations (refer to Table 13. 7), based on the final Project layout.

13.3.4 Identification of regional Seascape Units, local Seascape Units and Landscape Character Areas

- 13.3.4.1 The RSU, LCAs and LSUs identified through desk study and field assessment are illustrated in Figures 13.01 - 13.04, Volume 2, and are defined in Section 13.4. However, there is a difference between how the boundaries to the RSUs, LCAs and LSU are categorised.
- 13.3.4.2 The boundaries to LCAs are identified through physical features that may include interactions between different elements such as geology, soils, vegetation and current human influences, plus non-physical features such as historical and cultural associations and references.
- 13.3.4.3 The character of the seascape cannot be defined through the assessment of physical attributes, or historical and cultural references alone. This is because, except when the tides allow, there is no visual perception of the physical landform beneath the sea, and this is restricted to low tide level. Therefore, in addition, a visual envelope that relates to areas of coastal landscape is also defined, which is used as part of the process to identify the character and boundaries of the RSUs.
- 13.3.4.4 The visual envelope of each RSU is defined by identifying a length of coastline that runs between major headlands; the extent of the seaward component of the sea, which includes all sea surface visible from the defined length of coastline out to a distance of 15km in any direction and; the extent of the landward component, which are areas of land with visibility of the defined area of sea within the RSU.
- 13.3.4.5 The LSU are identified through the use of OS Maps, Admiralty Charts, current LANDMAP data and existing wave pattern data. This has allowed for the identification of: coastline features, including estuaries, inlets, harbour walls etc; composition of the seabed; water depth; and wave patterns. During the field work visit, the landward extent of the LSUs was further refined to include adjacent areas to the coast that are considered to have a strong visual relationship with the coast. Following consultation with CCSC, it was agreed that the seaward extent of the each LSU should extend to the 10m water depth contour as identified in the Admiralty Chart for Swansea Bay (Refer to Figure 4.1b, Volume 2).



13.3.5 Assessment of effects on seascape and landscape character

- 13.3.5.1 Seascape and landscape effects may include direct physical changes to seascape and landscape elements caused by the Project (e.g. development on the coastal edge) or indirect effects (e.g. effects on the character, quality and setting of a particular seascape or landscape) that may arise as a consequence of the construction of the Project. The potential seascape and landscape effects across the study area are identified by the on-site analysis and verification of seascape/landscape character information that is established during the baseline assessment. The seascape and landscape assessment criteria described below provide a framework for the assessment of seascape and landscape effects. It must be noted that there may be exceptions to these broad categories, due to specific local characteristics that may apply in individual circumstances.
- 13.3.5.2 The first stage of the assessment established the existing character, value and susceptibility of seascape and landscape receptors to change.
- 13.3.5.3 The identification of RSUs, LSUs and LCAs enables an understanding to be formed of the inherent value and importance of separate seascape and landscape components; the processes that have created features such as field patterns, coastlines and settlement forms; and the processes that may alter seascape and the landscape character in the future.
- 13.3.5.4 The overall value and susceptibility of change of each RSU, LSU and LCA is evaluated against defined criteria as set out in the paragraphs below.

Seascape and landscape value

- 13.3.5.5 The value attributed to the seascape and landscape is an important factor to be considered when assessing the sensitivity of a given seascape or landscape.
- 13.3.5.6 The value of each of the RSUs, LSUs and LCAs is derived through a combination of professional judgement, field work assessment, desktop assessments and the application of the LANDMAP landscape assessment and classification, which includes a review of five aspect layers. The value can then be determined by applying the criteria shown in Table 13.2.

Table 13.2 Definition of seascape and landscape value

Level of Value	Definition
Outstanding	Seascapes or landscapes, which are outstanding by nature of their scenic quality, which are aesthetically pleasing with a strong sense of place and may be rare in terms of their character type. They may be located away from centres of population, with an undeveloped character and may be difficult to access due to topography. They may also contain sites of historic, cultural, geological or natural habitat importance. These areas may be important tourist destinations and may be of national or international importance as defined by statutory designations.
High	Seascapes or landscapes with scenes of picturesque quality, which are aesthetically pleasing. They may be located near to centres of population, with some development evident though not dominant. Access may be restricted due to topography. They may also contain rare or historic features, have some notable cultural association, important geological features or contain a large proportion of high quality habitats (e.g. Site of Special Scientific Interest (SSSI)). These areas may be tourist destinations e.g. Blue Flag Beach and may be of regional or county importance as defined by statutory and local authority designations.



Level of Value	Definition
Moderate	Seascape or landscapes with picturesque attributes, which are aesthetically pleasing. Some characteristic features remain unaffected but others are fragmented and/or spoilt. They may be close or within centres of population, with few restrictions to access. The area may have some tourist associations, though tourism is not the primary attraction. Area may contain a network of habitats (e.g. Local Nature Reserve); historic or geological features. These areas may be of local importance as defined by local authority designations.
Low	Seascapes or landscapes with limited aesthetically pleasing scenes. Few characteristics remain unaffected and may be highly fragmented or spoilt. Very little coherent character and a weak sense of place and are unlikely to be rare in terms of character type. They may be located within centres of population, with easy access. They are unlikely to contain tourist attractions, or to be of local importance as defined by local authority designations.

Susceptibility of Seascape and Landscape Receptors to Change

- 13.3.5.7 The susceptibility of landscape receptors to the type of change or development proposed is described within the Guidelines for Landscape and Visual Impact Assessment (GLVIA, 3) (The Landscape Institute and IEMA, 2013) as *“the ability of the landscape receptor (whether it be the overall character or quality/ condition of a particular landscape type or area, or an individual element and/ or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/ or the achievement of landscape planning policies and strategies”*².
- 13.3.5.8 The relationship between the various seascape and landscape character components assists in defining if, and how, the Project may be placed in the landscape. It also allows choices to be made on informing design, which will vary according to the characteristics of the receiving seascape/landscape. The susceptibility to change of a given seascape/landscape is particular to both the specific seascape/landscape in question and the specific nature of proposed development³. Susceptibility to change of the study area's component RSUs, LSUs and LCAs is appraised within the assessment as shown in Table 13.3, using a range of factors which include:
- The nature of existing features within the seascape/landscape, including the presence of any large scale developments.
 - Seascape/Landscape pattern and scale.
 - Stability, robustness and fragility of seascape and landscape attributes and ability to be restored.
 - Visual enclosure/ the openness of views within the seascape and landscape, and visual attributes including the distribution and number of receptors, static and transitory receptors, scope for visual mitigation.
 - The condition of the seascape/landscape, including the maintenance of individual elements such as beaches, promenades, piers, hedgerows, buildings, woodland.
 - The nature of the proposed development, its component parts and character.
 - The extent to which sensitive design consideration and mitigation limit the degree of change.

² Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 88, paragraph 5.40

³ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 89, paragraph 5.42

**Table 13.3 Susceptibility to change of seascape and landscape receptors**

Level of Value	Definition
High	A seascape/ landscape where the majority of attributes are unlikely to withstand change without causing a change to overall character to the extent that it would be difficult or impossible to restore following construction of the Project. Planning policies and/ or strategies may be in place relating to this seascape/ landscape which impose a presumption against development of the type proposed.
Moderate	A seascape/landscape with a combination of attributes that is capable of absorbing some degree of change, following construction of the Project, without affecting overall character or resulting undue consequences for the maintenance of the baseline situation.
Low	A seascape/landscape where the majority of attributes are robust and/ or tolerant of change to the extent that the Project would have little or no effect on overall character or maintenance of the baseline situation. It is likely to be easily restored. Development of the type proposed may assist in the achievement of planning policies and/or strategies relating to this seascape/landscape.

Seascape and Landscape Sensitivity

- 13.3.5.9 An assessment of sensitivity is made to determine the degree to which each RSU, LSU and LCA can accommodate or mitigate offshore development or change without unacceptable detrimental effects on its character. In this assessment 'sensitivity' is defined as the stability of character and resilience of the seascape or the landscape to withstand change and the ability to recuperate from loss or damage due to this change.
- 13.3.5.10 Combining judgements made on value and susceptibility to change, enables a considered judgement to be made on the level of sensitivity to be apportioned to each defined RSU, LSU and LCA within the study area. Table 13.4 outlines the general principles that are used to inform and guide the assessment of seascape and landscape sensitivity:

Table 13.4 Sensitivity of seascape and landscape character

Level of Sensitivity	Definition
High	A seascape or landscape where the majority of attributes are unlikely to withstand change without causing a change to overall character to the extent that it would be difficult or impossible to restore. The frequency and sensitivity of receptors is also likely to be high.
High - Moderate	A landscape or seascape where the majority of attributes may be able to withstand limited change without causing a change to overall character to the extent that it would be difficult or impossible to restore. The frequency and sensitivity of receptors is also likely to be high but not exclusively high.
Moderate	A seascape or landscape with a combination of attributes that is capable of absorbing some degree of change without affecting overall character. There are unlikely to be large numbers of sensitive receptors.
Moderate – Low	A landscape or seascape where the majority of attributes may be able to withstand significant change without causing a change to overall character to the extent that it would be difficult or impossible to restore. The frequency and sensitivity of receptors is also likely to be low but not exclusively low.
Low	A seascape or landscape where the majority of attributes are robust and/ or tolerant of change to the extent that change or development would have little or no effect on overall character. It is likely to be easily restored and the frequency and sensitivity of receptors are likely to be low.

Magnitude of Effect on Seascape and Landscape

- 13.3.5.11 The magnitude of effect on either the seascape or landscape character is defined as the degree of change that will result from the introduction of the Project. It is dependent on a number of factors, including:
- The degree to which seascape or landscape character elements will be altered by the Project;
 - The extent of the Project visible within the seascape/landscape;
 - The relationship of the Project to adjoining land uses and the wider seascape/landscape context;
 - Whether impacts are 'direct' or 'indirect';
 - The distance of the Project from a specified seascape or landscape character area; and
 - Whether effects are short, medium or long term.
 - Whether effects are permanent or temporary.
- 13.3.5.12 The nature of effect is deemed as being either short-term (less than 5 years) medium-term (5 – 10 years) or long term (10 years plus) in timescale. Table 13.5 outlines the general principles that are used to inform and guide the definition of the magnitude of landscape impacts:

Table 13.5 Magnitude of seascape and landscape effects

Level of Effect	Definition
High	The Project would be immediately apparent and would result in major loss or major alteration to key elements of the seascape and/or landscape character to the extent that there is a fundamental and permanent, or long-term, change to seascape/landscape character. The change may occur over an extensive area.
Moderate	The Project would be apparent in views and would result in the loss or alteration to key elements of the seascape and/or landscape character to the extent that there is a partial long-term change to seascape/landscape character. The change may occur over a limited area.
Low	The Project would result in minor loss or alteration to key elements of seascape and/or landscape character to the extent that there may be some slight perception of change to seascape/landscape character. The change may be temporary and occur over a limited area.
Negligible	The Project would result in such a minor loss or alteration to key elements of seascape and/or landscape character that there would be no fundamental change.

Significance of Seascape and Landscape Effects

- 13.3.5.13 The significance of seascape and landscape effects are dependent on the points considered within the seascape/landscape sensitivity appraisal, the factors that influence the magnitude of change upon it, and the relationship between seascape/landscape sensitivity and magnitude of seascape/landscape change.
- 13.3.5.14 Table 13.6 outlines the general principles that are used to inform and guide the definition of the significance of seascape/landscape effects.

**Table 13.6 Significance of seascape and landscape effects**

Level of Effect	Definition
Major	The Project may have direct effects upon characteristic seascape and/or landscape features, altering elements of the seascape and/or landscape that contribute toward distinct character. The Project is likely to become a defining seascape/landscape element. Effects of this nature are likely to be contained within the character area in which the Project is located.
Moderate	The Project may be a characteristic component of the seascape/landscape character, the alteration of which may influence key attributes to the extent that changes to the character of the seascape and/or landscape are easily noticeable, although the development would not become the defining seascape/landscape element. The Project may be a distinct feature within views from the seascape and/or landscape, or influential although not defining, of the seascape/landscape character. The Project may be easily noticeable but seascape and/or landscape character would remain less defined by the development than by other seascape/landscape attributes.
Minor	If the Project could be integrated within the existing site area without the loss of essential seascape and/or landscape features which contribute to seascape/landscape character and quality.
Negligible	Where the Project can be integrated into the existing seascape/landscape, without the loss of key underlying seascape and/or landscape attributes. The Project would have little, or no, effect on existing seascape/landscape character.

13.3.5.15 RSUs, LSUs and LCAs in locations where effects are determined to have major seascape/landscape significance, are also considered to be significant under the EIA Regulations 2009 (the EIA Regulations). Conversely any RSUs, LSUs and LCAs where it is determined that seascape/landscape effects are minor or negligible, are also considered to be not significant under the EIA Regulations.

13.3.5.16 Where effects are determined to be of moderate significance, whether these effects are significant or not significant under the EIA Regulations will depend on the individual and specific mitigating circumstances available in each SU, LSU and LCA. For example, the Project may only affect a small proportion of the overall character area; however, from the area where it is visible is considered to be of higher sensitivity than that of the character area as a whole. Therefore while overall, effects may be considered moderate, due to the high sensitivity of the seascape/landscape from where the Project may be visible, effects would be considered significant under EIA Regulations, as opposed to not significant from other locations within the character area, which are considered to be less sensitive.

13.3.5.17 The subjective nature of landscape is acknowledged within current guidance⁴. As such, categorisation of landscape effects as beneficial or adverse is difficult to achieve. It is also possible for effects to be neutral in their consequences on the landscape. An informed discussion is required in respect of the nature of effects and whether they may be considered to be beneficial, neutral or adverse. Commentary may include consideration of:

- i. The degree to which the proposal fits with existing character; and
- ii. The contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to existing character.

⁴ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 88, paragraph 5.37



13.3.6 Baseline visual assessment

- 13.3.6.1 Visual effects result from changes in the seascape or landscape and are defined as "changes on the appearance of the landscape or seascape, and the impacts of those changes on people"⁵. Therefore the assessment of impacts on visual amenity is concerned with the change that the Project may have on views, how it is perceived by sensitive receptors (i.e. different groups of people), any change in the focus of views and the overall change in visual amenity. The methodology used to assess the significance of visual impacts is described below.

Visual analysis mapping

- 13.3.6.2 A Zone of Theoretical Visibility (ZTV) has been produced to establish where all or part of the Project seawall and the on and offshore buildings are likely to be visible from (refer to Figure 13.05, Volume 2). The ZTV is first used to assist the identification of areas with theoretical visibility and preliminary viewpoints in the baseline assessment, and then to aid the assessment of visual effects.
- 13.3.6.3 The ZTV is created using computer-generated contour data at 10m intervals (Ordnance Survey digital terrain model, or 'DTM'). A three-dimensional computer model of the Project is created and accurately located within the DTM. The computer model takes account of the effect the curvature of the earth will have on visibility of the Project.
- 13.3.6.4 In practice the extent of actual visibility will be smaller than that which is shown on the ZTV diagrams, which assume bare-ground topography only. The diagrams do not make allowances for above ground elements, such as trees or buildings, which may provide intermittent screening. The ZTVs also cannot take account of other factors, such as weather and distance, which may have a bearing on the visual prominence of the Project. Consequently, the ZTV diagrams should be considered as a tool to determine general rather than absolute visibility. This is in accordance with the GLVIA (The Landscape Institute & IEMA, 2013). The ZTVs are refined by field studies, which take account of variables such as above-ground screening and factors that may influence visual prominence.

Assessment of effects on visual amenity

- 13.3.6.5 In order to assess the significance of visual effects, viewpoints were selected from within the 15km study area to represent various receptor groups. Viewpoints representing views from the land to the sea, the coastline (including views from the coast across the sea to land) and views from the sea back towards land were selected. These viewpoints included locations frequented by members of the public such as public footpaths, promenades/beaches, open water, residential areas, areas that contain public amenities and popular tourist attractions.
- 13.3.6.6 Viewpoints frequented by members of the public, such as public rights of way, popular visitor attractions, car parks, and views from settlements, as well as viewpoints located in particularly scenic areas, are favoured because these are likely to represent a greater concentration of sensitive visual receptors. Viewpoints from which the Project is likely to be prominent have also been favoured. This is in accordance with current best practice and guidance.

⁵ Guidance on the Assessment of the Impact of Offshore Wind Farms - Seascape and Visual Impact, (2005) pg 7:DTI



- 13.3.6.7 When carrying out viewpoint surveys, the nature of the view was recorded, as well as whether partial or full views of the Project would be experienced, whether views were static or transitory, how prominent the Project may be, and whether large numbers of properties or viewers will experience the view. It should be noted that many activities that take place in the sea are transient and may not be taking place at the time of the survey (e.g. sea kayaking, fishing etc.). Therefore in addition to site survey work, a desk based analysis was also undertaken in order to establish the range of potential sensitive receptors that may experience the Project from a particular viewpoint.
- 13.3.6.8 Additionally, for practical reasons, viewpoints have to be selected from publicly accessible locations and not from private land or property. It is accepted that views may differ from individual private property. However, in residential areas, efforts are made to select public locations that will depict a view that represents a particular residential neighbourhood. A list of the viewpoints that have been assessed is provided in Table 13.7 below.

Table 13.7 Viewpoints (VP)

VP	Location	Easting	Northing	Reason for Selection
1	Aberavon Sands, south	274633	189343	Popular tourist location, with clear views towards the Project. VP located on Wales Coast Path.
2	Aberavon Sands, north	273089	190995	Popular tourist location, with clear views towards the Project. VP located on Wales Coast Path.
3	Maes Tŷ Canol, Baglan	275530	192793	Residential area, with elevated views towards Swansea Bay.
4	Headland Road, St. Thomas, Swansea	266560	193625	Residential area, with elevated views towards Swansea Bay. VP requested by City and County of Swansea Council.
5	The Knab, Adjacent to Mumbles Pier	262458	187751	Popular tourist attraction, with good views across Swansea Bay and located within close proximity of the Gower AONB. VP located on Wales Coast Path.
6	Mumbles Hill Nature Reserve	262778	187437	Located within the Gower AONB. A popular tourist destination that provides elevated views across Swansea Bay.
7	Swansea promenade, near Lido	261990	190586	Located on the Wales Coast Path, this VP provides good, close distance, open views across Swansea Bay.
8	Clyne Golf Course, Swansea	260174	190610	Elevated location within the Gower AONB.
9	Nicander Parade, Townhill, Swansea	264797	193582	Residential area, with elevated views towards Swansea Bay.
10	Meridian Quay. Swansea	265574	192356	A twenty-nine storey residential development. Restaurant on the top floor provides panoramic views across Swansea Bay and surrounding landscape.
11	Swansea promenade	265255	192265	Located on the Wales Coast Path, this VP provides good, close distance, open views across Swansea Bay.
12	SA1 Swansea Waterfront	266596	192508	Area that includes residents, tourists and workers. Close distance views of the Project from 2m within development boundary.
13	Kilvey Hill, Swansea	266849	193658	Elevated location that is popular with walkers and provides good elevated views across adjacent urban areas, Swansea Bay and beyond.
14	Memorial Stone, Margam Country Park	281380	186380	Located on PROW, this VP offers elevated views towards Swansea Bay from within a landscape of Special Historic Interest and one that has also been designated as a Grade I listed Registered Landscape Park and Garden of Special Historic Interest.
15	Sker Point	278883	179959	View from south west extent of study area. Provides views across Swansea Bay from an area adjacent to Kenfig Burrows.
16	Swansea University, Science and Innovation Campus	269973	192603	Located on the site of the former Baglan Bay Oil Refinery. Locations on the adjacent sand dunes provide close distance views across Swansea Bay. VP requested by NRW.



VP	Location	Easting	Northing	Reason for Selection
17	Crymlyn Burrows, Swansea	271378,	192598	Located within a SSSI, this viewpoint provides unobstructed views across Swansea Bay. VP requested by NRW.
18	Public Right Of Way (PROW) on Mynydd Brombil	278528	188352	This PROW provides elevated views across adjacent urban areas, including Port Talbot and Swansea, with Swansea Bay beyond. VP requested by NRW.
19	Swansea Bay	264808	189089	Provides view from within Swansea Bay back to coastline. VP requested by NRW.
20	Pant Street, St. Thomas, Swansea	267623	193392	Residential area, adjacent to Swansea Port. VP requested by CCSC.
21	Pant y Celyn Road, Townhill, Swansea	264039	193384	Residential area, with elevated views towards Swansea Bay. VP requested by CCSC.
22	Clyne Gardens, Swansea	261253	190505	Registered Park and Garden. VP requested by CCSC.

Assessment of viewpoints

13.3.6.9 From each viewpoint, an assessment of the existing view and potential changes that will result from the Project has been completed in the field. The effect of the Project on the existing view has been assessed using the criteria described in Section 13.3.6. The following elements are considered in the description and assessment of visual effects from each viewpoint:

- The existing visual character and quality of the viewpoint (including whether it is within a designated landscape, the presence of visual detractors, etc);
- The character of the existing seascape/landscape against which the Project would be viewed including any screening provided by existing surface features, built form, vegetation and local topography;
- The viewpoint location, the presence and concentration of receptors, and receptor sensitivity (for example, will people view the development area during work or leisure activities, whilst in transit, etc.);
- The proportion of the Project that will be visible, its scale, distance from the viewpoint and position in the view in relation to other features within the view including adjacent land uses and pattern of land cover;
- The duration of the potential effect, i.e. is it long term or temporary, continuous or transitory (the latter meaning that the receptor would be exposed to the effect for a short time); and
- Whether effects will occur during construction of the Project.

Evaluation of visual sensitivity

13.3.6.10 The sensitivity of visual receptors is dependent on susceptibility to change of the person or group of people likely to be affected, and the value attached to particular views⁶.

Susceptibility of visual receptors to change

13.3.6.11 The susceptibility of different visual receptors to changes in views relates to their occupation or activity whilst experiencing the view, and the resultant extent to which their

⁶ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 113, paragraph 6.31



attention or interest may therefore be focussed on the views and the visual amenity experienced⁷.

Table 13.8 Susceptibility to change of visual receptors

Level of Effect	Definition
High	May typically include residents of properties, including private houses, caravans, B&Bs, guest houses and hotels where the main view is orientated towards the Project, or people undertaking recreation where the seascape or landscape within which the development is seen as the primary reason for attraction or reason for visit (e.g. tourists, walkers and hikers on recognised footpaths, open access land, rights of way and promenades, scenic route users, yachts and inshore recreational boat users). Receptors are more likely to be within a designated landscape and could be attracted to visit more frequently, or stay for longer, by virtue of the view.
Moderate	May typically include outdoor workers (e.g. fishermen, farmers, dock workers) and people undertaking recreational pursuits where the seascape/landscape within which the Project is seen is not the primary reason for attraction (e.g. golf, water based sports, historic sites). May also include residents of properties where the proposed development would form an ancillary view. Receptors are less likely to be within a designated landscape and could be attracted to visit more frequently or stay for longer by virtue of the facilities and features of the particular attraction rather than by the value of the view.
Low	May typically include people travelling through the seascape/landscape by car, train, bus, ferry etc; people in community facilities, industrial/office/shop workers. Receptors are unlikely to be within a designated landscape and are most likely to be present at a given viewpoint by virtue of some other need or necessity unrelated to the appreciation of the seascape/landscape or visual value.

Value attached to views

- 13.3.6.12 In determining visual sensitivity, professional judgement takes into account the value attached to the view. Considerations are likely to include the recognition attributes to particular views, for example in relation to heritage assets or through planning designations. Further indicators may include an appearance on tourist maps, provision of facilities for enjoyment such as parking places, sign boards and interpretive materials. Where relevant, these considerations are taken into account when making professional judgements regarding the sensitivity of visual receptors.

Sensitivity of visual receptors

- 13.3.6.13 The sensitivity of visual receptors is dependent on the susceptibility of the receptor to change and the value of the view, including other seascape/landscape elements within it. Table 13.9 outlines the general principles that are used to inform and guide the assessment of visual sensitivity at each viewpoint

⁷ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 113, paragraph 6.32

**Table 13.9 Sensitivity of visual receptors**

Level of Effect	Definition
High	Receptors highly responsive to new visual elements of the type proposed, by virtue of their location, nature and/or existing visual qualities and elements. Receptors will be highly susceptible to change and considered to be at a location of high value.
High – Moderate	Receptors responsive, but able to accommodate a small degree of new visual elements of the type proposed, by virtue of their location, nature and/or existing visual qualities and elements. Receptors may be highly susceptible to change and considered to be at a location of high value but not exclusively so.
Moderate	Receptors who are able to accommodate some new visual elements of the type proposed, by virtue of their location, nature and/or existing visual qualities and elements. Receptors may be susceptible to change, although less likely to be at a location of recognised value.
Moderate – Low	Receptors are able to accommodate a high degree of new visual elements of the type proposed, by virtue of their location, nature and/or existing visual qualities and elements. Receptors may be susceptible to change, although less likely to be at a location of recognised value.
Low	Receptors where new visual elements of the type proposed may be readily accommodated, by virtue of location, nature and/or existing visual qualities and elements. Receptors are not likely to be highly susceptible to change or at a location of recognised value.

Magnitude of visual effects

13.3.6.14 The magnitude of effect on visual amenity is defined as the degree of change that will result from the introduction of the Project into the land/seascape. It is dependent on a number of factors, including:

- i. Distance between the Project and the receptor;
- ii. Prominence of the Project in views;
- iii. Extent visible;
- iv. Proportion of the field of view occupied by the Project ;
- v. Other development and built structures within the view;
- vi. The backdrop to the Project in the view;
- vii. Nature of the foreground in the view;
- viii. Presence of existing retained features in the view; and
- ix. Whether effects are short, medium or long term.
- x. Whether effects are permanent or temporary.

13.3.6.15 Magnitude of effect on visual amenity (i.e. views and visual appreciation and enjoyment of the landscape) is categorised as high, medium, low and negligible and is defined in Table 13.10.

Table 13.10 Magnitude of visual effects

Level of Effect	Definition
High	The Project would be an immediately apparent feature that would affect and change the overall appearance of the view and to which other features would become subordinate. The Project is likely to be visually dominant.
Moderate	The Project would form a recognisable new element within the overall view and would be readily observed without changing the overall nature of the view. Overall quality of the view may remain intact. The Project is likely to be visually prominent.
Low	The Project would form a component of the wider view that might be missed by the casual observer. Awareness of the Project would not have a marked effect on the overall quality of the view. The Project is likely to be visible.
Negligible	The Project would be barely perceptible, or imperceptible, and would have no marked effect on the overall quality of the view.

Significance of visual effects

- 13.3.6.16 The significance of visual effects is dependent on the points considered within the appraisal of sensitive receptors, the factors that influence the magnitude of visual change, and the relationship between visual sensitivity and magnitude of visual change. Viewpoint assessment included an analysis of viewpoints, illustrating the nature of available views towards the Project from locations within the study area. The significance of effect from these locations has been measured against the criteria detailed in Table 13.11 below.

Table 13.11 Significance of visual effects

Level of Effect	Definition
Major	The Project would affect existing views to the extent that the existing defining visual elements will become subservient within the view. The Project may be seen as conflicting with existing visual character; however, existing characteristic elements may be retained as reference points within the view. The degree which existing elements such as skylines, woodland blocks, built form, topography and other structural seascape and landscape features are retained will be considered in determining significance.
Moderate	The Project would result in alteration to seascape and/or landscape features which contribute to the existing visual character or quality, but the overall integrity of the seascape/landscape is maintained. The Project may be suitably absorbed or accommodated within the view alongside existing visual elements, without degrading the integrity of existing visual qualities.
Minor	The Project would be visually integrated within the existing seascape/landscape without the loss of essential seascape and/or landscape features which contribute to seascape/landscape character and quality.
Negligible	The Project would be integrated into the existing seascape/landscape without having a material effect upon the distinctive and valued characteristics of the existing view.

- 13.3.6.17 Viewpoint locations from where effects are determined to have major visual significance are considered to be significant under the EIA Regulations. Conversely any locations where it is determined that visual effects have no visual significance, are considered, similarly, to be not significant under the EIA Regulations.
- 13.3.6.18 Where effects are determined to be of moderate visual significance, whether these effects are significant or not significant under EIA Regulations would depend on the individual and specific mitigating circumstances relating to each viewpoint. For example, effects from a viewpoint may be considered to be of moderate visual significance. However, the broad nature of the view in which the Project would be seen may reduce these effects to an



extent where effects would still be considered to be moderate, though not considered to be significant under EIA Regulations.

13.3.6.19 The subjective nature of visual effects assessment is acknowledged within current guidance⁸. As such, categorisation of visual effects as beneficial or adverse (or in some cases neutral) is difficult to achieve. An informed discussion is provided on the nature of effects and whether they may be considered to be beneficial, neutral or adverse. Commentary may include consideration of:

- i. The nature of existing visual elements and qualities;
- ii. The degree to which the proposal fits with existing visual elements; and
- iii. The contribution to the view that the development may make in its own right, usually by virtue of good design, even if it is in contrast to existing visual qualities.

13.3.7 Assessment of cumulative effects

13.3.7.1 Cumulative effects can be described as *the effects on views and visual amenity enjoyed by people, which may result either from adding the effects of the project being assessed to the effects of the other projects on the baseline conditions or from their combined effect*"⁹

13.3.7.2 The cumulative assessment on seascape and landscape character has assessed the combined effects of the Project with other existing, consented and proposed developments (refer to Table 13.12). The cumulative assessment on visual amenity has also assessed the combined effects, plus the sequential effects of the Project from major routes within the study area with the developments listed in Table 13.12.

13.3.7.3 Following consultation, the combined cumulative effects have been assessed within the 15km study area. Combined cumulative effects can be described as the combined effects on seascape/landscape character and visual amenity of all the existing and future proposals (whether these are consented or awaiting a decision) including the proposed Project.

- i. Cumulative developments can be viewed either in: In Combination - which will occur when the receptor is able to view the Project in conjunction with one or more developments from the viewpoint within their arc of vision at the same time without moving their head. (It is important to note that this term is used here to describe a different effect to that described by the same term used elsewhere in the ES, where it means the appreciation of more than one environmental effect occurring simultaneously).
- ii. In Succession - Where the observer has to turn their head to see the various developments that are included within the baseline.

13.3.7.4 Sequential effects occur when the receptor has to move to another viewpoint to see the same or different cumulative developments and can be either:

- i. Frequently Sequential - Where the features appear regularly and with short time lapses between instances depending on speed of travel and distance between the viewpoints.

⁸ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 88, paragraph 5.37

⁹ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 129, paragraph 7.29



- ii. Occasionally Sequential - Where longer times lapses between appearances would occur because the receptor is moving very slowly and/or there are larger distances between the viewpoints.

13.3.7.5 All existing, consented and proposed developments within a 15km radius of the centre of the DCO application site boundary included within the cumulative assessment were identified at the scoping stage of the Project. Following further consultation with Local Authorities and statutory consultees, the list was refined and agreed in order to provide a final list of cumulative developments for inclusion within the assessment (see Table 2.2, Chapter 2: EIA Process and Assessment of Significance). The developments for which potential effects may be possible as a result of the Project are shown in Table 13.12 below and the locations of developments considered within the assessment are illustrated in Figure 13.06, Volume 2. Other developments, listed in Table 2.2, Chapter 2, were screened out of the assessment as no cumulative effects were anticipated.

Table 13.12 Summary of cumulative developments

Development & Location	Current Status	Reason For Inclusion
Swansea University Bay Campus (SUBC) - located on shoreline adjacent to Crymlyn Burrows	Approval granted – construction Phase 1 commenced	Located within close proximity to the Project site boundary and also requested by NRW for inclusion within cumulative assessment.
Mumbles pier, redevelopment. Construction of new RNLI Lifeboat Station, Mumbles	Mumbles Pier refurbishment - completion 2013. RNLI Lifeboat Station - 2014.	Pier is a tourist attraction within Swansea Bay and as such, it was requested by NRW for inclusion within cumulative assessment.
Swansea SA1	On going	Major redevelopment of former docks area for commercial/residential and leisure use within close proximity of the Project. Assessment of cumulative effects on existing and proposed developments requested by NRW.
Swansea Port Wind Turbine	Operational	Single turbine located within the Project site boundary.
Mynydd Marchywel Wind Farm	Submitted	Proposed 5 no. turbine wind farm located approximately 14km north east of the Project.
Southern Access Road at Coed Darcy.	Submitted	Access road linking Fabian Way (A483) with development at Coed Darcy. Major infrastructure project that passes through Crymlyn Bog.
Wind Turbines on Land at Mynydd Brombil Farm	Submitted	Proposed 5 no. turbine wind farm located north of Port Talbot
Wind Turbine on Newlands Farm, Margam	Submitted	Proposed single wind turbine located approximately 13km south east of the Project
Wind Turbine at Kenfig Hill Industrial Estate	Submitted	Proposed single wind turbine located approximately 13.5km south east of the Project
Tata Internal Power Generation	Submitted	Proposed construction of new power generating facilities within the existing Port Talbot steel works.
Prenergy Biomass Power Station	Consented	Proposed construction of a biomass power station within Port Talbot steel works.
Abernedd Power Station	Consented	Proposed construction of a Combined Cycle Gas Turbine Power Station within Baglan Bay Energy Park.

13.3.7.6 The assessment criteria described in this section provides a framework for the assessment of cumulative seascape/landscape and visual effects. There may be exceptions to these broad categorisations due to specific characteristics that may apply to individual circumstances.



Assessment of cumulative seascape and landscape effects

13.3.7.7 Cumulative seascape and landscape effects relate to the degree of change to the existing character of the study area that would result from the introduction of the Project over and above that of the cumulative baseline. The magnitude of cumulative change to seascape and landscape character is dependent on a number of factors, including:

- i. The cumulative baseline, i.e. the presence, appearance and interrelationship of existing, consented and proposed developments, and the degree to which these already influences seascape and landscape character;
- ii. The geographical extent covered by the cumulative landscape effects that have been identified;
- iii. Whether effects are direct or indirect;
- iv. The distance of the Project from the seascape unit or landscape character area under consideration, and from other developments that form the cumulative baseline, which may also affect the seascape unit or landscape character area in question;
- v. The duration, nature, permanence and extent of the effect in physical and visual terms; and
- vi. The value attached to the seascape/landscape in question, including any landscape designations.

Magnitude of cumulative landscape effects

13.3.7.8 The susceptibility of change of seascape/landscape receptors and seascape/landscape sensitivity in respect of cumulative effects will be the same as that already defined in the seascape and landscape impact assessment, because the seascape/landscape resource is unaltered. However, different criteria are used for assessing magnitude and significance of cumulative effects.

13.3.7.9 Table 13.13 outlines the general principles that are used to inform and guide the assessment of the magnitude of cumulative landscape effects:

Table 13.13 Magnitude of cumulative seascape and landscape effects

Magnitude of Cumulative Landscape Effects	Definition
High	The combined effects of the Project and other cumulative developments would result in major loss of, or major alteration to, key elements of seascape and/or landscape character to the extent that there would be a fundamental and permanent, or long-term, change to seascape and/or landscape character. The change may occur over an extensive area.
Moderate	The combined effects of the Project and other cumulative developments would result in the loss of or alteration to, key elements of seascape and/or landscape character to the extent that there would be a partial long-term change to seascape and/or landscape character. The change may occur over a limited area.
Low	The combined effects of the Project and other cumulative developments would result in minor loss of or alteration to, key elements of seascape and/or landscape character to the extent that there may be some slight perception of change to seascape and/or landscape character. The change may be temporary and occur over a limited area.
Negligible	The combined effects of the Project and other cumulative developments would result in such a minor loss of or alteration to, key elements of seascape and/or landscape character that there would be no fundamental change to seascape and/or landscape character.



Significance of cumulative seascape and landscape effects

- 13.3.7.10 The significance of cumulative seascape and landscape effects is dependent on the points considered within the seascape/landscape sensitivity appraisal, the factors that influence the magnitude of effect and change upon it, plus the relationship between seascape/landscape sensitivity and magnitude of cumulative landscape effect.
- 13.3.7.11 Table 13.14 outlines the general principles that are used to inform and guide the assessment of the significance of cumulative seascape and landscape impacts:

Table 13.14 Significance of cumulative seascape and landscape effects

Significance of Cumulative Landscape Effects	Definition
Major	Effects that would occur when the majority of seascape and/or landscape attributes are deemed to be highly sensitive and the combined cumulative effects of the Project and other cumulative developments would alter seascape and/or landscape character to the extent that it would become defined or considerably influenced by the presence of development, taking account of cumulative baseline conditions.
Moderate	The significance of effects would decrease as the number of sensitive seascape and/or landscape attributes also decreases. The Project and other cumulative developments may still be easily noticeable but their combined effects would not cause the seascape and/or landscape character to become more defined by development than by other landscape attributes.
Negligible	Effects that would occur when the majority of seascape and/or landscape attributes are not deemed to be highly sensitive and where the combined effects of the Project and other cumulative developments would have little or effect on the existing seascape and/or landscape character. Where the Project and other cumulative developments can be integrated into the existing cumulative baseline without the loss of key seascape and/or landscape attributes. Cumulative seascape and landscape effects would also be deemed as 'Not Significant'.

- 13.3.7.12 RSUs, LSUs and LCAs determined to be subject to effects of major cumulative seascape and/or landscape significance are considered to be significant under EIA Regulations. RSUs, LSUs and LCAs determined to be not significant in terms of cumulative seascape and/or landscape effects are also considered to be not significant under EIA Regulations.
- 13.3.7.13 Where cumulative effects are determined to be of moderate cumulative seascape and/or landscape significance, whether these effects are significant or not significant under EIA Regulations, would depend on the individual and specific mitigating circumstances within each character area. For example, the Project may only affect a small proportion of the overall character area. However, from the area where the Project may be visible it is considered to be of higher sensitivity than that of the character area as a whole. Therefore while overall, cumulative effects may be considered moderate, due to the sensitivity of the seascape and/or landscape from where it is visible, cumulative effects are considered significant under EIA Regulations, as opposed to not significant from other locations within the character area that are considered less sensitive.
- 13.3.7.14 The subjective nature of landscape is acknowledged within current guidance¹⁰. As such, categorisation of seascape and landscape effects as beneficial or adverse (or in some cases

¹⁰ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 88, paragraph 5.37



neutral) is difficult to achieve. An informed discussion is provided within the Visual Assessment contained in this chapter on the nature of effects and whether they may be considered to be beneficial, neutral or adverse. Commentary may include consideration of:

- i. The nature of existing visual elements and qualities;
- ii. The degree to which the proposal fits with existing and proposed developments; and
- iii. The contribution to the view that the development and other developments may make, usually by virtue of good design, even if it is in contrast to existing visual qualities.

Assessment of cumulative visual effects

13.3.7.15 Cumulative visual effects relate to the degree to which man-made development features in particular views or sequences of views, and the resulting effects of this upon visual receptors. This SLVIA considers combined and sequential cumulative visual effects that may arise within the study area, and in relation to the selected viewpoints. Combined cumulative visual effects can be described as:

- A. In Combination - which will occur when the receptor is able view the Project in conjunction with one or more developments from the viewpoint within their arc of vision at the same time without moving their head.
- B. In Succession - Where the observer has to turn their head to see the various developments that are included within the baseline.
- C. Sequential effects occur when the receptor has to move to another viewpoint to see the same or different developments and can be described as:
 - C1 Frequently Sequential - Where the features appear regularly and with short time lapses between instances depending on speed of travel and distance between the viewpoints.
 - C2 Occasionally Sequential - Where longer times lapses between appearances would occur because the receptor is moving very slowly and/or there are larger distances between the viewpoints.

13.3.7.16 This assessment considers the degree to which the Project would contribute to man-made development becoming a significant or more defining characteristic of the visual character within the 15km area. The susceptibility of change of visual receptors and sensitivity of visual receptors remains the same as that already defined in the visual impact assessment because the visual resource is unaltered. However, different criteria are used for assessing magnitude and significance of cumulative visual impacts.

Magnitude of cumulative visual effects

13.3.7.17 The magnitude of cumulative visual effect is dependent on a number of factors, including:

- i. The value attached to the view;
- ii. The size or scale of the cumulative effect that has been identified;
- iii. The speed and mode of travel of visual receptors, and duration of cumulative views;
- iv. The geographical extent of the cumulative effects identified;



- v. The visual relationship between the Project and other developments that form the cumulative baseline, including separation distances between them;
- vi. The nature of the cumulative baseline, i.e. the presence, appearance and intervisibility of other existing, consented and proposed developments that are considered within the cumulative assessment;
- vii. The scale and character of the landscape in which the Project would be viewed alongside the other developments that form the cumulative baseline;
- viii. The nature of available views, including angle of view, prominence, screening elements, elevation, and distance from the viewpoint location;
- ix. The duration, frequency and permanence of available views, including whether the potential cumulative effect is likely to be frequent (i.e. it would occur regularly, repetitively, or with short time lapses between occurrences) or occasional (i.e. it would occur infrequently, with long time lapses or distances between occurrences); and
- x. The number of cumulative developments within the same arc of vision from the viewpoint.

13.3.7.18 Table 13.15 outlines the general principles that are used to inform and guide the magnitude of cumulative visual effects.

Table 13.15 Criteria used to define magnitude of cumulative visual effects

Magnitude of Cumulative Visual Effects	Definition
High	Cumulative development including the Project would increase the scale of man-made developments in the seascape/landscape to a level which would dominate views.
Moderate	Cumulative development including the Project would result in a noticeable increase in development. . However, this increase would not result in the cumulative developments being the dominant feature of the view.
Low	Cumulative development including the Project would be visible but would form components of the view that might be easily missed by the casual observer. They would not contribute to the overall prominence of the development within the view.
Negligible	Cumulative development including the Project would be barely perceptible, or imperceptible, and would have no effect on the perception of development within the view.

Significance of cumulative visual effect

13.3.7.19 The significance of cumulative visual effects is dependent on the points considered within the appraisal of sensitive receptors, the factors that influence the magnitude of cumulative visual effects, and the relationship between visual sensitivity and magnitude of cumulative visual effect.

13.3.7.20 Table 13.16 outlines the general principles that are used to inform and guide the assessment of the significance of cumulative visual effects.

**Table 13.16 Significance of cumulative visual effects**

Significance of Cumulative Visual Effects	Definition
Major	Effects that would occur when the majority of visual receptors are deemed to be highly sensitive and the combined effects of the Project and other cumulative developments would result in the view becoming defined, or considerably influenced by development.
Moderate	The significance of effects would decrease as the number and sensitivity of visual receptors also decreases. The Project and other cumulative developments may still be a noticeable addition to views. However, their combined effects would not cause the overall visual character of the view to become defined by development rather than by other elements of the existing view.
No Cumulative Significance	Effects that would occur when the majority of visual receptors are not deemed to be highly sensitive and where the combined effects of the Project and other cumulative developments would have little or no incremental effect on existing views. They are likely to constitute a barely perceptible, or imperceptible, component of the wider view, which might be missed by the casual observer. Awareness of the Project and other cumulative developments would not have a marked effect on the overall quality of the view.

- 13.3.7.21 Viewpoint locations from where cumulative effects are determined to have major cumulative visual significance are considered to be significant under EIA Regulations. Conversely any locations where it is determined that visual effects have no cumulative visual significance, are also considered to be not significant under EIA Regulations.
- 13.3.7.22 Where cumulative effects are determined to be of moderate cumulative visual significance, whether these effects are significant or not significant under EIA Regulations, would depend on the individual and specific mitigating circumstances relating to each viewpoint. For example, effects from a viewpoint may be considered to be of moderate visual significance. However, the broad nature of the view in which the Project and other cumulative baseline developments would be seen may reduce these effects to an extent where effects would still be considered to be moderate though not considered to be significant under EIA Regulations.
- 13.3.7.23 The subjective nature of landscape is acknowledged within current guidance¹¹. As such, categorisation of seascape and landscape effects as beneficial or negative (or in some cases neutral) is difficult to achieve. An informed discussion is provided within Visual Assessment on the nature of effects and whether they may be considered to be beneficial, neutral or adverse. Commentary may include consideration of:
- The degree to which the proposals fit with existing character;
 - The contribution to the landscape that the developments may make, usually by virtue of good design, even if it is in contrast to existing character.

¹¹ Landscape Institute / Institute of Environmental Management & Assessment, Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013) Page 88, paragraph 5.37



13.4 Baseline conditions

13.4.1 Study area and context

- 13.4.1.1 This section of the SLVIA establishes the baseline seascape/landscape and visual character of the study area, which is defined and described in greater detail below, by drawing together existing desktop information such as maps, planning designations and historic references. The information gathered during the desk study was verifying and expanded through the site surveys. Section 13.2 sets out references to documents used within this section of the SLVIA.
- 13.4.1.2 The SLVIA study covers a 15.0km radius from the centre of the Project (refer to Figure 13.07, Volume 2). It predominantly lies within and adjacent to the administrative areas of CCSC and NPTCBC and extends into the neighbouring authorities of BCBC to the south east and Carmarthenshire County Council in the northwest.
- 13.4.1.3 Dominating the study area is the broad, sweeping arc of Swansea Bay that extends from Mumbles Head in the west to Sker Point in the east. Here the large expanse of water changes in colour depending on meteorological conditions, although typically ranges from grey on overcast days through to a grey/blue in sunny conditions. Here, the large expanse of water changes in colour depending on meteorological conditions and sea state, although typically ranges from grey/brown on overcast days through to a grey/blue in settled sunny conditions. The western half of the Bay typically consists of a wide, shallow sandy beach, where the urban form of the city of Swansea and the adjoining town of Mumbles lie immediately to the north. The limestone outcrop of Mumbles Head, with its steep facing cliffs, forms a prominent feature to the western extent of the Bay, contrasting with other areas, which are predominately low lying. The steep, rocky cliffs extend further west, past Mumbles Head and include the sheltered beaches of Langland Bay, Caswell Bay and Three Cliffs Bay, all of which are popular tourist destinations within the area.
- 13.4.1.4 To the east, beyond Swansea Marina, the Bay is more industrial in character and includes Swansea Port, where the breakwater walls extend into Swansea Bay, forming the opening to the River Tawe and Swansea Port. Land surrounding King's Dock incorporates the area known as SA1 Swansea Waterfront. An area of significant urban regeneration that includes a number of new residential, commercial and leisure facilities that surround King's Dock. This is a dynamic area in terms of change and new development continues to be constructed within SA1 Swansea Waterfront and also on land further east of the docks. Land to the east of the city centre has been identified as a potential area for growth within emerging development plans¹². Therefore development within this part of the city, is a trend that is likely to continue over the medium to long term. To the north east of the port is the large fen of Crymlyn Bog. Adjacent to the mouth of the River Neath and extending south east towards Porthcawl, is Aberavon Sands. This stretch of coastline, which is approximately 5.0km long, is broad, flat and relatively straight. The beach is overlooked by the town of Port Talbot and the adjacent steel works. The steel works include a harbour and breakwater wall that extends into Swansea Bay. Many tall apparatus and chimneys have also been constructed within the steel works and these dominate the skyline of the local area. To the south eastern edge of the study area, heavy industry gives way to the coastal dunes system of Kenfig Sands, which is noted for its ecological value and is designated as a Special Area for Conservation (SAC), National Nature Reserve (NNR) and Site of Special Scientific Interest (SSSI).

¹² City and County of Swansea, Swansea Local Development Plan, Preferred Strategy, July 2013, Page 40



- 13.4.1.5 The River Tawe is one of two major rivers within the study area, the other being the River Neath. Flowing in a north to south direction along the Swansea Valley the Tawe passes through the town of Clydach, which is located on the eastern facing slopes of the valley. The eastern valley sides are steeply sloping and are dominated by dense deciduous woodland, while the valley floor is relatively flat agricultural land. Before entering into Swansea Bay, the lower section of the Tawe, flows through the City of Swansea, where the banks have been formed in concrete and are therefore more urban in character than the upper sections. The principal transport route through this valley is the A4067 that runs from Mumbles to Sennybridge in Powys.
- 13.4.1.6 The River Neath to the east of Crymlyn Burrows flows through the Vale of Neath, which is a wide bottomed valley, with steep valley sides that contains dense blocks of mixed woodland. Nearer to the mouth of the river, the character becomes urban as it meanders through the town of Neath. The A465(T) - 'Heads of the Valleys Road' - runs along the valley floor connecting Neath with Hereford and is the primary transport route within the area.
- 13.4.1.7 The M4 Motorway is the principal transport route through the study area and runs in a broad, south east to northwest direction, travelling north of Port Talbot and Swansea. Other major transport routes within the study area, include the A48, that runs from Gloucestershire to Carmarthenshire, the A465 which connects Llandarcy to Hereford and runs in a north westerly direction through the Vale of Neath, and the A4067 that runs through the study area from The Mumbles, through the Swansea Valley en route to Sennybridge in Powys.
- 13.4.1.8 The major settlements within the study area are typically located along the coastal plain as are noted above. However, there are several towns located away from the coast, predominantly within the Vale of Neath and the Swansea Valley, including Neath, Pontardawe and Clydach. Approximately 8.5km to the north west of Swansea is the town of Gorseinon.
- 13.4.1.9 With the exception of the town of Gorseinon, land within the north western part of the study area is typically agricultural in character, consisting of a mosaic of improved and semi-improved fields, predominately used for pasture. There are also a number of scattered blocks of woodland, of which the predominantly coniferous, of which Penllergaer Forest is the largest.
- 13.4.1.10 Within the eastern part of the study area, and to the north of Port Talbot, the landscape is typically upland in character and the area is dominated by the simple ridgelines of the mountains that rise steeply from the adjacent coastal plain. Extensive tracts of dense coniferous forestry cover much of this upland area including the mountains of Mynydd Margam, Mynydd Penhydd, Mynydd Emroch and Mynydd Dinas.
- 13.4.1.11 At night the concentrated sources of light from street lights, residential properties and other buildings creates a sky glow above the urban areas of Swansea, Aberavon and Port Talbot, which encloses the majority of Swansea Bay. The points of lights which are also visible within the urban landscape produce long reflections across the water of the Bay. The lights to the apparatus within Port Talbot steelworks create a unique and dramatic night time feature within the eastern part of the study area.
- 13.4.1.12 The numbers of light sources are less frequent towards Mumbles Head and also east along Kenfig Sands, creating an intrinsically dark sky in these parts of the study area. However, the white flashing light from Mumbles Lighthouse is a visible night time feature. Views



south across Swansea Bay and out towards the Bristol Channel are also intrinsically dark, except for lights from marker buoys and vessels.

13.4.2 Landscape designations

- 13.4.2.1 A review of relevant statutory and non-statutory landscape classifications has been carried out as part of this SLVIA. Designations are one of the criteria that are considered when defining sensitivity and when assessing the significance of effect on seascape or landscape character. The value placed on a seascape or landscape through designation may also have a bearing on the sensitivity of visual receptors. For instance, walkers within an AONB (there for the purpose of hiking to observe and experience a nationally renowned landscape) may be of higher sensitivity than people using a local footpath where observation and experience of the landscape may be secondary.
- 13.4.2.2 Landscape designations provide an indication of the value that national and local government, plus other agencies, attach to various landscape types. Landscapes can be designated by statute and are included in policies within relevant Development Plans.
- 13.4.2.3 Landscape classifications identify landscapes or elements within the landscape that are still recognised as being important by virtue of being marketed as attractions, or identified in non-statutory documentation in the public realm, but which have no protection in law. Within the study area, there are a range of national, regional and local designations that have been identified as the key designations relevant to the landscape and visual character of this study area.
- 13.4.2.4 Both statutory and non-statutory designations are described below and are illustrated in Figure 13.08, Volume 2.

13.4.3 Statutory designations

Gower Area of Outstanding Natural Beauty (AONB)

- 13.4.3.1 Extending from Swansea Bay (although it does not include the Bay) in the east to Carmarthen Bay in the west, the Gower AONB covers an area of 188 square kilometres. In total 43 square kilometres (or 23% of the total area of the AONB) lies within the study area and includes the area of the AONB that extends along the coast from Mumbles Head to Three Cliffs Bay and land to the north, as far as the village of Three Crosses. Its location is shown in Figure 13.08, Volume 2.
- 13.4.3.2 The primary objective of the AONB, as stated in Policy EV26 of the CCSC UDP (2008), is *"the conservation and enhancement of the area's natural beauty. Development that would have a material adverse effect on the natural beauty, wildlife and cultural heritage of the AONB will not be permitted"*.
- 13.4.3.3 A management plan for the AONB has also been published by the CCSC in the form of Supplementary Planning Guidance ("Management Plan"). The purpose of the management plan is to *"spell out the vision for the AONB and what needs to be done to conserve and enhance the special qualities for which it has been designated. This will link the special qualities with the underlying social and economic issues, which impact on, or interact with them. The Plan is intended to promote an integrated approach to the planning and management of land at a strategic level"*.¹³

¹³ <http://www.swansea.gov.uk/index.cfm?articleid=10990>



- 13.4.3.4 Chapter 5 of the Management Plan acknowledges that the landscape within the AONB is *"internationally renowned for its small scale and variety of character and which is closely related to the surrounding sea"* (CCSC (2006) Gower Area of Outstanding Natural Beauty Management Plan: Chapter 5, page 104) and outlines the following policies in relation to it:
- i. LS1 Encourage the conservation, and enhancement of the AONB's key distinctive landscape features of limestone cliffs, salt marshes, sand dunes, common land, wooded valleys, and small fields bounded by hedges and stone walls.
 - ii. LS2 Protect and enhance traditional views of the landscape, seascape, and landmark features, from inappropriate development.
 - iii. LS3 Undertake visual surveys of the AONB's key distinctive landscape features and monitor change.
 - iv. LS4 Raise awareness of the importance of the AONB's key landscape features.
- 13.4.3.5 A SPG entitled 'Lighting Scheme Guidance for Gower Area of Outstanding Natural Beauty 2010 Supplementary Planning Guidance' has been produced by CCSC with the aim of providing general advice of the use of outdoor lighting in the AONB. It notes that new lighting should always take into account the nature of the landscape character of the area in which it is situated. It goes on to note that *"Light pollution affects the sensory perception of the landscape and its character. Developers should be sensitive to this and adapt the nature of their lighting accordingly taking account of the current level of artificial light"* (CCSC (2010) Paragraph 4.1.3, page 15).
- 13.4.3.6 CCSC has also published an SPG for Gower AONB, entitled 'Gower AONB Design Guide - November 2011', which is intended to *"raise the standard of building and landscape design in the Gower Area of Outstanding Natural Beauty (AONB) - one of the most naturally beautiful landscapes in the UK. The aim is to ensure that new development integrates into the sensitive landscape within which it sits"*¹⁴
- 13.4.3.7 In Section 2 of the guidance, eight landscape character types have been identified. The area of the AONB that falls within the study area predominantly consists of lowland plateau. This landscape type contains large and open, semi-regular fields that are used for arable farming. These fields are generally considered to be of good quality agricultural land and are enclosed by well managed fields boundaries. Hedgerows and scattered hedgerow trees are also a common feature of the AONB. To the north is the unenclosed land of Clyne Common. The main transport routes, Swansea Airport and the settlements of Bishopston and Southgate are also included within the lowland plateaus.
- 13.4.3.8 Along the coastline, rock, cliff and shore are the predominant landscape type and contains some of the Gower's most dramatic scenery. It is characterised by steep, rocky cliffs that give way to a rocky foreshore, scree and sand. To the upper reaches of the cliffs, bracken and gorse are common features. The areas are mainly used for tourism, including walkers and beach users.
- 13.4.3.9 Woodland Valleys are also a common character type and are made up of steeply sloping valleys enclosed by linear, dense woodlands. The terrain is most commonly associated with the river/streams that are found within the AONB. The woodlands are either owned by the Forestry Commission (now NRW in Wales) or the National Trust, and the valleys are well used for leisure and amenity purposes.

¹⁴ <http://www.swansea.gov.uk/index.cfm?articleid=43281>



13.4.4 Non statutory designations

Heritage Coast

- 13.4.4.1 The intention of a Heritage Coast designation is to protect an undeveloped coast from inappropriate development and through management, balance the needs of conservation, recreation, tourism and commercial activity. Under Policy EV31 of the CCSC UDP (2008), the area of coastline within the study area that extends from the mid-point of Caswell Bay to the mid-point of Three Cliffs Bay, has been designated as a Heritage Coast. The coastline includes the dramatic Pennard Cliffs that run for approximately 6.5km between Pwlldu Bay and Three Cliffs Bay. The cliffs, which are managed by the National Trust, contain common land that is grazed by cattle and sheep. Its location is shown in Figure 13.08, Volume 2. The ZTV (refer to Figure 13.05, Volume 2) indicates that the Project will not be visible from any location along the Heritage Coast and therefore its consideration has been excluded from further assessment.

Register of Landscapes, Parks and Gardens of Special/Outstanding Historic Interest

- 13.4.4.2 Policy EV11 of the CCSC UDP (2008) states “*Development that would harm the character or setting of Registered Historic Parks and Gardens or the character of Historic Landscapes will not be permitted.*”
- 13.4.4.3 A Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales has been compiled by Cadw, ICOMOS UK and CCW. Part 1 of the Register lists Historic Parks and Gardens, whilst Part 2 provides details of Historic Landscapes that are of either Outstanding (Part 2.1) or Special Historic Interest (Part 2.2). These are discussed further in the Cultural Heritage: Terrestrial Archaeology and Historic Landscape assessment, Chapter 21, Section 21.2.

Landscapes, Parks and Gardens of Special Historic Interest

- 13.4.4.4 The Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales identifies those parks and gardens that can be considered of importance within Wales based upon a clear set of criteria. There are fourteen Registered Landscapes of Special or Outstanding Historic Interest that lie within the study area and their locations are shown in Figure 13.08, Volume 2.
- 13.4.4.5 Three of the fourteen sites are Grade I listed: Clyne Gardens, Margam Park and Singleton Abbey & Sketty Hall. The remaining eleven sites are either Grade II* or Grade II listed. A brief description of each is provided in the following paragraphs below.
- 13.4.4.6 Kilvrough is Grade II listed and located approximately 13.0km south west of the centre of the Project. An eighteenth-century and nineteenth-century park and garden contains a small landscaped park with a folly, a formal, informal and kitchen garden. The site also includes the Grade II listed Kilvrough Manor. The site is not open to the public and is currently used as an outdoor education centre. The ZTV (refer to Figure 13.05, Volume 2) demonstrates that the Project will not be visible from this site and therefore it has been excluded from further assessment.
- 13.4.4.7 Overlooking Swansea Bay, and approximately 7.0km west of the centre of the Project, is the 18th-century, Grade I listed park of Clyne Gardens. Situated within the Gower Peninsula AONB this park predominantly consists of mature deciduous, ornamental woodland, and is particularly noted for its collection of rhododendrons. The park also contains the Grade II* listed Clyne Castle and the Grade II, Clyne Chapel. Clyne Castle has been converted in to private apartments, additional apartment blocks have recently been



constructed within the castle grounds. To the eastern boundary of the park, and running in a north to south along the disused railway line, is a traffic free cycle path that forms part of the wider National Cycle Network Route 4, the Celtic Trail.

- 13.4.4.8 Singleton Park & Sketty Hall, located to the north of Swansea University and Singleton Hospital, is a Grade I listed park and garden. Located approximately 5.5km northwest of the centre of the Project it covers an area of approximately 100ha, some of which lies within the University grounds. The main public area of Singleton Park is a large, attractive park with a mix of large open expanses of well-maintained, undulating grassed areas and blocks of mature broadleaved trees, where glimpsed views towards Swansea Bay are available. The larger blocks of trees are principally located to the fringes of the park. Located within the old walled garden, within the northwest corner, is a botanic garden, which includes a number of glasshouses.
- 13.4.4.9 Several Grade II listed buildings are located within Singleton Park, including Sketty Hall, which includes an Italian Garden, Swiss Cottage, the former farmhouse to Singleton Farm and several lodges.
- 13.4.4.10 At the junction of Sketty Lane and Mumbles Road, a rectangular area of land forms Singleton Park Boating Lake. The lake itself is situated to the western half of the park and includes an island covered with alder, willow and poplar trees. Well-maintained grassed areas with mature trees, typically lime, birch, oak and sycamore, make up the remainder of the park. There is a car park, children's play area and public house on the northern boundary adjacent to the hospital.
- 13.4.4.11 Located approximately 5.5km northwest of the Project and abutting the eastern boundary of Singleton Park, lies the Grade II listed Brynmill Park. This is a small, Victorian informal park covering an area of approximately 3.6ha. A small reservoir that is enclosed by mature trees dominates the park. Other features include a bowling green, a grass lawn and a small children's play area.
- 13.4.4.12 Located on Mumbles Road, between St. Helen's cricket ground and Swansea Guildhall is the Grade II listed Victoria Park. This is a small urban park within the centre of Swansea that contains two hard court tennis courts, two bowling greens and a children's play area. Dominating the south western boundary of the park, is the Grade II Patti Pavilion, which contains a restaurant and a concert hall. From within the park there are views across Mumbles Road towards Swansea Bay.
- 13.4.4.13 The Grade II listed Cwmdonkin Park, located within the Uplands area of Swansea, is some 5.50km north west of the centre of the Project, where views across Swansea Bay are available. It is associated with the poet Dylan Thomas, who was born and lived in Cwmdonkin Drive, which lies immediately to the north of the park. The park itself is largely informal in character, with areas containing a mix of mature deciduous broadleaved trees and evergreen oaks. The park also contains open areas of grass, plus a tennis court and a bowling green.
- 13.4.4.14 Enclosed on four sides by large Victorian housing, the Grade II listed St James's Garden and Crescent is located approximately 5.0km north west from the centre of the Project. This is a well preserved late Victorian park in two distinct parts. The southern section is crescent shaped and is dominated by St. James's Church, a Grade II listed building. Surrounding the church is the church hall (Grade II listed) and a block of two storey modern houses, which are enclosed by mature broadleaved trees.



- 13.4.4.15 To the north is a rectangular shaped park, that is informally laid out, containing ornamental shrubs within mown grass. A network of winding tarmac paths and island flowerbeds is a feature of the park, as is the belt of mature broadleaved trees and large pine trees that are found surrounding the boundary.
- 13.4.4.16 Cwmgelli Cemetery is located in the north of Swansea, approximately 6.0km northwest of the centre of the Project. This Grade II listed, Victorian cemetery is informally laid out with a network of winding tarmac paths. Within the centre of the cemetery is a small chapel. The cemetery is enclosed by a stone wall and mature broadleaved trees.
- 13.4.4.17 Situated approximately 9.0km northwest of the Project, is the Grade II listed Penllergaer Forest. Currently owned by the Forestry Commission (now NRW in Wales) and covering an area of approximately 193ha, the site predominantly consists of coniferous woodland, although to the north there are two small areas of semi-natural broadleaved woodland. The ZTV (refer to Figure 13.05, Volume 2) indicates that the Project will not be visible from this site and therefore it has been excluded from further assessment.
- 13.4.4.18 Located within Neath Port Talbot and approximately 6.5km north east of the Project, Jersey Park is an example of a well preserved early twentieth-century urban public park. Consisting of a mix of formal and informal layout, the planting within the park contains predominantly a mix of evergreen trees and shrubs, which enclose the park. To the north there is a cricket pitch and bowling green.
- 13.4.4.19 Victoria Gardens is a small urban public park located within the town of Neath, approximately 9.0km north east of the Project. This Grade II listed park contains many of its original features including a bandstand and formal flower beds. Mature broadleaved trees to the boundary enclose the park.
- 13.4.4.20 Located on the eastern fringe of the town of Neath and approximately 9.0km north east from the centre of the Project, lies the Grade II* listed country park known as The Gnoll. Covering approximately 40ha, the park, originally constructed in the early eighteenth-century, contains extensive areas of open grassland to the north and a block of mature broadleaved trees to the south. A large lake is located on the eastern boundary and which is fed by an informal cascade. The Grade II listed Ivy Tower is also a prominent feature within the park.
- 13.4.4.21 Situated adjacent to St. Theodore's Church in Port Talbot and approximately 8.5km south east of the Project, lies Talbot Memorial Park. This is a small, Grade II listed urban park that includes a bandstand and a war memorial around which there are a number of mature deciduous trees. Within the north western half of the park there are two bowling greens, four hard court tennis courts and a children's play area.
- 13.4.4.22 To the southern slopes of Margam Mountain is the Grade I listed Margam Park. Covering an area of approximately 400ha of parkland, it is located approximately 12.5km south east of the Project. Predominantly, the park is open grassland, which includes a walled deer park that covers approximately half of the estate. Mature trees are scattered throughout the park, forming larger blocks of woodland, plus there are three water features: the Fish Pond, New Pond and Furzemill Pond. A sense of enclosure is provided by the wooded slopes of Mynydd Margam to the north, which includes a high wire adventure centre. A number of structures are located within the grounds, including the large Grade II* listed Margam Castle that is situated in the northern part of the park. This nineteenth-century Tudor Gothic mansion is a dominant feature and provides commanding views south across the southern extents of the park, towards the Bristol Channel. Other structures include the Orangery, the ruins of Chapter House and the ruins of Infirmary, which are all Grade I



listed buildings, plus the Grade II listed Citrus House. The ruins of Hen Egwyls, a Grade II listed building, are located on the southern slopes of Mynydd Margam. This ruin overlooks the park and provides excellent views across the surrounding landscape, as do the elevated areas to around the Brest Plantation., which includes good, views towards Swansea Bay. The National Long Distance Walking Routes of the Ogwr Ridgeway Walk, plus Coed Morgannwg Way and St. Illtyd's Way link within Margam Park, before heading north towards the Rhymney Valley.

Landscapes of Outstanding Historic Interest

- 13.4.4.23 The Register of Landscapes of Outstanding Historic Interest in Wales identifies landscapes that are considered to be of outstanding historic interest by virtue of being examples of the best surviving and most complete, and which represent the range, type, diversity and quality of the historic content of the whole of the Welsh landscape.
- 13.4.4.24 There is one Registered Landscape of Outstanding Historic Interest that lies within the study area, Merthyr Mawr, Kenfig & Margam Burrows. These are two discrete areas, although only Kenfig & Margam Burrows lies within the 15km study area boundary. Its location is shown in Figure 13.08, Volume 2.
- 13.4.4.25 Located approximately 11.5km south east from the centre of the Project, Kenfig & Margam Burrows lies on the coastal plain between the sea and Margam Mountain to the north. Dominated by the extensive, undulating form of the coastal sand dunes, the area is bisected by the M4 Motorway and main London to Swansea railway line on its eastern fringe.

Landscapes of Special Historic Interest

- 13.4.4.26 The Register of Landscapes of Special Historic Interest in Wales identifies landscapes that are considered to be the most important and significant historic landscapes in Wales.
- 13.4.4.27 There is one Registered Landscape of Special Historic Interest that lies within the study area, Mynydd Margam and its location is shown in Figure 13.08, Volume 2.
- 13.4.4.28 The well wooded western flank of the mountain rises steeply above the town of Port Talbot and the adjacent M4 motorway, to a series of more gentle slopes and plateaus that are typically between 200m - 300m AOD, reaching a maximum height of 344m AOD. Coniferous forestry is a dominant feature of the landscape, although a series of small wooded valleys and ravines that typically contain small streams, rising to a peat bog, is also a common feature of the mountain. The mountain contains a number of Bronze Age ritual and funerary monuments, early Christian monuments and medieval defensive works. However, it is the remains of Margam Abbey, plus the Tudor Gothic mansion of Margam Castle and the Orangery, within Margam Country Park, which are the most prominent historical features. Located on the southern slopes of Margam Mountain, the park and these features are discussed further in paragraph 13.4.4.22 above.

National Trails/Long Distance Routes and National Cycle Routes

- 13.4.4.29 The Wales Coast Path, completed in May 2012, is a 1400km continuous walking route around the entire coast of Wales and runs as near to the coast as legally and practically possible (refer to Figure 13.08, Volume 2). The path is split into eight geographical areas, with Region G - Gower and Swansea Bay passing through the study area. This section of the route, which is approximately 155km long, starts at Kenfig Dunes, before travelling north west through Margam, along Aberavon Beach, before heading west towards Swansea. The path runs adjacent to the entire length of Swansea Bay, around Mumbles



Head towards Caswell Bay, before continuing along the Heritage Coast to Three Cliffs Bay. The section of the path to the west of Three Cliffs Bay is not within the study area, although it continues, for approximately a further 45km to Loughor on the Swansea/Carmarthenshire border.

- 13.4.4.30 In addition to the Wales Coast Path, a section of four long distance Recreational Routes, as indicated on Ordnance Survey maps, pass through the study area: Gower Way, Coed Morgannwg Way, Ogwr Ridgeway Walk and St. Illtyd's Way. These routes are shown in Figure 13.08, Volume 2.
- 13.4.4.31 The Gower Way is a long distance route, which is 56km in length and traverses the Gower Peninsula from east to west. The section that passes through the study area can be broadly described as the northern section of the route and runs from near Three Crosses on the edge of AONB to the lower slopes of Banc Darren-fawr in the north. The path takes in a range of landscapes, both urban and rural and includes a section that passes through the town of Gorseinon and the Lliw Valley.
- 13.4.4.32 Within two locations in the south eastern part of the study area, a section of the long distance routes of Coed Morgannwg Way and St. Illtyd's Way merge. The first section is found within Cwm Afan, to the north of Afan Argoed Country Park and the second section is within Margam Country Park.
- 13.4.4.33 In addition to other long distance routes within Margam Country Park, a short section of the Ogwr Ridgeway Walk also lies within the park. The route is 21km long in total and travels in a westerly direction, finishing at Mynydd Maendy in the local authority of Rhondda Cynon Taff.
- 13.4.4.34 Four National Cycle Network routes are located within the study area, these are: NCN4, NCN43, NCN46 and NCN47, and are shown in Figure 13.08, Volume 2.
- 13.4.4.35 NCN4 is a 720km long distance route between London and Fishguard, via Swansea. Three distinct sections of the route pass through the study area; The Celtic Trail - East, Swansea Bike Path and The Celtic Trail - West.
- 13.4.4.36 The Celtic Trail - East runs for 135km from Chepstow to Port Talbot. A significant proportion of the route is traffic free, including the promenade at Aberavon Sands.
- 13.4.4.37 Connecting with The Celtic Trail - East at the Maritime Quarter is the 9km long Swansea Bike Path, which continues around Swansea Bay to Mumbles Head. The route travels adjacent to the A4067, Oystermouth Road and Mumbles Road along a traffic free cyclepath/ footpath that was the route of the former Mumbles railway. This cycle route also forms part of the Wales Coast Path.
- 13.4.4.38 The Celtic Trail - West, is a 363km route that passes through the Clyne Valley Country Park, heading north along the disused railway line towards Dunvant and Gowerton on the western outskirts of Swansea, before travelling northwest towards Carmarthenshire.
- 13.4.4.39 The second National Cycle Route within the study area, NCN43, connects Swansea with Builth Wells, where it travels through the Swansea Valley and the Brecon Beacons National Park. Much of the route is still under development. However, there is a 21km traffic free section between Swansea and Ystalyfera via Pontardawe. This section of the route begins near the Tawe Bridge, following the River Tawe north, before heading east at Clydach along the Swansea Canal.



- 13.4.4.40 NCN46 is also still under development, and, once complete, will connect Neath with Droitwich Spa in Worcestershire. Currently, a section that runs along the Neath Canal, linking Clyne with Glyn-Neath, is open.
- 13.4.4.41 NCN47 is a predominantly inland route starting at Newport and finishing at Fishguard, passing through Neath. The majority of the route, including a section that passes through the study area, is suitable for mountain bikes only and makes extensive use of existing forestry tracks. This section of NCN47 is known as the 'High Level Route' and connects Neath with Pontypridd.

13.4.5 Analysis of LANDMAP data

- 13.4.5.1 LANDMAP 2011 data and field work studies have been used to divide the study area into areas of distinct and separate character, known as Landscape Character Areas (LCAs).
- 13.4.5.2 Analysis included detailed examination of available LANDMAP data to Level 3 classification, involving the evaluation of data for all five aspect layers: Visual and Sensory, Landscape Habitats, Geological, Historic and Cultural Landscapes.
- 13.4.5.3 Maps for the 15km radius study area were prepared using the methodology described in LANDMAP Information Guidance Note 3 and Guidance Note 4 (refer to Figures 13.09 - 13.19, Volume 2). The maps were produced and are consistent with LANDMAP data available to download at the time of preparation (2013).
- 13.4.5.4 Analysis of the available LANDMAP Data for the five aspect layers is summarised below:

Cultural Landscape

- 13.4.5.5 The cultural landscape of the study area is characterised by urban landscapes of mixed overall value, fringed by rural plateau and ridges. Infrastructure arteries, such as the M4, A48, the London to Swansea railway line, cut through the study area. Pockets of land uses border these routes and include: SA1 Waterfront, Swansea Enterprise Park and Margam Park. Figure 13.09, Volume 2, LANDMAP Level 3 Classification illustrates the Cultural Landscape Aspect Areas.
- 13.4.5.6 Urban areas include Swansea, Port Talbot, Margam, Neath, Gorseinon, Gowerton and Pontardawe. These urban cultural aspect areas are of mixed rarity evaluation, representing low and moderate classifications within former industrial and fringe areas such as St Thomas in Swansea, Port Talbot, Baglan, Rhydding and Cimla. Outstanding rarity evaluation is attributed to the greater Swansea cultural aspect area, resulting from the area's "multi-faceted, rich mixture of socio-economic and socio-cultural attributes"¹⁵. Margam Park's cultural rarity is also evaluated as outstanding. High rarity evaluation is given to the ridge areas of Mynydd Marchywel and Mynydd Margam, with large scale industrial activity at the Port Talbot steel works also classified as high rarity evaluation. This is a reflection of the increasing scarcity of industrial activity of this size and importance within the UK. Rarity evaluations are illustrated in Figure 13.10, Volume 2.
- 13.4.5.7 The group evaluation of cultural aspect layers reflects relationships with adjacent aspect areas and features and as such, many of the cultural aspect areas within the study area are of high or outstanding value, including the settlement of Swansea and upland and rural areas to the north. Large expanses of the study area to the east of Swansea Bay remain un-assessed in terms of their group value. Refer to Figure 13.11, Volume 2, Group Evaluation.

¹⁵ LANDMAP, Cultural Landscape , Aspect Area Name: Greater Swansea, Aspect Area Code: SWNSCL033



Geological Landscape

- 13.4.5.8 Figure 13.12, Volume 2, Level 3 Classification illustrates the Geological Landscape Aspect Areas within the study area. The urban area of Swansea has not been assessed within the LANDMAP 2011 data.
- 13.4.5.9 The geological landscape of the study area is dominated by upland plateau to the east, including Foel Fynyddau, Mynydd Margam and Mynydd Marchywel, which are cut by valley folds. To the east, lowland escarpments and plateau including Penllergaer, Penclawdd, Cockett and the Gower plateau of Fairwood Common and Llethryd. To the north, the glacial mountain valley of Mynydd Pysgodlyn marks the foothills of further uplands beyond the northern study area boundary.
- 13.4.5.10 Overall evaluation across much of the geological landscape of the study area is considered to be moderate, including the vast expanses of upland plateau. The Afon Nedd Valley that cuts through Mynydd Marchywel and Mynydd Blaenafon is classified as high overall value, linking with the upland plateau of Foel Fynyddau which is also classified as high overall value, as a result of South Wales Pennant formations. The lowland escarpments of the Gower, which include Upper Carboniferous and Carboniferous limestone stratigraphy, are attributed as outstanding overall value. Penllergaer lowland escarpment is also given outstanding geological overall evaluation, as a result of the Penllergaer railway cutting, Upper Carboniferous and Grovesend formation stratigraphy. Figure 13.13, Volume 2, Overall Evaluation illustrates values for the Geological Landscape Aspect Layer.

Historic Landscape

- 13.4.5.11 The study area encompasses a mixed historic landscape, including large areas of irregular, regular and 'other' fieldscapes. Settlements and marginal processing/manufacturing aspect areas lie on the eastern side of the Bay. The nucleated settlements of Clydach, Gowerton and Gorseinon lie within the fringes of Swansea and the fieldscapes to the north. The settlement of Swansea is un-assessed. However, historic features within Swansea have been assessed within the Cultural Heritage: Terrestrial Archaeology Chapter of the ES (refer to Chapter 21). Water and wetland aspect areas are located within Swansea Bay foreshore to the west and the Neath estuary. The marginal lands of Aberavon Sands and Kenfig Burrows lie on the eastern foreshore of the Bay. Figure 13.14, Volume 2, LANDMAP Level 3 Classification illustrates the Historic Landscapes Aspect Areas.
- 13.4.5.12 The overall evaluation of Historic Landscape Aspect Areas classifies much of the study area as outstanding and includes many of the study areas fieldscapes, which are outstanding in their overall evaluation as a result of the complex nature field systems and rich, multi-period associations. Aspect Areas of moderate overall evaluation include Port Talbot works and other industrial/ manufacturing land at Jersey Marine and Baglan, reflecting the disappearance of historic intertidal and fieldscapes within these areas. Some western parts of the study area are un-assessed within the LANDMAP evaluation data and therefore no overall value has been attributed to these areas in terms of its historic landscape. Overall Evaluations, where assessed are illustrated in Figure 13.15, Volume 2.

Landscape Habitats

- 13.4.5.13 The landscape habitats of the study area are varied, including a complex range of mosaic, grassland, wetland, woodland and residential/ industrial habitats. Improved grassland Aspect Areas are located to the western half of the study area, including the open areas between Gowerton, Swansea and Gorseinon. Mosaic Aspect Areas are broadly located to the east of the study area, including the open land which borders the Vale of Neath. The eastern half of the study area is cut by river corridors, which run in a northeast –



southwest direction. Figure 13.16, Volume 2, illustrates Level 3 Classification for Landscape Habitats Aspect Areas.

- 13.4.5.14 Overall evaluation of Landscape Habitats Aspect Areas is shown in Figure 13.17, Volume 2. In broad terms, the study area encompasses habitats of moderate – low overall evaluation, including the fieldscape and residential habitats that cover much of the study area. Higher evaluation is given to intertidal areas and river corridors of greater habitat value, including Swansea Beach, the sands around Sker Point and parts of the Vale of Neath. Outstanding value is attributed to the intertidal habitats at the mouth of the Neath River, as a result of the rare species supported by this area, which includes the Crymlyn Burrows SSSI, located to the north west of the Neath training wall. Based on LANDMAP data, the area within Port Talbot dock walls and Kenfig Burrows is also of outstanding value, the latter designated as a SAC, NNR and SSSI.

Visual and Sensory

- 13.4.5.15 The visual and sensory landscape of the study area is mapped in Figure 13.18, Volume 2. In broad terms, the study area includes areas of rolling and mosaic lowlands to the west, and upland plateau and valleys of mosaic and wooded qualities to the east. Visual and Sensory Level 3 Data maps the intertidal areas that follow the course of Swansea Bay and Port Talbot, along with Llanrhidian marsh to the west of the study area. Mosaic lowland valleys divide the study area to the north, with the open/ wooded mosaic Neath valley cutting into the eastern half of the study area. Urban Aspect Areas include Port Talbot, Margam and Neath and Swansea. LANDMAP excludes large urban areas, including Swansea, therefore no overall value has been attributed to the urban area of Swansea within the Visual and Sensory data.
- 13.4.5.16 Overall Evaluation data indicates moderate values across much of the study area, including the upland plateau and valley landscapes to the east and the mosaic rolling lowlands to the west of the study area. Intertidal areas of Swansea Bay, Margam and Aberavon sands are attributed as high overall evaluation by virtue of scenic quality and exposed character. Kenfig Sands are given an outstanding overall evaluation, as a result of the extensive and unspoilt wild sands and strength of sense of place. Kenfig Burrows are also outstanding, by virtue of the nature of attractive views available and strong sense of place and isolation. Similarly, the beaches of the Gower are also attributed outstanding overall value. High values are given to areas of hillside and scarp slopes above the east of the bay, including Mynydd Dinas and Margam Scarp, resulting from dramatic topography and scenic quality. Cwm Dyffryn wooded upland valley is also of high overall value, given its intimate qualities and settled, isolated sense of place. The scenic qualities of the South East Gower Aspect Area and Llandewi rolling farmlands also result in high overall evaluation. Of lower overall value are the industrial and urban landscapes of Margam and Port Talbot, resulting from low scenic quality, and the degraded nature of the landscape in these areas. Figure 13.19, Volume 2, maps Overall Evaluation Data for the Visual and Sensory Aspect Layer.

13.4.6 Analysis of Admiralty Charts

- 13.4.6.1 Admiralty Charts are supplied by the United Kingdom Hydrographic Office and are nautical charts that identify information such as the coastline, land and underwater contour lines, seabed depth and composition, hazards, prominent features and anything that may assist with navigation on the water. The most up to date Admiralty Chart available for the study area is the 1:25,000 scale, International Chart Series - South Wales - Swansea Bay, published in March 1994, edited in 2001 and updated in 2012.



- 13.4.6.2 The depth of the seabed noted on the chart is recorded in metres and reduced to Chart Datum, which is approximately the level of the Lowest Astronomical Tide. When reference is made to height above Chart Datum, this refers to the drying height i.e. the vertical distance of the seabed that is exposed by the tide, above the sea at the Lowest Astronomical Tide.
- 13.4.6.3 Extending from Sker Point in the south east of the study area to the main breakwater wall at Port Talbot Docks, this stretch of the coastline is dominated by the sands of Kenfig and Margam Sands. Within the intertidal area of the beach there are a several exposed rocky areas, including the prominent Sker Rocks, plus Gwely'r Misgl and a group to the south of the breakwater wall. Other features of interest, include two ship wrecks: one located off Sker Point, whose hull/superstructure is visible when the sea level is at chart datum; and another to the south of the main breakwater wall at Port Talbot Docks. Within this section of the coastline two storm water outfall pipes extend from the coastline into the bay.
- 13.4.6.4 Extending for a distance of approximately 4.0km from the coastline, the depth of water is typically 5m to 10m. The composition of the seabed is a mix of fine and medium sand with shells (fs.mS.Sh), soft mud (soM) and fine sand and shells (fs.Sh). A distinctive feature of the seabed within this area are the sandbanks of Kenfig Patches and North Kenfig Patches that are made up of medium sand (mS) and fine sand, shells and pebbles (fs.Sh.P) respectively. The area around Kenfig Patches is a popular location for fishing boats.
- 13.4.6.5 Beyond 4.0km, the depth of the water typically reaches a maximum of 23m and the seabed is principally made up of a mix of soft mud (soM), soft mud with fine sand (soM.fS), medium Sand with mud (mS.M) and medium sand with Shells (mS.Sh).
- 13.4.6.6 The tidal harbour at Port Talbot Docks is enclosed to the south by the Main Breakwater wall and to the north by the shorter, Lee Breakwater wall. These walls are formed with loose rock, which have also been placed to the landward side of the harbour. A jetty has been constructed within the harbour that includes three cranes. These vertical structures, which are used for the unloading of raw materials and the loading of steel products by the Port Talbot steel works, form a local landmark. Ships enter the harbour through a channel that has been dredged to a depth of 11.2m. This channel extends for a length of approximately 460m and is defined by port and starboard buoys that are illuminated with red and green beacons respectively. A lighted buoy also marks the entrance to the channel.
- 13.4.6.7 To the north of the tidal harbour is Old Dock, which lies adjacent to the mouth of the River Afan. The Lee Breakwater wall, plus a wall of loose rocks, extend for a distance of approximately 300m into Swansea Bay and delineate the entrance to the docks and the mouth of the river. A narrow channel that has been dredged to a depth of 11.2m allows for access into the Old Docks. The dock is currently used by Port Talbot steel works for the import of raw materials for the manufacture of steel and for the export of steel products. The port is also used for the import of wood chip and biomass fuels. A lighted marker buoy delineates the dredged channel.
- 13.4.6.8 An additional breakwater wall has been constructed further to the north, known as North Breakwater and it marks the southern extent of Aberavon Sands. This breakwater and the wall constructed from loose stone creates an enclosed intertidal sandy beach that is overlooked by a modern housing estate.
- 13.4.6.9 Extending for approximately 4.0km, from North Breakwater to Whitford Point, near Baglan Bay, is the sandy beach of Aberavon Sands. The adjacent promenade is approximately 2.0km in length and is protected from the sea by a combination of rock armour and



seawall. The remainder of the beach is not protected and its landward side is formed by sand dunes, including those of Baglan Burrows.

- 13.4.6.10 The beach at low tides reveals a wide, flat expanse of sand. It contains no distinguishing features, although it is a popular beach for locals and tourists.
- 13.4.6.11 The height of the beach within the intertidal area varies, ranging from 0m to a maximum height of 6.0m above Chart Datum (CD). In the adjacent zone, where the depth of the seabed varies between 0m - 5.0m below CD, the seabed is made up of sand (S), plus a mix of mud and sand (M.S). Between a depth of 5.0m and 10.0m below CD, the seabed is typically a mix of mud (M), mud and fine sand (M.fS), coarse sand and mud (cS.M), plus a mix of sand and gravel (S.G). Approximately 4.6km south west from the coastline, there is a disused spoil ground. Covering an area of 4.6km², this was used in the past for the deposit of dredged material.
- 13.4.6.12 Beyond the spoil ground is an area of Swansea Bay known as Outer Green Grounds. The seabed which is typically at a depth of between 10.8 and 12.4m below CD, comprises of coarse sand and shells (cS.Sh), plus rock and coarse sand (R.cS). This is a popular area for fishing.
- 13.4.6.13 At a distance of approximately 3.0km to the south there is a second spoil ground, covering an area of 6.0km². It is understood that this spoil ground is currently used for the disposal of dredged material from the navigation channels.
- 13.4.6.14 Three wrecks lie off the coast of Aberavon Sands, none of which are within the intertidal zone and therefore are not visible, due to the depth of the seabed in this location.
- 13.4.6.15 The mouth of the River Neath lies to the north of Whitford Point, where a 2.0m deep channel has been dredged for a distance of approximately 3.2km. The river has a MHWS tide of 9.7m and a MHWN tide of 7.4m above CD (no data is available for low tide). The seabed and riverbed is predominantly made up of sand, although small patches of gravel are also evident. A salt marsh lies between Crymlyn Burrows and Baglan Burrows. There are a number of wharfs and jetties along the lower reaches of the Neath estuary and, as it discharges to sea, it is entrained in a dredged channel by training walls which were constructed in the Victorian era. The training walls end around MLWS and the dredged channel, which is 76m wide, is delineated by lateral mark buoys at its entrance and by a series of traffic signals along its length.
- 13.4.6.16 At low tide, the intertidal area between the dredged channel to the River Neath and the entrance to Swansea Port, that extends for approximately 2.0km at its widest point, is exposed to reveal an undulating area of sand, whose form is strongly shaped by the flow of the tide. The height of the beach within this area typically varies between 0m and 6.8m above Chart Datum. The eastern half of the coastline, which lies within the boundary of the Port of Neath is flanked by the sand dunes of Crymlyn Burrows, which were formed as a result of the Victorian training walls (see Archaeology Chapters (20 and 21)). From the western extent of the dunes, up to and including the Eastern Breakwater wall at Swansea Dock, the coastline is protected by rock armour. In addition, a seawall has been constructed on the land adjacent to the docks. This half of the coastline falls within the limit of Swansea Harbour. Three storm water outfall pipes extend from this section of the coastline into the sea, which are partially exposed at low tide. The longest of these outfall pipes is approximately 3.4km long and on its landward side an illuminated beacon is located. Within the sea, marking the outfall, is a buoy.



- 13.4.6.17 The area within the Bay, where the Admiralty Chart indicates that the depth of the water varies between 0m - 5.0m below CD, the seabed, typically is a composition of fine sand with shells (fS.Sh), fine sand with stones (fS.St), a mix of sand, shell and gravel (S.Sh.G) and a mix of mud and sand (M.S).
- 13.4.6.18 A single wind turbine has been erected on the land between Queen's Dock and the Eastern Breakwater wall and is a feature of the skyline. Except for the outfall pipes described above there are no notable features within the water or on the seabed within this part of Swansea Bay.
- 13.4.6.19 Enclosing the mouth of the River Tawe are the concrete breakwaters of Eastern Breakwater and West Pier, from which a 4.2m deep dredged channel, approximately 4.5km in length, extends into Swansea Bay. A shorter breakwater protrudes from the entrance to King's Dock to create a small intertidal harbour, where at low tide the mud of the seabed is exposed. Lights are positioned on the end of each of the three seawalls. The effects of the Project on these structures are discussed in the Cultural Heritage: Terrestrial Archaeology and Historic Landscape assessment, Chapter 21, Section 21.5.1.
- 13.4.6.20 Ship access to King's Dock is through a narrow channel, which include a series of locks. This dock is still operational and is used for cargo operations and, consequently, the dock sides contain a number of cranes, flood lights, storage compounds and other associated port infrastructure. Access to the Prince of Wales Dock, plus Queens Dock and two dry docks, is gained from within King's Dock.
- 13.4.6.21 Following the closure of the oil plants at Baglan Bay and Llandarcy, oil tankers no longer berth within Queens Dock. However, remnants of past activity are still evident, including oil berths, a repair jetty and a chemical jetty, which are all located within the dock. Although the main Queens dock has limited use by ships, the docks are used for farming mussels.
- 13.4.6.22 To the north, is the Prince of Wales Dock. The smallest of the three docks, there are plans for its redevelopment as part of the SA1 Swansea Waterfront regeneration project. However, as it is understood, plans to extend the marina facilities to this area are currently on hold.
- 13.4.6.23 The entrance into Swansea Marina is accessed via a lock enabling the barrage that spans the River Tawe to be passed. The former docks provide berthing facilities for approximately 500 small craft, and are enclosed by four storey high residential blocks. The twenty nine storey Meridian Tower is located within the south western corner of the marina and consequently is a very prominent landmark within the study area. Within the River Tawe, additional pontoons have been constructed to allow the mooring for a further 200+ small recreational and fishing vessels.
- 13.4.6.24 Extending from West Pier to The Mumbles is the sweeping concave form of Swansea Beach. The MHWS tide is 9.5m and the MLWS tide is 1.0m above CD. The MHWN tide is 7.2m and the MLWN is 3.1m. The broad intertidal area of the beach ranges from 0m to a maximum height of 7.4m above Chart Datum and the seabed comprises a mix of sand and mud (S.M), plus extensive deposits of gravel (G). The gravel deposits are predominantly located close to West Pier and within the western and southern parts of the beach.
- 13.4.6.25 Within the eastern half of the beach there are three storm water outfall pipes, two of which are visible when the sea is level is at Chart Datum. The largest of the three outfall pipes is approximately 1.0km long and the outflow is marked by a spindle buoy.



- 13.4.6.26 Three ship wrecks are located within the intertidal zone near to Mumbles Head, where parts of their hulls are visible when the sea level is at Chart Datum. This area is used for the mooring of small craft and also includes the site of a cleared platform, where an obstruction located on the seabed is visible.
- 13.4.6.27 Access to the water for small craft is gained through the concrete slipways that are clustered around Mumbles Yacht Club, located on the southern fringes of Swansea Beach.
- 13.4.6.28 To the east of the yacht club is the distinctive landmark of Mumbles Pier. Between the yacht club and pier is the RNLI onshore lifeboat station. Located on the pier, the offshore lifeboat station has been in operation since 1863. The pier itself is currently closed to the public for refurbishment and the construction of the new RNLI boathouse at the end of the pier.
- 13.4.6.29 The area of the seabed that extends past the intertidal zone and includes the area of sea between Mumbles Head, the end of West Pier and extending to the Tawe dredged channel is typically between a depth of 1.0 - 2.6m below CD. However, the area known as Green Grounds partially lies within this area. It is a popular location for fishing and within it the seabed reaches a depth of 5.9m. The seabed throughout this area consists of a mix of sand (S), plus sand and shells (S.Sh).
- 13.4.6.30 To the west of Green Grounds there is a submerged ship wreck, a second wreck is located a further 1.3km further west. The hull of this additional wreck is visible when the sea level is at Chart Datum. East of Mumbles Pier is a reported anchorage area, although its limits are undefined.
- 13.4.6.31 Mumbles Head represents the point where the coastline changes from one dominated by a flat coastal strip, flanked with sand dunes and man-made structures, including sea defences, harbours and breakwater walls, to one that is dominated by an indented, rocky shoreline.
- 13.4.6.32 The rocky islets of Mumbles Head and Middle Head, situated a small distance from the mainland, are both prominent features within the seascape and landscape and remain visible even at MHWS tides. When the water is at Chart Datum, the islets are accessible on foot. A lighthouse is located on Mumbles Head, which is used to warn vessels entering Swansea Bay and the docks of the shallow waters of Mixon Shoal, which are located approximately 800m to the south. Parts of this shoal, which consists of fine sand and is marked by a lighted can buoy, are exposed when the sea level is at Chart Datum. To the south east of this shoal is a large anchorage area.
- 13.4.6.33 To the west of Mumbles Head, the coastline is characterised by the steep, rocky cliffs of Tutt Head, Rams Tor and Newton Cliff, which all extend into the sea. Within the sheltered inlets of these cliffs are the sandy beaches of Bracelet Bay, Limeslade Bay, Pwll Du Bay, plus the larger bays of Llangland Bay and Caswell Bay. The intertidal zone along this stretch of the coastline is narrow and the seabed, falls sharply to a depth of 10m. Within a depth of between 10m and 20m below CD, the seabed typically consists of a mix of fine and coarse sand, shells and gravel (fS.cS.Sh,G). Further to the south, at a distance of approximately 5.0km south of Mumbles Head, is the area known as White Oyster Ledge. Consisting of coarse sand and shells (cS.Sh) the seabed within the area varies between a depth of 8.5m and 18.9m below CD. The surrounding seabed is typically at a depth of over 20m. This is a popular location for fishing vessels.



13.5 Baseline landscape and visual assessment

13.5.0.1 Eight broad LCAs within the 15km study area have been identified and, based upon LANDMAP Aspect Areas, have been subdivided into twenty-nine sub-character areas (as illustrated in Figure 13.1, Volume 2). The Project is located within LCA J: Industrial: J1 Swansea Port. In addition to the LCAs that have been identified, two RSUs and 6 LSU have been identified. Alongside the character assessment, visibility has been analysed through the assessment of identified viewpoint locations (Refer to Table 13. 7 and Figure 13.7, Volume 2).

13.5.0.2 Existing baseline conditions, and potential effects on seascape/landscape character and visual amenity from each viewpoint location, have been assessed below. Assessment considers the effects of the Project, including associated infrastructure through the construction and occupation phase of the site.

13.5.1 Assessment of ZTV

13.5.1.1 In broad terms, the ZTV (refer to Figure 13.5, Volume 2) indicates that, apart from an area of sea lying immediately south of Mumbles Head and extending in a south westerly direction to the study area boundary, all elements of the Project will be visible from offshore locations.

13.5.1.2 Extending from Sker Point to Mumbles, the ZTV indicates that all elements of the Project will be visible from the coastal strip. From those locations at a distance from the coast, all elements of the Project will theoretically be visible from the districts of Mayals, Sketty, Townhill, Mayhill, the city centre, St Thomas and Port Tennant, and in respect of locations within the north of the City, from areas within Morriston. To the south west of Morriston, within Pen-lan, the ZTV indicates that the lagoon seawalls, plus the proposed on shore and offshore buildings will be visible; and to the east of Fforest Fach, only the Lagoon seawalls will be visible.

13.5.1.3 Within Crymlyn Bog, visibility is restricted to the south western areas of the Project and limited to the proposed on and offshore buildings only. Immediately to the west of Crymlyn Bog, within Bonymaen, the lagoon seawalls will theoretically be visible, although to the north in Trallwn only the lagoon seawalls will theoretically be visible.

13.5.1.4 To the north of the M4 motorway, in areas within the Birchgrove district and towards Mynydd Drumau, the ZTV indicates that all elements of the Project will be visible, except for locations to the west of Mynydd Drumau where only the lagoon seawalls will theoretically be visible.

13.5.1.5 To the east, and within the Sandfields estate in Aberavon, views of the Project are limited and only the proposed onshore and offshore buildings are predicted to be visible from locations away from the coastal strip. Further to the south east, and from within the steel works at Port Talbot, views of the Project are restricted to the coastal edge that lie adjacent to Margam Sands, where all elements of the Project will in theory be visible.

13.5.1.6 From the elevated locations in the eastern parts of the study area that overlook Swansea Bay, all elements of the Project may be theoretically visible from Baglan and the southern facing slopes of Mynydd Dinas, Mynydd Emroch, Mynydd Brombil and Mynydd Margam.

13.5.1.7 To the north, and from locations within 10-15km of the centre of the Project visibility is restricted to elevated areas of land to the north of Neath and also to the north of Clydach.



- 13.5.1.8 Visibility of the Project to the west, including locations within Gower AONB, is significantly restricted and limited to isolated locations, predominantly near to the small settlement of Three Crosses.

13.5.2 Baseline assessment of Regional Seascape Units

- 13.5.2.1 A detailed description of the two RSUs identified within the study area is provided below:

RSU1: Sker Point to Mumbles Head (Swansea Bay)

- 13.5.2.2 Extending from Sker Point in the south east to Mumbles Head in the west, this RSU encompasses a significant proportion of the study area. The rocks at Sker Point mark the southern extent of Kenfig Sands and they form a prominent natural feature to the coastal edge. Extending in a north-west direction to the harbour at the Port Talbot steel works are the large scale sand dunes of Kenfig Burrows and Margam Burrows. The dunes form a straight edge to the coastline and overlook the flat expanse of Kenfig Sands and Margam Sands, which are exposed at low tide. The section of coastline from Sker Point to Margam Burrows is undeveloped and contrasts with other sections of the coastline which are dominated by heavy industry and urban built form. The steel works within Port Talbot, including the blast furnaces, cooling towers and chimneys, are all clearly visible from the beaches and from the sea, as are the breakwater walls and cranes within the Tidal Harbour. On land adjacent to the steel works, the urban form of Port Talbot, with the long sandy stretch of Aberavon Beach, can be seen with the rising scarp slopes of Mynydd Dinas beyond. The promenade edge at Aberavon is a combination of seawall and rock armour, which creates a strong, hard edge to the coastline. Extending from the western extent of the promenade to the Main Breakwater wall are sand dunes, including those which form Baglan Burrows.
- 13.5.2.3 Separating Port Talbot and Swansea is the River Neath, where significant alluvial deposits of sand and, to a lesser extent, gravel have been deposited at its mouth. The sand dune systems of Crymlyn Burrows and Baglan Burrows flank the mouth of the river as does a salt marsh. The approach to the river's mouth has been dredged for navigational purposes. At low tide the intertidal area between the River Neath and the River Tawe exposes a broad, undulating expanse of sand. Clustered around the mouth of the River Tawe is Swansea Port, where the seawall, which is constructed from rock armour, the Eastern Breakwater and West Pier walls, in addition to the cranes, a wind turbine and development within SA1, are all prominent features from the coast and coastal waters. Currently under construction on the former BP oil refinery site, located between Swansea Port and Crymlyn Burrows, is the Swansea University Bay Campus (SUBC). The steel frames of the first phase of the buildings are currently visible and it is anticipated that the campus will be complete in 2015, when it will form a prominent feature of this section of the coastline. The mouth of the river has been dredged and, in addition to allowing access to the docks, it also provides access to Swansea Marina, which has been awarded Blue Flag status¹⁶. Located between the mouth of the River Tawe and Mumbles Head is the sweeping arc of Swansea Beach. This stretch of beach is the defining character of the RSU and extends for approximately 8.0km. The tidal range is approximately 9m and at low mean tide the intertidal area reveals a broad expanse of mud, sand and gravel. To the north, the urban form of Swansea extends across the rising land beyond, forming a visible feature from the Bay. Contrasting with the flat expanse of the beaches is the limestone outcrop of Mumbles Hill that rises to a height of 77m AOD. Its steep facing cliffs form a prominent feature to the coastline, at the western extent of Swansea Bay. Located a short distance off Mumbles Hill are the islets of Middle Head and Mumbles Head, both of which are accessible on foot during

¹⁶ <http://www.blueflag.org>.



periods when the sea water is at Chart Datum level (lowest astronomical tide). These islets form a distinctive jagged profile and visual focus with highly tilted rock beds. Mumbles Head lighthouse forms a distinctive feature when viewed from both the sea and when viewed on land, looking across the Swansea Bay. Another significant feature and well known landmark, from both the sea and from land, is Mumbles Pier.

- 13.5.2.4 The waters within the Bay are used by a variety of vessels, including pleasure cruisers, yachts, many of which are moored at Swansea Marina, plus large commercial ships that use both Swansea and Neath Ports and the docks of Port Talbot steel works. Swansea Bay is also a popular location for fishing boats, with the areas of Inner & Outer Green Grounds, White Oyster Ledge and Kenfig Patches are notable.
- 13.5.2.5 When the sea is at Chart Datum level (that is, very low water spring tide), several features within the intertidal area throughout the RSU become visible. These include several combined overflow pipes to the south of Swansea Ports, an extent of the Victorian training walls of the Neath estuary, the walls of the docks of Port Talbot steel works and a number of shipwrecks. Shipwrecks are found at Sker Point in the east and at Margam Sand; however, the largest cluster is to the western extent of Swansea Bay, near The Mumbles (Chapter 20, Cultural Heritage: Marine Archaeology). Except for the buoys, there are no above surface features outside the intertidal area of the Bay. Therefore, the number and variety of vessels adds visual interest to the otherwise flat character of the sea.
- 13.5.2.6 The RSU will be viewed predominantly from the promenade, beaches and residential areas of Swansea and Aberavon, plus the pier at the Mumbles. From the coastal plain, visibility is limited, although the coal field plateau to the north east affords long views.
- 13.5.2.7 Key views from the land to the sea include the promenade at Swansea, Mumbles including Mumbles Head and the pier, Swansea Marina and Aberavon beach. From the sea, the key views will be from leisure craft and sailing boats.
- 13.5.2.8 This RSU is open in character and due to the simple sweep of the Bay, large in scale, although a slightly greater sense of enclosure is created by the peninsula of Mumbles Head to the west.
- 13.5.2.9 Key cultural associations include the designated sites of Crymlyn Burrows and Kenfig Burrows, the historically and archaeologically outstanding Margam Park, Swansea Bay and Mumbles, plus Aberavon, which are all holiday resorts/tourist destinations. The area also has strong associations with past industrial activity, which includes ship building within Swansea and Neath, plus current industrial activity, most notably at Port Talbot steel works. As the birthplace of the Dylan Thomas, Swansea has strong cultural links with the poet.

Seascape Value: High /Moderate

- 13.5.2.10 The seascape area is heavily dominated by urban built form and particularly heavy industry, the latter of which has resulted in a reduction in the scenic quality along the coastline. However, there are locations that are considered to be of scenic quality, including Kenfig and Margam Burrows, Mumbles Head, the wooded slopes above Margam Country Park and Clyne Valley Country Park. Aberavon Sands in the east and the promenade that extends around Swansea Beach are popular tourist locations within the seascape area and include a section of the Wales Coast Path. Although they are not as popular as The Mumbles, the rugged coastline and secluded beaches further to the west of Mumbles Head are key elements of the RSU.



RSU2: Mumbles Head to Three Cliffs Bay

- 13.5.2.11 The coastline within this RSU falls within the Gower AONB and is designated a Heritage Coast. It is an indented, eroding coast with steeply sloping limestone cliffs with secluded sandy beaches that create a medium to small sense of scale along the coast. Due to the steep rock formations that extend into the sea, the seabed increases in depth over a short distance and the intertidal zone is subsequently narrow. The combination of these factors creates an attractive and dramatic coastline. Inter visibility between areas on the land and the sea are moderately limited due to the high coastal landform and the undulating nature of the lowland plateau. The area is a popular tourist destination, especially the beaches of Limeslade Bay, Pwlldu Bay and Three Cliff Bay, plus Bracelet Bay, Langland Bay and Caswell Bay, which have all been awarded Blue Flag status¹⁷. From these locations, there are good views out to sea. Forming a backcloth to the coastline is the residential area of Langland, where from number of properties, plus Langland Bay Golf Club, there are outstanding views across the Bristol Channel. Further to the west the landscape is typically undulating farmland in character. The seaward limit within the RSU extends south from Mumbles Head to Sker Point and therefore is predominantly open water. The seabed is typically at a depth of between 10m to 20m and includes the areas of Mixon Shoal and White Oyster Ledge, plus the larger of the two spoil grounds (which is no longer used) found within the study area. Permanent above surface water features are limited to buoys, although the vessels moored at the anchorage area to the south east of Mixon Shoal, plus vessels passing through to Swansea Bay provide visual interest.
- 13.5.2.12 Key views from the sea to land will predominantly be from swimmers, yachts and pleasure boats within Swansea Bay and the Bristol Channel.
- 13.5.2.13 Cultural associations include a mix of popular holiday and leisure locations and beaches, with upmarket residential coastal villages. There are also Anglo-Saxon associations and place names, most notably that of Bishopston.
- 13.5.2.14 Land adjacent to Swansea, which lie within the AONB, are under pressure from new development, including housing for residential, holiday and retirement homes. There is also pressure from an increase in recreational users on the sea and on land, including coastal paths, beaches and other habitats.
- 13.5.2.15 Offshore dredging and the effects of beach nourishment have the potential to effect offshore sandbanks, dune systems and beaches.
- Seascape Value: Outstanding*
- 13.5.2.16 This is a RSU of outstanding scenic quality that contains aesthetically pleasing features, predominantly along its coastline including the limestone cliff and sandy bays. This has been recognised through the landscape designations with which it has been awarded. Consequently the area is a nationally important and popular tourist destination. Attractions include the Wales Coast Path, plus Caswell Bay and Langland Bay, which are particularly noted for their surfing and Three Cliff Bay for its distinctive rock formations.
- 13.5.2.17 As noted within the Seascape Assessment of Wales - Regional Seascape Unit 45, "*the rugged character of the coastline could use headlands and cliffs to hide views of development from wider visibility from land. Development just offshore would conflict with the intactness and setting of features on the coast or from local views, from the Downs, roads and coastal paths, the recreational beaches and settlements*"¹⁸. The ZTV indicates

¹⁷ <http://www.blueflag.org>

¹⁸ Seascape Assessment of Wales, Regional Seascape Unit 45 - Worms Head to Mumbles Head - South Gower



that from the land based areas and areas immediately adjacent to the coastline, the topography of the area, including the headlands and cliffs screen views of the Project.

13.5.3 Baseline assessment of Local Seascape Units

13.5.3.1 A detailed description of the six LSUs identified within the study area is provided below:

LSU1: Kenfig Sands

13.5.3.2 At low tide the wide, flat expanse of sand within the intertidal area dominates this LSU, which extends from Sker Point to the estuary of the Afon Cynfig and is designated as a landscape of Outstanding Historic Interest. Above the MHW level is a shallow bank of pebbles that forms a straight coastal strip. Immediately adjacent are the undulating sands dunes of Kenfig Burrows, vegetated with Marram Grass. The undulating nature of the dunes creates a sense of enclosure and restricts long distance views from within Kenfig Burrows to the coast. The southern extent of the LSU is defined by the rocky outcrop of Sker Rocks. Further to the north is an additional rock outcrop of Gwely'r Misgl, which is exposed at low tide.

13.5.3.3 Beyond the MLW level the seabed predominantly consists of a mix of fine and medium sand with shells (fS.mS.Sh), with patches of mud and fine sand (M.fS), rock, fine sand and shells (r.fS.Sh). A distinctive feature of the seabed within this LSU are the sandbanks of North Kenfig Patches and Kenfig Patches, which are made up of medium sand (mS), plus fine sand, shells with pebbles (fS.Sh.P) respectively.

13.5.3.4 Water depth typically varies between 5m - 8m, although there are isolated areas that reach a depth of between 10m - 11m. The depth of water over the sand banks typically varies between 0m-3m. Tidal currents predominantly flow perpendicular to the coast and around the southern extent of the Kenfig Patches.

13.5.3.5 The seascape is open in character and from the land there are attractive, long distance views along the beach towards Swansea and Mumbles Head, which provides a sense of enclosure and unobstructed views out across Swansea Bay and the Bristol Channel. The Port of Port Talbot, a manmade feature, protrudes from the coast, and views to the onshore manmade features of Port Talbot steel works, including the chimneys, cranes and other apparatus form a notable vertical element.

13.5.3.6 The beach is a popular location with local residents and tourists and Sker Rocks is popular with onshore fishermen. The predominant offshore activity is also fishing, especially around the sand banks.

Seascape Value: Outstanding

13.5.3.7 The sand dunes to the landward extent of the LSU have been designated as a Landscape of Outstanding Historic Interest and are therefore considered to be of national importance. As stated previously, the dunes are also designated as a SAC, NNR and SSSI. There are good, attractive views across the eastern part of Swansea Bay and out towards the Bristol Channel. The views towards the built form of Swansea and the industrial landscape of the steel works at Port Talbot are notable features. However, these contrast with the simple form of the seascape/landscape forming visual interest as opposed to a detracting feature.

LSU2: Port Talbot Steel Works

13.5.3.8 The coastal edge within this LSU, which abuts the steel works and extends from the estuary of the Afon Cynfig to the Lee Breakwater wall at Port Talbot Docks, is formed by a



bank of rock armour that creates a straight, hard edge. The intertidal area is predominantly made up of sand, although there are also patches of exposed rock.

- 13.5.3.9 The seabed gently slopes to a depth of 10m and the zone between the MLW level to water depth of 5m is made up of fine sand (fs). Beyond this depth, the seabed consists of soft mud (soM). Tidal currents follow the predominant wind direction and, therefore, move in south westerly to north easterly direction.
 - 13.5.3.10 To the northern edge of the LSU is the Tidal Harbour that is used by the steel works. It is enclosed to the south by the Main Breakwater wall and to the north by the shorter, Lee Breakwater wall, both of which are formed with loose rock. The three cranes located on the jetty within the harbour form a prominent focal point/landmark. The harbour and its entrance has been dredged to a depth of 4.2m, and for a length of approximately 3.8km, and is delineated by a lighted marker buoy.
 - 13.5.3.11 There are two storm water outfall pipes within this SLU that extend from the coastline into Swansea Bay for a distance of approximately 3.5km and 2.75km respectively. The latter outfall pipe, located to the south of the Main Breakwater wall, is visible within the intertidal area of the beach, as is an adjacent ship wreck. The seaward extent of the second outfall pipe is marked by a buoy that emits a yellow warning light.
 - 13.5.3.12 The landward side of the coast is dominated by the steel works and, therefore, public access is restricted. However, public access along the beach is possible and it provides good views out across Swansea Bay and the Bristol Channel. Views from the sea towards land will be dominated by the steelworks, which will be back clothed by the hills of Mynydd Margam and Mynydd Brombil.
- Seascape Value: Moderate*
- 13.5.3.13 The coastal edge and coastal strip have been significantly influenced and subsequently degraded through manmade activities. However, this has also created a strong sense of place, and the restricted access to the beach results in an increased sense of tranquillity. Views from the coast out across Swansea Bay are attractive, while views back to land from the sea will be defined by the steel works, creating an instantly recognisable feature along the coast.

LSU3: Aberavon Sands

- 13.5.3.14 Extending from the Lee Breakwater wall in the south to the mouth of the River Neath in the north, the promenade along Aberavon seafront, plus roads, open spaces, leisure facilities and housing, including the large Sandfields estate, are all prominent features of the coastal strip that overlooks the wide, flat expanse of Aberavon Sands. The beach, which is simple and exposed in character, is a popular destination for locals and tourists and is used for surfing and fishing. The North Breakwater wall is also a popular location for fishing.
- 13.5.3.15 Rock armour forms the coastal edge to the southern half of the coastal edge, while a stepped concrete wall forms the coastal edge in the northern half. The coastal edge to Baglan Energy Park, located to the north west of Sandfields, is softer in character as it is formed by the undulating dunes of Baglan Burrows.
- 13.5.3.16 The intertidal area of the beach is wide and flat and is made of sand (S) and slopes gently to a depth of 10m. Between a water depth of 0m-5m the seabed is typically a mix of mud and sand (M.S). Beyond this depth the seabed consists of a mix of mud (M), mud and fine sand (M.fs), coarse sand and mud (cS.M), plus a mix of sand and gravel (S.G) and sand and



shells (S.Sh). Within this zone two wrecks are located, the position of one is marked by a lighted pillar buoy. Tidal currents follow the predominant wind direction and therefore move in south westerly to north easterly direction.

- 13.5.3.17 Enclosing the southern extent of Aberavon Sands and located within the intertidal area is the North Breakwater wall of Port Talbot Harbour, that, along with the Lee Breakwater wall, forms an intertidal harbour to the mouth of the River Afan. The Breakwater is constructed from loose rock and is a notable feature, although the larger adjacent Port walls dominate.
- 13.5.3.18 To the north edge of the LSU lies the Neath Estuary, where a 2.0m deep and approximately 3.2km long channel has been dredged and is delineated by a series of lighted buoys. The estuary has been extensively shaped by sand deposits and is overlooked by the dunes of Baglan Burrows.
- 13.5.3.19 Views from land to sea are more enclosed in the north by the dunes. However from the south and from the beach itself, there are good open views across Swansea Bay and the Bristol Channel. In good weather conditions the North Devon coastline will be visible. From the sea, views back towards the land are predicted to be dominated by development along the coastal strip, particularly the housing of the Sandfields estate. Development will be back clothed by the slopes of Mynydd y Gaer and Mynydd Dinas.

Seascape Value: Moderate

- 13.5.3.20 The built form within the coastal strip is of varied aesthetic quality, with many elements forming a detracting feature. However, the wide expanse of beach is well maintained and is the main focal point of the area. Locations within and immediately surrounding Baglan Burrows are less developed and more tranquil in character and considered to be of higher value than the other more developed parts of the LSU.

LSU4: Swansea Port and Crymlyn Burrows

- 13.5.3.21 Located between the dredged channels of the River Neath and River Tawe, the eastern half of the LSU is dominated by the natural character of Crymlyn Burrows, while the industrial character of Swansea Port dominates the western half.
- 13.5.3.22 The coastal edge to Crymlyn Burrows is straight and has been naturally formed by the sand dunes that are more established and vegetated with marram grass. Further inland the dunes are vegetated with a mix of marram grass and scrub species, before giving way to a salt marsh.
- 13.5.3.23 Located in between Crymlyn Burrows and Swansea Port is the site of the former BP oil refinery. Land within this area is predominantly flat and the eastern half of the site has been levelled in preparation for the SUBC, which is currently under construction. The western half of the site is more post industrial in character and is typically a mix of scrub and wind blown sand. The Port of Swansea lies adjacent to the former BP oil refinery and is dominated by the Prince of Wales Dock, Queen's Dock and King's Dock. Surrounding the docks are a number of single storey industrial units, storage compounds, cranes, flood light pylons and other port infrastructure. A bank of rock armour forms the coastal edge to this section of the LSU, extending from the site of the SUBC and along the front of the access road that is located to the south of Queen's Dock, within Swansea Port. Adjacent to the access road is a single wind turbine.
- 13.5.3.24 Marking the western boundary of the LSU and enclosing the mouth of the River Tawe, are the concrete breakwaters of Eastern Breakwater and West Pier, from which a 4.2m deep



dredged channel, approximately 4.5km in length, extends into Swansea Bay. A shorter breakwater wall protrudes from the entrance to King's Dock to create a small intertidal harbour, where at low tide the mud of the seabed is exposed. Lights are positioned on the end of each of the three seawalls.

- 13.5.3.25 The wide, flat expanse of windblown sand (S) which contains pockets of gravel (G) dominates the wide intertidal area, especially at locations in front of Crymlyn Burrows and the SUBC. The intertidal area adjacent to Swansea Port is narrower, where the eastern half consists of sand (S) and the western of gravel (G).
- 13.5.3.26 The seabed that extends from the MLW level to a water depth of 5m is broad and gently sloping in character and is a mix of sand, shells and gravel (S.Sh.G), fine sand and shells (fs.Sh), mud and sand (M.S), plus fine sand and stones (fs.St). Beyond this depth, extending out to a depth of 10m, the seabed is a mix of sand and gravel (S.G), rocks (R) and coarse sand and shells (cs.Sh). Within this area of Swansea Bay is the Outer Green Rounds which extends to a depth of 13m. This is a popular location for sea fishing within Swansea Bay.
- 13.5.3.27 Extending from the rock armour at the site of the SUBC are three outfall pipes, which are partially exposed at low tide. The longest of these outfall pipes is approximately 3.4km long and on its landward side an illuminated beacon is located. Within the sea, marking the outfall, is a buoy.
- 13.5.3.28 The wide, flat expanse of beach creates an open seascape that has a simple relationship with the sand dunes and seawalls. There are good long distance views from the land across Swansea Bay and the Bristol Channel, including views towards the Mumbles and Port Talbot. The chimney to the power station at Baglan Bay Energy Park and the steel works at Port Talbot are visible. However, they contrast with the simple form of the seascape/landscape forming visual interest as opposed to a detracting feature.
- 13.5.3.29 The beach and Crymlyn Burrows, although enclosed by urban and industrial landscapes, are sparse in terms of the number of people, which provides a sense of tranquillity.

Seascape Value: High/ Moderate

- 13.5.3.30 The coastal strip that abuts Crymlyn Burrows is more natural in character than the more hard edged, industrialised areas that surround the docks, and as a result it has a simple, yet attractive visual relationship with the beach. Despite its close proximity to urban areas it has a relatively unspoilt and tranquil character, although this is declining through the construction of the SUBC. It is also an area of ecological importance as recognised through its designations as a SSSI. This part of the LSU is considered to be of high value. Areas within and surrounding Swansea Port are considered to be of lower value, due to the existing influence of manmade features that dominate. There are no designations within the Port itself and public access is restricted to authorised dock workers.

LSU5: Swansea Bay

- 13.5.3.31 Defined by the concave, sweeping form of Swansea beach, this LSU extends from the West Pier breakwater wall to Mumbles Head. This is an area with a strong sense of place.
- 13.5.3.32 Within the east of the LSU, there is a mix of coastal edge treatments. Adjacent to the Maritime Quarter, the coastal edge is natural sand dunes, contrasting with hard edge of the sea wall that forms the promenade to the row of terraces to the southern edge of Swansea Marina. In front of the Civic Centre it is defined by a stepped concrete wall that



provides access to the beach. Extending from the Civic Centre to Brynmill lane, a low stone wall separates the beach from the adjacent footpath.

- 13.5.3.33 The coastal edge is more natural in character between Brynmill Lane and the estuary of the River Clyne. This section is steeper in gradient and vegetated with a belt of deciduous trees. From the estuary and for a length of approximately 0.5km the coastal edge is formed by a low retaining wall that provides open access to the beach.
- 13.5.3.34 Within areas within the western half of the LSU, the coastal edge is more hard edged in character and is formed by the hard edge of the seawall that separates the beach from the adjacent footpath.
- 13.5.3.35 To the landward side, the coastal strip is defined by a mix of land uses. The A4067 (Oystermouth/Mumble Road) separates the majority of buildings from the beach. However, within the Maritime Quarter and Swansea Marina, there is a concentration of residential blocks that directly overlook the beach and adjacent Swansea Bay. These range from 3 storeys in height to the 29 storey Meridian Tower, which forms a strong focal point within surrounding areas.
- 13.5.3.36 The remainder of the coastal strip that lies to the south of the A4067 is less developed in terms of built form. A linear park that contains open grass areas and mature trees and shrubs, extends from opposite St. Helens cricket ground to Fairwood Road in The Mumbles and is a prominent feature of the coastal strip. It includes a promenade along which a section of the Wales Coast Path passes. The Promenade is popular with cyclists. Other features of note include the Black Pill pitch and put golf course and the Black Pill Lido.
- 13.5.3.37 Within The Mumbles, the coastal strip is varied in character and includes a number of shops, cafes and two storey terraced housing. There are also large areas of tarmac that are used for car parking and boat storage. To the western edge of the LSU, the steep facing cliffs that form Mumbles Hill are prominent. Extending into the sea are the rocky islets of Mumbles Head and Middle Head which form a prominent feature to the character of Swansea Bay. A lighthouse is located on the former of these two islets.
- 13.5.3.38 There are several features of interest located within in the coastal edge of The Mumbles that are also popular tourist destinations. These include Clyne Gardens, a Grade I Registered Park and Garden; Swansea Pier and lifeboat station and Oystermouth Castle. The remains of this 12th century castle are located on a small hill and are enclosed by mature deciduous trees. There are good views south towards the Mumbles, including Mumbles Pier.
- 13.5.3.39 The intertidal area within Swansea Bay is broad and gently sloping, exposing a seabed that comprises sand and mud (S.M.), with patches of gravel (G), most notably located close to West Pier and within the western and southern parts of the beach. The areas of the beach to the north of Blackpill and extending to the Civic Centre that are more sandy and also more accessible than the southern parts around The Mumbles are more populated with visitors. To the south, a number of boats are moored within the bay and grounded at low tide and are a distinctive feature of the intertidal area. Three shipwrecks are located within the intertidal zone near to Mumbles Head, where parts of their hulls are visible when the sea level is at Chart Datum.
- 13.5.3.40 Beyond the intertidal zone and extending to the LSU boundary, the depth of the seabed is typically between 0m and 3m, and consists of a mix of sand (S), plus sand and shells (S.Sh). Sailing is a popular activity within the Bay and yachts and other vessels are a common feature.



- 13.5.3.41 Tidal currents follow the predominant wind direction and, therefore, move in south westerly to north easterly direction into Swansea Bay before moving in an anti-clockwise direction within the inner, more sheltered areas.
- 13.5.3.42 Views from the land towards the sea are predominately from enclosed locations around the Bay, which are surrounded by the landform of Mumbles Head or land adjacent to the Neath estuary and Port Talbot. Looking back to the coast, views will be predominately back clothed by the built form within Swansea and the rising hills to the north.

Seascape Value: Outstanding/ High

- 13.5.3.43 The strong visual relationship between the coastal edge, beach and its sweeping form is the defining feature of Swansea and The Mumbles. The coastal edge is attractive, particularly to the south of Brynmill extending to Mumbles Head, where there is a buffer between the beach and A4067. Although within an urban area with many features and manmade elements, views from the promenade and the beach across the Bay are visually stimulating. The area is an important tourist destination and areas to The Mumbles are within the boundary of the Gower AONB.

LSU6: Gower Coastline

- 13.5.3.44 This LSU is characterised by the indented rocky shoreline that is made up of steep facing cliffs and small sheltered sandy beaches, which combine to provide a strong sense of place. Within the intertidal area, there is a rock shelf to the base of the cliffs that includes loose rock and scattered pools. At low tide this rock shelf, along with the beaches of Bracelet Bay, Limeslade Bay, Pwll Du Bay, plus the larger bays of Langland Bay and Caswell Bay shelf are further exposed. The seabed increases to a depth of the 10m quickly, although the Mixon Shoal sandbanks are located immediately to the south of Mumbles Head and are exposed at low tide. This sandbank is a popular area for fishing vessels.
- 13.5.3.45 There are good open views along the coast line and out to the Bristol Channel from the Wales Coast Path that passes through the LSU. The angular form of rocks creates a dramatic coastline that contrasts with the simple character of the sea. The sense of scale is more intimate from the beaches due to the enclosure created by the rock formations. These beaches are popular with tourists, and Langland Bay and Caswell Bay are noted for their surfing. Manmade features are less prominent than in other parts of the coastline within the study area, reinforcing the natural character of the seascape/landscape.
- 13.5.3.46 Tidal currents follow the predominant wind direction and therefore move in south westerly to north easterly direction.

Seascape Value: Outstanding

- 13.5.3.47 A coastline that has been designated as a Heritage Coast and the landward extent of the LSU is within the boundary of the Gower AONB. The combination of steep, jagged cliffs and the crashing of the waves against them create a dramatic sense of character, which contrast with the more simple, sheltered sandy bays. There are attractive views along the coastline and out across Swansea Bay and the Bristol Channel and subsequently it is a popular location for tourists.

13.5.4 Baseline assessment of Landscape Character Areas

- 13.5.4.1 An overview of the principal characteristics of each of the broad LCAs and a detailed description of the sub-character areas are described below:



Dunes

Key Characteristics:

13.5.4.2 Large, coastal dune systems are located between the M4 motorway and the Bristol Channel. Key characteristics include:

- i. Undulating sand dunes vegetated with Marram Grass;
- ii. Kenfig Pool;
- iii. Views across Bristol Channel and towards steel works; and
- iv. Wales Coast Path.

A1: Margam and Kenfig Burrows

13.5.4.3 Located within the south east of the study area, between the coastal plain of Margam Sands, the M4 motorway to the east and the Port Talbot steel works to the north, this is an extensive area of undulating sand dunes, vegetated with Marram Grass. A network of paths running through the burrows allows access for walkers and includes a section of the Wales Coast Path. Kenfig Pool, a relatively large pool, is situated within the south of the character area.

Landscape Value: Outstanding

13.5.4.4 The simple form of the undulating dunes creates an attractive landscape that has been designated as a Landscape of Outstanding Historic Interest and is therefore considered to be of national importance. The dune system is also designated as a SSSI, SAC and NNR and is largely unspoilt with good, attractive views across the adjacent Bristol Channel and towards Swansea Bay. However, the nearby steel works are a prominent visual detractor within views to the north.

Hillside and Scarp Slopes

Key Characteristics:

13.5.4.5 Located to the north of Clydach, west of Neath and north of Port Talbot, are areas of steep sided slopes. Key characteristics include:

- i. Steep sided slopes;
- ii. Woodland belts of coniferous and deciduous trees on lower slopes;
- iii. Simple ridgelines; and
- iv. Restriction of man-made features.

B1: North of Clydach

13.5.4.6 Located within the north of the study area, adjacent to the settlement of Clydach, this is an area that is dominated by farming. A mosaic of undulating, irregular shaped fields that are used for pasture cover the simple rounded form of this landscape. On lower slopes, where the Lower Clydach River flows, blocks of broadleaved trees within Cwm Clydach are found. Land within the south east of the character area is more open and consists of unimproved grassland used for pasture. Man-made influences are limited and restricted to isolated farms and overhead power lines.



Landscape Value: Moderate/ Low

- 13.5.4.7 This is a relatively attractive landscape, that is largely intact although not particularly rare and which can be considered to be of local importance only. The landscape is largely unspoilt, although the large steel lattice pylons and electricity cables are a detracting feature of views.

B2: Mynydd Drumau

- 13.5.4.8 The ridgeline and eastern facing steep scarp slopes of Mynydd Drumau located to the north of the village of Skewen form a distinctive feature within the local landscape. The lower slopes are characterised by a dense belt of mix woodland, while the upper slopes typically consists of fields used for pasture, enclosed by a mix of maintained and overgrown hedgerows.

Landscape Value: Moderate

- 13.5.4.9 This is a simple aesthetically pleasing landscape, where the scarp face and woodland block forms a distinctive local landmark to the north of Skewen and Neath Abbey. However, the landscape is not covered by any landscape designations, or noted for its historical or cultural importance.

B3: Margam and Mynydd Dinas

- 13.5.4.10 Situated between the M4 motorway and the forested upland areas to the north east, this character area marks the edge of the coal measures and the coastal plain. The steep scarp slopes extend from the western boundary of Margam Park, to the settlement of Britton Ferry, and include the slopes of Mynydd Margam, Mynydd Dinas and Mynydd-y-Gaer and limit the extent of development within Margam and Port Talbot. The slopes are typically vegetated with coniferous trees, bracken and scrub.

Landscape Value: High/ Moderate

- 13.5.4.11 The scarp slopes are not subject to any landscape designations; however, they form a distinctive and recognisable feature within the local area, which provide a strong sense of place. Due to the steep topography, access is restricted to local footpaths and forestry tracks.

Intertidal and Wetlands

Key Characteristics:

- 13.5.4.12 These are areas of salt marsh and lowland fen within Loughor Estuary and east of Swansea. Key characteristics include:
- i. Flat lowland topography;
 - ii. Saltmarsh and Lowland Fen;
 - iii. Sites of ecological importance; and
 - iv. Wales Coast Path.

C1: Llanrhidian Marsh

- 13.5.4.13 This common land is an extensive area of marsh adjacent to the Loughor Estuary, on the western boundary of the study area. There are also areas of rough grassland, used to graze horses. The distinctive landscape is flat and has no man-made features, which provides a sense of remoteness and openness. There are good long distance views across the estuary towards the rising land within Carmarthenshire. Most notably these are from



the Wales Coast Path, a section of which runs along the B4295 that lies adjacent to the marsh.

Landscape Value: Outstanding/ High

- 13.5.4.14 The area has several ecological designations and it is also a Ramsar site. Therefore it is of international importance in terms of its ecological value. Although it has no landscape designations, it is a rare and unique landscape type within the study area, and therefore it is considered to be of county to regional importance in terms of its landscape value.

C2: Crymlyn Bog

- 13.5.4.15 Located on the eastern urban edge of Swansea and enclosed to the south and east by industry, this area of land that was partially used for industrial activity itself, is the most extensive lowland fen in Wales. It consists predominantly of swamps, water meadows, tall reed beds, scrub and woodland.

Landscape Value: High

- 13.5.4.16 The character area is important in terms of its ecological value and is reflected in its designations (SAC, SSSI and Ramsar site). There are no landscape designations and, overall, it can be considered to be of county to regional importance. Due to being a fen, it is difficult to access, which provides a sense of tranquillity that contrasts with its more urban/industrial surroundings.

Mosaic Lowlands

Key Characteristics:

- 13.5.4.17 These cover a significant proportion of the north western parts of the study area. Key characteristics include:
- i. Clyne Valley Country Park;
 - ii. Penllergaer Valley Wood;
 - iii. Undulating farmland; and
 - iv. Irregularly shaped fields.

D1: Clyne Valley Country Park

- 13.5.4.18 This is an 18th-century, Grade I Registered Park & Garden of Special Historic Interest in Wales that is situated between Swansea and The Mumbles and within the Gower Peninsula AONB. The park predominantly consists of mature deciduous, ornamental woodland, although it also contains the Grade II* listed Clyne Castle and the Grade II, Clyne Chapel. Clyne Castle has been converted into private apartments and additional apartment blocks have recently been constructed within the castle grounds. To the eastern boundary of the park, and running in a north to south along the disused railway line, is a traffic free cycle path that forms part of the wider National Cycle Network Route 4, the Celtic Trail.

Landscape Value: High

- 13.5.4.19 A park of national importance as defined by the designations both for the park and the landscape it is set within this LCA. The park is adjacent to a large centre of population and although some development is evident, it is not dominant, and the sense of tranquillity has remained intact. Access to the park is not restricted and it is a popular tourist and recreational area.



D2: Three Crosses

- 13.5.4.20 This is an area of rolling farmland with fragmented blocks of broadleaved woodland, located between the urban fringe of Swansea and the Loughor Estuary. Field patterns are irregular in shape and are typically bound by maintained hedgerows. The area is accessible from a network of minor roads. There are also a number of footpaths, the most notable of which is the Gower Way long distance route. The village of Three Crosses lies within the heart of the character area, with the village of Pen-clawdd located on the study area boundary. A number of individual dwellings, predominantly farm houses, are scattered throughout the character area.

Landscape Value: Moderate

- 13.5.4.21 A relatively attractive landscape, although one that is not particularly rare within the county or within the study area. The area is close to large centres of population and is easy to access. Although land to the south of Three Crosses has been designated as a SAC and a SSSI for its ecological importance, there are no landscape designations within the character area and, therefore, the landscape is considered to be of local importance only.

D3: Rhyd-y-Pandy

- 13.5.4.22 An extensive area of rolling farmland within the north of the study area. Areas adjacent to the slopes of Cefn Drum and Mynydd Pysgodlyn have a slight upland feel to their character due to the more elevated location. The landscape typically comprises fields of improved and semi-improved pasture that are enclosed by a mix of managed and overgrown hedgerows. The main landscape feature in the north is the Lower Lliw Reservoir, located to the north east of Felindre, and is a picturesque site that has been designated as a Site of Nature Conservation Interest (SINC) for its ecological value. The large, predominantly coniferous forest of Penllergaer Valley Wood is located within the southern half of the character area and is a Grade II registered Landscape, Park and Garden of Special Historic Interest. The landscape is generally open in character and good views towards the Gower and Loughor Estuary are available. Settlements are largely restricted to isolated dwellings and farmhouses, although the villages of Pontlliw, Felindre and Craig-cefn-parc are all within the character area boundary. There are also a number of other man-made features present, including a section of the M4 motorway and overhead power lines. Access is relatively easy through a network of minor roads and the long distance routes, including the Gower Way that passes through the character area in a broad south west to north east direction.

Landscape Value: Moderate

- 13.5.4.23 This is a landscape that is relatively attractive and has a sense of wilderness, especially within the more elevated locations. The landscape is largely intact, although the overgrown hedgerows reduce the quality of the landscape, as has the introduction of the motorway and overhead power lines.

D4: Afon Tawe

- 13.5.4.24 The western half of the character area that is located to the north of Swansea is characterised by the gently sloping valley sides, through which the River Tawe and A4067 run. A mix of improved and semi-improved fields used for pasture and mature broadleaved trees typically form the valley sides, which also restrict longer distant views. In addition to the A4067, other man-made features include overhead power lines, plus the small settlement of Glais. To the east of Glais, the landscape is more rolling in character. The irregular fields are typically enclosed by hedgerows, some of which are overgrown or gappy or with post and wire fences. The landscape is more open than the western half and



is less accessible due to the lack of transport routes. There are views of overhead power lines and longer distance views to the northern fringe of Swansea.

Landscape Value: Moderate

- 13.5.4.25 There are no landscape designations within the character area and it is only considered to be of local importance. Some characteristics of the landscape have remained intact, others such as hedgerows have been lost. There is a sense of openness, particularly within the eastern half of the character area. However, the nearby urban centre of Swansea is within close proximity, which influences views from elevated locations.

D5: Gelli-Bwch

- 13.5.4.26 The M4 motorway and A48 carriageway dominate central parts of this character area, while land within the western half and north of Jersey Marine consists of steep sided lowland hills. The hills rise from approximately 10m AOD to 106m AOD and create an exposed upland feel. Vegetation cover is a mix of broadleaved woodland, and improved and unimproved grassland used for pasture. Located adjacent to the site of the former oil refinery is the small settlement of Llandarcy. The floodplain around the River Neath is the prominent feature within the eastern half of the character area. There is evidence of previous and declining industrial and commercial uses, including small scale docks, breakers yards and storage depots that lie adjacent to degraded farmland, which is used for pasture.

Landscape Value: Moderate / Low

- 13.5.4.27 Land to the north of Jersey Marine is an attractive landscape within close proximity of urban areas. However, within other parts of the character area, although they have a strong sense of place, there is little coherent character due to the mix and quality of land uses which are not aesthetically pleasing. The area is unlikely to attract tourists and is likely to be of local importance only.

D6: Coed Hirwaun

- 13.5.4.28 Located on the south eastern boundary of the study area, this is an attractive, low lying, gently rolling landscape predominantly consisting of improved and semi-improved irregular shaped fields that are enclosed by maintained hedgerows. There are also scattered blocks of mature tree planting that provide a sense of intimacy. Abutting the M4 motorway and forming the western boundary of the character area, is a golf course. The road network is limited. However, the A48 carriageway crosses the character area. There are no large settlements, although two housing estates have been constructed and there are a number of individual dwellings, including a number of farm houses. Within the northern part of the site is the Grade I registered Landscape, Park and Garden of Special Historic Interest of Margam Park.

Landscape Value: Outstanding / High

- 13.5.4.29 Although the character area is located close to a centre of population and is easy to access from the A48, the landscape can be considered to be picturesque. It has a strong sense of place, especially within Margam Park, which contains several sites of historic interest and as such is a landscape of national importance.

Open Lowlands

Key Characteristics:

- 13.5.4.30 These are areas of low lying areas of land within the western and eastern parts of the study area, adjacent to the coast. Key characteristics include:



- i. Gower AONB;
- ii. Coastal views;
- iii. Fields used for pasture; and
- iv. Wales Coast Path.

E1: Gower Farmlands

- 13.5.4.31 Located to the west of The Mumbles, this is a relatively flat landscape predominantly consisting of irregular shaped fields that are used for pasture and enclosed by maintained hedgerows. On the higher ground to the north, is Clyne Common, where the landscape is more open in character and typically vegetated with rough grassland. Much of the common is currently used as a golf course. Further to the east, is Fairwood Common, which includes Swansea Airport. The coastline to the south, along which a section of the Wales Coast Path runs, is a mix of rocky cliffs and sandy bays, including Caswell Bay, Pwll Du Bay and Three Cliffs Bay. Extending inland from these bays are steep sided wooded valleys, forming a distinctive feature within the landscape. To the north east of Three Cliffs Bay is Pennard Burrows. This is a coastal dune system that is well vegetated and forms Pennard Burrows Golf Links course. There are several settlements within the character area, including Bishopston and Southgate, both of which serve as commuter villages for Swansea. The area is connected by a number of A and B roads, plus smaller minor roads.

Landscape Value: Outstanding

- 13.5.4.32 This is an attractive landscape noted for its scenic quality. The character area is within the Gower AONB and the coastline has been designated as a Heritage Coast. Although close to the large urban area of Swansea, the area has its own identity and a strong sense of place. It is a popular location for tourists, especially locations along the coastline, and can be considered a landscape of national importance.

E2: Margam Moor and Eglwys Nunydd Reservoir

- 13.5.4.33 Located between the M4 motorway and the sand dunes of Margam Burrows, this character area is cut in two by the London to Swansea railway line that runs north to south. The eastern half is dominated by the large, flat expanse of Eglwys Nunydd Reservoir, which is used for fishing and sailing. To the north of the reservoir there is a mix of industrial plants, recreational sports fields, semi-improved grassland and blocks of mature trees, predominantly willow. Land to the west of the railway is made up of semi-improved grassland that is used for pasture. Drainage ditches, lined with willows are found throughout the landscape.

Landscape Value: Moderate/ Low

- 13.5.4.34 Its association with the steel works and other industrial activities has significantly degraded the landscape, which has led to its fragmentation and left it with few aesthetically pleasing or picturesque features. Although tourism is unlikely to be the primary reason for visiting, a section of the Wales Coast Path does run through the character area and the reservoir is used for recreational purposes and is considered important for its ecological habitat.

Uplands

Key Characteristics:

- 13.5.4.35 Upland areas of land situated within the north eastern section of the study area. Key characteristics include:



- i. Coniferous tree plantations;
- ii. Irregular shaped fields used for pasture; and
- iii. Mountain summits.

F1: Upland Clydach River Valley

- 13.5.4.36 An upland valley to the north west of Pontardawe, that rises from approximately 50m AOD to 260m AOD. Land cover typically consists of irregular shaped fields used for pasture, with wooded valleys on the lower slopes. Field boundaries are typically overgrown hedgerows although walls and fences are evident. A network of small springs and streams cross the character area. Access is restricted to minor roads that link the scattered farmhouses.

Landscape Value: Moderate

- 13.5.4.37 An attractive landscape, where the lack of development and restricted access creates a settled landscape with a sense of wilderness and common character throughout, creates a strong sense of place. However, the character area does not contain any sites of historic, cultural, geological or habitat importance of note and it is not covered by any landscape designations. The area is considered to be of county to local importance.

F2: Clydach Valley

- 13.5.4.38 A broad upland valley that predominantly consists of a mosaic of irregular shaped fields used for pasture that runs between Mynydd Drumau and Mynydd Marchywel. Many of the hedgerows that enclose these fields are overgrown. The A474 is the main transport route through the area, although there are several other minor roads that connect with it. Within the west of the character area is Mynydd Drumau, whose lower slopes are vegetated with a mix of mature deciduous and coniferous woodland. The upper slopes are more open in character and contain fields that are bound by a mix of hedgerows and stone walls. The eastern half of the character area includes the lower slopes of Mynydd Marchywel, which contain irregular shaped agricultural fields, plus Neath Golf Club and Gilfach Quarry. The main settlements include the village of Rhos, a number of other individual dwellings are scattered throughout the character area.

Landscape Value: Moderate /Low

- 13.5.4.39 Located between the settlements of Pontardawe and Neath, this is a landscape that has some aesthetically pleasing scenes, particularly at higher levels. However, the landscape has been degraded through the introduction of man-made elements including housing, overhead power lines and quarrying. Also there is a sense of neglect due to the presence of overgrown hedgerows. There is an area to the south of Rhos that has been designated as a SSSI; however, there are no landscape designations and the area is considered to be of local importance only.

F3: Vale of Neath

- 13.5.4.40 Incorporating the valley floor and sides, this character area lies within the north east part of the study area. The River Neath meanders along the wide valley floor, adjacent to which runs the main communication route within the character area, the A465(T). A sense of enclosure is provided by the linear blocks of deciduous woodland that is found next to the carriageway. The Neath Canal also runs along the valley floor. The valley sides are predominantly a mosaic of irregular shaped fields used for pasture. On the southern lower slopes, the settlement of Tonna is located, while further to the south is The Gnoll. This is a Grade II* registered Landscape, Park and Garden of Special Historic Interest in Wales and is popular park and tourist destination within the county.



Landscape Value: High/ Moderate

- 13.5.4.41 The character area has a distinct sense of place, brought about by the enclosed wooded river valley and The Gnoll, which is aesthetically pleasing and a park of great scenic value within the local area. The quality of the landscape has been slightly degraded by the carriageway that crosses the valley, and also the construction of residential properties and commercial units.

F4: Mynydd y Gaer

- 13.5.4.42 Located on a ridge between the Neath Valley and Afan Valley, this upland area includes Mynydd y Gaer, Foel Fynyddau and Cefn Morfudd. They typically contain a mix of irregular shaped fields of semi improved and rough grassland that are used for upland grazing and large blocks of commercial forestry plantations, many of which have straight edges, which contrast with the surrounding open countryside. The ridgeline of Foel Fynyddau is dominated by the communication masts that are located on its summit. Transport routes are restricted to minor roads that run between the mountains and this is where the majority of properties are located, including the village of Pontrhydyfen, which is located at the foot of Foel Fynyddau.

Landscape Value: Moderate

- 13.5.4.43 This is a landscape that has both small scale scenic qualities in its field patterns and hedged lined lanes along the minor roads and larger scale scenic qualities at higher levels, where there are panoramic views towards the coast and across adjacent valleys. The character area is largely undeveloped, which adds to its sense of tranquillity, providing a sense of place. The introduction of commercial forestry and communication masts are negative features, as they disrupt the otherwise smooth, gentle lines of the ridgelines. There are no landscape designations within the character area. The village of Pontrhydyfen has strong cultural associations with Richard Burton, as it is the birthplace of the actor.

F5: Mynydd Margam, Mynydd Emroch and Mynydd Penhydd

- 13.5.4.44 Incorporating the upland areas of Mynydd Margam, Mynydd Emroch and Mynydd Penhydd, the character of this landscape is dominated by extensive tracts of coniferous woodland. The woodland is commercially managed and is a mix of spruce, larch and pine. Located between Mynydd Emroch and Mynydd Margam is the Cwm Dyffryn valley, where views along the minor road are enclosed by the mature vegetation on the adjacent steep valley sides. At the head of the valley, the road connects with the small village of Bryn, where more open views across the surrounding landscape are possible. The B4282 runs through the village, where it joins the A4107. Access within the woodland is restricted to forestry tracks and footpaths, although Afon Argoed Country Park (Afan Forest Park) lies within the woodland on Mynydd Penhydd. The park includes a number of mountain bike trails and walking trails and is a popular tourist attraction within the area.

Landscape Value: High

- 13.5.4.45 The landscape is defined by the extensive areas of coniferous forestry, where the valleys are the only major variation within the landscape. Cwm Dyffryn is an attractive valley, although overall the landscape is not as scenic as other locations within the study area, including the adjacent Margam Park and the Gower to the south west. However Mynydd Margam is a Registered Landscape of Special Historic Interest and the mountain contains a number of Bronze Age ritual and funerary monuments, early Christian monuments and medieval defensive works and therefore is of historic and cultural importance. To the north, there are no landscape designations associated with Mynydd Penhydd, however Afon Argoed Country Park is an important county and regional tourist destination.



Urban

Key Characteristics:

- 13.5.4.46 Urban settlements, predominantly located along or near to the coastline. Key characteristics include:
- i. Residential areas;
 - ii. Commercial and leisure facilities;
 - iii. Communication routes, including roads and railways; and
 - iv. Historic and cultural sites.

G1: Swansea

- 13.5.4.47 The settlement of Swansea extends over a large, central part of the study area, spreading west from the docks, following Swansea Bay westward to the Clyne River valley. The core of the city centre is located adjacent to the Bay, north of Oystermouth Road, including a variety of shops and public facilities, typically set within blocks of pedestrianised streets of mixed design and public realm styles. The Quadrant Shopping centre, bus station and St. David's shopping centre form the city's retail core, characterised by varied style and form. The city centre is generally of limited architectural merit, although landmark buildings and streets such as Wind Street, Swansea Castle and St Mary's Church are visually enhancing elements. Swansea marina and the Maritime Quarter have been subject to recent and ongoing redevelopment, including a complex of apartment blocks, fronting on to the marina. Many of the recent developments are of limited architectural significance. However, the relationship of buildings and water creates an attractive urban environment.
- 13.5.4.48 Swansea Bay, including the foreshore and surrounding leisure facilities westward as far as the lido, is of more distinct character. The expansive foreshore and promenade and the availability of attractive views across the Bay contribute to a positive character. Cultural significance and sense of place are evident within this well-frequented area; however, there are detractive views toward the steel works at Port Talbot.
- 13.5.4.49 The residential areas of Swansea are typically characterised by high density terraced streets, many of late 19th Century origin, including the communities of Sketty, Landore, St. Thomas and Port Tennant. The community of Townhill is of distinct character, resulting from sloping topography, and provide excellent views south across the study area. To the north, the settlement of Morriston contains mixed housing forms, including high density terraces. Kilvey Hill features within many views from and toward residential areas, forming a backdrop.
- 13.5.4.50 The urban area of Swansea is crossed by a number of transport arteries, including the A4217 and A483. Located between the A483 and the terraced housing in Port Tennant, is Fabian Way Park and Ride facility. The A48 and A4067 connect Swansea with outlying settlements along the coastline and within the Swansea Valley. The presence of such infrastructure contributes toward the overall mixed sense of place and character within Swansea.
- Landscape Value: High (areas adjacent to Swansea Bay) Moderate (to all other areas)*
- 13.5.4.51 The mixed character and qualities of built form across Swansea's residential and public realm areas contribute an incoherent sense of place. The presence of areas of greater value, include the Bay and marina leisure areas and foreshore, plus cultural landmarks such as the castle and Kilvey Hill, which forms a backdrop to residential areas and is



positive in character. However, the generally mixed quality of residential and city centre areas is dominant. Value is limited by incoherent character and the presence of degrading elements, such as detractive elements within views and buildings of poor condition.

G2: Coed Darcy

- 13.5.4.52 Situated to the south of Neath on the site of a former BP Llandarcy Oil Refinery, Coed Darcy is currently being redeveloped to provide up to four thousand new homes, plus community facilities, including shops, schools and leisure and recreational facilities. The site's infrastructure, will include a road link from the development to the M4 motorway and construction has started on the first phase of houses. Within the north east of the site is an existing business park.

Landscape Value: Moderate/ Low

- 13.5.4.53 A landscape that is currently being transformed from a former industrial area to one that is predominantly residential and therefore changing in character. Although close to existing centres of population, the area is not noted for its tourist associations, cultural, historic or geological features.

G3: Neath

- 13.5.4.54 Located around and straddling the River Neath, this character area also includes the adjacent settlements of Britton Ferry, Skewen and Neath Abby. The centre of the town is situated adjacent to the ruins of Neath Castle and is a compact area of retail outlets and residential properties, predominantly rows of nineteenth century terraced housing. Also located within the town centre is the small urban park of Victoria Gardens, which is a Grade II listed Registered of Landscape, Park and Garden of Special Historic Interest. To the north east of the park is the Gnoll rugby ground. Areas within the south of the town are typically made up of post war semi-detached housing. Residential properties are also prominent on the south east facing slopes of the valley, which includes the large estates of semi-detached housing that dominate the area of Neath Abbey. The ruins of the abbey itself are located further to the south, on the valley floor adjacent to the A465, which is the principal transport corridor through the town.
- 13.5.4.55 To the west of the housing estates of Neath Abbey is the village of Skewen. Housing stock is a mix of short rows of traditional nineteenth century terraces and post war semi-detached houses. Within northern fringes of the villages, houses are predominantly late twentieth century detached and semi-detached two storey properties and bungalows. Shops and other community facilities are centred along the A4230. The village has one railway station, which is on the main Cardiff to Swansea line.
- 13.5.4.56 The traditional core of Britton Ferry, which lies between Neath and the M4 motorway, is made up of rows of nineteenth century terraced housing. These terraces have been constructed between the railway line and the A474 that passes through the village. Land to the east and west of the central core has been in filled with a mix of post war semi-detached housing and modern housing estates. To the north east of the settlement on the banks of the River Neath is a large industrial estate.

Landscape Value: Moderate

- 13.5.4.57 The location of the settlements within the valley provides the context for a strong sense of character and place. However this character has been eroded by the sprawling development, much of which is of limited architectural value or merit. There are some views out to the surrounding valley sides, but overall there are few picturesque scenes within the character area.



G4: Cwmafan

- 13.5.4.58 Separated from Port Talbot by the topography of Mynydd Dinas and Mynydd Emroch, Cwmafan is a large village within the Afan Valley, whose valley sides provide a strong sense of enclosure to the settlement. The centre of the village, which sits on the valley floor, is dispersed and predominantly consists of traditional stone built terraced houses. On the valley sides, particularly on the northern slopes, newer housing estates have been built, that contrast with the traditional building vernacular of the village.

Landscape Value: Low

- 13.5.4.59 The traditional terraced housing within the centre of the village helps to create a sense of place, although this is degraded through inappropriate modern housing estates that surround the core. The village as a whole has little aesthetic quality and is considered to be of local importance only.

G5: Port Talbot and Margam

- 13.5.4.60 Situated between the scarp slopes that are adjacent to the M4 motorway and the coast, the settlements of Port Talbot and Margam are dominated by the nearby steel works. The old part of Port Talbot consists of rows of two storey terraced houses, while the newer parts, which are situated closer to the coast, are made up predominantly of two storey semi-detached houses, many of which form the large Sandfields Estate. Along the seafront of Aberavon there is a promenade and a linear park along which a section of the Wales Coast Path runs and which provides good views across Swansea Bay. Adjacent to the canal, and within the centre of the town, is a cluster of civic buildings. Further to the east and adjoining Port Talbot is the linear settlement of Margam. The area is almost entirely made up of two storey semi-detached post war housing and passing through the settlement is the A48 carriageway, which runs in a south east to northwest direction.

Landscape Value: Low

- 13.5.4.61 There is no discernible pattern to the settlements, which are predominantly made up of large post war housing estates and dominated by the adjacent industrial areas. Except for the promenade and linear park that overlooks Aberavon Sands and Swansea Bay, which is the only notable tourist feature within the town, there are few areas that are of aesthetic quality or visual interest.

G6: The Mumbles

- 13.5.4.62 Overlooking the southern extents of Swansea Bay, a linear park, along which the Wales Coast Path runs, forms a buffer between the sea and the A4067 carriageway. Properties adjacent to the A4067 are a mix of styles, ranging from modern detached houses to three storey Victorian terraces. The commercial centre of The Mumbles, much of which falls within a conservation area, is located within the southern half of the character area along Mumbles Road. Forming a prominent feature at its far southern extent is Mumbles Pier. Victorian in construction it includes a lifeboat station and slipway, a Grade II listed building. Currently the pier is closed to the public for restoration work and the construction of a new RNLI station. Beyond the pier is Mumbles Head, a rocky outcrop upon which a lighthouse is located, which is designated as a Heritage Coast and also lies within the Gower AONB. This area also includes the Mumbles Hill Nature Reserve. The main residential area of The Mumbles lies to the west, where the topography rises steeply and where the traditional core consists of rows of terraced housing. Further to the south west, the houses are more modern in construction and are typically a mix of detached bungalows and two storey properties, some of which provide excellent views across the Bristol Channel. Also commanding excellent views over the sea are the ruins of the twelfth



century Oystermouth Castle. Set within grounds adjacent to the A4067 it is a popular tourist attraction within the area.

Landscape Value: Outstanding/ High

- 13.5.4.63 Although located close to the large urban settlement of Swansea, the area has a distinct and separate identity and sense of place. There are many Victorian buildings, including a number of terraced rows of housing that are in a well maintained condition and aesthetically pleasing. The area is a popular destination for tourists and contains a number of historic important features including Oystermouth Castle and the Mumbles Pier. The coastline along the southern extent of the character area falls within the Gower AONB and has been designated as Heritage Coast.

G7: Gorseinon and Gowerton

- 13.5.4.64 Located to the north west of Swansea, this is a predominantly residential area that encompasses the settlements of Gorseinon and Gowerton. The core of Gorseinon, which is centred around the A4240, consists of terraced streets with commercial properties on the ground floor and accommodation above. Other locations within the town are typically a mix of post war and late twentieth century detached and semi-detached housing. The Afon Lliw runs through the western part of the town, along which a section of the long distance walking route of the Gower Way passes. To the south, Gowerton is a linear settlement that has developed along the B4296. Within the centre of the village there is a cluster of commercial properties and nineteenth century terraced housing. Other development within the village is typically late twentieth century modern semi-detached housing estates, although to the northern fringes of the village is a large steel plant.

Landscape Value: Low

- 13.5.4.65 There is little coherent character to the settlements due to the mix of architectural style and design. The settlements are located near to the Gower AONB, but offer few tourist attractions in themselves and are likely to be of local importance only.

G8: Pontardawe

- 13.5.4.66 This encompasses the former industrial communities of Pontardawe, Trebanos and Clydach to the north of Swansea. Residential housing, which includes a mix of traditional terraced housing, post war semi-detached and more modern detached and semi-detached properties, dominates the area. To the east of these settlements runs the River Neath and which is where the main industrial activity is located.

Landscape Value: Low

- 13.5.4.67 The area is not rare within the study area and does not have a strong sense of place due to the sprawling nature of the settlements and large areas of commercial development that provides little visual cohesion. Although there are a number of buildings within the area that have scenic quality, there are also a number of detracting elements.

G9: SA1 Swansea Waterfront

- 13.5.4.68 This is located to the south of the A483 and encompasses land within the Prince of Wales Dock and the parcels of land surrounding it. Development that forms part of the masterplan for SA1 Swansea Waterfront is currently located along King's Road and Langdon Road and includes commercial, community facilities and residential units, including a number of large apartment blocks. A significant proportion of the land included within the masterplan for the area is still to be redeveloped. This is a dynamic landscape in terms of change and, if land within SA1 Swansea Waterfront is developed in accordance with the masterplan, building plots that are currently vacant along King's Road and



particularly Langdon Road will be in filled. This will increase the mass of buildings within the area and result in the dense urban character of the city centre extending further east across the River Tawe.

Landscape Value: Moderate/Low

- 13.5.4.69 The area has a strong sense of place, due to its past industrial associations, but also through the more modern developments, which are slowly becoming more dominant within the area. This has resulted in an improving value to the character of the landscape, which had been eroded during previous periods of industrial decline.

Industrial

Key Characteristics:

- 13.5.4.70 Industrial areas located on the coastal plain near to the urban areas of Swansea and Port Talbot. Key characteristics include:
- i. Heavy industry;
 - ii. Swansea Port;
 - iii. Port Talbot Steel Works; and
 - iv. Coastal location, views across Swansea Bay.

H1: Swansea Port

- 13.5.4.71 This encompasses an area of land to the east of the River Tawe and south of the A48 and A483 (Fabian Way). Swansea Port, which is owned by Associated British Ports (ABP) is dominated by the Prince of Wales Dock, Queen's Dock and King's Dock. The latter is still currently operational with two dry docks. The land surrounding King's Dock contains cranes and floodlight pylons, both of which are a feature of the skyline, a number of large, single storey industrial sheds, typically with a pitched roof, storage compounds and other associated port infrastructure. To the south is Queens Dock and, although it is limited in terms of ship activity, it is used as a commercial mussel farm. Enclosing the dock is the Eastern Breakwater seawall that extends into the mouth of Swansea Bay. To the west of the Eastern Breakwater seawall, is a shorter breakwater wall that forms a small inter tidal harbour at the entrance to the River Tawe. A single wind turbine creates a focal point to this area. Land immediately to the east of the port boundary, although within the LCA is currently being redeveloped. A number of commercial developments have recently been constructed along Langdon Road, resulting in the character of the city centre extending further east of the city centre.

Landscape Value: Low

- 13.5.4.72 The landscape has been significantly influenced by past and present industrial activity and although this has created an area with a strong sense of place, it has degraded the scenic quality of the landscape.

H2: Swansea Gate Business Park

- 13.5.4.73 Located to the east of Swansea Port, this area predominantly consists of large industrial units/factories, including an Amazon Industrial distribution centre, which is a prominent feature from the adjacent A48. In addition to the industrial sites, there is a row of post war terraced and semi-detached houses. Located amongst the industrial units is the visitor attraction "Swansea Bay 1940s".

*Landscape Value: Low*

- 13.5.4.74 Due to the type of development within the character area, the landscape is not aesthetically pleasing and has little scenic quality or sense of place. It is not considered to be a rare landscape and is of local importance only.

H3: Baglan Bay

- 13.5.4.75 Situated on the coastal plain to the east of the River Neath, this flat area of land formerly contained the BP Baglan Bay petrochemicals plant. Although much of the land is currently vacant following its demolition, the site is at the first stage of redevelopment and there are plans over the next 25 years for the site to be redeveloped further. Currently situated on the site is an office block, known as Baglan Bay Energy Park, a number of large industrial units and further to the north, Baglan Bay power station. The power station's chimney is visible from surrounding locations, creating a local landmark within the area. A section of the Wales Coast Path, runs through the western edge of the character area and adjacent to the power station.

Landscape Value: Moderate /Low

- 13.5.4.76 This is a landscape that has been severely degraded through past industrial activity. There has been recent redevelopment of some areas. The introduction of the Energy Park has assisted in creating a sense of place. However, the character of the area overall remains limited in terms of its scenic quality. There are no landscape designations within the character area and although a section of the Wales Coast Path runs through it, tourists are unlikely to be attracted to stay for any length of time.

H4: Port Talbot Steel Works

- 13.5.4.77 The large steel works that are located between Port Talbot and Margam Burrows dominate the landscape of the coastal plain. The steel production plant, including the blast furnace, chimneys and cooling towers within the works, plus the overhead power lines, form a particularly notable feature of the skyline. To the north of the works is a disused dock, adjacent to which the seawalls of the artificial harbour extend into Swansea Bay. Within the harbour a pier has been constructed which includes a number of cranes.

Landscape Value: Low

- 13.5.4.78 This is a landscape that has been significantly degraded in terms of its scenic quality through the introduction of heavy industry. However an industrial landscape on this scale is rare and it has created a unique landscape that provides a strong sense of place.

Table 13.17 Summary of RSU/LSU/LCA value and visual appraisal

Regional Seascape Unit		Seascape Value	Visual Appraisal and Key Influencing Factors
RSU1	Mumbles Head (Swansea Bay) to Sker Point	High/ Moderate	The open nature of the sea will result in views of the Project seawalls being visible in all areas within the RSU. Visibility may reduce from locations to the edge of the study area due to the curvature of the earth hiding low lying features. Where the Project seawalls are visible they would be viewed against a backdrop of urban landscape of Swansea and Port Talbot, with the rising landscape beyond.
RSU2	Three Cliffs Bay to Mumbles Head	Outstanding	The ZTV indicates that the Project seawalls will be visible from all areas of the RSU except from locations to the west of Mumbles Head, which will screen views. Visibility may reduce from locations to the edge of the study area due to the curvature of the earth hiding low lying features. Where the Project seawalls are visible they would be viewed against a backdrop of urban landscape of Swansea and Port Talbot, with the rising landscape beyond.
Local Seascape Unit		Seascape Value	Visual Appraisal and Key Influencing Factors
LSU1	Kenfig Sands	Outstanding	Unobstructed, open views. Large expanse of Swansea Bay and infrastructure of Port Talbot steel works key features of views from both the beach and from locations within Swansea Bay.
LSU2	Port Talbot Steel Works	Moderate	Unobstructed views from the sea back towards the Project, although it will be viewed back clothed against existing manmade features within Swansea Port and surrounding urban areas of the city. Views of the Project from locations immediately adjacent to the Port Tidal Harbour will be screened by the walls of the Main Breakwater. From other areas along the beach, there will be unobstructed views of the Project.
LSU3	Aberavon Sands	Moderate	Unobstructed views of the Project from the coastal edge, beach and from locations within Swansea Bay.
LUS4	Swansea Port and Crymlyn Burrows	High/ Moderate	Views of the Project from the coastal edge adjacent to Crymlyn Burrows will be at close distance and unobstructed. From within Swansea Port, views will be screened by the existing concrete 2m seawall that runs along the road parallel to Queen's Dock. Views from within Swansea Bay will be unobstructed, although views will be back-clothed against the docks, the residential area of St. Thomas and Port Tennant, plus the slopes of Kilvey Hill.
LUS5	Swansea Bay	Outstanding/ High	Unobstructed views from the coastal edge, the beach and from locations on the water. Views from within the coastal strip will be more restricted due to built form and vegetation.
LUS6	Gower Coast	Outstanding	The ZTV indicates that views of the Project will be restricted to locations within Swansea Bay and to the south of Mumbles Head.
Landscape Character Area		Landscape Value	
LCA A: Dunes			
A1	Margam and Kenfig Burrows	Outstanding	Unobstructed, open views particularly from land adjacent to the coast. From other locations further from the coast, views likely to be restricted by undulating dune system. Large expanse of Swansea Bay and infrastructure of Port Talbot steel works key features of views.
LCA B: Hillside Scarp & Slopes			
B1	North of Clydach	Moderate/ Low	Views of the Project seawalls restricted to elevated eastern parts of the LCA. A combination of topography, woodland and tree belts screen longer distance views from other locations. Views dominated by agricultural fields, although overhead power lines are also evident.
B2	Mynydd Drumau	Moderate	The woodland belt to the lower eastern facing slopes is a visually prominent feature and restricts views across the surrounding landscape. Open, long distance views are restricted to central and southern areas within elevated locations.

Tidal Lagoon Swansea Bay plc

B3	Margam and Mynydd Dinas	High/Moderate	An area that is significantly influenced by the adjacent motorway. Views across the surrounding area restricted by dense woodland.
LCA C: Intertidal and Wetlands			
C1	Llanrhidian Marsh	Outstanding/High	ZTV indicates that there will be no views of the Project seawalls from within this character area.
C2	Crymlyn Bog	High	Although located adjacent to the urban area of Swansea, the rural landscape is visually dominant, with views to the upland areas to the north. Overhead power lines however are a notable feature. The Project seawalls may be visible from southern sections of the LCA, although views may be filtered by scattered mature trees that are located throughout the area.
LCA D: Mosaic Lowlands			
D1	Clyne Valley Country Park	High	The mature deciduous, ornamental woodland is the key visual influence within the LCA and also restricts longer distance views out across the surrounding landscape, including views towards the Project seawalls. View of Swansea Bay and the Project are available from southern areas of Clyne Gardens.
D2	Three Crosses	Moderate	Rolling agricultural fields visually dominate this LCA. The ZTV indicates that views of Project seawalls are predominantly restricted to locations to the SE of the settlement of Three Crosses. Views are predicted to be restricted by mature woodland blocks that are located within this area.
D3	Rhyd-y-Pandy	Moderate	The predominant visual feature within this LCA are the rolling agricultural landscape. Views of the Project seawalls may be possible from the more exposed upland areas to the north, typically from Banc-Maestir-mawr. However, any views of the Project seawalls would be seen in conjunction with the overhead power lines that are a visual feature within this part of the LCA.
D4	Afon Tawe	Moderate	A visually complex landscape due to the number of both natural and man-made elements, including agricultural fields, mature woodland belts and overhead power lines. The ZTV indicates that views of the Project seawalls will be restricted to locations to the SE of Glais. From these locations distance views may be available of the Project seawalls, although views will be filtered hedgerows and mature trees.
D5	Gelli-Bwch	Moderate/ Low	The LCA is visually dominated by the floodplain of the River Neath and broadleaved woodland and improved and improved grassland. The M4 divides these two areas and is a main visual detractor, as are the remnants of industrial activity that are scattered throughout the LCA. Views of the Project seawalls are likely to be prominent from areas adjacent to Baglan Bay.
D6	Coed Hirwaun	Outstanding/High	A landscape that contains many attractive visual elements, most notably within Margam Park. This landscape contains many mature trees that will screen views of the Project seawalls, from lower lying areas. From the more elevated areas within the park to the east, views of the lagoon seawalls may be available. To the south of the park, the area is dominated by low lying gently rolling farmland. Glimpsed views of the Project seawalls may be possible from this part of the LCA, however, the Port Talbot steel works is a notable visual detractor within existing views.
LCA E: Open Lowlands			
E1	Gower Farmlands	Outstanding	The ZTV indicates that views of the Project seawalls will be limited to the eastern fringes of the LCA's boundary, including locations within Clyne Golf Course. From all other areas within the LCA visibility of the Project seawalls will be restricted by local topography.
E2	Margam Moor and Eglwys Nynydd Reservoir	Moderate/ Low	A low lying landscape, that is visually dominated by Eglwys Nynydd Reservoir. Views of the Project seawalls are predicted to be screened by local topography and the adjacent steel works.

Tidal Lagoon Swansea Bay plc

LCA F: Uplands			
F1	Upland Clydach River Valley	Moderate	An area that is characterised by the well wooded valley slopes, which also restricts long distance views over the surrounding landscape. Within the more elevated areas of the LCA, longer distance views towards the Project seawalls are likely to be restricted by the overgrown hedgerows that are a feature of the landscape.
F2	Clydach Valley	Moderate/ Low	Visibility within the valleys will restrict views towards the Project seawalls. Views may be possible from the more open, upland areas to the south of Mynydd Marchwell. Views of the Project seawalls would be distant from these locations. While they would be predominantly rural in character they would be viewed in conjunction with over head power lines, a notable visual detractor within the landscape.
F3	Vale of Neath	High / Moderate	The ZTV indicates that visibility of the Project seawalls will predominantly be restricted to locations within and adjacent to The Gnoll Country Park. This country park is the key visual attraction within this LCA, although views from within in and the surrounding areas are likely to be glimpsed views only due to the hedgerows and mature trees that are a feature within the landscape.
F4	Mynydd y Gaer	Moderate	An area dominated by upland areas that are used for grazing and commercial forestry. The ZTV indicates that the Project seawalls will be visible from locations within the northern and southern parts of the LCA. From these locations it is likely to be viewed in conjunction with many manmade features, including the urban elements that make up Swansea and Port Talbot.
F5	Mynydd Margam, Mynydd Emroch and Mynydd Penhydd	High	Coniferous woodland blocks dominate the landscape within this LCA. Although the ZTV indicates that there will be isolated locations where the Project seawalls may be visible, in reality views are predicted to be screened by the forestry blocks.
LCA G: Urban			
G1	Swansea	Moderate	The ZTV indicates that views of the Project seawalls may be available from southern and central parts of the City. Due to the screening effects of built form, which dominates the LCA, longer distance views towards Swansea Bay and the Project are likely to be restricted within these areas and from much of the City. However, clear views of the Project seawalls will be possible from locations along Mumbles Road and also from areas within the more elevated residential districts, including Townhill, Mayhill and St. Thomas, plus the open land on Kilvey Hill.
G2	Coed Darcy	Moderate/ Low	An area that is currently undergoing a significant change as its moves from a post industrial landscape to one that will be dominated by mixed use commercial buildings and residential properties. From central areas of the LCA there may be glimpsed views of the Project seawalls, although they would be viewed in conjunction with manmade elements, including overhead power lines.
G3	Neath	Moderate	The ZTV indicates that the visibility of the Project seawalls will mainly be restricted areas around Neath Abbey. However, built form and mature vegetation is likely to screen views from this area. Therefore views of the Project seawalls from within this LCA will be limited.
G4	Cwmafan	Low	ZTV indicates that there will be no views of the Project seawalls from within this character area.
G5	Port Talbot and Margam	Low	An area that is visually dominated by the large housing estate of Sandfields and the more traditional terraced housing that abuts the M4 motorway. This development has created a tight urban grain and although the ZTV indicates that the Project seawalls will be visible from the whole of this LCA, in reality views are likely to be restricted to Aberavon seafront. From this location there will be clear, unobstructed views across Swansea Bay, including the Project seawalls.

Tidal Lagoon Swansea Bay plc

G6	The Mumbles	Outstanding/ High	From the elevated residential areas within the LCA, the Project seawalls are predicted to be screened from view by built form. It is predicted that views will be available from Mumbles Hill, to the south and also from Mumbles Road. From these locations views of the Project seawalls will be largely unobstructed.
G7	Gorseinon and Gowerdon	Low	ZTV indicates that there will be no views of the Project seawalls from within this character area.
G8	Pontardawe	Low	ZTV indicates that there will be no views of the Project seawalls from within this character area.
G9	SA1	Moderate/ Low	The ZTV indicates that the Project seawalls will be visible from all areas of the LCA. However existing industrial units and other infrastructure within the adjoining docks is predicted to screen views. Views of the Project seawalls may however be available from the upper floors of existing and proposed commercial, leisure and residential blocks.
LCA H: Industrial			
H1	Swansea Port	Low	Located immediately adjacent to the Project seawalls, views would be screened by the existing concrete clad seawall that divide the docks from Swansea Bay. As the majority of this wall is to be removed as part of the Project, then it is predicted that some views of the Project seawalls would be available from within the LCA, including areas surrounding Queen's Dock.
H2	Swansea Gate Business Park	Low	An area dominated by factory and industrial buildings. Views of the Project seawalls from areas to the north of Fabian Way are predicted to be screened by existing vegetation. The land to the south is currently being developed for the SUBC. Once constructed, there will be close range, unobstructed views of the Project seawalls from elevated buildings, with lower views being potentially screened by existing sand dunes.
H3	Baglan Bay	Moderate/Low	The ZTV indicates that the Project seawalls will be visible from all locations within the LCA. However, existing sand dunes that divide the former industrial site from Aberavon Sands is predicted to screen views from this area.
H4	Port Talbot Steel Works	Low	An area dominated by the infrastructure associated with the steel works, which will screen views of the Project seawalls from many areas within the LCA. Views of the Project seawalls may be possible from locations within the LCA that abut Swansea Bay.



13.6 Mitigation measures

- 13.6.0.1 During the course of the EIA, the layout of the proposed Project has changed as part of an iterative assessment and design process. Mitigation measures used to avoid or reduce wider impacts have been considered as part of this process (refer to Chapter 3 - Site Selection and Options Appraisal). The Masterplan captures one aspect of this iterative process and links the main focal areas of the Lagoon and the seawalls of the Lagoon to the land while capturing the existing waterside environments associated with Swansea Port, the SUBC and existing brownfield land. Overall the Masterplan encompasses O&M requirements associated with the operation of the energy generation facility and related recreational opportunities.
- 13.6.0.2 However, other than the Masterplan, due to the scale and nature of the Project, mitigation measures to reduce the effects on seascape/landscape character and visual amenity are limited. Notwithstanding this, the lighting design along the Lagoon seawalls and also to the onshore and offshore buildings have been carefully considered and embedded into the design in order to minimise effects at night.

13.7 Potential effects – construction

13.7.1 Introduction

- 13.7.1.1 This section looks at the effects on both landscape character and the visual effects during the temporary construction phase of the Project. Construction of the Project is split into four main phases. It is planned to commence in spring 2015 and extend to the beginning of 2019, with the first power generated by the Project expected to be exported during the summer of 2018. A more detailed description of the construction methods is provided in Chapter 4 of the ES.
- 13.7.1.2 The assessment of effects on seascape and landscape character during the construction phase of the Project includes the RSU, LSU and LCAs where effects are predicted to occur. Where no effects are predicted to occur to either a RSU, LSU or LCA, then these have been excluded from the assessment.

Potential effects on seascape & landscape character

Potential effects - Phase 1

- 13.7.1.3 Phase 1 of the works undertaken in the first year of construction will include site mobilisation, start of the western seawall, construction of the temporary cofferdam and commencement of construction of the eastern seawall. As discussed in Chapter 4, two potential seawall construction methods are described for the Lagoon seawall, the use of Geotubes® to form the inner wall structure or more conventional gravel mounds/quarry run. In terms of this Chapter, neither technique will materially alter the following assessment and the former is referred to for ease of reference.
- 13.7.1.4 The landside construction support site is assumed to include: temporary offices, access control, car parking and plant yard, plus a marine access and fabrication yard, batching plant and rock stockpile area. A number of construction compound areas have been identified in Chapter 4 Project Description, and the final selection will be subject to further discussion with landowners nearer the time. Notwithstanding this, they will be



located within or adjacent to the Port of Swansea and access for the construction traffic will be off Fabian Way.

- 13.7.1.5 To accommodate these facilities, work may include the clearance of vegetation, stripping of topsoil and removal of any fences. Direct effects on landscape character during this part of the works will be confined to within *LCA H1 - Swansea Port* and will be short term in duration and reversible.
- 13.7.1.6 The Docks already contain storage compounds, offices and other similar infrastructure to that which is required for the construction site facilities. Development-type operations are therefore an established element of the area's character. There may be a discernible increase in the presence of vehicular movement within the Docks and in particular along the construction haul road to the front of Queen's Dock until the new road proposed for the Project is constructed. However, it is predicted that there will not be a fundamental change in character within *LCA H1 - Swansea Port*. The landscape value and susceptibility to change of landscape receptors is considered to be low. Sensitivity of seascape and landscape character is considered to be low and magnitude of effects low.
- 13.7.1.7 On balance, effects on landscape character are predicted to be minor and not significant under EIA Regulations. Effects are considered to be neutral, as there will be no material change to the character of the landscape within this part of the study area in relation to this work.
- 13.7.1.8 The most significant effects on seascape and landscape character during the four phases of construction works will be as a result of activity associated with the construction of the Lagoon seawalls. It is proposed that work during Phase 1 will involve the construction of the western seawall from landfall at the Port of Swansea to the temporary cofferdam location. This will be followed by the construction of a 2.3km length of the eastern seawall. Construction of the seawalls will involve the removal of sediment from the seabed by a Cutter Suction Dredger which will then be pumped to another vessel in order that the Geotubes® can be filled and layered to form the seawalls. The placement of rock armour will then follow.
- 13.7.1.9 Once the rock armour has been placed on the seawall an 8m wide haul road will be constructed along the top of the western seawall. This will extend from the shore to the construction area for the turbine and sluice gate housing structure.
- 13.7.1.10 It is proposed that Geotubes® will not be used for the eastern arm of the seawall at the location where it crosses the beach. The material used to construct this section of the seawall will, therefore, be either pumped and then shaped using a back hoe dredger or a land based excavator on top of the Lagoon seawall.
- 13.7.1.11 Effects during this first phase of the works will be direct, short term and reversible within *LSU4 Swansea Port and Crymlyn Burrows*. The principal effect on seascape character during Phase 1 will be the construction of the Lagoon seawalls, including the movement of the vessels and other sea and land based machinery used for their construction. The laying of the Geotubes® will take place when the water is at a suitable level for the vessels and at high tide only, where the upper layers are predicted to be visible. However, the full vertical extent of the Geotubes® to both the eastern and western Lagoon seawalls will be visible within the intertidal area of the beach at low



tide. Construction activity associated with the seawalls will be a visible feature within this LSU. However, development is an existing element of this section of the coastline's character, which includes Swansea Port and the SUBC. Construction activity during this phase of the works will be seen against a backdrop of this existing urban development. Movement of vessels, associated with the construction of the Project, within Swansea Bay will be prominent. However they will be seen in conjunction with other vessels that are not associated with the Project, and which pass through the LSU. On average 14 vessels pass through the development area each day, including a number of larger vessels (maximum length 292m) that access the Swansea Port and the River Neath. Therefore while construction activity and most notably the movement of vessels may be prominent, it is not predicted to change the overall character of the LSU. The value of the seascape character is high/moderate, susceptibility of change on seascape and landscape receptors is considered to be moderate, sensitivity of seascape and landscape character is considered to be moderate and magnitude of effects moderate.

- 13.7.1.12 On balance, effects on landscape character are predicted to be moderate and not significant under EIA Regulations. Effects on seascape character are considered to be neutral, as the industrial/maritime character of this LSU will remain during the construction phase of the Project.

- 13.7.1.13 Indirect impacts will potentially occur over a wider area as it is predicted that the movement of the vessels and associated works will be possible within Swansea Bay from surrounding areas. This includes locations within *G1 - Swansea*, most notably along the promenade and elevated locations to the north; *G5 - Port Talbot & Margam*; *G6 - The Mumbles*; and *H3 - Baglan Bay*. As noted above, commercial and leisure crafts are an existing defining character of the seascape and therefore the introduction of vessels for the construction of the seawalls will not introduce a new or conflicting element to Swansea Bay's existing character. Land based operations will predominantly be within an area whose character is already defined by development/industry and, therefore, it is predicted that there will be no significant change in character to surrounding LCAs as a result. The value attributed to the character of the landscape is predicted to range from outstanding to moderate/low and susceptibility of change on seascape and landscape receptors is considered to be high, sensitivity of seascape and landscape character is considered to be high-moderate and magnitude of effects low.

- 13.7.1.14 On balance, effects on landscape character are predicted to be moderate although not significant under EIA Regulations. Effects are considered to be neutral, as there will be no material change to the character of the seascape or landscape during this phase of the construction works.

- 13.7.1.15 In order to construct the turbine and sluice gate housing structure, a temporary cofferdam is required. Two potential options are currently being considered: (i) sediment bund with Geotubes® and rock armour; (ii) twin wall sheet pile cofferdam. This will be constructed at the same time as the western arm of the permanent Lagoon seawall and is predicted to approximately seven months to construct. Whichever option is used, it will require seabed levels to be reduced and therefore the removal of sediment through the use of a cutter section dredger.

- 13.7.1.16 Of the two options proposed, the twin wall sheet pile cofferdam is predicted to have the greatest effects on landscape character. This is due to their size and the machinery needed to construct it, which will include a crawler crane on a jack-up barge. This will



have direct effects on the seabed. However, as the majority of the structure will be below water, indirect effects are predicted to be more significant during this stage of construction.

- 13.7.1.17 The crane located on the jack-up barge used for the construction of the cofferdam is likely to be visible from locations within and surrounding Swansea Bay and also from elevated locations within Swansea. The Mumbles. From locations within the Bay itself it is likely to be a visible feature of its character; however, from onshore locations it is not predicted to be a defining feature, due to its distance from the shore. The value of the seascape/landscape character is considered to be high/moderate and susceptibility of change on seascape and landscape receptors is considered to be high. Therefore sensitivity of seascape and landscape character is considered to be high-moderate and magnitude of effects low.
- 13.7.1.18 On balance effects on landscape character are predicted to be moderate/minor and not significant under EIA Regulations. Effects are considered to be neutral, as there will be no material change to the character of the seascape or landscape character during this phase of the construction works.

Potential effects - Phase 2

- 13.7.1.19 Phase 2 of the construction works includes continued work on the lagoon seawalls (approx 3.1km) and the construction of the turbine and sluice gate housing structure within the temporary cofferdam.
- 13.7.1.20 Once the temporary cofferdam is complete, the seawater within it will be pumped out to allow a dry area for construction works. Access ramps, crane rails, hardstanding areas and welfare and offices will be set up within the cofferdam to allow works to commence. These elements will generally be screened from the surrounding area.
- 13.7.1.21 The temporary cofferdam structure (sheet piled or Geotubes®/rock armour) around the perimeter of the turbine and sluice gate housing structure will have direct effects on the character of the seascape. The cofferdam will be a visible feature within Swansea Bay, especially from locations along the promenade. Visual effects will be most significant at low tide when approximately two-thirds of the vertical face of the cofferdam will be visible.
- 13.7.1.22 The value of the seascape character is considered to be outstanding/high and the susceptibility of change on seascape and landscape receptors is considered to be high. Therefore sensitivity of seascape and landscape character is considered to be high and magnitude of effects low/negligible.
- 13.7.1.23 On balance, effects on landscape character are predicted to be moderate-minor and not significant under EIA Regulations. Effects are considered to be neutral, as there will be no material change to the character of the seascape or landscape during the construction of the turbine and sluice gate housing structure.

Potential Effects - phase 3

- 13.7.1.24 Phase 3 of the construction works will include the removal of the temporary cofferdam around the turbine and sluice gate housing structure and the completion of the eastern seawall, at a length of c.1.5km. This phase of works will take place once the sluice gate



structure is complete, all turbines and sluice gates are installed and dry commissioning finished. Effects on seascape and landscape character during the construction of the seawall for Phase 2 and Phase 3 of the works will be similar to that of the western seawall during Phase 1. However, the bottom layer of Geotubes® will not be exposed, as this section of the seawall lies beyond the MLW level and, while effects may be slightly reduced, they are predicted to remain moderate and not significant for the duration of the works.

Potential effects - Phase 4

- 13.7.1.25 Phase 4 of the works will include the reinforced crest along the Lagoon seawalls and the final placing of the rock armour. This work will commence at the sluice gate structure and progress along the western and eastern seawalls towards the shore. During this phase of works the offshore visitors centre will also be constructed and the onshore slipway and O&M, boating centre/visitor facilities completed.
- 13.7.1.26 Construction of the Offshore Building is predicted to have the most significant effect on seascape and landscape character during this phase of the works, as this item of work is predicted to last the longest, and the movement of cranes will be viewed against open skyline from landward areas, although as part of the wider character of Swansea Bay. In addition, construction traffic using the haul road along the western arm of the Lagoon seawall will be a notable feature from close distance locations i.e. near to Swansea Civic Centre. The seascape/landscape character is predicted to be of high/moderate value and the susceptibility of change on seascape and landscape receptors is considered to be high. Therefore the sensitivity of seascape and landscape character is considered to be high/moderate and magnitude of effects moderate. On balance, the significance of effects on landscape character are predicted to be moderate and not significant for the purposes of the EIA Regulations. Effects are considered to be neutral, as there will be no material change to the character of the seascape or landscape during this phase of the construction works.
- 13.7.1.27 It is proposed for the Western Landfall Building to be completed during Phase 4 of the works. It will be 3 storeys high, with a pitched roof and finished with external timber cladding with glazing to the oyster hatchery and laboratory section of the building. Effects within *LCA H1 - Swansea Port* will be direct, short term and reversible and will require the stripping of existing vegetation. Direct, short term and reversible effects will also occur within *LSU4 - Swansea Port and Crymlyn Burrows*, as work within the intertidal area of the beach will take place during the construction of the Western Landfall Building and associated slipway and hardstanding area for the boats. Effects of the construction of this building are not predicted to be as great as for the Offshore Building, due to its location set within the context of existing port. Construction of the SSSI information point will be viewed in conjunction with the ongoing development of the SUBC. It is therefore predicted that there will be no notable alteration to the surrounding LCAs. From within Swansea Bay, construction activity will be viewed against the backdrop of an urban landscape. The value of the seascape/landscape character is predicted to be of high/moderate to Crymlyn Burrows and low to areas within the Port. Susceptibility of change on seascape and landscape receptors is considered to be high. Therefore, sensitivity of seascape and landscape character is considered to be moderate, magnitude of effects low and significance of effects on landscape character, moderate/minor and not significant. Effects are considered to be neutral, as there will



be no material change to the character of the seascape or landscape during this phase of the construction works.

- 13.7.1.28 The final phase of the works will see the construction of the Landward Urban Park and the Landward Ecological Park.

13.7.2 Potential effects on visual amenity

Potential effects - Phase 1

- 13.7.2.1 Works during the setting up landside construction support site will be viewed in conjunction with existing operations within the docks, which will reduce visual effects. Such works will, in any event, be short term in duration. There may be a perceptible increase in the movement of vehicles along the construction haul road to the front of Queen's Dock, especially at night when headlights may be visible. The landscape character is predicted to be of low value and the susceptibility of visual receptors to change is also considered to be low. Therefore, the sensitivity of receptors is low and magnitude of effect is considered to be low.
- 13.7.2.2 On balance, effects on visual amenity during the setting of the site facilities are predicted to be minor and not significant under EIA Regulations. Effects are considered to be neutral, as this phase of the construction work will be incorporated into the view without changing its overall nature.
- 13.7.2.3 The most significant effects on visual amenity are likely to result during the construction of the Lagoon seawalls. During the first phase of construction, the western seawall will be a visible feature, including from locations within Swansea Bay, the eastern areas of Swansea Beach, the Civic Centre and to the south of Swansea Marina. From these areas the movement of the Cutter Section Dredger will be evident, as will the laying and filling of the Geotubes®, plus the placing of the rock armour, although any movement of the vessels will be viewed in conjunction with the many existing vessels within Swansea Bay. The movement of vehicles along the proposed construction haul road may also be a noticeable visual feature, especially at night when headlights may draw attention to the construction works. The stockpile of material located within the lagoon, adjacent to the proposed Western Landfall Building site, and within the intertidal area, will also be visible, especially at low tide. Whilst effects will reduce with distance, the construction works to this part of the Lagoon seawall will also be visible from more distant locations, including visually sensitive locations within the Mumbles and along Swansea Promenade. From many locations, including from within the Bay itself, The Mumbles and parts of Swansea Promenade, the construction work will be viewed against a backdrop of existing development and, therefore, it will not feature prominently in the view.
- 13.7.2.4 During this first phase of the works there will be short term effects on visual amenity to areas in front of the SUBC as a result of both the machinery used to construct the section of the eastern Lagoon seawall that lies within the adjacent intertidal area of the beach, and the construction vehicles passing in front of the campus along the haul road. Effects may be mitigated, by the early implementation of the proposed access track, sand dunes and coastal grassland area adjacent to the SUBC, that will partially screen views of machinery and vehicles on the construction haul road. Effects will be further mitigated by setting the level of the construction haul road below the level of the final



access road and also by restricting any lighting within this area during the construction period.

- 13.7.2.5 The seascape/landscape character is of high/moderate value and susceptibility of visual receptors to change is considered to be high and the sensitivity of receptors high. The magnitude of effects for this part of the construction works is considered to be high/moderate.
- 13.7.2.6 On balance, the significance of effects on visual amenity during this phase of the construction works are predicted to be major/moderate and significant from locations immediately adjacent to the Project site boundary and not significant from other, more distant, locations, including The Mumbles. Effects are predicted to be adverse from within and immediately adjacent to the Project site boundary and neutral from all other areas.
- 13.7.2.7 The temporary cofferdam around the turbine and sluice gate housing structure will also be constructed during the first phase of works. As noted within paragraph 13.7.1.16, a twin wall sheet pile cofferdam is predicted to have a greater visual effect than the sediment bund constructed with Geotubes®. The most visible feature during this part of the works will be the jack-up barge, which will be viewed as an additional, vertical structure within Swansea Bay for approximately 7 months. The jack-up barge, plus the movement of the crawler crane used for the installation of the sheet piles to the cofferdam, are predicted to be visible from a significant proportion of Swansea Bay, plus areas within Swansea, including the promenade and residential areas of Townhill and St. Thomas, The Mumbles and from Aberavon Sand to the east. From these locations it will be a recognisable, although due to distance not a prominent new element within views. From more distant locations, including Margam and Kenfig Sands, the jack-up crane, due to its distance, is likely to be viewed as a component of the wider view. The seascape/landscape character is predicted to be of high/moderate value and the susceptibility of visual receptors to change high. Therefore the sensitivity of receptors is considered to be high/moderate. The magnitude of effects for this part of the construction works is considered to be moderate/low.
- 13.7.2.8 On balance, effects on visual amenity during this phase of the construction works are predicted to be moderate and not significant under EIA Regulations. Effects are considered to be neutral, as the construction work will be incorporated into the view without changing its overall nature.

Potential effects - Phase 2

- 13.7.2.9 Phase two of the construction works will include the construction of the turbine and sluice gate housing structure within the temporary cofferdam, plus the further work on the eastern seawall. Work within the cofferdam will largely be screened by the cofferdam walls, although the light columns that are proposed to illuminate this working area will be a visible feature at night, as it will be viewed in isolation to other existing light sources. Once the turbine and sluice gate housing structure has been constructed, the wave wall and Offshore Building will then be constructed. This operation is likely to be more visually noticeable than the construction of the sluice gate structure as it will be constructed on top of the housing. Effects will be greatest from within Swansea Bay, as operations will be viewed at close distance. It is predicted that there will be a reduction in effects from landward locations. However, from Swansea promenade, The



Mumbles, areas within Townhill and St. Thomas, plus Aberavon Sand it will be a notable feature of views and from many locations, as operations will be viewed against open water.

- 13.7.2.10 An additional 3.1km of the eastern seawall will be constructed during this phase of the works. The existing western arm of the Lagoon seawall is predicted to screen views of this work from locations to the west, which will include views from within the inner areas of Swansea Bay, plus areas along Swansea Promenade and lower lying areas within the Mumbles. However, from elevated locations on Mumbles Hill, St. Thomas, Townhill and Aberavon Sands, the Cutter Section Dredger used to place and fill the Geotubes® and the placement of the rock armour will be a possible, although short term, feature of views.
- 13.7.2.11 The movement of vehicles used during the construction of the turbine and sluice gate housing structure including the transportation of the turbines, will be an additional feature of views, especially at night. Although movement of vehicles will be predominantly viewed against a backdrop of existing lighting to urban areas adjacent to Swansea Bay.
- 13.7.2.12 During this phase of the works, the seascape/landscape character is predicted to be of outstanding/high value, susceptibility of visual receptors to change is considered to be high and the sensitivity of receptors high. The magnitude of effects for this part of the construction works is considered to be high/moderate. On balance, effects on visual amenity are predicted to be major-moderate and adverse during the construction phase of the works.

Potential effects - Phase 3

- 13.7.2.13 Phase 3 will include the removal of the temporary cofferdam around the turbine and sluice gate housing structure, and the completion of the eastern arm to the turbine and sluice gate housing structure. There are currently three methods available for the removal of the temporary cofferdam, and the option selected will depend on which option is chosen to construct it. It is assumed that a twin wall sheet pile cofferdam will have the greatest visual effects, as this will require the continued use of the jack-up barge and the crawler crane. Removal of the cofferdam would be carried out by reversing its construction method and therefore effects on visual amenity will be similar to its construction operations.
- 13.7.2.14 It is proposed that any sediment, stone or rock armour removed from the temporary cofferdam will be used in the construction of the final 1.5km of the eastern seawall. This may reduce visual effects during this phase of the works, as less vehicles will be required to deliver materials. From Aberavon Sands, the Cutter Section Dredger used to place and fill the Geotubes® and the placement of the rock armour will be visible feature, although any movement will be viewed in conjunction with existing vessels, particularly those entering the dredged channels of to the River Neath and River Tawe. Operations will be viewed against a back drop of open water and Mumbles Head depending on the receptor's location within this area. From locations in the western parts of the study area, construction operations will be screened from low lying areas by the western arm of the Lagoon seawall, although the movement of the Cutter Section Dredger will be visible. From elevated locations, including Mumbles Hill, the work may be evident but viewed as a component of the wider view. However, from closer distance locations,

including Townhill and St. Thomas, construction works are predicted to be more noticeable, as works will be viewed against open sea, although in conjunction with existing vessels within Swansea Bay. The seascape/landscape character is of high/moderate value, susceptibility of visual receptors to change is considered to be high and the sensitivity of receptors high/moderate. The magnitude of effects for this phase of the construction works is considered to be moderate/low.

- 13.7.2.15 On balance, the significance of effects on visual amenity for this phase of the construction works are predicted to be moderate and not significant under EIA Regulations. Effects are considered to be neutral, as the construction work will be incorporated into the view without changing its overall nature.
- 13.7.2.16 During Phase 1 - 3 of the construction works, the dredging of sand used to fill the Geotubes® and bund voids during construction of the Lagoon seawalls may cause an increase in the amount of suspended sediment within the water. This may result in noticeable, although temporary, dark patches of water from locations within a radius of approximately 200m of dredging activities. However any change will depend on the tidal/sea state, metrological conditions and the background level of suspended sediment in the Bay at the time of dredging. Beyond 200m, it is anticipated that the sediment will be lower in the water and largely indiscernible from the natural appearance of the water.
- 13.7.2.17 Dredging of the finer material around the turbine and sluice gate housing structure may also result in an increase in suspended sediment within the water and, therefore, resulting in darker patches of water within the Bay. Changes in water colour may be visible up to 2km from dredging activities. However, this will also depend on the tidal state, metrological conditions and the background level of suspended sediment in the Bay at the time of dredging.
- 13.7.2.18 Therefore, changes in the colour of the water may be noticeable during the construction of the Lagoon seawalls, from the locations on the promenade, extending east from the Civic Centre to the Maritime Quarter, and from the SUBC and also from Crymlyn Burrows. Changes in the colour of the water during the construction of the turbine and sluice housing structure is not predicted to be perceptible from these locations due to the distance from which any dredging activity will be seen and being viewed at angle that is close to sea level. From more elevated locations within the study area, including Townhill, Mayhill and St. Thomas, changes in the colour of the water may be possible, but, due to distance, they are not predicted to be prominent. The seascape/landscape character is predicted to be of high/moderate value, susceptibility of visual receptors to change is considered to be high and the sensitivity of receptors high. The magnitude of effects is considered to be moderate/low.
- 13.7.2.19 On balance, the significance of effects on visual amenity due to any resulting changes in the colour of the water within the Bay as a result of dredging activities is predicted to be short term, moderate and not significant under EIA Regulations. Effects are considered to be neutral, as overall it is predicted that there will not be a significant change in the colour of the water when viewed in the wider context of Swansea Bay.

**Potential Effects - Phase 4**

- 13.7.2.20 The key visual effect during the fourth and final phase is predicted to be the construction of the Offshore Building. During this work, the cranes and movement of vehicles is predicted to be the most visible element, especially from locations within Swansea Bay and from landward locations including Townhill and St. Thomas. From the landward locations, construction work to the Offshore Building will be viewed against open water, as opposed to existing built form, which will be the case from locations within Bay. Although at a distance of approximately 4km from St. Thomas and 5.5km from Townhill, views of the building can be considered to be medium to long distance. The seascape/landscape character is predicted to be of high/moderate value, susceptibility of visual receptors to change is considered to be high/moderate and the sensitivity of receptors high/moderate. The magnitude of effect is considered to be moderate/low.
- 13.7.2.21 On balance, effect on visual amenity during this phase of the construction works is considered to be moderate and not significant under EIA Regulations. Effects are considered to be neutral, as construction work will be incorporated into the wider view of Swansea Bay without changing its overall nature.
- 13.7.2.22 The Western Landfall Building will also be completed during this phase, although any construction work is predicted to be viewed in conjunction with existing built elements within the docks and surrounding areas, thereby reducing effects.
- 13.7.2.23 The construction of the crest wall and construction of onshore slipways will be an evident, although not prominent, feature of views. This work will be shorter in duration than other construction activities described previously, and can be carried out on top of the seawall itself so no specialist vessels will be required.
- 13.7.2.24 Due to the predominantly low level nature of the design, views of the construction of the Landward Ecological Park and Landward Urban Park will be screened by the Lagoon seawalls and restricted to locations within the Lagoon, plus elevated locations within Townhill and St. Thomas. However, from these distant locations any construction work will be a minor element of the wider view. The landscape character is predicted to be of moderate value, susceptibility of visual receptors to change is considered to be high/moderate and the sensitivity of receptors high/moderate. The magnitude of effects is considered to be low.
- 13.7.2.25 On balance, effects on visual amenity for this phase of the construction works are considered to be moderate/minor and not significant under EIA Regulations. Effects are considered to be neutral, as the construction work will be incorporated into the view without changing its overall nature.

Tidal Lagoon Swansea Bay plc

Table 13.18 Summary of potential effects on seascape/landscape character: construction phase

Phase	Construction Activity	Seascape/ Landscape Value	Susceptibility to Change	Sensitivity of Receptors	Magnitude of Effects	Significance of Effects	Beneficial/Neutral/ Adverse
Phase 1	Setting up of landside construction support site	Low	Low	Low	Low	Minor Not Significant	Neutral
	Lagoon Seawall - western seawall and Phase 1 of eastern seawall	High/Moderate	Moderate	Moderate	Moderate	Moderate Significant	Neutral
	Construction of temporary cofferdam	High/Moderate	High	High/Moderate	Low	Moderate/Minor Not Significant	Neutral
Phase 2	Continuation of construction of the eastern seawall and continuation of construction of the eastern seawall	Outstanding/ High	High	High	Low/Negligible	Moderate-Minor Not Significant	Neutral
Phase 3	Removal of temporary cofferdam	High/Moderate	Moderate	Moderate	Moderate	Moderate Not Significant	Neutral
	Completion of the eastern seawall	High/Moderate	Moderate	Moderate	Moderate	Moderate Not Significant	Neutral
Phase 4	Construction of Offshore Building	High/Moderate	High	High/Moderate	Low	Moderate Not Significant	Neutral
	Construction of Crest Wall/Slipways, Western Landfall Building, Landward Ecological Park and Landward Urban Park	High/Moderate Low ¹⁹	High	Moderate	Low	Moderate/Minor Not Significant	Neutral

¹⁹ High/Moderate within Crymlyn Burrows. Low within Swansea Port.

Table 13.19 Summary of potential effects on visual amenity: construction phase

Phase	Construction Activity	Seascape/ Landscape Value	Susceptibility to Change	Sensitivity of Receptors	Magnitude of Visual Effects	Significance of Visual Effects	Beneficial/Neutral/ Adverse
Phase 1	Setting up of landside construction support site	Low	Low	Low	Low	Minor Not Significant	Neutral
	Lagoon Seawall – western arm and Phase 1 of eastern seawall	High/Moderate	High	High	High/Moderate	Major/Moderate Significant ²⁰	Adverse/Neutral
	Construction of cofferdam	High/Moderate	High	High/Moderate	Moderate/Low	Moderate Not Significant	Neutral
	Dredging Activities within Swansea Bay	High/Moderate	High	High	Moderate/Low	Moderate Not Significant	Neutral
Phase 2	Construction of turbine and sluice gate housing structure and continuation of construction of the eastern seawall	Outstanding/ High	High	High	High/Moderate	Major/Moderate Significant	Adverse
	Dredging activities within Swansea Bay	High/Moderate	High	High	Moderate/Low	Moderate Not Significant	Neutral
Phase 3	Removal of cofferdam	High/Moderate	High	High/Moderate	Moderate/Low	Moderate Not Significant	Neutral
	Completion of the eastern seawall	High/Moderate	High	High/Moderate	Moderate/Low	Moderate Not Significant	Neutral
	Dredging activities within Swansea Bay	High/Moderate	High	High	Moderate/Low	Moderate Not Significant	Neutral
Phase 4	Construction of Offshore Building	High/Moderate	High/Moderate	High/Moderate	Moderate/Low	Moderate Not Significant	Neutral
	Construction of crest wall/slipways Western Landfall Building, Landward Ecological Park and Landward Urban Park	Moderate	High/Moderate	High/Moderate	Low	Moderate/Minor Not Significant	Neutral

²⁰ Significant, adverse effects from locations immediately adjacent to the Project site boundary and Not Significant, neutral from all other locations.



13.8 Potential effects – Operation

13.8.0.1 This section looks at both the effects on landscape character and the visual effects during the operational phase of the Project. It is anticipated that the operational life of the lagoon would last for 120 years.

13.8.1 Potential effects on seascape & landscape character

13.8.1.1 Effects on seascape and landscape character as a result of the Project will predominantly occur from locations within Swansea Bay and from locations adjacent to the coastline, including the following RSUs, LSUs and LCAs.

RSU1: Sker Point to Mumbles

Susceptibility of Seascape Receptors to Change: Moderate

13.8.1.2 A seascape that provides open views from the opposing headlands across Swansea Bay and also out towards the Bristol Channel from locations from the coastal strip, edge and from the water. The seascape has been significantly influenced by man-made features which define the coastal strip and edge, and reduce the condition and quality, especially central parts of the RSU.

Seascape Sensitivity: High - Moderate

13.8.1.3 Seascape value is considered to be high/ moderate. A seascape that is not considered to be tranquil due to the varying elements that form its character and the number of receptors within it. However, it is considered to be a valued seascape, particularly within western parts, including The Mumbles and to the east, including Kenfig Sands and Burrows. The mix of uses along the coastline creates a seascape that can be described as rare.

Magnitude of Seascape Effects: High

13.8.1.4 The Project, including all onshore and offshore elements, lies entirely within this Seascape Unit, where direct effects on seascape character will occur. The main change in character will be the introduction of the Lagoon seawalls into the seascape. Seawalls are currently located adjacent to the Lagoon at the entrance to Swansea Port and also at the entrance to the docks of Port Talbot steel works and are an established feature within the seascape. The Lagoon seawalls will be viewed at a similar height above water (typically 3.5m at high tide); however, at approximately 9.5km in length it will be a larger structure in scale than the existing seawalls. In addition, the construction of the Lagoon seawalls, including the Offshore Building to the southern edge of the Lagoon, will introduce built elements to an area of Swansea Bay where none currently exist. The SUBC will also be a notable feature within this RSU once constructed. The Lagoon seawalls will occupy approximately one third of the inner extent of the Bay and from predominantly low lying locations, including Aberavon Sands in the east and Swansea Promenade and The Mumbles in the west, there may be a foreshortening of views across the Bay.

13.8.1.5 Effects on seascape character will be greater at low tide and especially within locations within close proximity of the coastal edge, as the extent of seawall visible within the intertidal area of the beach will increase (maximum height of 8.5m AOD). These structures will be a permanent, long term element within the seascape and will

potentially be viewed from areas along the coastline, extending from Sker Point to Mumbles Head.

- 13.8.1.6 Direct effects on seascape character will occur to the foreshore, where it is enclosed by the Lagoon seawalls. Currently, extending from the eastern breakwater seawall at Swansea Port to the site of the ongoing development of the SUBC, the foreshore is made up of a mix of sand and gravel, along which a bank of rock armour runs. The area is industrial in character, due to the docks and former oil refinery that lie adjacent to it. As outlined in Chapter 4 (Project Description) amendments to this rock armour allow for the construction of the Landward Ecological Park and Landward Urban Park, both of which will change the existing character within the area.
- 13.8.1.7 The Landward Ecological Park, which is located adjacent to the ongoing SUBC development, will consist of a beach and, potentially, a mariculture area. The Landward Urban Park, which will be located adjacent to the existing seawall at Swansea Port, will also include a series of beaches, plus a public promenade. In terms of character, it is predicted that the ecological park will relate to the adjacent Crymlyn Burrows, while the urban park will relate to the existing built form of Swansea. However, both will allow for greater accessibility to this area than is currently possible, which, in conjunction with the SUBC, will create a more active edge to that part of the coastline.
- 13.8.1.8 Pleasure cruisers, yachts and boats used for fishing are all common recreational craft that use Swansea Bay, and are a distinctive feature that assists in forming the character of the seascape. Following construction, the area enclosed by the Lagoon's seawalls will not be accessible to fishing vessels that currently use this area. However, it will be accessible to water based activities including yachting and rowing. Therefore, there will be no fundamental or significant change to this element of the seascape's character or use, as water based activities will continue to be a feature within this part of the bay.
- Significance of Seascape Effects: Major*
- 13.8.1.9 The seascape is considered of high/moderate sensitivity and the magnitude of effects high, as they will be direct.
- 13.8.1.10 On balance, it is considered that effects on landscape character will be major and significant under EIA Regulations. Effects are considered to be beneficial from locations enclosed by the Lagoon's seawalls, due to the improvements to the public realm and leisure facilities the Project will provide. From locations immediately surrounding the Project, effects on seascape character may be adverse as there will be an increased sense of built form within the intertidal zone that will lead to a sense of enclosure and detachment from surrounding areas. From the majority of the RSU, effects are considered to be neutral, as the Project will be seen as a development set within an existing urban context, that will lead to no fundamental change to the character of the seascape.

RSU2: Three Cliffs Bay to Mumbles Head

Susceptibility of Seascape Receptors to Change: High

- 13.8.1.11 This area encompasses a Heritage Coast and a coastal strip lying within the Gower AONB, and is therefore considered to be of high quality. The rock formations, secluded beaches and presence of the sea creates a dramatic coastal edge, with excellent views along it and out across Swansea Bay and the Bristol Channel. Views towards the Project

are predominantly screened from view. From locations within Swansea Bay, the seascape is more open, larger and more simple in character.

Seascape Sensitivity: High

- 13.8.1.12 Seascape value is considered to be outstanding. This is considered an area of high quality due to the dramatic views that are available, predominantly along the cliffs and out to sea from the elevated locations on the Wales Coast Path.

Magnitude of Seascape Effects: Moderate/Low

- 13.8.1.13 There will be no direct effects on the character of this RSU. The ZTV (refer to Figure 13.5, Volume 2) indicates that no elements of the Project will be visible from a significant proportion of its landward extent and from locations along the coastline. To the east of Mumbles Head, the Lagoon seawalls, the turbine and sluice gate housing structure and the Offshore Building will all be visible from the seaward limit boundary. Within this part of the RSU there may be a loss to the open character within the Bay and from the beach and adjacent coastal edge/strip due to the presence of the Project. However, these effects will be over a limited area and from the majority of the RSU the open character of the sea will remain intact.

Significance of Seascape Effects: Moderate/Minor

- 13.8.1.14 The seascape is considered high sensitivity and the magnitude of effects moderate/low as any effects will be restricted to a limited area of the overall RSU.
- 13.8.1.15 On balance, it is considered that effects on landscape character within RSU1 will be moderate/minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, following the construction of the Project, although there may be a slight change in character to limited areas, there will be no fundamental change to the overall existing seascape character.

LSU1: Kenfig Sands

- 13.8.1.16 The Project would be viewed at a distance of between approximately 10 - 15km from this LCA and even at low tide it is predicted that it would be viewed as a shallow, although broad, horizontal element with an open seascape.

Susceptibility of Seascape Receptors to Change: Moderate

- 13.8.1.17 The number of receptors is not predicted to be large due to the restricted accessibility to the foreshore, although this increases the sense of tranquillity. This is an open, large scale seascape in which the simple form of the beach and the sea create an attractive and aesthetically pleasing seascape. There are no manmade features within this LSU, although the adjacent steel works and urban form of Swansea beyond are visible. At a distance of approximately 15km away, the project is not predicted to be prominent.

Seascape Sensitivity: High - Moderate

- 13.8.1.18 Seascape value is considered to be outstanding, due to being partially within an area designated as of Outstanding Historic Interest and susceptibility of landscape receptors to change is moderate. Therefore on balance, landscape sensitivity is considered to be high/moderate.

Magnitude of Seascape Effects: Low

- 13.8.1.19 Effects will be indirect and there will be no physical change to the character of the LSU, although any effects will be long term. It is predicted that the Lagoon seawalls will be visible from within the majority of locations within the LSU, although at a distance of over 10km. The simple linear form of its design will compliment the open, simple character of the beach and the sea, which will assist in absorbing the Project into the seascape.

Significance of Seascape Effects: Moderate/Minor

- 13.8.1.20 The seascape is considered to be of high/moderate sensitivity and the magnitude of effects low. The Project can be integrated into the seascape without changing the fundamental elements that currently define it, as the open character of the sea and the beach will remain following construction of the Project.
- 13.8.1.21 On balance, it is considered that effects on landscape character for LSU1 will be moderate/minor and not significant under the EIA Regulations. Effects are considered to be neutral, as following the construction of the Project there will be no material change to the existing seascape character.

LSU2: Port Talbot Steel Works

- 13.8.1.22 It is predicted that the Project will be visible from the majority of the LSU, including the intertidal areas and within Swansea Bay.

Susceptibility of Seascape Receptors to Change: Low

- 13.8.1.23 Access to the foreshore is restricted and, therefore, the number of receptors will be limited. However, this is a LSU that has been degraded, particularly along the coastal edge and strip through the introduction of the steel works. Man-made elements within the intertidal zone are present, including a section of the Main Breakwater wall to the Tidal Harbour, although they are less common than on the landward side. The breakwater wall extends beyond the intertidal zone and is a prominent feature of the seascape. This is, therefore, considered to be a seascape that is robust to change. The Project will be seen in conjunction with the existing manmade features from both the foreshore and locations within the Bay, as opposed to the open sea.

Seascape Sensitivity: Moderate - Low

- 13.8.1.24 Seascape value is considered to be moderate. Although parts of the coastal edge and strip have been degraded, it has a strong sense of place, creating a unique backdrop to the seascape. Noise from the steel works is predicted to reduce the sense of tranquillity. Therefore, on balance, landscape sensitivity is considered to be moderate/low.

Magnitude of Seascape Effects: Low

- 13.8.1.25 Any physical changes to the character of LSU2 will be indirect and will be as a result of sediment deposition in the vicinity of Crymlyn Burrows, which may, over time, increase the extent of the sand dune system adjacent to the seawall. In addition, there are predicted to be small increases in sedimentation within sections of the Port Talbot Channel. Additional maintenance dredging may be required in this area, but this area is already subject to a dredging regime and so effects associated with the Project are unlikely to be perceptible. The Project itself will be viewed at a distance of approximately 5km at its closest point and will form a notable feature of the inner parts of Swansea Bay from the sea, as views will be unobstructed. The low lying, simple form of the Lagoon seawalls will be viewed against the existing urban form of Swansea and

the open character, when looking towards the Bristol Channel, will remain. Due to the scale and vertical prominence of the steel works, it is likely to remain the defining character of the LSU.

Significance of Seascape Effects: Minor

- 13.8.1.26 The seascape is considered to be of low sensitivity and the magnitude of effects low. There may be a slight change in the character of the seascape, most notably from within the Swansea Bay. However, the effects are not predicted to be at a level where there will be a fundamental change in the seascape character.
- 13.8.1.27 On balance, it is considered that effects on landscape character in LSU2 will be minor and not significant under the EIA Regulations. Effects are considered to be neutral, as following the construction of the Project there will be no material change to the existing seascape character.

LSU3: Aberavon Sands

- 13.8.1.28 It is predicted that the Project will be visible from the majority of the LSU, including the intertidal areas and within Swansea Bay.

Susceptibility of Seascape Receptors to Change: High/Moderate

- 13.8.1.29 There is easy access to the foreshore and there are a high number of receptors within the LSU, predominantly using the beach and along the coastal edge and strip. The coastal strip is typically enclosed in character due to built form, while, in contrast, the coastal edge and foreshore is more open and simple in form and pattern.

Seascape Sensitivity: High - Moderate

- 13.8.1.30 Seascape value is considered to be moderate. The coastal strip is complex in form as it contains many contrasting elements that form its character. This contrasts with the simple, wide expanse of the beach and the sea, which is well maintained, compared to the coastal strip which is slightly degraded. Due to the number of receptors that are attracted to the LSU, it is not considered to be tranquil, except for locations surrounding Baglan Burrows that are more natural in character and less influenced by man.

Magnitude of Seascape Effects: High/Moderate

- 13.8.1.31 Effects will be indirect and any physical changes will be a result of sediment deposition in the vicinity of Crymlyn Burrows, which may, over time, increase the extent of the sand dune system adjacent to the seawall (refer to Chapter 6). The eastern arm of the Lagoon seawalls will be immediately apparent and will result in a greater sense of enclosure, especially within the northern areas of the LSU, including Baglan Burrows. Within these areas there will be a discernible change in character, although the increase in sand along the outer edge of the Lagoon seawall, may, over time, assist in integrating the Project into the surrounding seascape. Within the southern parts of the LSU, any sense of enclosure will diminish due to distance and the broad, open expanse of beach and views across Swansea Bay and the Bristol Channel will remain as a defining element.

Significance of Seascape Effects: Major/Moderate

- 13.8.1.32 The seascape is considered of high/moderate sensitivity and the magnitude of effects high/moderate. From locations within the northern parts of the LSU, including areas adjacent to Baglan Burrows, the Project will be a defining feature extending from the coastal strip into Swansea Bay. Changes in character will be most significant within the intertidal zone, when at low tide the full height (8.5m AOD) of the eastern arm of the

Lagoon seawalls will be visible. From locations further to the south, changes in character will not be as significant, as the Project will be absorbed into the wider seascape.

- 13.8.1.33 On balance, it is considered that effects on landscape character to LSU3 will be major/moderate and significant under the EIA Regulations. Effects are considered to be adverse from locations adjacent to Baglan Burrows, as there will be reduction in the sense of tranquillity and a loss of views across Swansea Beach and to the promenade at The Mumbles, a key defining feature of its character. From other areas, effects are considered to be neutral as there will be no fundamental change in character.

LSU4: Swansea Port

- 13.8.1.34 The Project lies entirely within this LSU and therefore all elements of the Project will be visible.

Susceptibility of Seascape Receptors to Change: High/Moderate

- 13.8.1.35 Areas within the coastal strip and to the coastal edge that form the docks have been significantly influenced by manmade activities. This influence extends into the intertidal area, through the construction of the breakwater walls. The docks and the site of the ongoing SUBC development are not considered to be well maintained, and the number of receptors is limited to due to the restrictive access to the docks and the foreshore. This is considered to be a seascape with a robust susceptibility to change within areas adjacent to the Port.

- 13.8.1.36 Crymlyn Burrows has a simple natural form to its character, from where there are good open views across Swansea Bay and the Bristol Channel, where ships within the Bay and entering the docks are a feature of views. There is minimal maintenance of the dunes, although they are considered to be an attractive feature. Subsequently the susceptibility of seascape receptors to change is considered to be greater in the eastern half of the LSU, around Crymlyn Burrows, than the western half that is dominated by the docks.

Seascape Sensitivity: High - Moderate

- 13.8.1.37 Seascape value is considered to be high/moderate. The LSU is already influenced by manmade activities within the coastal strip, coastal edge, intertidal zone and within the open water, especially to areas within and adjacent to the docks. The quality of the seascape is varied and considered to be greater in areas adjacent to Crymlyn Burrows, where the sense of tranquillity is greater, due to the small numbers of receptors found within this part of the LSU.

Magnitude of Seascape Effects: High

- 13.8.1.38 Effects on the coastal strip, coastal edge, intertidal area and seabed to Swansea Port and the SUBC will be direct. Within this part of the LSU there will be a fundamental change in character, from one that is dominated by industrial/commercial activity to one that is dominated by recreational and leisure use. The introduction of the Landward Urban Park and Landward Ecological Park will result in a more attractive, softer coastal edge. Improved access to these areas will create a more active and vibrant environment. The construction of the Lagoon seawalls will create a sense of enclosure, as views towards the horizon, Aberavon Sands, Swansea Beach and the lower lying areas of The Mumbles will be screened. Activity within the Lagoon, including sailing and rowing, will reinforce the change in character to one of recreational use.

- 13.8.1.39 From Crymlyn Burrows, there will be an increased sense of manmade elements as the seawalls that form the eastern arm of the Lagoon will be a visible feature. This may lead to an increased sense of enclosure, that will be greatest in the western part of the Burrows, extending from the coastal strip to within the intertidal zone. The sand dunes and beach to the adjacent Landward Ecological Park will complement the existing, simple form found within the eastern areas of the LSU. However, the increase in potential visitors may lead to a loss in the tranquillity that is currently experienced in this area.
- 13.8.1.40 From locations to the south of the Lagoon seawalls and within Swansea Bay, there may be a partial change in character. The Lagoon seawalls, turbine and sluice gate housing structure, plus the Offshore Building will increase the proportion and scale of manmade developments that are present within this part of Swansea Bay. However, they will be seen in conjunction with the existing built form that will backcloth the Project.
- 13.8.1.41 There will also be effects on the seabed through both erosion and accretion of sediment within the Lagoon. This will mainly occur within the subtidal area and will not be visible. In the intertidal area, towards the rear of the Lagoon, sedimentation is anticipated, and it is expected that long-term maintenance dredging will be required to maintain sufficient depth for efficient (and cost-effective) energy generation (refer to Chapter 6).
- 13.8.1.42 Along the Crymlyn Burrows frontage, increased sand accretion is likely to occur due to the increased shelter (reducing the erosion potential) provided by the eastern seawall to south-westerly wave conditions. Over time, the extent of dunes adjacent to the eastern seawall may extend further into the intertidal area. However, effects on character are not predicted to be significant.
- 13.8.1.43 The process of creating a 'head of water' (delaying the release of water into or out of the Lagoon by around 2.5 hours) will create a controlled environment within the Lagoon and a slightly unnatural level of water within and outside of the Lagoon at low and high tide respectively. This construction of the Lagoon seawalls and controlling of the water level may potentially create a difference in wave patterns in and outside of the Lagoon, depending on weather conditions. When the wind blows across Swansea Bay the water within the Lagoon will be sheltered by the seawalls, potentially creating calmer waters than those outside of the seawalls. This may be particularly noticeable when the wind is from the prevailing south westerly direction (refer to Chapter 6 - Coastal Processes, Sediment Transport and Contamination).
- Significance of Seascape Effects: Major*
- 13.8.1.44 The seascape is considered of high/moderate sensitivity and the magnitude of effects high. From within this LSU the Project will be a defining feature that will change its character. This will be most notable from locations that lie adjacent to the existing docks and which are enclosed by the Lagoon seawalls, and also from locations to the east, within Crymlyn Burrows.
- 13.8.1.45 On balance, it is considered that effects on the landscape character of LSU4 will be major and significant under the EIA Regulations. Effects are considered to be beneficial from locations that are enclosed by the Lagoon seawalls, as improvements to the public realm, including the construction of urban and ecological parks, plus an increase in leisure facilities, will be a positive addition to the seascape and the local area. To Crymlyn Burrows, effects can be considered to be adverse, as there may be a slight

change in character, most notably within the intertidal zone as the Lagoon seawalls create a sense of enclosure and restrict views along the beach towards Swansea and The Mumbles.

LSU5: Swansea Bay

- 13.8.1.46 It is predicted that the Project will be visible from the majority of the LSU, including the intertidal areas and within Swansea Bay. Views from Clyne Gardens and Oystermouth Castle will be restricted by existing vegetation.

Susceptibility of Seascape Receptors to Change: High/Moderate

- 13.8.1.47 Access to coastal edge and foreshore is unrestricted and there are a high number of receptors within the LSU predominantly using the beach and along the coastal edge and strip. The coastal strip contains many large, manmade elements and is subsequently more enclosed due to built form and vegetation. This contrasts with the more open character of the beach and sea that is simple in form and pattern.

Seascape Sensitivity: High - Moderate

- 13.8.1.48 Seascape value is considered to be outstanding/ high. The coastal strip is complex in form as it contains many contrasting elements that form its character. This contrasts with the simple, wide expanse of the intertidal area and the sea. The LSU is predominantly well maintained and attractive, containing many features of interest including Mumbles Pier, Mumbles Head, including the lighthouse, Oystermouth Castle, Clyne Gardens, Blackpill Lido and Meridian Tower. The large sweeping Bay, and beaches that are within close proximity to a major urban centre, create a character that can be considered to be rare. The coastal strip, coastal edge, intertidal area and open sea are not considered to be tranquil, due to the high number of receptors that undertake land and sea based activities.

Magnitude of Seascape Effects: High/Moderate

- 13.8.1.49 Effects will be indirect, although long term. Within the eastern half of the LSU, indirect effects will occur through the potential increase in settlement of muds over the shallow subtidal area and, as such, they will not be visible. It is predicted that the large expanse of sand within other parts of the beach will continue to dominate the intertidal area of this LSU. The Lagoon seawalls that form the Broad Seaward Park will be apparent in views from most locations within the LSU, creating a sense of enclosure, which will extend from Blackpill Lido to The Knab within The Mumbles. The Lagoon seawalls will disrupt the visual links with the eastern half of the Bay, which will be most apparent at low tide when a greater extent of the Lagoon seawall will be visible within the intertidal zone. However, the broad sweeping form of Swansea Beach that is a defining feature of the Bay, , will remain.

Significance of Seascape Effects: Major/Moderate

- 13.8.1.50 The seascape is considered of high/moderate sensitivity and the magnitude of effects high/moderate. The construction of the Project will change the character of the seascape to eastern areas through an increase in enclosure.
- 13.8.1.51 On balance, it is considered that effects on landscape character to LSU5 will be major/moderate and significant under the EIA Regulations. Effects are considered to be neutral from western parts of the LSU, as, although there will be an increase in enclosure within the Bay, the features that define it will be retained. This includes the broad sweep of Swansea Beach and the open views out towards the Bristol Channel.

From eastern areas adjacent to Swansea Marina, effects are considered to be adverse, as the Project will be a defining feature of the character, and the open character of the intertidal area may be reduced.

LSU6: Gower Coast

- 13.8.1.52 It is predicted that the visibility of the Project will be restricted from this LSU and limited to locations to the south of Mumbles Head.

Susceptibility of Seascape Receptors to Change: High

- 13.8.1.53 The area is designated as a Heritage Coast and, with the coastal strip lying within the Gower AONB, is therefore considered to be of high quality. The rock formations, secluded beaches and presence of the sea creates a dramatic coastal edge, with excellent views along it and out across Swansea Bay and the Bristol Channel, although views towards the Project are predominantly screened from view.

Seascape Sensitivity: High

- 13.8.1.54 Seascape value of this LSU is considered to be outstanding. This is an area of high quality due to the dramatic views that are available, predominantly along the cliffs and out to sea from the elevated locations on the Wales Coast Path. This is an LSU of few manmade elements, although the number of tourists reduces its sense of tranquillity.

Magnitude of Seascape Effects: Low/Negligible

- 13.8.1.55 The Project will be screened from view by topography from all areas along the coastal strip, coastal edge and intertidal areas, except from Pwll Du Head, where the Lagoon seawalls and offshore O&M and visitor centre may be visible. Therefore, from the majority of the LSU there will be no effects. From locations to the south west of Mumbles Head, views of the Project, including the Lagoon seawalls and the Offshore Building may be possible from ships and other vessels on the water. However, at a distance of over 6km, the Lagoon seawalls will be a low, linear feature on the water and rather less dominant than the rock formations along the coast that are considerably closer in distance.

Significance of Seascape Effects: Minor

- 13.8.1.56 The seascape is considered to be of high sensitivity and the magnitude of effects low/negligible. It is predicted that the Project can be integrated into the LSU without loss to its defining character, due to the limited proportion of the LSU in which it will be visible.
- 13.8.1.57 On balance, it is considered that effects on landscape character to LSU6 will be minor and not significant under the EIA Regulations. Effects are considered to be neutral as following the construction of the Project, there will be no material change to the existing seascape character.

A1: Margam and Kenfig Burrows

- 13.8.1.58 The Project would be viewed at a distance of between approximately 10 - 15km from this LCA, and even at low tide it is predicted that it would be viewed as a shallow, although broad, horizontal element with an open seascape.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.1.59 Receptors are likely to be limited in numbers due to accessibility within the LCA, and thus restricted to visitors to Kenfig Pool and Dunes Nature Reserve and walkers on the Wales Coast Path. The expanse of dunes and absence of manmade features provides a sense of isolation and tranquillity. However, from locations adjacent to the coast, the sense of isolation and tranquillity is disrupted through views of man-made features, including the adjacent steel works and urban form of Swansea beyond. The intimate scale of the landscape will restrict views of the Project. However, where visible, it may lead to a further erosion of the sense of tranquilly and unspoilt character of the LCA, although, at approximately 15km away, it is not predicted to be prominent.

Landscape Sensitivity: High - Moderate

- 13.8.1.60 Landscape value is considered to be outstanding and susceptibility of landscape receptors to change is moderate. Therefore on balance, landscape sensitivity is considered to be high/moderate.

Magnitude of Landscape Effects: Low

- 13.8.1.61 Effects will be indirect although long term from within this LCA. It is predicted that views of the Project would be limited, due to the screening effects of topography, thereby reducing effects. Visibility would be predominantly restricted to western fringes of the LCA where the broad, open character of the adjacent Swansea Bay will assist in absorbing the Project into the seascape.

Significance of Landscape Effects: Moderate/Minor

- 13.8.1.62 The landscape is considered high/moderate sensitivity and the magnitude of effects low. The Project could be integrated into the landscape from the majority of the LCA, due to the screening effects of topography. There may be some alteration to the western fringes of the LCA where it may be a visible feature. However, at a distance of approximately 10km. and due to its simple linear form and the broad seascape in which it would be viewed, it is not predicted to become a defining feature of the character within this LCA.
- 13.8.1.63 On balance, it is considered that effects on landscape character of A1 will be moderate/minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, following the construction of the Project, there will be no material change to the existing landscape character.

C2: Crymlyn Bog

- 13.8.1.64 The ZTV indicates that the Project, including the Lagoon seawalls, buildings and park areas, may be visible from the far southern and far northern parts of the LCA. From central western areas, the buildings may be visible.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.1.65 Views of the Project will be restricted from within this LCA by a combination of topography, vegetation and built form. It is therefore considered to be robust in terms of the development proposed by the Project.

Landscape Sensitivity: High

- 13.8.1.66 This is a rare landscape within the study area and is considered to be an important landscape habitat. Although on the edge of the large urban settlement of Swansea and

enclosed by industrial land, there is a sense of tranquillity. However, these urban features also act as a visual detractor within landscape.

Magnitude of Effects on Landscape Character: Negligible

- 13.8.1.67 As topography is low lying and relatively level, existing vegetation to the A483 (Fabian Way) and built form within the adjoining Swansea Port, is predicted to screen all views of the Project. Therefore the character of this LCA is predicted to remain unchanged.

Significance of Effects on Landscape Character: Negligible

- 13.8.1.68 The landscape is considered to be of moderate sensitivity and the magnitude of effects negligible. It is predicted that there will be no change to character following the construction of the Project.
- 13.8.1.69 On balance, it is considered that effects on landscape character of C2 will be not significant and not significant under the EIA Regulations. Effects are considered to be neutral, as, following the construction of the Project, there will be no material change to the existing landscape character.

D1: Clyne Valley Country Park

- 13.8.1.70 Views of the Project are predicted to be restricted to isolated high points to the south of this LCA, where the Lagoon seawalls, Western Landfall Building, plus the Offshore Building and the Landward Urban and Ecological Parks, may all be visible, at a distance of approximately 6.0km.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.1.71 Dense broadleaved woodland characterises this LCA, which creates a strong sense of enclosure within the majority of the park, as well as a strong sense of place. The combination of this is predicted to create a robust landscape that will be able to withstand a small amount of change.

Landscape Sensitivity: High - Moderate

- 13.8.1.72 Landscape value is considered to be high and susceptibility of landscape receptors to change is moderate. Therefore, on balance, landscape sensitivity is considered to be high/moderate.

Magnitude of Effects on Landscape Character: Moderate/Low

- 13.8.1.73 Effects on the character of this LCA will be long term in duration. However, any views of the Project and, therefore, effects will be limited to a very small proportion of the overall LCA.

Significance of Effects on Landscape Character: Moderate/Minor

- 13.8.1.74 The landscape is considered of high/moderate sensitivity and the magnitude of effects moderate/low. From locations where the Project may be visible, there may be slight perception in change to character, as it will contrast with the rural setting from which it will be seen. However, this will be restricted to a limited area and from most locations the character of the park is predicted to remain intact.
- 13.8.1.75 On balance, it is considered that effects on landscape character of D1 will be moderate/minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, following construction of the Project, there will be no material change to the existing landscape character.

D5: Gelli Bwch

- 13.8.1.76 When entering the Bay, the Lagoon Seawalls, plus the Offshore Building to the southern edge of the Lagoon and the SSSI information point will all be visible elements. From other locations within northern areas of the LCA, views of the Project would be limited, due to the screening effects of topography.

Susceptibility of Landscape Receptors to Change: High/Moderate

- 13.8.1.77 The character of this LCA is dominated by the River Neath and its floodplain, along which there are indicators of past industrial activity, predominantly associated with shipping, that result in a sense of neglect and a landscape of poor condition. The mouth of the River Neath also has a strong visual connection with the adjacent Swansea Bay. Views of elements of the Project visible are predicted to be a defining feature, and would have a significant influence on how the character within this part of the LCA would be perceived.

Landscape Sensitivity: Moderate - Low

- 13.8.1.78 Landscape value is considered to be moderate/low and susceptibility of landscape receptors to change is moderate. Therefore on balance, landscape sensitivity is considered to be moderate/low.

Magnitude of Effects on Landscape Character: Moderate

- 13.8.1.79 From locations within the LCA that abut Swansea Bay, it is predicted that there will be long term, indirect, effects on landscape character, as the visible elements of the Project will be a defining feature. Effects will be limited to a small proportion of the overall LCA, due to the screening effects of topography.

Significance of Effects on Landscape Character: Major/Minor

- 13.8.1.80 The landscape is considered of moderate/low sensitivity and the magnitude of effects moderate. Effects on landscape character are predicted to be major from locations that abut Swansea Bay, as the Project will be immediately apparent and be a defining character of the landscape within this area. From other areas to the north, effects are predicted to be minor, due to the screening effects of topography.

- 13.8.1.81 On balance, it is considered that effects on landscape character of D5 will be major and significant under the EIA Regulations from locations that abut Swansea Bay and minor and not significant from all other locations. From locations within the LCA, where effects are significant, they are considered to be beneficial, as the introduction of a large scale renewable development will enhance the otherwise declining character of the landscape.

G1: Swansea

- 13.8.1.82 The ZTV ([cross-reference]) indicates that all elements of the Project will be visible from locations that extend across approximately half of the LCA. It includes areas that overlook Swansea Bay, the city centre, plus the predominantly residential areas of Sketty, Uplands, Townhill, the Marina and St. Thomas. Further to the north, the ZTV indicates that the Project may also be visible from the Penlan and Tre-Boeth areas of the city, plus areas encompassing Bon-y-maen and Winch Wen, that are located in the east.

Susceptibility of Landscape Receptors to Change: High, Moderate /Low

13.8.1.83 Locations within the LCA that overlook Swansea Bay generally have a greater connection with the adjoining seascape than other areas of Swansea. This includes areas along the A4067, Oystermouth Road and Mumbles Road, plus areas extending from the City and County of Swansea offices to the West Pier breakwater wall, at the entrance to Swansea Port. This is an attractive and predominantly well maintained landscape and, due to its urban character, it is predicted to be robust enough to withstand a certain degree of change. From locations within this part of the LCA, the seawall that forms the eastern arm of the Lagoon, the Offshore Building, including the turbine and sluice gate housing structure and Western Landfall Building would be a visible manmade feature, forming a defining feature.

13.8.1.84 As previously noted, the tight urban grain within the LCA, and most notably with residential areas, restricts views towards the Project. The exception to this is the residential area of Townhill and the open space of Kilvey Hill. These form prominent features within the landscape and have a visual connection with lower lying parts of the city and also Swansea Bay. From these locations, and locations along the seafront, the susceptibility of landscape receptors to change is predicted to be high. From all other areas within the LCA susceptibility of landscape receptors to change is predicted be moderate/low

Landscape Sensitivity: High - Moderate

13.8.1.85 Landscape value is considered to be high for areas adjacent to Swansea Bay and moderate for all other areas within the LCA. Susceptibility of landscape receptors to change is high within areas adjacent to Swansea Bay, and moderate to low from all other areas. Therefore, on balance, landscape sensitivity is considered to be high/moderate.

Magnitude of Effects on Landscape Character: High/Moderate from locations adjacent to Swansea Bay and elevated locations that overlook it. Low, from all other areas within the LCA.

13.8.1.86 Effects on this LCA will be indirect although long term. Following the construction of the Project, it will be an immediately apparent feature within the seascape from the more sensitive locations within the LCA. However, the open character of the seascape that is a notable feature from these locations will remain. Although the Project will be set within an urban context, there may be an increase in the sense of enclosure within the Bay, due to the presence of the Lagoon seawalls.

Significance of Effects on Landscape Character: Major/Moderate from locations adjacent to Swansea Bay and elevated locations that overlook it. Minor from all other areas within the LCA.

13.8.1.87 The landscape is considered of high/moderate sensitivity and the magnitude of effects high/moderate from locations adjacent to and that overlook Swansea Bay, and low from all other areas. Effects on landscape character can be considered to be not significant from much of LCA, as the Project will not be visible, due to the tight urban grain that characterises much of the LCA. However, from locations adjacent to Swansea Bay and from elevated locations that overlook it, the Lagoon seawalls in particular will be a defining feature of the seascape/landscape.

- 13.8.1.88 On balance, it is considered that effects on landscape character of G1 will be major/moderate and significant under the EIA Regulations from locations that are adjacent to and that overlook Swansea Bay, and minor and not significant from all other locations within the LCA. From locations within the LCA where effects are significant, they are considered to neutral, as, although the Project will be a feature of the character of the LCA, the design of the Project will complement existing urban regeneration projects within Swansea, and will allow for an increase in recreational opportunities. From areas where effects are considered to be not significant, they are also considered to be neutral as there will be no fundamental change in character.

G2: Coed Darcy

- 13.8.1.89 The ZTV indicates that the Lagoon seawalls and Offshore O&M and visitors centre building will be visible from central locations of this LCA.

Susceptibility of Landscape Receptors to Change: Low

- 13.8.1.90 This is a LCA whose condition is improving as the landscape changes from post-industrial to one dominated by residential properties. It is therefore a landscape that is robust and where change in character type is a common feature. Development and landform restrict views out of the LCA towards the Project.

Landscape Sensitivity: Low

- 13.8.1.91 Landscape value is considered to be moderate/low and susceptibility of landscape receptors to change is low. Therefore, on balance, landscape sensitivity is considered to be moderate/low.

Magnitude of Effects on Landscape Character: Low

- 13.8.1.92 Effects on this LCA would be indirect, long term and reversible. The Lagoon seawalls will be the most visible feature of the Project, viewed at a distance of approximately 3.5km. Intervening topography and built form is predicted to restrict views of the Project, thereby reducing effects.

Significance of Effects on Landscape Character: Minor

- 13.8.1.93 The landscape is considered of low sensitivity and the magnitude of effects low. This is a LCA that is going through a significant change, from one that is post-industrial in character to one that is predominantly residential. Changes within the character area itself are likely to have a greater effect on the landscape within this LCA than the proposed Project, where visibility would be restricted to glimpsed views of the Lagoon seawalls from elevated, central areas of the LCA.

- 13.8.1.94 On balance, it is considered that effects on landscape character of G2 will be minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, following the construction of the Project, there will be no material change to the existing landscape character.

G5: Port Talbot and Margam

- 13.8.1.95 From within this LCA, visibility of the Project will be limited to the coastal areas including Aberavon promenade and the Sandfields estate. The eastern arm of the Lagoon seawalls, the Offshore O&M and visitors centre building, plus the Western Landfall Building, are predicted to be visible from locations within this LCA.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.1.96 The area has been significantly influenced by man-made elements, many of which have little visual or aesthetic quality. The area is dominated by the adjacent steel works and motorway, where traffic noise is clearly discernible. Southern parts of the character area that lie adjacent to Swansea Bay have a stronger visual association with the adjoining open water, as opposed to the tight urban grain that is common to much of the area. From the coastal areas, elements of the Project will be viewed against a backdrop of existing urban features and the ridgeline of the hills beyond Swansea and the Mumbles. Given the elements that form its character, it is a landscape that is considered to be able to withstand a certain level of change with a degree of robustness.

Landscape Sensitivity: Moderate – Low

- 13.8.1.97 Landscape value is considered to be low and susceptibility of landscape receptors to change is moderate. Therefore, on balance, landscape sensitivity is considered to be moderate/low.

Magnitude of Effects on Landscape Character: Moderate

- 13.8.1.98 Effects on landscape character are predicted to be indirect, although long term in duration. Where views of the Project will be available, except from the area of the Sandfields estate that directly abuts the Baglan Bay Energy Park, the Lagoon seawalls and other associated structures will not be perceived to extend past Mumbles Head. Therefore, the clear, open views that are a notable feature of the character within the coastal parts of this LCA, will remain. From the majority of the LCA, no views of the Project will be available, due to the screening effects of topography and built form, and, therefore, from these locations, there will be no change to landscape character.

Significance of Effects on Landscape Character: Moderate/Minor

- 13.8.1.99 The landscape is considered of moderate/low sensitivity and the magnitude of effects moderate. The Project may be a notable feature of the seascape from within this character area, although it is not predicted to be a defining feature, due to the open character of the views towards Swansea Bay being retained. From the majority of the LCA, the Project could be integrated in to the landscape without the loss of key landscape features.

- 13.8.1.100 On balance, it is considered that effects on the landscape character of G5 will be moderate/minor and not significant under EIA Regulations. Effects are considered to be neutral, as, following the construction of the Project, there will be no material change to the existing landscape character.

G6: The Mumbles

- 13.8.1.101 The Project will be a visible element from the A4067 (Mumbles Road), where the seawall that forms the western arm of the Lagoon and the Offshore Building are likely to be discernible. From the more elevated parts of the LCA, including areas of Mumble Hill, the Lagoon seawalls will be notable elements at both high and low tides. Views will include the hard landscaped areas to both the western and eastern arms of the Lagoon, the Offshore O&M and visitors centre, plus the Western Landfall Building.

Susceptibility of Landscape Receptors to Change: High

- 13.8.1.102 There are many man-made features within the character area, although they help form an aesthetically pleasing and coherent urban form that is well maintained. The broad expanse of Swansea Bay has a strong visual connection with this LCA. There are several

features of interest and landmarks, including Clyne Gardens, Oystermouth Castle and Mumbles Pier, which also have a strong association with the area. Although predominantly urban in nature, the area has a settled feel to it and it has a sense of tranquillity, particularly at locations on Mumbles Hill.

Landscape Sensitivity: High

- 13.8.1.103 Landscape value is considered to be outstanding/high and susceptibility of landscape receptors to change is high. Therefore, on balance, landscape sensitivity is considered to be high.

Magnitude of Effects on Landscape Character: High/Moderate

- 13.8.1.104 From low lying areas along the A4067, visible elements of the Project would be seen against the backdrop of Port Talbot and the mountains beyond. The broad expanse of Swansea Bay, the built form of the urban areas, and the mountains beyond are likely to remain prominent and defining features. However, a sense of partial foreshortening of views within the Bay may result.
- 13.8.1.105 At a distance of approximately 4.5km, and due to the elevated height at which Mumbles Hill lies, the Project is predicted to be viewed as a notable additional element within the seascape from within this LCA. Although the large expanse of Swansea Bay will remain a prominent and a key component of this LCA, other key features that also help define its character, including Mumbles Pier, will remain as prominent features.
- 13.8.1.106 The tight urban grain that characterises much of the residential areas of the LCA will restrict views of the Project and, therefore, effects on landscape character from these locations will be limited. The Project will be screened from view from Oystermouth Castle by existing mature vegetation, which will also limit views from Clyne Gardens.

Significance of Effects on Landscape Character: Moderate/Negligible

- 13.8.1.107 The landscape is considered of high sensitivity and the magnitude of effects moderate from locations adjacent to the A4067 and Mumbles Hill, where views of the Project are available, and negligible from all other locations.
- 13.8.1.108 From within the majority of this LCA, existing built form will screen views of the Project and there will be no change to landscape character from these areas, and, therefore, the significance of effect is considered to be negligible. From locations where elements associated with the Project are visible, it is predicted that there may be a partial change in character. This includes predominantly areas adjacent to the A4067 and within the more elevated parts of the LCA, such as Mumbles Hill. From locations where the Project is visible, the significance of effects on landscape character is predicted to be moderate.
- 13.8.1.109 On balance, it is considered that effects on landscape character will be moderate and not significant under the EIA Regulations from locations including areas adjacent to the A4067 and from Mumbles Hill, and negligible from locations where the Project will be screened from view. Effects are considered to be neutral as, following construction of the Project, there will be no fundamental change to the existing landscape character as a whole, as the defining sweeping form of Swansea Beach, the extensive intertidal area, views to the upland areas across the Bay and views out to the Bristol Channel will all be retained.

G9: SA1 Swansea Waterfront

- 13.8.1.110 From within SA1 Swansea Waterfront, views of the Project will be restricted to glimpsed views only from existing or proposed buildings. From locations between Trafalgar Bridge and the Lock Control Building, there may be channelled views towards the Lagoon seawalls, forming a sense of enclosure and restricting open views of Swansea Bay.

Susceptibility of Landscape Receptors to Change: Low

- 13.8.1.111 Man-made elements significantly influence the area, creating a robust and varied land use pattern, which has also resulted in improvements to the condition of the landscape. This area is currently under transformation in terms of its character, as it is an area that has been significantly influenced by past industrial activity, which is being replaced by lighter commercial developments and residential properties. Further changes are predicted as more land is redeveloped. A sense of visual enclosure is provided by the developments and existing landscape elements.

Landscape Sensitivity: Moderate – Low

- 13.8.1.112 Landscape value is considered to be moderate/low and susceptibility of landscape receptors to change is low. Therefore, on balance, landscape sensitivity is considered to be moderate /low.

Magnitude of Effects on Landscape Character: Negligible

- 13.8.1.113 Although this LCA is located at a distance of approximately 1.0km from the Project, it is predicted that only a small proportion of the Project will be visible from within the LCA, due to the screening effects of existing landscape elements. Any effects would be indirect and long term in duration. The introduction of the Project is not predicted to alter the existing character of the landscape, as it will be viewed as a complementary element to those features that already exist and define the LCA.

Significance of Effects on Landscape Character: Minor

- 13.8.1.114 The landscape is considered of moderate/low sensitivity and the magnitude of effects negligible. This is a robust landscape that has experienced significant change. Views of the Project are significantly limited by existing landscape elements. The overall character of the LCA is predicted to remain that of a mixed use, urban landscape following construction of the Project.
- 13.8.1.115 On balance, it is considered that the effects on landscape character of G9 will be minor and not significant under the EIA Regulations. Effects are considered to be neutral, as following the construction of the Project, there will be no material change to the existing landscape character.

H1: Swansea Port

- 13.8.1.116 From this LCA, there will be clear views of the full extent of the Project from southern areas. Existing built form is predicted to screen views from the majority of the LCA.

Susceptibility of Landscape Receptors to Change: Low

- 13.8.1.117 The landscape is dominated by a number of man-made structures, which have created several landmarks on the local skyline, including industrial features such as cranes and a wind turbine, plus the existing seawall that extends into Swansea Bay, through to residential developments within SA1. The landscape has gone through many changes

and although it is considered to be robust, it is not in good condition. It is a landscape that is not rare or unique and is of little scenic quality.

Landscape Sensitivity: Low

- 13.8.1.118 Landscape value is considered to be low and susceptibility of landscape receptors to change is low. Therefore, on balance, landscape sensitivity is considered to be low.

Magnitude of Effects on Landscape Character: High/Moderate

- 13.8.1.119 From within much of the LCA, effects will be indirect and its character is predicted to remain predominantly unchanged following completion of the Project. This will be due to the low level nature of the works (particularly the Lagoon seawall), although the Landward Urban Park may be a notable feature to the southern edge of the LCA.

- 13.8.1.120 Effects to the south and west of Queen's Dock will be direct, long term and permanent. The Landward Urban and Ecological Parks will be constructed along the southern edge of the dock, which will include significant improvements to the public realm. To the western edge of Queen's Dock, the Western Landfall Building and visitor car park is proposed. From these areas the Lagoon seawalls will be a visible feature and the character within this part of the LCA will significantly change from one of an industrial landscape to a landscape which is more recreational in character. However, despite these changes, the large expanse of water and associated infrastructure to Queens Dock and Kings Dock are predicted to remain as the dominant feature of the LCA.

Significance of Effects on Landscape Character: Major/Moderate

- 13.8.1.121 The landscape is considered of low sensitivity and the magnitude of effects high/moderate. The Project will have direct, long term effects within the southern and western parts of the LCA that will lead to a fundamental change in its character. From more central locations of the LCA, elements of the Project may be notable, including glimpsed views of the public realm areas, the Western Landfall Building, and the movement of vehicles entering and existing the visitors car park. However, these elements are not predicted to change or define the existing character of the LCA.
- 13.8.1.122 On balance, it is considered that effects on landscape character of H1 will be major/moderate and significant under the EIA Regulations. Effects are considered to be beneficial, as, following construction of the Project, there will be improvements to the public realm to the southern edge of the LCA. This work will enhance its character and will complement existing regeneration projects within the adjacent Maritime Quarter and the SUBC.

H2: Swansea Gate Business Park

- 13.8.1.123 All elements of the Project are predicted to be visible features within the LCA from locations to the south of the A483 (Fabian Way). From areas to the north, existing built form and vegetation is predicted to screen views.

Susceptibility of Landscape Receptors to Change: Low

- 13.8.1.124 Large scale industrial units are an existing feature of the landscape, particularly within northern parts of the LCA, which provides a sense of visual enclosure. The post industrial land to the south of the A483 (Fabian Way) is more open in character and has a stronger visual connection with the adjacent Swansea Bay. This is a landscape that has no notable landscape features of interest, is poorly maintained and is of little overall

value in terms of its scenic quality. It is considered to be a robust landscape that can tolerate significant changes.

Landscape Sensitivity: Low

- 13.8.1.125 Landscape value is considered to be low and susceptibility of landscape receptors to change is low. Therefore, on balance, landscape sensitivity is considered to be low.

Magnitude of Effects on Landscape Character: High (from locations to the south of the A483 (Fabian Way)). Negligible (From locations to the north of the A483 (Fabian Way))

- 13.8.1.126 Following the completion of the SUBC, the character within areas to the south of the A483 (Fabian Way) will change from one of post-industrial decline to a modern university campus that includes a number of buildings to a maximum height of 8no. storeys. The character of the area will be visually and physically linked to the adjacent Landward Ecological Park, where the burrows, boardwalk, beach and salt marsh area will be visible elements that form the character of this area. The Lagoon seawalls, especially the seawalls to the eastern arm of the Lagoon, will be a prominent feature in the seascape from the campus. Effects will be long term and permanent and, from locations where the Ecological Park is proposed, direct.

- 13.8.1.127 From locations to the north of the A483 (Fabian Way), it is predicted that there will be no elements of the Project visible, due to the screening from existing buildings and vegetation. Therefore there will be no alteration to the existing character.

Significance of Effects on Landscape Character: Major (from locations to the south of the A483 (Fabian Way)). Negligible (From locations to the north of the A483 (Fabian Way))

- 13.8.1.128 The landscape is considered of low sensitivity and the magnitude of effects high from locations to the south of the A483 (Fabian Way) and negligible from all other locations. Effects will be direct from southern parts of the LCA and which will result in significant, long term changes to the landscape character, to the extent that the Project will be the defining feature. From these locations, the significance of effects is considered to be major. From northern areas of the LCA, there will be no change to landscape character and therefore the significance of effects is considered to be, negligible.
- 13.8.1.129 On balance, it is considered that effects on landscape character of H2 will be major and significant under the EIA Regulations from locations to the south of the A483 (Fabian Way), and negligible and not significant from all other areas. From locations where effects are considered to be significant, effects are considered to be beneficial as, following the construction of SUBC and Project, there will be an enhancement to a landscape that was declining in quality. The introduction of the Project will increase activity and integrate the LCA with adjoining urban areas.

H3: Baglan Bay

- 13.8.1.130 The ZTV indicates that elements of the Project will be visible from the majority of the LCA. In reality, the sand dunes that lie adjacent to Baglan Burrows will screen views.

Susceptibility of Landscape Receptors to Change: Low

- 13.8.1.131 The removal of the petrochemical plant and the construction of large scale power plants and industrial units has left a simple, large scale landscape in terms of its form. Except for the power plant, there are no features of interest within the LCA that make the character of the landscape particularly rare along this section of the coastline, which is dominated by heavy industry. It is a landscape that is not well maintained, although it is

considered to be robust and able to withstand a degree of change. This is an open landscape with a visual connection with the hills to the north. Views across the adjacent Swansea Bay are restricted by the sand dunes of Baglan Burrows.

Landscape Sensitivity: Low

- 13.8.1.132 Landscape value is considered to be moderate/low and susceptibility of landscape receptors to change is low. Therefore, on balance, landscape sensitivity is considered to be low.

Magnitude of Effects on Landscape Character: Moderate

- 13.8.1.133 Any effects from within this LCA will be indirect and long term in duration. However, the construction of the Project is not predicted to alter the character of this landscape due to the restrictive views that are available from the LCA, and also its historic association with industrial activity. This has created a robust landscape that is predicted to absorb change of the nature proposed by the Project, without affecting the elements that define it.

Significance of Effects on Landscape Character: Minor

- 13.8.1.134 It is predicted that the Baglan Power Station will remain a defining feature of the LCA as will the flat, open spaces left following the removal of the petrochemical plant, as views of the Project will be limited. It is therefore considered that the Project can be integrated within the existing landscape without the loss of the elements that define it.
- 13.8.1.135 The landscape is considered to be of low sensitivity and the magnitude of effects moderate. On balance, it is considered that effects on the landscape character of H3 will be minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, following construction of the Project, there will be no material change to the existing landscape character.

H4 - Port Talbot Steel Works

- 13.8.1.136 It is predicted that the seawall that forms the eastern arm of the Lagoon, plus the Offshore Building will be visible from the western edge of this LCA.

Susceptibility of Landscape Receptors to Change: Low

- 13.8.1.137 The presence of heavy industry has resulted in the landscape becoming degraded and the number of man-made features, particularly within the skyline, creates a sense of visual confusion. However, it is a unique landscape, and the vertical elements within the works are an instantly recognisable local feature that has become associated with the character of Port Talbot. It is considered to be a robust landscape, able to withstand a certain level of change due to the dominance of the existing features. The manmade elements are predicted to create a sense of visual enclosure; however, more open views across Swansea Bay may be available from the western edge of the LCA.

Landscape Sensitivity: Low

- 13.8.1.138 Landscape value is considered to be low and susceptibility of landscape receptors to change is low. Therefore, on balance, landscape sensitivity is considered to be low.

Magnitude of Effects on Landscape Character: Moderate

- 13.8.1.139 The Lagoon seawalls are predicted to be the most visible element of the Project within this LCA, although restricted to areas abutting the coastline only. Therefore, effects, which will be indirect and long term, will be restricted to a small proportion of the

overall LCA. At low tide, there will be an increase in the extent of the Lagoon seawalls visible. They would also be viewed in conjunction with the existing dock harbour walls to the steel works.

Significance of Effects on Landscape Character: Minor

- 13.8.1.140 The landscape is considered to be of low sensitivity and the magnitude of effects moderate. The steel works are a strong and visually dominating element that defines the landscape within this LCA. It is predicted that, while the Project may be visible from areas within it, it will be seen as an additional element within the adjoining seascape that will not fundamentally change the character of the wider landscape. The existing structures within the steel works will continue to dominate.
- 13.8.1.141 On balance, it is considered that effects on the landscape character of H4 will be minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, following construction of the Project, there will be no material change to the existing landscape character.

18.3.2 Potential effects on seascape & landscape character from other LCAs

- 13.8.2.1 The ZTV indicates that, from LCAs located beyond the immediate environs of the coastline, visibility of the Project and, therefore, effects on landscape character would potentially be greatest from the following LCAs: LCA B2 - Mynydd Drumau; LCA B3 - Margam & Mynydd Dinas; LCA D6 - Coed Hirwaun; LCA F2 - Clydach Valley; LCA F3 Vale of Neath; LCA F4: Mynydd y Gaer; and LCA F5- Mynydd Margam, Mynydd Emroch and Mynydd Penhydd. These LCAs are discussed further below. From all other LCAs within the study area, there will be no views of the Project, or views will be limited to such a very small proportion of the LCA that it is predicted that the effects on landscape character will be not significant. This relates to the following LCAs; B1- North of Clydach; C1 - Llanrhidian Marsh; D2 - Three Crosses; D3 - Rhyd-y-Pandy; D4 - Afon Tawe; E1 - Gower Farmlands; E2 - Margam Moor and Eglwys Nunydd Reservoir; F1 - Upland Clydach River Valley; G3 - Neath; G4 - Cwmafan; G7 - Gorseinon and Gowerton; and G8 - Pontardawe.

B2: Mynydd Drumau

- 13.8.2.2 The ZTV indicates that all elements of the Project, including the Lagoon seawalls, will be visible from central areas of the LCA.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.2.3 This is an open, simple landscape, particularly on higher ground where there is an upland feel to the landscape and which defines the character within this LCA. This, along with the lack of man-made features, brings a sense of remoteness and tranquillity to the character area. There are strong visual connections with the adjoining rural and urban landscapes.

Landscape Sensitivity: Moderate

- 13.8.2.4 Landscape value is considered to be moderate and susceptibility of landscape receptors to change is moderate. Therefore, on balance, landscape sensitivity is considered to be moderate.

Magnitude of Effects on Landscape Character: Low

- 13.8.2.5 Effects on this LCA would be indirect and long term in duration. Topography channels views towards the Project and, at a distance of approximately 6km, it is predicted that the Lagoon's seawalls may be a notable, although not prominent, feature. This will be due to distance, the broad scale of the seascape/landscape that it will be viewed within, plus the low lying nature of the development. These factors will assist in retaining any open views beyond the Project and across Swansea Bay.

Significance of Effects on Landscape Character: Minor

- 13.8.2.6 The landscape is considered of moderate sensitivity and the magnitude of effects low. It is not predicted that the character of Mynydd Drumau will alter as a result of the Project's construction. The Project will be viewed as an additional element within the wider seascape/landscape setting, as opposed to a defining feature that will lead to a loss of the landscape features that define this particular LCA.
- 13.8.2.7 On balance, it is considered that effects on the landscape character of B2 will be minor and not significant under EIA Regulations. Effects are considered to be neutral as, following construction of the Project, there will be no material change to the existing landscape character.

B3: Margam & Mynydd Dinas

- 13.8.2.8 From the summit of Mynydd y Dinas, the full extent of the Project may be visible, including the Lagoon seawalls, all on and offshore buildings, plus both the Landward Urban and Ecological Parks.

Susceptibility of Landscape Receptors to Change: Moderate/Low

- 13.8.2.9 Mynydd Dinas is a notable landscape feature within the study area, due to the steep topography of the slopes, and its location next to the M4 motorway and the settlements and industrial sites that lie adjacent to this section of it. The scarp slopes themselves have few man-made features, although the tranquillity of the area is significantly affected by the adjacent M4 carriageway and urban form.
- 13.8.2.10 The landscape is more open in character on Mynydd Dinas, in comparison to the enclosed, forested slopes within the southern part of the LCA. The character of this LCA is visually linked with the surrounding urban and industrial areas of Port Talbot, plus the broad, flat expanse of Swansea Bay.
- Landscape Sensitivity: Moderate*
- 13.8.2.11 Landscape value is considered to be high/moderate and susceptibility of landscape receptors to change is moderate/low. Therefore, on balance, landscape sensitivity is considered to be moderate.
- Magnitude of Effects on Landscape Character: Moderate*
- 13.8.2.12 Effects will be indirect and long term in duration and will affect approximately two-thirds of the LCA. The Project itself will be viewed as an additional, yet large manmade element within Swansea Bay. It will be viewed in conjunction with additional built elements and will form part of the wider seascape/landscape, although it will not dominate to the extent where a fundamental change in landscape character will result.

Significance of Effects on Landscape Character: Moderate

- 13.8.2.13 The landscape is considered to be of moderate sensitivity and the magnitude of effects moderate. Following construction, the Project may be a characteristic component of views from within this LCA; however, due to the broad scale of the seascape/landscape in which it would be seen, it is not predicted to be a defining feature of its character.
- 13.8.2.14 On balance, it is considered that effects on the landscape character of B3 will be moderate and not significant under the EIA Regulations. Effects are considered to be neutral, as, following construction of the Project, there will be no material change to the existing landscape character due to the large number of existing manmade elements that influence the existing character.

D6: Coed Hirwaun

- 13.8.2.15 The ZTV indicates that, in theory, all elements of the Project would be visible from the majority of the LCA. However views are predicted to be significantly screened by existing vegetation.

Susceptibility of Landscape Receptors to Change: High

- 13.8.2.16 This is a landscape with a strong sense of place, due in part to the fields that are enclosed by well maintained hedgerows and also the scattered blocks of woodland, which create a sense of visual enclosure. The area contains many features of interest, predominantly within the designated Margam Park. It is considered to be a rare landscape within the county and study area, and a relatively tranquil area, despite being within close proximity to the M4 motorway and the encroachment of new housing estates.

Landscape Sensitivity: High

- 13.8.2.17 Landscape value is considered to be outstanding/high and susceptibility of landscape receptors to change is high. Therefore, on balance, landscape sensitivity is considered to be high.

Magnitude of Effects on Landscape Character: Low

- 13.8.2.18 Effects on this LCA would be indirect, long term and reversible. However, due to the screening effects of existing vegetation, it is predicted that views of the Project will be screened from view from the majority of this LCA including locations within the Grade I Listed Historic Park and Garden of Margam Park. Therefore it is predicted that there will be a minor change in landscape character following its construction.

Significance of Effects on Landscape Character: Minor

- 13.8.2.19 The landscape is considered to be of high sensitivity and the magnitude of effects low. It is predicted that the Project could be integrated into the character of the landscape without the loss of essential features that define it, due to the restrictive views out of the LCA towards the Project.
- 13.8.2.20 On balance, it is considered that effects on the landscape character of D2 will be minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, following construction of the Project, there will be no material change to the existing landscape character.

F2: Clydach Valley

- 13.8.2.21 The ZTV indicates that the Project will be visible from southern areas, to the north of Skewen, where all elements will, in theory, be visible. Views of the Project may also be possible from eastern areas, to the south of Mynydd Marchywel. Within this area, individual elements of the visible Project are potentially more restricted. However, from all locations the Lagoon seawall will, theoretically, be visible.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.2.22 The southern facing slopes of Mynydd Marchywel and Mynydd Drumau are more open in character than the enclosed valley floor, where the main transport routes run, and they provide panoramic views south over the surrounding landscape towards Swansea. However, this, is a landscape that is not considered to be of special or unique quality and is one that is not particularly well maintained and already contains many man-made elements. It is therefore considered to be robust and able to accommodate a degree of change.

Landscape Sensitivity: Moderate

- 13.8.2.23 Landscape value is considered to be moderate/low and susceptibility of landscape receptors to change is moderate. Therefore, on balance, landscape sensitivity is considered to be moderate.

Magnitude of Effects on Landscape Character: Moderate/Low

- 13.8.2.24 At a distance of approximately 5.5km at its closest point, it is predicted that the Project will be viewed as an additional element within a large-scale open seascape/landscape that already contains manmade structures. Therefore, while there may be a slight perception of change in character as the Project would be apparent in views, it will not be a major element or alter key elements of the landscape. Any effects would be indirect and long term in duration.

Significance of Effects on Landscape Character: Moderate/Minor

- 13.8.2.25 The landscape is considered of moderate sensitivity and the magnitude of effects moderate/low. The Project may be a notable element within the landscape, especially from more open elevated locations within the LCA. Although visible, it will be integrated within the wider view and not become a defining feature of the LCA.
- 13.8.2.26 On balance, it is considered that effects on the landscape character of F2 will be moderate/minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, although there may be a slight change in character following the construction of the Project, it is not predicted that it will be to the extent that there will be a material change to the existing landscape character.

F3: Vale of Neath

- 13.8.2.27 The ZTV indicates that views of the Project will be predominantly restricted to the southern and north western boundaries of the LCA, where all elements will theoretically be visible.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.2.28 The valley floor along which the A465(T) runs is predominantly an intimate landscape in scale due to topography and mature trees, which create a sense of enclosure and, as a result, both short and long distance views are restricted. However, the carriageway and

other manmade features that are found along the valley disrupt the sense of tranquillity. In the southern extents of the study area, including The Gnoll valley sides, the landscape is largely well maintained and more open in character. These areas are aesthetically more pleasing than other areas within the LCA and therefore less robust.

Landscape Sensitivity: High - Moderate

- 13.8.2.29 Landscape value is considered to be high/moderate and susceptibility of landscape receptors to change is moderate. Therefore, on balance, landscape sensitivity is considered to be high/moderate.

Magnitude of Effects on Landscape Character: Low

- 13.8.2.30 Effects within this LCA will be indirect and long term in duration and it is predicted that the Lagoon seawalls will be the most visible feature of the Project, most notably from southern areas to the east of the settlement of Tonna. However, the Project will be viewed at a distance of over 12km and in conjunction with a number of natural and manmade features. Therefore, it will be an additional, although not prominent, feature within the wider seascape/landscape. From the more sensitive areas of the LCA within The Gnoll, and also from more northern parts, existing vegetation is predicted to screen views and, therefore, there will be no change in its character.

Significance of Effects on Landscape Character: Moderate/Minor

- 13.8.2.31 The landscape is considered high/moderate sensitivity and the magnitude of effects low. The Project may be a feature within views from the more open southern parts of the LCA; however, from the majority of areas, including the most sensitive parts that include The Gnoll, views will be limited. It is predicted that the Project can therefore be integrated into the landscape without the loss of essential landscape features.
- 13.8.2.32 On balance, it is considered that effects on the landscape character of F3 will be moderate/minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, although there may be a slight change in character following the construction of the Project, it is not predicted that it will be to the extent that there will be a material change to the existing landscape character.

F4: Mynydd y Gaer

- 13.8.2.33 From within the majority of this LCA, no elements of the Project will be visible due to topography. Views of the Project will, in theory, be restricted to high points within the southern parts of the LCA, including Foel Fynyddau, Mynydd y Gaer and Cefn Morfydd.

Susceptibility of Landscape Receptors to Change: Moderate

- 13.8.2.34 There are no particular features of interest that make the landscape notably special or unique and it can be considered to be fairly typical of other upland areas within the study area. However, the lack of development and access provides a sense of tranquillity and add to the sense of wilderness and remoteness that is found within this LCA. Areas within southern parts of the LCA, including Foel Fynyddau and Mynydd y Gaer, have a visual connection with the adjacent urban areas of Port Talbot and Swansea Bay beyond.

Landscape Sensitivity: Moderate

- 13.8.2.35 Landscape value is considered to be moderate and susceptibility of landscape receptors to change is moderate. Therefore, on balance, landscape sensitivity is considered to be moderate.

Magnitude of Effects on Landscape Character: Moderate/Low

- 13.8.2.36 From locations within southern areas of the LCA there may be a partial change in landscape character as the full extent of the Project will potentially be visible, including the Lagoon seawalls, the Offshore Building, plus the mariculture and saltmarsh area within the Ecological Park at a distance of approximately 6km. Effects will be indirect and long term in duration, and the construction of the Project will introduce an additional large manmade feature in to the view that will form part of its character. However, due to the large-scale nature of the landscape, it is not predicted to dominate to the extent where it fundamentally changes the character of the landscape. Any changes will be limited to southern areas only.

Significance of Effects on Landscape Character: Moderate/Minor

- 13.8.2.37 The landscape is considered to be of moderate sensitivity and the magnitude of effects moderate/low. The Project may be a feature within views from the more open southern parts of the LCA, and there may be a slight perception of change. However, from the majority of areas within the LCA, it is predicted that the Project will not be visible and can therefore be integrated into the landscape without the loss of essential landscape features.
- 13.8.2.38 On balance, it is considered that effects on the landscape character of F4 will be moderate/minor and not significant under the EIA Regulations. Effects are considered to be neutral, as, although there may be a slight change in character following construction of the Project, it is not predicted that it will be to such an extent that there will be a material change to the existing landscape character.

LCA F5- Mynydd Margam, Mynydd Emroch and Mynydd Penhydd

- 13.8.2.39 The ZTV indicates that there will be views of the Project within the southern parts of this LCA. However, the extensive tracts of coniferous woodland that dominate the landscape will restrict views of the Project.

Susceptibility of Landscape Receptors to Change: High/Moderate

- 13.8.2.40 The cover provided by the dense forestry creates a simple landform pattern and a sense of visual enclosure; it also creates a feeling of tranquillity and remoteness, which is enhanced by the lack of development. Scenic quality on the upland area is not considered to be high, due to the continuous cover of coniferous trees. However, much of the LCA is designated as a Registered Landscapes of Special Historic Interest and it includes the Afon Argoed Country Park, an important county and regional tourist destination.

Landscape Sensitivity: High - Moderate

- 13.8.2.41 Landscape value is considered to be high and susceptibility of landscape receptors to change is high/moderate. Therefore on balance, landscape sensitivity is considered to be high/moderate.

Magnitude of Effects on Landscape Character: Negligible

- 13.8.2.42 Effects would be indirect and long term in duration. However, the extent of the Project visible from within the LCA will be significantly limited by the dense coniferous forestry. It is predicted that there will be such a minor loss or alteration to the character of the landscape that there will be no fundamental change.



Significance of Effects on Landscape Character: Minor/Negligible

- 13.8.2.43 The landscape is considered high/moderate sensitivity and the magnitude of effects negligible. Views of the Project from within this LCA are predicted to be significantly restricted by coniferous forestry and, therefore, it will have little or no effect on its character.
- 13.8.2.44 On balance, it is considered that effects on the landscape character of F5 will be minor/not significant and not significant under the EIA Regulations. Effects are considered to be neutral, as, following construction of the Project, there will be no material change to the existing landscape character.

Table 13.20 Summary of potential effects on seascape character

Regional Seascape Unit	Value	Susceptibility to Change	Sensitivity	Magnitude of Effects	Significance of Effects	Beneficial/Neutral / Adverse
RSU1	High/Moderate	Moderate	High-Moderate	High	Major Significant	Beneficial/Neutral / Adverse ¹
RSU2	Outstanding	High	High	Moderate/Low	Moderate/Minor Not Significant	Neutral
Local Seascape Unit						
LSU1	Outstanding	Moderate	High-Moderate	Low	Moderate-Minor Not Significant	Neutral
LSU2	Moderate	Low	Moderate-Low	Low	Minor Not Significant	Neutral
LSU3	Moderate	High/Moderate	High-Moderate	High/Moderate	Major/Moderate Significant	Adverse/Neutral ²
LSU4	High/Moderate	High/Moderate	High-Moderate	High	Major Significant	Beneficial/Adverse ³
LSU5	Outstanding/High	High/Moderate	High-Moderate	High/Moderate	Major/Moderate Significant	Adverse/Neutral ²
LSU6	Outstanding	High	High	Low/Negligible	Minor Not Significant	Neutral

- 1 - Effects are considered to be **beneficial** from locations enclosed by the Lagoon seawalls, **adverse** from locations immediately surrounding the Project and **neutral** from all other locations.
- 2 - Effects are considered to be **adverse** from locations adjacent to Baglan Burrows and **neutral** from all other locations.
- 3 - Effects are considered to be **beneficial** from locations that are enclosed by the Lagoon seawalls and **adverse** from within Crymlyn Burrows.
- 4 - Effects are considered to be **adverse** from locations adjacent within the east of the LSU and **neutral** from all other locations.

Tidal Lagoon Swansea Bay plc

Table 13.21 Summary of potential effect on landscape character

Landscape Character Area		Value	Susceptibility to Change	Sensitivity	Magnitude of Effects	Significance of Effects	Beneficial/Neutral/Adverse
LCA A: Dunes							
A1	Margam and Kenfig Burrows	Outstanding	Moderate	High - Moderate	Low	Moderate/Minor Not Significant	Neutral
LCA B: Hillside Scarp & Slopes							
B1	North of Clydach	Moderate/Low	Low	Moderate	Negligible	Negligible Not Significant	Neutral
B2	Mynydd Drumau	Moderate	Moderate	Moderate	Low	Minor Not Significant	Neutral
B3	Margam and Mynydd Dinas	High/Moderate	Moderate/Low	Moderate	Moderate	Moderate Not Significant	Neutral
LCA C: Intertidal and Wetlands							
C1	Llanrhidian Marsh	Outstanding/High	Low	High	N/A	N/A	N/A
C2	Crymlyn Bog	High	Moderate	High	Negligible	Negligible Not Significant	Neutral
LCA D: Mosaic Lowlands							
D1	Clyne Valley Country Park	High	Moderate	High - Moderate	Moderate/Low	Moderate/Minor Not Significant	Neutral
D2	Three Crosses	Moderate	Low	Moderate	Negligible	Negligible Not Significant	Neutral
D3	Rhyd-y-Pandy	Moderate	Low	Moderate	Negligible	Negligible Not Significant	Neutral
D4	Afon Tawe	Moderate	Low	Moderate - Low	Negligible	Negligible Not Significant	Neutral
D5	Gelli-Bwch	Moderate/Low	High/Moderate	Moderate - Low	Moderate	Major Significant Minor ¹ Not Significant	Beneficial
D6	Coed Hirwaun	Outstanding/High	High	High	Low	Minor	Neutral

Tidal Lagoon Swansea Bay plc

Table 13.21 Summary of potential effect on landscape character

Landscape Character Area	Value	Susceptibility to Change	Sensitivity	Magnitude of Effects	Significance of Effects	Beneficial/Neutral/Adverse
	High				Not Significant	
LCA E: Open Lowlands						
E1	Outstanding	Low	High - Moderate	Negligible	Negligible Not Significant	Neutral
E2	Margam Moor and Eglwys Nunydd Reservoir	Low	Low	Negligible	Negligible Not Significant	Neutral
LCA F: Uplands						
F1	Upland Clydach River Valley	Low	Moderate	Negligible	Negligible Not Significant	Neutral
F2	Clydach Valley	Moderate	Moderate	Moderate/Low	Moderate/ Minor Not Significant	Neutral
F3	Vale of Neath	Moderate	High - Moderate	Low	Moderate/ Minor Not Significant	Neutral
F4	Mynydd y Gaer	Moderate	Moderate	Moderate/Low	Moderate/ Minor Not Significant	Neutral
F5	Mynydd Margam, Mynydd Emroch and Mynydd Penhydd	High/ Moderate	High - Moderate	Negligible	Minor/ Negligible Not Significant	Neutral
LCA G: Urban						
G1	Swansea	High /Moderate	Moderate	High/Moderate/ Low	Major/ Moderate Minor ²	Neutral
G2	Coed Darcy	Low	Low	Low	Minor Not Significant	Neutral
G3	Neath	Low	Low	Negligible	Negligible Not Significant	Neutral
G4	Cwmafan	Low	Low	N/A	N/A	Neutral

Tidal Lagoon Swansea Bay plc

Table 13.21 Summary of potential effect on landscape character

Landscape Character Area	Value	Susceptibility to Change	Sensitivity	Magnitude of Effects	Significance of Effects	Beneficial/Neutral/Adverse
G5	Low	Moderate	Moderate - Low	Moderate	Moderate/Minor Not Significant	Neutral
G6	Outstanding/High	High	High	Moderate/Negligible	Moderate/Negligible ³	Neutral
G7	Low	Low	Low	N/A	N/A	N/A
G8	Low	Low	Low	Negligible	Negligible Not Significant	Neutral
G9	Moderate/Low	Low	Moderate - Low	Negligible	Minor Not Significant	Neutral
LCA H: Industrial						
H1	Low	Low	Low	High/Moderate	Major/Moderate Significant	Beneficial
H2	Low	Low	Low	High Negligible	Major Significant Negligible ² Not Significant	Beneficial
H3	Moderate/Low	Low	Low	Moderate	Minor Not Significant	Neutral
H4	Low	Low	Low	Moderate	Minor Not Significant	Neutral

N.B. - N/A denotes that the ZTV indicates that there will be no visibility of the proposed Project from the LCA and therefore no effects

- 1 - Significance of effects on landscape character are **major** from locations adjacent to Swansea Bay and **minor** from all other areas.
- 2 - Magnitude of effects on landscape character is **high/moderate** from locations adjacent to Swansea Bay and elevated locations that overlook it; **low** from all other areas within the LCA. Significance of Effects on Landscape Character are **major/moderate** from locations adjacent to Swansea Bay and elevated locations that overlook it and **minor** from all other areas within the LCA.
- 3 - Significance of effects on landscape character are **moderate** from locations adjacent to the A4067 and Mumbles Hill and **negligible** from all other areas.
- 4 - Magnitude of effects on landscape character is **high** from locations to the south of the A483 (Fabian Way) and **negligible** from locations to the north of the A483 (Fabian Way). Significance of effects on landscape character are major from locations to the south of the A483 (Fabian Way) and negligible from locations to the north of the A483 (Fabian Way).



13.8.3 Cumulative effects on seascape and landscape character

- 13.8.3.1 Cumulative effects on landscape character are predicted to be most significant from locations immediately adjacent to, and within close proximity of, the Project. These are assessed by reference to these project/developments listed in Table 13.12.
- 13.8.3.2 It is predicted that within LSU4 - Swansea Port and Crymlyn Burrows the combination of the Project and the SUBC will lead to an increase in the influence of development along the coastline.
- 13.8.3.3 The significance of effects is predicted to be major and beneficial for areas enclosed by the Lagoon seawalls, as there will be improvements to the quality of the public realm through the implementation of the Landward Urban Park, Ecological Park and SUBC described in Section 13.8.1. To the east of the Lagoon seawalls within Crymlyn Burrows, the increase in development and number of people within the area will lead to a loss to its sense of tranquillity, and, therefore, effects are considered to be adverse.
- 13.8.3.4 The character of the landscape and seascape is not predicted to change from locations along the coast which extend from Port Talbot to Sker Point. The Project and cumulative developments will be accommodated into the seascape/landscape without changing the overall character of LCAs and LSU along this stretch of the coastline.
- 13.8.3.5 From locations to the west of the Project and extending to Mumbles Head, the Project will be viewed together with the following cumulative developments; Swansea Port, the SUBC and the proposed wind turbines to Mynydd Brombil. These developments are predominantly set within an existing urban context and their introduction is not predicted to significantly change the elements that define it. Therefore, the significance of cumulative effects is considered to be moderate, although not significant. Effects are considered to be neutral.

13.8.4 Potential effects on Visual Amenity

- 13.8.4.1 The significance of visual effects as a result of the Project during the operational phase, from each of the selected viewpoints, has been assessed against the significance criteria defined in section 13.3. Effects during the operational phase of the project are considered to be long term and permanent in duration.
- 13.8.4.2 Photomontages of the Project from the selected viewpoints have been used to aid this assessment and are provided in Figures 13.20 – 13.77. All Figures are presented in Volume 2 of this ES.

Viewpoint 1: Aberavon Sands, south

- 13.8.4.3 *Seascape/Landscape Character Area & Designations:* Aberavon Sands (LSU3)/Port Talbot and Margam (G5). Located on National Cycle Route and Wales Coast Path.
- 13.8.4.4 *Susceptibility to Change of Visual Receptors:* High
Recreational users on the promenade and beach, tourists and walkers on Wales Coast Path. The promenade and beach, including views across Swansea Bay, are predicted to be the primary reason for visits.

Sensitivity of Visual Receptors: High - Moderate.

- 13.8.4.5 Visitors are likely to be highly susceptible to the type of development proposed, as views of Swansea Bay will be a main reason for their visit. However, the viewpoint contains a number of existing manmade features and is not located within an area of recognised value.
- 13.8.4.6 **Existing View:** This viewpoint is located on Aberavon beach promenade, approximately 4.2km east of the Project seawall at its nearest point. A broad, open view is available over the beach, looking westward into Swansea Bay. The characteristic profile of the Bay landform contains the view to the north and northwest, including the distinctive forms of Kilvey Hill, Mumbles Hill and Mumbles Head. The foreground contains the promenade embankment and expansive views over the open Aberavon beach. To the south, distance views are available across the Bristol Channel.
- 13.8.4.7 Mixed urban forms of varied grain and texture are visible within the central Bay area, notably including the tower at Meridian Quay, and other larger-scale built forms within the SA1 development, which are prominent urban features. Swansea dock wall is visible as a thin, linear feature cutting in to the central part of the bay. To the south, the Port Talbot dock wall and other dock infrastructure are visible at close distance.
- 13.8.4.8 **Predicted View:** The effect of the Project at high tide from Viewpoint 1 is illustrated by the photograph and photomontages in Figures 13.20 and 13.21 and at low tide in the photograph and photomontage in Figures 13.22 and 13.23. The photomontages illustrate that at both high and low tide the rock armour that forms the eastern arm of the Lagoon seawall will be visible, as would the Western Landfall Building, SSSI information point and the Offshore Building including the turbine and sluice gate housing structure including the semi-goliath gantry crane. Due to the black/grey coloured finish of the crane it will be a regressive and minor feature of the view.
- Magnitude of Visual Effects: Moderate.*
- 13.8.4.9 The Lagoon seawalls would be a recognisable feature of the view at both high and low tides and may create a sense of visual enclosure within the inner, eastern part of Swansea Bay, as existing views towards the coastline of Swansea and Mumbles will be screened. At low tide approximately one third of the seawall that forms the eastern arm of the Lagoon would be visible at full height and prominent within views, as it will be visible against the sand within the inter-tidal area of the beach. However, over time, prominence of the rock armour to the seawalls is predicted to darken in colour and become more regressive in the view.
- 13.8.4.10 The Offshore Building will be evident and viewed against the landform beyond, as would the Western Landfall Building and SSSI information point. The SSSI information point will be the closest element within the view, although, like the others, it will be seen in conjunction with other built structures as opposed to an isolated feature.
- 13.8.4.11 The overall nature of the view is not predicted to change, as, although the Project, and in particular the Lagoon seawalls, will be readily observed, the open views across the adjacent beach of Aberavon and the more distant views south out to the Bristol Channel will be retained.
- 13.8.4.12 The proposed low level lighting of the western arm of the Lagoon is predicted to be screened from view by the eastern arm of the Lagoon. Feature lighting to the Offshore



Building may be notable, especially when the turbines are in operation, when the lighting will be more intense. Lighting along the access road south of Queen's Dock and areas within the Landward Urban Park may also be evident. The Western Landfall Building is not predicted to be prominent at night, as it is proposed that any lighting will be a low level glow only. It is not predicted that lighting to the structures and sculptural elements to the eastern arm of the Lagoon will be prominent, as any lighting will be focussed below the horizontal plane. Where lights of the Project can be seen, they will be viewed against the sky glow to the urban areas of Swansea and The Mumbles. The magnitude of night time effects is considered to be low.

Significance of Visual Effects: Moderate

13.8.4.13 Receptors are considered to be of high sensitivity and the magnitude of effects moderate. The Project would be an additional feature of the view, particularly the Lagoon seawalls. However, the large scale of the seascape/landscape is predicted to absorb these into the view and the existing visual elements are predicted to remain dominant.

13.8.4.14 On balance, it is considered that effects on visual amenity will be moderate, although not significant under the EIA Regulations. Effects are considered to be neutral, as the development will be incorporated into the view without changing its overall nature.

Predicted Cumulative View

13.8.4.15 From this location it is predicted that all or part of all the cumulative developments (as listed in Table 13.12) will be visible within the view, except for the proposed Mynydd Marchywel wind farm and the wind turbine developments at Newlands Farm and Kenfig Industrial Estate.

Magnitude of Visual Cumulative Effects: Moderate.

13.8.4.16 It is predicted that the Project will be seen in the same arc of view as all other cumulative developments. The SUBC is predicted to be the most prominent of the cumulative developments, as it will be viewed at a distance of approximately 6km and against the lower sloped of Kilvey Hill. The proposed hotel, leisure and residential blocks within the Mumbles Pier redevelopment project may be a visible element within the view due to its scale, although not prominent, as it will be seen at distance of over 10km. All other developments due to distance, existing manmade features, and the large scale of the seascape/landscape in which they will be viewed are predicted to be minor features. Views of other cumulative developments will typically be experienced by walkers and beach users who will either be stationary or moving at a slow speed. Sequential views may be possible and frequent due to the speed of travel and the open nature of the views from the promenade.

Significance of Cumulative Visual Effects: Moderate

13.8.4.17 Receptors are considered of high/moderate sensitivity and magnitude of cumulative effects moderate. There may be a slight increase in the perception of developments within the view, however, due to the broad nature of the seascape and its ability to absorb large developments, the overall nature of the views is not predicted to change. The wide expanse of sand, views to Swansea Bay and the hills beyond Swansea and The Mumbles will remain dominant.

13.8.4.18 On balance, it is considered that cumulative effects on visual amenity will be moderate, although not significant under the EIA Regulations. Cumulative effects are considered to



be neutral as, although visible, cumulative developments will be incorporated into the view without changing its overall nature.

Viewpoint 2: Aberavon Sands, north

- 13.8.4.19 *Seascape/Landscape Character Area & Designations:* Aberavon Sands (LSU3)/Baglan Bay (H3), on the border with Port Talbot and Margam (G5). Located on National Cycle Route and Wales Coast Path.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.20 Recreational users of the promenade and beach, tourists and walkers on the Wales Coast Path. The wide, sandy beach and views across Swansea Bay and the Bristol Channel are predicted to be the main reason for their visits.

Sensitivity of Visual Receptors: High - Moderate

- 13.8.4.21 Visitors are likely to be highly susceptible to the type of development proposed, as views to Swansea Bay will be a main reason for their visit. However the viewpoint is not located within an area of recognised value.

- 13.8.4.22 *Existing View:* This viewpoint is located on Aberavon beach, approximately 2.3km north of Viewpoint 1. The Project seawall is located approximately 2.2km to the west of the viewpoint location at its nearest point.

- 13.8.4.23 The view from this location is broad and expansive. The foreground contains open views across the beach and into Swansea Bay. To the north, the Swansea Bay headland limits the view, containing the distinctive profiles of Kilvey Hill, Mumbles Hill and Mumbles Head. Crymlyn Burrows dunes and beach are visible at middle distance to the north, beyond which rises the prominent form of Kilvey Hill, containing mixed tree groupings and grassland landcover.

- 13.8.4.24 The urban forms of the Civic Centre and residential communities of Swansea are visible within the centre of the Bay. Prominent larger-scale built forms include the tower at Meridian Quay and the SA1 development. Block urban forms are also visible within the Swansea docklands area, located at medium distance above the linear form of the dock wall.

- 13.8.4.25 *Predicted View:* The effect of the Project at high tide from Viewpoint 2 is illustrated by the photograph and photomontages in Figures 13.24 and 13.25, and at low tide in the photograph and photomontage in Figure 13.26 and 13.27. At low tide, the seawall to the eastern arm of the Lagoon will be visible, with the Offshore Building and safety zone markers extending above the rock armour. The Western Landfall Building and SSSI information point will also be visible with glimpsed views of the Landward Ecological Park. At high tide the view will be similar to that at low tide except that the proportion of the seawall visible will be restricted to the upper 3.5m.

Magnitude of Visual Effects: Moderate.

- 13.8.4.26 At a distance of approximately 2.0km, the seawall that encloses the east of the Lagoon will be a feature of the view. Although there may be some slight loss to the sense of the sweeping arc of Swansea Bay, it will be predominantly retained. The Lagoon seawall will visually extend past Mumbles Head, forming a detracting element within the view. At low tide the full extent of the Lagoon seawall (approximately 12.0m AOD) will be visible within the inter-tidal area of the beach, although the proportion visible will reduce to

approximately 3.5m AOD at high tide. The Offshore Building will be the most structure of the Project, as the Western Landfall Building will be viewed in conjunction with existing built form. Activities within the Bay and also along the eastern arm of the Lagoon seawall and Ecological Park will also be evident.

- 13.8.4.27 At night, it is predicted that lighting along the western arm of the Lagoon will be screened by the seawalls to the eastern arm of the Lagoon. Lighting to the structures and sculptural elements to the eastern arm of the Lagoon will not be prominent from this location, as any lighting will be focussed below the horizontal plane. Lighting to the Offshore Building may be notable, due to the dynamic lighting proposed for the building, especially when the turbines are in operation and there is localised increase in the intensity of the lighting. However, it will be viewed in conjunction with existing lighting within The Mumbles. Lighting to the areas surrounding the Western Landfall Building and along the access road south of Queen's Dock may be noticeable although not prominent, as it will be viewed against the sky glow of the urban areas of Swansea. The magnitude of night time effects is considered to be low.

Significance of Visual Effects: Moderate

- 13.8.4.28 Receptors are considered to be of high sensitivity and the magnitude of effects moderate. The Project, and in particular the Lagoon seawalls, will be an additional element of the view. Although there may be a foreshortening of views across Swansea Bay, the existing characteristics including the extensive open views out to sea, Mumbles Head, built form within Swansea and prominent Kilvey Hill, will all remain as reference points within the view.
- 13.8.4.29 On balance, it is considered that effects on visual amenity will be moderate, although not significant under EIA Regulations. Effects are considered to be neutral, as the development will be incorporated into the view without changing its overall nature.
- 13.8.4.30 Predicted Cumulative View: From this location it is predicted that all or part of all the cumulative developments will be visible within the view, except for the proposed wind farm developments of Mynydd Marchywel and Mynydd Brombil.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.31 It is predicted that the Project will be seen within the same arc of view as all cumulative developments, except for the proposed wind turbines at Newlands Farm and Kenfig Industrial Estate, and will be the most prominent of all developments. The wind turbines would be visible further to the south east, within a separate arc of view and would be very minor elements due to the screening of topography and the existing harbour walls. The proposed Abernedd Power Station may be a noticeable feature as will the SUBC, which will be viewed at a distance of approximately 4.5km and against the lower slopes of Kilvey Hill. The proposed hotel within the Mumbles Pier redevelopment project may be a visible element within the view, due to its scale, although not prominent, as it will be seen at distance of over 10km. All other developments, due to distance, existing manmade features and the large scale of the seascape/landscape in which they will be viewed, are predicted to be minor features. Views of the Project and other cumulative developments will typically be experienced by walkers and beach users who will either be stationary or moving at a slow speed. Sequential views may be possible and frequent due to the speed of travel and the open nature of the views from Aberavon Sands.



Significance of Cumulative Visual Effects: Moderate

- 13.8.4.32 Receptors are considered of high/moderate sensitivity and magnitude of cumulative effects moderate. Although there may be a slight increase in the prominence of development within the view, the Project and other cumulative developments will be viewed in conjunction with existing manmade features.
- 13.8.4.33 On balance, it is considered that cumulative effects on visual amenity will be moderate and not significant under EIA Regulations. Cumulative effects are considered to be neutral, as the combined cumulative effects of the Project and other cumulative developments will not result in a change in the overall nature of the view.

Viewpoint 3: Maes Ty Canol, Baglan

- 13.8.4.34 *Seascape/Landscape Character Area & Designations:* Neath (G3). No landscape designations.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.35 A number of glimpsed views through gaps between properties are available from Baglan area. Maes Ty Canol represents urban dwellers with elevated views over Swansea Bay and the Clydach Valley.

Sensitivity of Visual Receptors: Moderate

- 13.8.4.36 Receptors overlook an expansive urban area in which new built elements within the landscape are a common feature; as such, they are more likely to be able to accommodate new visual elements within the view. The location is not of recognised value.
- 13.8.4.37 *Existing View:* From this elevated location, views are available over rooftops and funnelled between buildings, towards Swansea Bay and the surrounding seascape/landscape. Long reaching views are available looking west and northward, containing the western curve of Swansea Bay, the Swansea docklands and the southern fringes of Swansea, including the SA1 development. At middle distance within the view, Baglan Bay, the mouth of the River Neath and surrounding foreshore including Crymlyn Burrows are clearly visible. The prominent large scale block built forms, chimney and other infrastructure at Baglan Bay Energy Park are clearly visible above the rooftops of Maes Ty Canol residential properties.
- 13.8.4.38 To the north, funnelled views down Maes Ty Canol and over neighbouring residential areas look toward the Clydach Valley LCA. The M4 and A483 roadway infrastructure form a dominant feature within the middle ground, beyond which mounded landform of mixed landcover and large scale quarry works are visible. The northern extents of Swansea, including Morriston, form the limit of the view, containing prominent large-scale skyline elements.
- 13.8.4.39 *Predicted View:* The effect of the Project from Viewpoint 3 is illustrated by the photograph and photomontages in Figures 13.28 and 13.29. The photomontage illustrates that, from this elevated location, the full length of the Lagoon seawalls, including the water enclosed within them will be visible. In addition the Offshore Building, the turbine and sluice gate housing structure, plus the Western Landfall Building and SSSI information point will also be visible, as would the landward urban and ecological parks.



Magnitude of Visual Effects: Moderate

- 13.8.4.40 The Project will form a recognisable new element within the view and water based activities within the Lagoon will be evident. Due to the proportion of the field of view that they occupy, the Lagoon seawalls will be the most visible feature, although they will be viewed against a backdrop of Swansea and Mumbles Head, rather than open sea. The centre of the Lagoon seawalls are approximately 7.5km away and, at this distance, it is not predicted that there will be a perception of change in the proportion of the seawalls that will be visible during high and low tide. The Offshore Building will be the most prominent of the buildings visible and will be viewed as a relatively small, although vertical structure within the Bay.
- 13.8.4.41 The difference between the water level in the Lagoon and the external sea level when a 'head of water' is created at high and low tides may be visible although not prominent due to distance and will not form a detracting element within the view.
- 13.8.4.42 The Project will be viewed in conjunction with the significant number and varied manmade features that currently occupy the view. A number of which are within the foreground, including the chimneys within Baglan Bay Energy Park, which will remain one of the most prominent features within the seascape/landscape.
- 13.8.4.43 At night, the feature lighting to and surrounding the Offshore Building will be viewed against the natural surroundings of the water within Swansea Bay. In addition, views of the low level lighting including that to the structures and sculptural elements of the western arm of the Lagoon seawalls may be possible when lit. This lighting, and that of the Offshore Building, will be within the same arc of view as the sky glow to the urban areas along the promenade to The Mumbles and Swansea. Lighting to the access road south of Queen's Dock and to the Western Landfall Building and areas surrounding it, is not predicted to be prominent. Lighting within these areas will be viewed in conjunction with existing lighting within Swansea Port and surrounding buildings. The magnitude of night time effects is considered to be moderate/low.

Significance of Visual Effects: Moderate

- 13.8.4.44 Receptors are considered to be of moderate sensitivity and the magnitude of effects is also moderate. The broad, large-scale view and the number of existing manmade features will assist in absorbing the Project into the view.
- 13.8.4.45 On balance, it is considered that effects on visual amenity will be moderate although not significant under EIA Regulations. Effects are to be neutral as, although the Project will form a new element within the view, the simple form of the design, and especially the Lagoon seawalls, fits with the character of Swansea Bay, and complements the existing energy developments that are currently visible from this viewpoint.
- 13.8.4.46 *Predicted Cumulative View:* From this location it is predicted that all or part of the Abernedd Power Station, SUBC, Mumbles Pier development, Swansea SA1, Southern Access Road at Coed Darcy and the existing wind turbine within the Port of Swansea will be visible within the view.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.47 All cumulative developments will be visible from this location will all be seen within the same arc of view. The Abernedd Power Station is predicted to be the most prominent of the cumulative developments visible, however due to its scale and location the SUBC is

also predicted to be a prominent feature, and is likely to increase the proportion of built form within the view. The hotel and residential blocks within the proposed Mumbles Pier development may be visible against Mumbles Hill. Other developments are not predicted to be prominent, as they will be viewed in conjunction with existing built form and absorbed into the surrounding urban landscape. Views will be experienced by residents and receptors driving through the landscape, typically at low speeds, however due to the screening of existing and built form, sequential views are predicted to be occasional due to the limited visibility of the Project and the cumulative developments.

Significance of Cumulative Visual Effects: Moderate

13.8.4.48 Receptors are considered of moderate sensitivity and magnitude of cumulative effects are also moderate. The introduction of the Project, when viewed with the other cumulative developments is predicted to increase the prominence of built form within the view.

13.8.4.49 On balance, it is considered that cumulative effects on visual amenity will be moderate, although not significant under EIA Regulations. Cumulative effects are considered to be neutral as the Project and other cumulative developments, although visible, will complement the existing built elements that form the view.

Viewpoint 4: Headland Road, St. Thomas, Swansea

13.8.4.50 *Seascape/Landscape Character Area & Designations: Swansea (G1).* No landscape designations.

Susceptibility to Change of Visual Receptors: High.

13.8.4.51 A number of glimpsed views through gaps between properties are available from St. Thomas. Headland Road represents residents with elevated views over Swansea Bay and towards the Project.

Sensitivity of Visual Receptors: Moderate

13.8.4.52 Receptors overlook the area of Swansea that includes SA1 Swansea Waterfront where new elements have become a common feature within the landscape. Therefore, although highly susceptible, receptors from this location are more likely to be able to accommodate new visual elements within the view. The location is not of recognised value.

13.8.4.53 *Existing View:* This elevated location lies at the western extent of St. Thomas, abutting the lower reaches of Kilvey Hill.

13.8.4.54 The view overlooks the Swansea docklands, into the wider Swansea Bay beyond. The extensive Maritime Quarter is clearly visible, adjacent to the Swansea marina. Recent urban development dominates the view, including large-scale apartment units within the Maritime Quarter and other quayside development, marinas and the Prince of Wales Dock. The commercial and office zone which abuts the Prince of Wales Dock is also prominent, adjacent to Sainsbury's retail outlet. Older terraced development, within less elevated areas of St Thomas, is visible within the middle ground of the view, divided from more recent marina/ docklands development by Fabian Way (A483). The industrial docklands area is more open, containing a number of large-scale vertical elements, including cranes and other infrastructure and a single wind turbine.



- 13.8.4.55 Views from this location looking westward are largely obscured. Glimpsed, funnelled views are available along Headland Road, looking toward Townhill and Mayhill over and between rooftops within the foreground.
- 13.8.4.56 *Predicted View:* The effect of the Project from Viewpoint 4 is illustrated by the photograph and photomontages in Figures 13.30 and 13.31. The photomontage illustrates that, from this location, the full extent of the western Lagoon seawall, and a significant proportion of the eastern arm of the Lagoon seawall will also be visible. Other associated structures visible will include the Offshore Building, turbine and sluice gate housing structure plus the onshore Western Landfall Building. The safety zone markers associated with the turbine and sluice gate housing structure may also be visible from this viewpoint location.
- Magnitude of Visual Effects: High/Moderate*
- 13.8.4.57 Topography and vegetation channel views towards the Project, where the Lagoon seawalls occupy a significant proportion of the field of view, where water based activity within the Lagoon would be noticeable. The Lagoon seawalls will be the most visible element of the Project and will visually connect with Swansea Port. However, they will be viewed against the open expanse of Swansea Bay, increasing the extent of built form currently within the Bay. At low tide, the proportion of the Lagoon seawalls visible will increase, most notably the western arm of the Lagoon that lies within the intertidal area, which may be visible at full height (approximately 12.0m AOD). Over time, the prominence of the rock armour to the seawalls is predicted to darken in colour and become more regressive in the view. Activities within the Lagoon and on the seawalls will be evident from this location.
- 13.8.4.58 The difference between the water level in the Lagoon and the external sea level when a 'head of water' is created at high and low tides may be a prominent feature from this elevated location. Due to the viewpoint location, this difference may be more noticeable at low tide, when the water level outside of the Lagoon is low, as the body of water held in the Lagoon, will contrast with the exposed sand within the intertidal areas of the adjacent beach.
- 13.8.4.59 The Western Landfall Building will be visible from this viewpoint. However, given its scale and location within the existing built form of Swansea Port, it is not predicted to be prominent. The Offshore Building is predicted to be more prominent due to its location; however, the muted choice of colours proposed for the building will assist in reducing its effects. The turbine and sluice gate housing structure may also be visible. The semi-goliath gantry crane, when in use, is not predicted to be prominent due to its size, distance from the viewpoint location, and the black/grey coloured finish. It will therefore be a regressive feature in the view when seen in conjunction water of Swansea Bay.
- 13.8.4.60 At night, it is predicted that the Offshore Building, including lighting to the surrounding public realm areas, plus lighting to the access road and areas surrounding the Western Landfall Building will be the most prominent lit element of the Project from this location. The structural and sculptural elements to the eastern arm of the Lagoon seawall may also be a visible feature when illuminated. The Offshore Building and the structural and sculptural elements will be viewed against the dark water of the Bay, while the lighting of the Project access road and areas surrounding the Western Landfall Building will be seen in conjunction with urban glow of Swansea Port. All lit elements of

the Project will be seen within the same arc of view as the nearby built form, where lights within it and the urban glow that is emitted will remain a prominent night time feature. The magnitude of night time effects is considered to be moderate/low.

- 13.8.4.61 At night, visible lighting will be restricted to the Offshore Building and the Western Landfall Building. Views of the low level lighting proposed to the western arm of the Lagoon seawall, will be screened by the crest wall. The lights of the Offshore Building will be viewed against the intrinsically dark water of the Bay and the Western Landfall Building will be seen in conjunction with urban glow of existing buildings within Swansea Port. Both buildings will be seen within the same arc of view as the nearby built form, where lights within it and the urban glow that is emitted will remain a prominent night time feature. The magnitude of night time effects is considered to be moderate/low.

Significance of Visual Effects: Major/Moderate

- 13.8.4.62 Receptors are considered to be of moderate sensitivity and the magnitude of effects is high/moderate. The Project would be a visible feature within the view, most notably at low tide. It will potentially be viewed as a defining feature within the seascape/landscape. However, as it will be seen in conjunction with a number of existing built elements and it is not predicted to conflict with the existing visual character.
- 13.8.4.63 On balance, it is considered that effects on visual amenity will be major/moderate and significant under EIA Regulations. Effects are considered to be neutral; whilst the Project will be an immediately apparent feature of the view, the simple form of the design complements the existing manmade features and simple, open character of Swansea Bay.
- 13.8.4.64 *Predicted Cumulative View:* From this location it is predicted that all or part of the Mumbles Pier development, Swansea SA1 and the existing wind turbine within the Port of Swansea will be visible within the view.

Magnitude of Visual Cumulative Effects: High/Moderate

- 13.8.4.65 Proposed development adjacent to the Prince of Wales Dock within Swansea SA1 will be seen as a feature of the view and may screen views of the Western Landfall Building and part of the Landward Urban Park. The Project, development within Swansea SA1 and the existing Swansea Dock wind turbine will all be viewed within close proximity to one another and will all within the same arc of view. Views of Mumbles Pier will be viewed in succession to the other developments and limited to the pier, including the new and existing life boat stations. Receptors are predicted to be static from this location; however, all developments will be viewed within a large scale seascape/landscape.

Significance of Cumulative Visual Effects: Major/Moderate.

- 13.8.4.66 Receptors are considered to be of high/moderate sensitivity and cumulative effects are major/moderate. Development within Swansea SA1 will be absorbed into the existing urban landscape and the existing wind turbine in Swansea Port and Mumbles Pier will be minor elements within the view. Due to its scale, the Project will be seen as the most notable of all the cumulative developments considered.
- 13.8.4.67 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under the EIA Regulations. Cumulative effects are considered to be neutral as the Project and other cumulative developments, although



visible, will be able to be accommodated into the view, due to their form and scale, without adversely affecting the visual qualities that define it.

Viewpoint 5: The Knab, Adjacent to Mumbles Pier

- 13.8.4.68 *Seascape/Landscape Character Area & Designations:* Swansea Bay (LSU5)/The Mumbles (G6). Located on Wales Coast Path.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.69 Recreational users of the promenade, tourists and walkers on the Wales Coast Path, whose primary reason for their visit is predicted to be attractions associated with Swansea Bay.

Sensitivity of Visual Receptors: High.

- 13.8.4.70 Although not formally recognised for its value, the location is locally popular with tourists, who are likely to be responsive to new visual elements of the type proposed and highly susceptible to change.

- 13.8.4.71 *Existing View:* Located at The Knab within The Mumbles, the sweeping arc of Swansea Bay is a prominent feature of foreground views, especially at low tide where the wide expanse of sand is visible. Extending out into Swansea Bay is Mumbles Pier and lifeboat station, which forms a distinct landmark. Adjacent to the pier are the steep wooded slopes of Mumbles Hill. To the left of the view is the urban development that extends along the A4067 (Oystermouth Road), where Oystermouth Castle can be seen set against the wooded backdrop of Colts Hill. The mature woodland within Clyne Country Park is a notable element dividing The Mumbles from the urban areas of Swansea. Within the centre of the view, the buildings of Swansea University are prominent as are the mainly residential areas of Brynhill, Townhill and Mayhill. Notable buildings within the city centre that can be seen from this location include the Civic Centre buildings, the BT building and Meridian Tower. Beyond the built form of the city centre, the distinctive Kilvey Hill including the telecommunications masts to its summit can be seen. Within the Swansea Port, the existing wind turbine forms a visible feature, adjacent to the estuary of the River Neath and the long flat expanse of Aberavon Sands. The built form of Port Talbot is visible in the far distance, as are the steel works, with the upland areas of Mynydd Dinas and Mynydd Brombil forming the backdrop.

- 13.8.4.72 *Predicted View:* The effect of the Project at high tide from Viewpoint 5 is illustrated by the photograph and photomontages in Figures 13.32 and 13.33, and at low tide in the photograph and photomontage in Figures 13.34 and 13.35. At low tide the Lagoon seawalls to the Broad Seaward Park would be visible, with the Offshore Building and safety zone markers extending above the rock armour. The turbine and sluice gate housing structure would also be a visible feature at low tide. At high tide, the view would be similar to that at low tide, except that the proportion of the seawall visible is restricted to the upper 3.5m. The Western Landfall Building will be a visible, although not a prominent feature of views.

Magnitude of Visual Effects: High (low tide), Moderate (high tide)

- 13.8.4.73 The Project would be viewed at a distance of approximately 6km and at low tide the Lagoon seawalls will be a visible feature. Following construction of the Project, longer distance views towards Aberavon Sands will be screened which will result in a sense of foreshortening of views across Swansea Bay from this location. Deposition of sediment in the western extent of Swansea Bay is predicted to be in the subtidal area, with

minimal, if any effect, on visible intertidal areas (refer to Chapter 6). This indirect result of the Project may be perceptible at low spring tide, although it will not be prominent. At high tide the Lagoon seawalls will be less prominent, due to the proportion of seawall that will be visible. At both high and low tide the Offshore Building, safety zone markers, and turbine/sluice gate housing structure are predicted to be visible although not prominent due to their size, proposed colour and finish in the large receiving seascape/landscape in which they will be viewed, and the fact that they will be viewed in conjunction with other manmade features within the backdrop.

- 13.8.4.74 At night, the low level lighting proposed along the western arm of the Lagoon seawall will be screened by the crest wall of the western arm. The Offshore Building will be seen as an illuminated feature within the Bay, especially when the turbines are operational and the intensity of the lighting will increase. However this lighting is localised and will be viewed in conjunction with existing sky glow to the urban area of Port Talbot. Illuminated areas along the access road and locations surrounding the Western Landfall Building will be viewed in conjunction with existing urban lighting within Swansea. The magnitude of night time effects is considered to be low.

Significance of Visual Effects: Major /Moderate

- 13.8.4.75 Receptors are considered to be of high sensitivity and the magnitude of effects is high at low tide and moderate at high tide. At low tide, the Project may become a defining feature of the view that will result in a partial foreshortening of views to inner areas of Swansea Bay, due to the proportion of the seawalls visible. However, due to its location within the Bay, the sweeping curve of Swansea Beach will be retained, as will views of the rising land to the north of Port Talbot. Mumbles Pier will remain as a prominent and defining feature within the seascape.
- 13.8.4.76 On balance, it is considered that effects on visual amenity will be major/moderate and significant under EIA Regulations. Effects are considered to be adverse, although following construction of the Lagoon the broad sweep of Swansea Beach, the views to the upland areas on the opposite side of the Bay and open views out towards the Bristol Channel will all be retained. However, there will be some loss to the open character within inner parts of Swansea Bay, which from this location may be seen as a detracting element.

- 13.8.4.77 *Predicted Cumulative View:* From this location, it is predicted that all or part of all cumulative developments will be visible within the view, except for the proposed southern access road at Coed Darcy.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.78 From this location, the hotel and residential units that are proposed as part of the Mumbles Pier redevelopment will be an immediately apparent and prominent feature of the view, as will the pier itself and life boat stations. It is predicted that the Project will also be a visible feature within the view, although, due to the angle of view that it will be viewed from, it will be less prominent than the Mumbles Pier development. Other cumulative developments will be even less prominent, as they will be viewed at a greater distance and against a backdrop of existing built form. The proposed turbines to the wind farm on Mynydd Brombil may be a notable feature within distance views, as they will break the skyline. All developments will be viewed in the same arc of view, except for Mumbles Pier, which will be viewed in succession. The speed of travel of receptors will be slow, as most will be on foot. Due to the speed of travel of receptors

and the open views in which development will be viewed, sequential views will be long in duration and potentially from a number of locations along the Wales Coast Path.

Significance of Cumulative Visual Effects: Major/Moderate.

13.8.4.79 Receptors are considered to be of high sensitivity and magnitude of cumulative effects are high/moderate. The construction of the Mumbles Pier project, where the hotel/leisure and residential units will be prominent, will lead to an increase in built form within the western half of Swansea Bay, and views to the wooded slopes of Mumbles Hill will be partially screened.

13.8.4.80 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under EIA Regulations. Cumulative effects are considered to be neutral.

Viewpoint 6: Mumbles Nature Reserve

13.8.4.81 *Seascape/Landscape Character Area & Designations:* The Mumbles (G6). Located within the Gower AONB.

Susceptibility to Change of Visual Receptors: High

13.8.4.82 The main receptor types are predicted to be tourists and walkers within Gower AONB whose primary attraction for their visit will be views across Swansea Bay and the Bristol Channel. Interpretive boards reinforce the value of views from this location.

Sensitivity of Visual Receptors: High

13.8.4.83 Receptors from this location are likely to be highly responsive to new visual elements of the type proposed and highly susceptible to change, as the location is set within the Gower AONB, a location of high value.

13.8.4.84 *Existing View:* From this elevated location on Mumbles Hill, the view is dominated by the large expanse of Swansea Bay. Within the foreground, Mumbles Pier and lifeboat station are an immediately apparent feature of the view, as is the lighthouse located on Mumbles Head. Along the sweeping arc of Swansea Bay, the wooded slopes within Clyne Country Park, the buildings within Swansea University and the built form within the Sketty district of Swansea on the rising hills beyond, are all visible within the left of the view. Development within Swansea is also notable, including the Meridian Tower, which is the most prominent feature within the city. Forming a backdrop to this part of the view, is Kilvey Hill. To the opposite side of the Bay, development within Port Talbot is discernible, including the steel works.

13.8.4.85 *Predicted View:* The effect of the Project at high tide from Viewpoint 6 is illustrated by the photograph and photomontages in Figures 13.36 and 13.37, and at low tide, in the photograph and photomontage in Figures 13.38 and 13.39. From this elevated location, it is predicted that, at both high and low tide, the western arm and the eastern arm of the Lagoon seawalls will both be visible. The area of water within Swansea Bay that will be enclosed by the seawalls will also be visible and water based activities, most notably sailing, is likely to be evident. In addition, views of the Lagoon seawalls, the turbine and sluice gate housing will be available, as will the Offshore Building within the same portion of the view. Both the Western Landfall Building and SSSI information point may also be seen, as will the proposed beach areas that abut Queen's Dock to the Landward Urban Park and also the beach and possible mariculture areas to the Landward Ecological Park.



Magnitude of Visual Effects: High/Moderate (High and Low tide)

- 13.8.4.86 The Project, most notably the Lagoon seawalls will be an immediately apparent feature within the inner area of Swansea Bay, although, over time, the rock armour to the seawalls are predicted to darken in colour and become more regressive in the view. However, Mumbles Pier, which is a feature of the existing view, will remain a prominent feature due to its proximity to the view and its contrasting form and colour with that of the simple form of the sea. From this location, there are open views across the broad expanse of Swansea Bay, out towards the Bristol Channel and this will assist in absorbing the Project into the wider seascape and reduce the sense of enclosure that may be created following its construction. The broad sweep of Swansea Bay is predicted to remain intact. The Offshore Building, plus the goliath gantry crane will introduce offshore, vertical elements into Swansea Bay. However, at a distance of approximately 4.5km, whilst visible, they are not predicted to be prominent features. The other buildings associated with the Project are predicted to be even less prominent, as they will be viewed in conjunction with other built features within the landscape, and in the case of the SSSI information point, at a distance of over 9km away.
- 13.8.4.87 The difference between the water level in the Lagoon and the external sea level when a 'head of water' is created at high and low tides may be a noticeable feature from this elevated location. However, due to the angle of view at which the Lagoon is viewed, only a narrow proportion of the total area inside of the Lagoon is visible and therefore any difference in water levels is not predicted to be prominent.
- 13.8.4.88 At night, the lights of the Offshore Building will be viewed against the intrinsically dark water that will be enclosed by the Lagoon seawalls and within the same arc of views as the glow of lights to the M4 motorway. It may, therefore, be a notable feature within night time views. The access road south of Queen's Dock, the Western Landfall building and illuminated areas surrounding it will be less prominent, as they will be viewed in conjunction with the sky glow emitted by the lights within Swansea Port. The low level lighting along the western arm of the Lagoon seawall will be screened from view by the crest wall, although the structural and sculptural elements along the eastern arm of Lagoon seawall may be visible when lit, although not prominent features. The magnitude of night time effects is considered to be moderate.

Significance of Visual Effects: Major /Moderate

- 13.8.4.89 Receptors are considered to be of high sensitivity and the magnitude of effects is high/moderate at both high and low tide. The Project is predicted to become a visible feature within views towards the inner areas of Swansea Bay. However, the broad nature of the overall view that is experienced from this location will assist in absorbing the Project into the seascape, thereby reducing effects. On balance, it is considered that effects on visual amenity will be major/moderate and significant under EIA Regulations. Effects are considered to be neutral, as, although the Project will be a defining feature, its scale and form fits with the existing large scale character of the seascape and landscape.

Predicted Cumulative View:

From this location it is predicted that all or part of all cumulative developments will be visible within the view. *Magnitude of Visual Cumulative Effects: Moderate*

- 13.8.4.90 The Project will be more prominent within the view than any of the cumulative developments, due to its scale and distance from the viewpoint location. The Mumbles Pier development will also be a notable feature of the view. The landward elements of

the Mumbles Pier project will be screened from view by topography and vegetation. Therefore, only the pier itself and the existing and proposed life boat stations will be seen. Due to distance and existing built form absorbing effects, the other cumulative developments visible will be minor components of the wider view, although all developments will be within the same arc of view. Receptors will predominantly be walkers and therefore moving at low speeds and any effects will potentially be long in duration.

Significance of Cumulative Visual Effects: High/Moderate

- 13.8.4.91 Receptors are considered to be of high sensitivity and magnitude of cumulative effects are moderate. The Project will be seen as a notable feature of views. The other cumulative developments are predicted to be minor components, as a combination of distance and existing character will absorb these developments into the view.
- 13.8.4.92 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under EIA Regulations. Cumulative effects are considered to be neutral as the Project and other cumulative developments, although visible, will be able to be accommodated into the view, due to their form and scale, without adversely affecting the visual qualities that define it.

Viewpoint 7: Swansea Promenade, near Lido

- 13.8.4.93 *Seascape/Landscape Character Area & Designations:* Swansea Bay (LSU5)/The Mumbles (G6), on the border with Swansea (G1) and Clyne Valley Country Park (D1). Located on Wales Coast Path.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.94 Receptors are predicted to be recreational users of the lido, beach and promenade, tourists and walkers along Wales Coast Path, whose main purpose of visit will be associated with the beach and Swansea Bay.

Sensitivity of Visual Receptors: High

- 13.8.4.95 Receptors from this location are likely to be highly responsive to new visual elements of the type proposed and highly susceptible to change, as many are likely to be attracted to the area, due the views across Swansea Bay.
- 13.8.4.96 *Existing View:* This is an open view, representative of a number of short-duration views available from the promenade, looking in to Swansea Bay. The foreground contains the broad, open beach, beyond which spreads the Bay. The Bay is enclosed to the west by the landform of the Mumbles and West Cross. The distinctive profiles of Mumbles Head and Middle Head are clearly visible.
- 13.8.4.97 To the east, the Bay is enclosed by the rising landforms of the Neath Valley sides, Mynydd y Gaer, Mynydd Dinas and Mynydd Emroch. The masts which mark the peak of Foel Fynyddau are also visible. 16 wind turbines at Ffynnon Oer wind farm are visible at a distance to the east, against the backdrop of coniferous forestry.
- 13.8.4.98 The civic and recent residential core development within Swansea are visible along the Bay to the east, including the Civic Centre Library, the Tower at Meridian Quay and the surrounding complexes of apartments and other quayside development, which adjoin the Swansea docklands. The dock wall is visible as a narrow linear feature within the Bay, above which a number of vertical structures including cranes, lighting columns and

a single turbine are visible. The residential community of Baglan is visible on the rising ground below Mynydd y Gaer. Further south along the Bay, the sandy beach at Aberavon Sands is also discernable, backed by mixed facades of the residential properties within Sandfields and Aberavon. The large-scale buildings, chimneys and other infrastructure of Port Talbot steel works are seen against the rising topography of the hills beyond. In the distance, the settlement of Porthcawl and Porthcawl Point are discernible, beyond which the distance backdrop of the view looks across the Bristol Channel.

- 13.8.4.99 *Predicted View:* The effect of the Project at high tide from Viewpoint 7 is illustrated by the photograph and photomontages in Figures 13.40 and 13.41, and at low tide in the photograph and photomontage in Figures 13.42 and 13.43. At low tide, the western arm of the Lagoon seawall will be visible, with the Offshore Building, including the goliath gantry crane and safety zone markers, extending above the rock armour. At high tide the view would be similar to that at low tide; however, the proportion of the seawall visible will be restricted to its upper 3.5m. The Western Landfall Building, which is located on the landward side of the Lagoon, will also be visible from this location.

Magnitude of Visual Effects: High (low tide), Moderate (high tide)

- 13.8.4.100 At low tide the rock armour that forms the western arm of the Lagoon seawall and the turbine and sluice gate housing structure would be an immediately apparent feature of the view, although effects will reduce as the proportion visible reduces on an incoming tide. The Project will be viewed at a distance of approximately 4.0km, against a backdrop of Port Talbot and the hills to the north of the town, plus the steel works, and, therefore, viewed in conjunction with existing manmade features. The Lagoon seawalls may foreshorten views to the inner, eastern part of Swansea Bay, as views towards Aberavon Sands and Margam Sands would be screened, although open views out to the Bristol Channel will be retained. Deposition of sediment in the western extent of Swansea Bay is predicted to be in the subtidal area, with minimal effect, if any, on visible intertidal areas. This indirect result of the Project may be perceptible at low spring tide, and as such it will not be prominent.
- 13.8.4.101 At night, lights along the western arm of the Lagoon seawall would be screened by the crest wall of this section of the Lagoon. However, lighting to the Offshore Building will be notable, especially when the turbines are in operation and the intensity of the localised lights are increased. Although the lighting to the Offshore Building will be evident, it will be viewed against a backdrop of the urban glow of lights of Port Talbot steelworks that form a prominent feature of existing night time views. The Western Landfall Building and areas surrounding it are predicted to be a more notable feature at night than during the day, as they will be illuminated against the intrinsically dark slopes of the upland areas adjacent to the M4, although within the same arc of view as existing urban lighting within Swansea. The magnitude of night time effects is considered to be moderate /low.

Significance of Visual Effects: Low Tide: Major High Tide: Major/ Moderate

- 13.8.4.102 Receptors are considered to be of high sensitivity and the magnitude of effects is considered to be high at low tide and moderate at high tide. The Project, and particularly the Lagoon seawalls, would be a visible feature, most notably at low tide, and may foreshorten views east towards Aberavon, Port Talbot and Kenfig Sands. However, the key elements that currently define the view, including the open views out



towards the Bristol Channel, the broad sweep of Swansea Beach and reference points that include the rising ground beyond Port Talbot, will all remain intact.

- 13.8.4.103 On balance, it is considered that effects on visual amenity will be major at low tide and major/moderate at high tide and significant under EIA Regulations. Effects are considered to be neutral. This is because the Project will be viewed in the same arc of view as existing development and, due to its simple liner form, will complement these existing visual elements, while retaining the existing key defining character of the Bay.

- 13.8.4.104 *Predicted Cumulative View:* From this location it is predicted that all or part of all the cumulative developments will be visible within the view, except for the proposed southern access road at Coed Darcy.

Magnitude of Visual Cumulative Effects: High/Moderate

- 13.8.4.105 The Project will be viewed within the same arc of view as the SUBC, development within Swansea SA1, the wind turbine within Swansea Port, Abernedd Power Station, Tata Internal Power Generation development, Prenergy Biomass Power Station, the proposed wind farms of Mynydd Marchywel and Mynydd Brombil, plus the proposed wind turbines at Newlands Farm and Kenfig Industrial Estate. These developments will be seen within successive views with the Mumbles Pier development, where the residential and hotel/leisure units will be visible, set against Mumbles Hill. Development will therefore be seen within a wide proportion of the view. Receptor types will be predominantly people using the lido, beach or walkers and therefore their movement will be slow, and sequential views will be long in duration and extend across a significant proportion of the beach and promenade. Although a number of cumulative developments will be visible, or potentially be visible, the open views out towards the Bristol Channel will be retained.

Significance of Cumulative Visual Effects: Major/Moderate

- 13.8.4.106 Receptors are considered to be of high sensitivity and magnitude of cumulative effects are high/moderate. From this location, the Project and the Mumbles Pier development will be immediately apparent features of the view. When viewed in combination with the other cumulative developments there may be a slight increase in the perception of built elements within the view. However, the open views towards the Bristol Channel and the broad expanse of Swansea Beach will remain as prominent features.

- 13.8.4.107 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under EIA Regulations. Cumulative effects are considered to be neutral, as there may be a slight increase in perception of built form within the view, but the key characteristics of the view that currently define it will be retained.

Viewpoint 8: Clyne Golf Course, Swansea

- 13.8.4.108 *Seascape/Landscape Character Area & Designations:* The Mumbles (G6), on the border with Swansea (G1) and Clyne Valley Country Park (D1). Located within the Gower AONB.

Susceptibility to Change of Visual Receptors: Moderate.

- 13.8.4.109 Golfers, where the main purpose of their visit is not connected with views across the seascape or landscape.

Sensitivity of Visual Receptors: High - Moderate

- 13.8.4.110 Receptors are located within a designated landscape. However the main purpose of their visit is not connected with views across surrounding seascape/landscape. Therefore it is predicted that they will be able to accommodate new visual elements of the type proposed.
- 13.8.4.111 *Existing View:* From this elevated location, good views are available from within the golf course, looking over the upper reaches of Mayals. The mixed facades and rooftops of residential properties within Mayals and West Cross are visible, fragmented by tree canopies, before the landform drops down to Swansea Bay. Views into the Bay are enclosed by the sweeping western curve of the Bay, reaching as far as Porthcawl Point and St Donats.
- 13.8.4.112 Deciduous tree cover within the rising slopes of Clyne Valley Country Park is visible to the east, beyond which the distinctive peak of Kilvey Hill is visible. The Swansea dock wall is discernable, extending into the Bay. Beyond, the rising settlement of Baglan and the less elevated communities of Sandfields and Aberavon are seen against the backdrop of hilly landform profiles, which include Mynydd y Gaer and Mynydd Dinas. Within the far distance, the wind turbines of Ffynnon Oer wind farm are discernible. Further south along the Bay, large-scale buildings and infrastructure at Port Talbot works are prominent features
- 13.8.4.113 To the west, Mumbles Head and Middle Head mark the eastern extent of Swansea Bay, backed by rising landform containing the residential areas of Newton and mixed tree cover. The western skyline limit of the view is formed by distance views over the Bristol Channel.
- 13.8.4.114 *Predicted View:* The effect of the Project from Viewpoint 8 is illustrated by the photograph and photomontages in Figures 13.44 and 13.45, Volume 2. The photomontage illustrates that from this elevated location, a significant proportion of the Lagoon seawalls including both the western and eastern arms will be visible. In addition, the Offshore Building will be visible, as will the turbine and sluice gate housing structure. All other elements of the Project are predicted to be screened from view.

Magnitude of Visual Effects: Moderate

- 13.8.4.115 The Lagoon seawalls will form a recognisable new element within the view, although the prominence of the rock armour is predicted to darken in colour and become more regressive in the view over time. There may be an increase in the sense of enclosure within the western half of Swansea Bay, as a result of the Lagoon seawalls. However the broad open views across Swansea Bay that define existing views, including those towards Porthcawl Point, will remain intact.
- 13.8.4.116 The difference between the water level in the Lagoon and the external sea level when a 'head of water' is created at high and low tides may be visible from this elevated location. However, the combination of distance and the screening by vegetation and built form of the majority of the intertidal area adjacent to the Lagoon will reduce the prominence of any differences in water level visible.
- 13.8.4.117 Activities within the Lagoon, such as sailing and rowing, would be evident, although not prominent at this distance (approximately 5.0km).

- 13.8.4.118 The Offshore Building will be a visible feature as it will be seen in isolation to other built structures within the view and against the open sea. However, the proposed muted use of colours will help to absorb the building into the surrounding seascape.
- 13.8.4.119 At night, the Offshore Building will be more noticeable within the view than during daylight hours. The lighting will be viewed against the dark sea, although sky glow to the urban areas to Port Talbot and Aberavon will be visible to the west of the building and within the distance. The proposed low level lighting along western arm of the Lagoon seawall will be screened by the crest wall. When lit, the structural and sculptural elements of the eastern seawall will be evident although not prominent. The magnitude of night time effects is considered to be moderate.

Significance of Visual Effects: Moderate

- 13.8.4.120 Receptors are considered to be of high/moderate sensitivity and the magnitude of effects is considered to be moderate. The Project would form a recognisable new element within the view that is located within the Gower AONB. However, given the broad nature of the view, the Project only occupies a small proportion of it. It is therefore predicted that it could be accommodated into the view alongside existing visual elements such that the overall nature of the view will not be altered.
- 13.8.4.121 On balance, it is considered that effects on visual amenity will be moderate although not significant under EIA Regulations. Effects are considered to be neutral, as, although the Project will be visible, the simple form of the Lagoon seawalls fits with the open character of Swansea Bay and there will be no change to the existing visual quality experienced from this viewpoint.
- 13.8.4.122 *Predicted Cumulative View:* From this location, it is predicted that all or part of the Mumbles Pier development, the proposed wind farms of Mynydd Marchywel and Mynydd Brombil, plus the proposed wind turbines at Newlands Farm and Kenfig Industrial Estate will be visible.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.123 The Residential and hotel/leisure units within the Mumbles Pier development project will be a prominent feature of views, increasing the proportion of development visible within The Mumbles. It is predicted that, due to its location, scale and distance from which it will be viewed (approximately 4km), it will be the most prominent of all the cumulative developments and potentially more prominent than the Project. The proposed turbines of the wind farm at Mynydd Brombil may also be a notable feature, as they will be viewed within the same arc of view as the Project and break the skyline. The proposed wind farm at Mynydd Marchywel and the proposed turbines at Newlands Farm and Kenfig Industrial Estate will all be visible within the same arc of view. However, due to distance and the screening effects of vegetation they are not predicted to be prominent features. Views of the Mumbles Pier development will be viewed in succession to all other cumulative developments. Receptors will predominantly be golfers whose primary purpose of the visit is not connected with the view, however their speed of travel through the landscape will be slow. Manmade features are less prominent within this view than others within the study area, however all developments will be viewed within a large scale seascape/landscape, which will assist in absorbing effects.

Significance of Cumulative Visual Effects: Moderate

- 13.8.4.124 Receptors are considered to be of high/moderate sensitivity and magnitude of cumulative effects moderate. The combined effects of the Project and other cumulative developments will increase the prominence of development within the view. However the broad scale of Swansea Bay will remain the prominent feature of the view as opposed to the existing or proposed developments.
- 13.8.4.125 On balance it is considered that cumulative effects on visual amenity will be moderate although not significant under EIA Regulations. Cumulative effects are considered to be neutral as the Project and other cumulative developments, although visible, will be able to be accommodated into the view, due to their form and scale, without adversely affecting the visual qualities that define it.

Viewpoint 9: Nicander Parade, Townhill, Swansea

- 13.8.4.126 *Seascape/Landscape Character Area & Designations:* Swansea (G1)). No landscape designations.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.127 Residents of properties with elevated views orientated toward the Project.

Sensitivity of Visual Receptors: Moderate

- 13.8.4.128 Receptors overlook an area of Swansea that includes SA1 Swansea Waterfront where new elements within the landscape have become a common feature. Therefore, although highly susceptible, receptors from this location are more likely to be able to accommodate new visual elements within the view. The location is not of recognised value.
- 13.8.4.129 *Existing View:* From this elevated location, excellent panoramic views are available over the civic core of Swansea, the Maritime Quarter and docklands. The view is characterised by urban development of mixed forms and grain, including foreground views over the rooftops of less elevated parts of Townhill and westward toward St Thomas.
- 13.8.4.130 The main focus of the view overlooks the urban centre of Swansea, with prominent buildings including the St David's and Quadrant Shopping Centres, the Civic Library and Parc Tawe Retail Park. The Vetch Field site is also clearly visible. To the west, the more open docklands area is also prominent, including the dock wall, which extends into Swansea Bay, and the Prince of Wales docks and associated infrastructure.
- 13.8.4.131 The eastern limit of the view looks toward Baglan and Port Talbot and the rising hill profiles beyond. Views westward are partially filtered by tree canopies, beyond which Blackpill, West Cross and the Mumbles contain the view.
- 13.8.4.132 *Predicted View:* The effect of the Project at high tide from Viewpoint 9 is illustrated by the photograph and photomontages in Figures 13.46 and 13.47, and at low tide, in the photograph and photomontage in Figures 13.48 and 13.49. From this location all elements of the Project will be visible at both high and low tide. The Lagoon seawalls will be the most prominent feature of the view and at low tide, the full extent of the eastern arm of the Lagoon seawall will be visible within the inter-tidal area of the beach. In addition the Offshore Building, the Western Landfall Building, and the turbine and



sluice gate housing structure are predicted to be notable, although not prominent elements of the Project visible within view.

Magnitude of Visual Effects: Moderate

- 13.8.4.133 The Project will form a recognisable new element within the view that will be readily observed. The Lagoon seawalls extending into Swansea Bay will be a notable feature, although the prominence of the rock armour is predicted to darken in colour and become more regressive in the view over time. However, they will be visually connected to the adjacent docks, other built form and with Swansea which is dominant within the foreground view. The broad sweeping arc of Swansea Bay that is a defining feature of the existing view will be retained. Activities within the Lagoon will be evident.
- 13.8.4.134 A difference between the water level in the Lagoon and the external sea level when a 'head of water' is created may result in a visual contrast between the exposed sand within the intertidal areas and the adjacent water, at high and low tides respectively.
- 13.8.4.135 The Offshore Building will be the most prominent of the structures, as it will be viewed against open water as opposed to in conjunction with other similar built form.
- 13.8.4.136 At night, the lights of the Offshore Building will be the most prominent of the illuminated elements of the Project and will be viewed against the intrinsically dark water of Swansea Bay. The low level lighting along the western arm of the Lagoon seawall will be screened by the crest wall, although the lighting to the structural and sculptural elements to the eastern arm of the Lagoon seawall may be visible, although not prominent. Light from the Western Landfall building may also be visible although due to its low level nature, again not prominent. However, lighting to the amenity areas surrounding it and also along the access road may be more notable, as it will any lighting will be viewed against the intrinsically dark areas of the Lagoon. From this elevated location although parts of the Project may be visible at night, the existing glow of lights emitted by the extensive urban areas and most notably lighting to Meridian Tower is predicted to remain the dominant feature. The magnitude of night time effects is considered to be moderate/low.

Significance of Visual Effects: Moderate

- 13.8.4.137 Receptors are considered high - moderate sensitivity and the magnitude of effects is considered to be moderate. The Project will result in a noticeable change to the elements that form the view as it will be an easily recognisable feature, especially at low water when a greater vertical height of the Lagoon seawall will be visible. However the broad sweeping form of Swansea Bay and the built form of Swansea will continue to be the dominant feature, including Meridian Tower that will remain a prominent focal point.
- 13.8.4.138 On balance, it is considered that effects on visual amenity will be moderate although not significant under EIA Regulations. Effects are considered to be neutral as although it will be a visible feature, the Project will complement the urban form that dominates foreground views and the simple, open character of Swansea Bay will be retained.
- 13.8.4.139 *Predicted Cumulative View:* From this location, it is predicted that all or part of all the cumulative developments will be visible within the view.



Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.140 The Project will be more prominent within the view than the cumulative developments that are visible from this location due to its scale, and the open views that are available towards it. Development within Swansea SA 1 and the wind turbine within Swansea Port will be closer and seen within the same arc of view as the Project. However, it is predicted that these developments will be absorbed into the wider urban landscape, which is a prominent feature of this view. The wind farm at Mynydd Brombil may be a notable feature, as the turbines will break the skyline. Other developments that will also be in the same arc of view, will be the proposed Tata Internal Power generation development, Prenergy Biomass Power Station, the Abernedd Power Station, the turbines at Mynydd Marchywel and the proposed turbines at Newlands Farm and Kenfig Industrial Estate. These will all be minor elements of the view due to distance from the viewpoint location and the screening effects of vegetation. Successive views towards the Mumbles Pier development will also be available, although views will be restricted to the hotel/leisure units, the pier, plus the existing and proposed life boat stations. Visual receptors will predominantly be residents whose views will be static.

Significance of Cumulative Visual Effects: Moderate

- 13.8.4.141 Receptors are considered high - moderate sensitivity and magnitude of cumulative effects moderate. The Project will increase development visible within the view, however, development/built form is currently a defining feature of the view. Therefore the combined effects of the cumulative developments are not predicted to be to the extent where they change the overall character of the view.
- 13.8.4.142 On balance, it is considered that cumulative effects on visual amenity will be moderate although not significant under EIA Regulations. Cumulative effects are considered to be neutral, as the Project and other cumulative developments, although visible, will be able to be accommodated into the view, due to their form and scale, without adversely affecting the visual qualities that define it.

Viewpoint 10: Meridian Quay, Swansea

- 13.8.4.143 *Seascape/Landscape Character Area & Designations:* Swansea Bay (LSU5)/Swansea (G1). No Designations

Susceptibility to Change of Visual Receptors: High.

- 13.8.4.144 Visitors to the restaurant at Meridian Tower, who are likely to be attracted by the panoramic views that are available from this location.

Sensitivity of Visual Receptors: Moderate

- 13.8.4.145 Visitors to this viewpoint are not within a recognised area, although they may be susceptible to change. However, by virtue of their location, they may be able to accommodate new visual elements of the type proposed, as views include SA1 Swansea Waterfront development which comprises many new built elements.
- 13.8.4.146 Existing View: Located within the restaurant on the 29th floor of the Meridian Tower, views west offer unobstructed, elevated views across Swansea Bay and towards Mumbles Head. The broad flat expanse of water and the sand to Swansea Beach, contrasts with the adjacent mix of buildings within Swansea. The mix of buildings within the city centre, Swansea SA1 and Swansea Mariana form a prominent feature to the view, as does the rounded form of Kilvey Hill, which forms a backdrop to the central part of the view. To the east of the city centre, infrastructure within Swansea Port can be



seen including the seawalls of West Pier and the Eastern Breakwater wall that extend in to the Bay. The existing wind turbine is also a feature within this part of the view. Beyond the docks and within the distance, Mynydd Dinas and Mynydd Brompton are both visible, forming a backdrop to Port Talbot and the steel works.

- 13.8.4.147 *Predicted View:* The effect of the Project from Viewpoint 10 is illustrated by the photograph and photomontages in Figures 13.50 and 13.51, Volume 2. The photomontage illustrates that from this location, the western and eastern arm of the Lagoon seawall will be visible within the view. The area of water enclosed by the Lagoon seawalls and activities taking place within them will be a notable feature from the restaurant. Other features of the Project that will be within the view include, the Western Landfall building, including car park and boat storage areas, the SSSI information point, the safety zone markers, the Offshore Building, turbine and sluice gate housing structure, and the Landward Urban Park and Landward Ecological Park.

Magnitude of Visual Effects: High

- 13.8.4.148 At a distance of approximately 1km, the Project would be an immediately apparent feature of the view and would occupy a significant proportion of it. Although views across the Lagoon towards Aberavon, Port Talbot and the rising land beyond will remain. It is predicted that there will be a sense of enclosure to Swansea Bay as a result of the Lagoon seawalls and the peninsula of Mumbles Head, that is also within the view. It is also predicted that the Landward Urban Park and Landward Ecological Park will be features of the view. Due to the low level nature of these elements and the urban context in which they will be viewed, it is not predicted that these will be prominent features. However, it will create a more active dock/foreshore edge and there may be an increase in the sense of movement along it, including pedestrian and vehicular activity. Deposition of sediment in the western extent of Swansea Bay is predicted to be in the subtidal area, with minimal effect, if any, on visible intertidal areas (refer to Chapter 6). This indirect result of the Project may be perceptible at low spring tide, although it will not be prominent.
- 13.8.4.149 The difference between the water level in the Lagoon and the external sea level when a 'head of water' is created at high and low tides may be a prominent feature from this elevated location. Due to the wide expanse of sand visible on the beach from this location, this difference may be more noticeable at low tide. During this period the exposed sand within the intertidal area outside of the Lagoon seawalls will contrast with the body of water held within it.
- 13.8.4.150 The Offshore Building will be visible and potentially prominent as it will be a vertical element that will be viewed against a backdrop of open water. The adjacent turbine and sluice gate housing structure will also be visible, and the infrequent movement of the semi-goliath gantry crane may be a visible element to this part of the view. However it will be a receding feature within the seascape, due to its black/grey coloured finish.
- 13.8.4.151 At night, the low level lighting to the promenade along the western arm of the Lagoon seawall is predicted to be screened by the crest wall. However, the Offshore Building will be visible when lit, especially when the turbines are operational and the localised light intensity increases, as it will be viewed against the intrinsically dark water of Swansea Bay and in isolation to other illuminated buildings/structures within the view. Although lighting along the access road south of Queens Dock and to amenity areas surrounding the Western Landfall building will be viewed in conjunction with existing

lights within Swansea Port, they will also be viewed against the backdrop of the intrinsically dark water within the Lagoon. Therefore there may be a perceived sense of additional lighting within this part of the view. In addition the glow of the Western Landfall building and structural and sculptural elements along the eastern arm of the Lagoon seawall will be visible. The magnitude of night time effects is considered to be high/moderate.

Significance of Visual Effects: Major

- 13.8.4.152 Receptors are considered moderate sensitivity and the magnitude of effects is considered to be high. Due to its size and extent of the view that it occupies, the existing built form within Swansea will remain as a dominant feature of the view. However, key views from this viewpoint location are out towards Swansea Bay and the Bristol Channel and the Project is predicted to become a defining feature within it.
- 13.8.4.153 On balance, it is considered that effects on visual amenity will be major and therefore significant under the EIA Regulations. Effects are considered to be neutral as the Project although immediately visible, will be viewed in conjunction with a part of Swansea that has gone and is continuing to go through significant urban redevelopment. The construction of the Project will complement this redevelopment, while retaining the open views out across Swansea Bay.
- 13.8.4.154 Predicted Cumulative View: From this location it is predicted that all or part of all the cumulative developments will be visible within the view, except for the proposed Southern Access road at Coed Darcy and the proposed Mynydd Marchywel wind farm.

Magnitude of Visual Cumulative Effects: High

- 13.8.4.155 Due to the close distance that the Project and other cumulative developments, including the wind turbine within Swansea Port, development within Swansea SA1 and the SUBC, they will form a prominent feature, within close proximity to one another and within the same arc of view. Any future development on land adjacent to the Tidal Basin within Swansea SA1 will be a notable, although not prominent feature, as it will be absorbed into the existing urban landscape. The SUBC will be a prominent feature due to its location and scale, and will result in an increase in the proportion of the view in which development can be seen. Within the distance, there will be successive views of the proposed wind turbines of Mynydd Brombil wind farm and the wind turbines to Newlands Farm and at Kenfig Industrial Estate. The proposed developments of Tata Internal Power generation development, Prenergy Biomass Power Station, the Abernedd Power Station will also be visible within the view. These developments are predicted to be visible although not prominent features, due to being at a distance at which they will be viewed. When looking further to the west, successive views of the Mumbles Pier development will be available in conjunction with the Lagoon seawalls and the Offshore Building. Receptors will be visitors to the restaurant and therefore will be static during the time that they stay.

Significance of Cumulative Visual Effects: Major

- 13.8.4.156 Receptors are considered moderate sensitivity and the magnitude of effects is considered to be high. Existing developments are a key defining element of the view, along with open views across Swansea Bay and the Bristol Channel. The Project will be the most prominent of all the cumulative developments and in combination with the SUBC will lead to the view becoming increasingly defined by development.



- 13.8.4.157 On balance, it is considered that cumulative effects on visual amenity will be major and significant under EIA Regulations. Cumulative effects are considered to be beneficial as the Project, plus other developments will be seen to positively contribute to the ongoing regeneration to this part of Swansea.

Viewpoint 11: Swansea Promenade

- 13.8.4.158 Seascape/Landscape Character Area & Designations: Swansea Bay (LSU5)/Swansea (G1). Located adjacent to National Cycle Route and Wales Coast Path.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.159 Receptors are predicted to be recreational users of the promenade, tourists and walkers along Wales Coast Path, whose main purpose of visit will be associated with the beach and Swansea Bay.

Sensitivity of Visual Receptors: High

- 13.8.4.160 Receptors from this location are likely to be highly responsive to new visual elements of the type proposed and highly susceptible to change, as many are likely to be attracted to the area, due to the views across Swansea Bay.

- 13.8.4.161 *Existing View:* A sweeping view into Swansea Bay, reaching from Swansea Port to the east to Mumbles to the west. The foreground of the view contains the promenade and broad beach which opens into the Bay beyond. The distance backdrop looks across the Bristol Channel.

- 13.8.4.162 To the west, the view looks along the promenade, funnelled by large-scale built form within the Maritime Quarter. The Meridian Tower is a landmark feature of the view, along with the Maritime Quarter apartment units. Swansea dock wall is a dominant element, visible at close distance, extending along the beach and into the bay. Above the dock wall, dockland infrastructure including cranes, lighting columns and other large-scale built form are prominent. The single docklands turbine is also a notable feature. Beyond, the docklands the rising landform profiles of the hills beyond form the skyline, including Mynydd Emroch and Mynydd Margam. Across the broad beach, the western extent of the view is formed by the Mumbles. Clear views are available into the western sweep of the bay, containing urban form of mixed grain, typically formed in terraces, within Blackpill, West Cross and Mayals. Facades and roofscapes are fragmented by tree cover. Oystermouth Castle, a prominent local landmark is also visible on the hillside. Mumbles Head and Middle Head are a distinctive topographical feature at the eastern extent of the bay.

- 13.8.4.163 *Predicted View:* The effect of the Project at high tide from Viewpoint 11 is illustrated by the photograph and photomontages in Figures 13.52 and 13.53, and at low tide in the photograph and photomontage in Figure 13.54 and 13.55. At low tide, the western arm of the Lagoon seawall will be a visible feature, as will the Offshore Building. The turbine and sluice gate housing structure will also be within views. The Western Landfall building will be viewed in conjunction with existing structures within Swansea Port.

Magnitude of Visual Effects: High (low tide), High/Moderate (high tide)

- 13.8.4.164 At low tide the rock armour that forms the western arm of the Lagoon seawall will be an immediately apparent feature. At high tide the proportion of wall that is exposed will be reduced and therefore, although still visible, it will not be such a prominent feature of the view. Accretion of sediment is predicted to occur within the Swansea Approach



Channel, but this will principally be along the central section and therefore will not be visible. However, this will depend on future management of the channel. At both high and low tide, the construction of the Lagoon seawall will increase the sense views being foreshortened to inner parts of Swansea Bay, although the broad sweeping arc of the beach will be retained. The Offshore Building is likely to form a focal point to the end of the Lagoon Wall, whereas in contrast the Western Landfall building will be less prominent, as it will be seen in conjunction with existing built form within the Port.

- 13.8.4.165 At night the crest wall will screen the low level lighting that is proposed along the western arm of the Lagoon seawalls and also restrict views of the low level lighting to the eastern arm of the Lagoon. The lighting to the Western Landfall building and surrounding amenity areas is predicted to be visible, although seen in conjunction with the existing glow of lighting with Swansea Port. The Offshore Building will be the most visible of the illuminated features of the Project, where it will form a new night time feature within Swansea Bay. It will be viewed against the intrinsically dark waters of Swansea Bay and areas within Kenfig Sands and located away from other existing light sources that will also be visible. The magnitude of night time effects is considered to be high/moderate.

Significance of Visual Effects: Major

- 13.8.4.166 Receptors are considered high sensitivity and the magnitude of effects is considered to be high at low tide and high/moderate at high tide. The project will be an immediately apparent feature of the view, especially at low tide, when the Lagoon seawall will be more visually prominent. Views east towards Aberavon, Port Talbot and Kenfig Sands may be foreshortened, however, the key elements that currently define the view, including, the broad sweep of Swansea Beach and reference points that include the rising ground beyond Port Talbot and Mumbles Head/Middle Head will all remain intact.
- 13.8.4.167 On balance, it is considered that effects on visual amenity will be major and therefore significant under the EIA Regulations. Effects are considered to be neutral as although immediately visible, the simple liner form of the Project, will complement the existing simple form of Swansea Bay and the beach, while retaining the existing key defining elements that define its character.
- 13.8.4.168 Predicted Cumulative View: From this location it is predicted that the Project will be viewed in the same arc of view as the existing wind turbine in Swansea Port, the SUBC, plus the proposed wind farm on Mynydd Brombil and the proposed single wind turbines at Newlands Farm and Kenfig Industrial Estate. The Mumbles Pier development will be visible in succession with the Project and the other cumulative developments.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.169 The introduction of the Project will be immediately apparent and will increase the proportion of the view in which development will be perceived, due to the close distance at which the Lagoon seawalls will be viewed. However, built elements are an existing, prominent feature of views east towards Swansea Port and across Swansea Bay to Port Talbot and Aberavon. This includes the proposed Tata Internal Power Generation development and the Prenergy Biomass Power Station which are both predicted to be visible in conjunction with the existing steel works. The wind turbine within the Port will be absorbed into this existing built form and therefore not predicted to significantly increase the perception of development within the view. At a distance of over 16km to both the wind turbine at Newlands Farm and the wind turbine at Kenfig

Industrial Estate, neither of these developments are predicted to be prominent. Due to their elevated location, the wind turbines on Mynydd Brombil may be visible, however at approximately 14km these turbines are also not predicted to be prominent. Due to the oblique angle at which the SUBC will be viewed at from this location and the intervening buildings/structures, it is not predicted to be a prominent feature of the view. Successive views of the Mumbles Pier development will be possible, where the residential and commercial units will be seen against a backdrop of the cliffs to Mumbles Hill. Development will therefore be seen within a wider proportion of the view following construction of the Project and the Mumbles Pier development. Receptor types will predominantly be people using the beach or walkers along the promenade and therefore their movement will be slow, and sequential views of these two developments will be long in duration and extend across a significant proportion of the view.

Significance of Cumulative Visual Effects: Major/Moderate

- 13.8.4.170 Receptors are considered high sensitivity and the magnitude of effects is considered to be moderate. Existing development is a key defining element of the view, however the combination of the Project and the Mumbles Pier development, will result in the view becoming more defined by development.
- 13.8.4.171 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under EIA Regulations. Cumulative effects are considered to be beneficial as the combined effects of these developments will reinforce this part of Swansea Bay as a location for recreation and leisure.

Viewpoint 12: SA1 Swansea Waterfront

- 13.8.4.172 *Seascape/Landscape Character Area & Designations:* Swansea Port & Crymlyn Burrows (LSU4)/Swansea Port (H1), on the border with Swansea (G1). Located adjacent to National Cycle Route and Wales Coast Path.

Susceptibility to Change of Visual Receptors: Moderate

- 13.8.4.173 Tourists within the SA1 Swansea Waterfront are predicted to be the main receptor type from this location. However, they are located on the edge of a docklands and therefore views of the seascape/landscape are not considered to be the primary reason for their visit.

Sensitivity of Visual Receptors: Low

- 13.8.4.174 Receptors are within a location where industrial and manmade features are a prominent feature. They are unlikely to be susceptible to the type of development proposed and will readily accommodate new visual elements.
- 13.8.4.175 *Existing View:* From this location within the central docklands area, the view is characterised by the presence of the dock wall, visible at close distance. The Kings Dock walls funnel narrow views in to Swansea Bay beyond.
- 13.8.4.176 Docklands infrastructure, including large-scale block built forms, cranes and lighting columns are characteristic features, along with the bund formed by the rock armour which abuts the dockland. The single turbine within the dock is visible at close distance. Waterfront promenade and apartment units within the Maritime Quarter are also visible to the west.



13.8.4.177 *Predicted View:* The effect of the Project from Viewpoint 12 is illustrated by the photograph and photomontages in Figures 13.56 and 13.57, Volume 2. The photomontage illustrates that from this location, the only elements of the Project visible will be a short section of the Lagoon seawall where it meets the existing breakwater of West Pier, with the safety zone markers extending above the rock armour. Glimpsed views of the Western Landfall building will be available between existing buildings within the docks and the Offshore Building will be visible above the walls of the West Pier breakwater.

Magnitude of Visual Effects: Low

13.8.4.178 The Lagoon Seawalls would visually enclose the entrance to Swansea Port, restricting the channelled views to Swansea Bay. The existing dock walls are an existing feature of the view and therefore, the introduction of the Lagoon seawalls are predicted to be viewed as an extension to these, and may be missed by the casual observer.

13.8.4.179 The Western Landfall building would be viewed as an additional building within the cluster of buildings that are located within this part of the view, and therefore this element of the Project may also be missed by the casual observer. The Offshore Building, plus the turbine and sluice gate housing structure may be viewed as additional elements, although they are likely to be absorbed into the seascape/landscape due to the industrial nature of the view in which they will be seen.

13.8.4.180 At night, the Offshore Building will be an additional illuminated element visible against the intrinsically dark sky of Swansea Bay. Lighting to the amenity areas to the west of the Western Landfall building may also be evident. However, although lighting within this area and also to the Offshore Building may be evident, they will be seen in conjunction with lighting within the docks, which includes lights mounted on columns, plus lighting to the nearby apartments within the Maritime Quarter, all of which is predicted to be more prominent due to their size. The magnitude of night time effects is considered to be low.

Significance of Visual Effects: Minor

13.8.4.181 Receptors are considered low sensitivity and the magnitude of effects is also considered to be low. The Project is predicted to be visually integrated into the existing seascape/landscape and therefore there will be no loss to the existing features that form the view.

13.8.4.182 On balance it is considered that effects on visual amenity will be minor and therefore, not significant under EIA Regulations. Effects are considered to be neutral, as following the construction of the Project, there will be no material change to the existing visual elements or qualities within the view from this location.

13.8.4.183 *Predicted Cumulative View:* From this location it is predicted that all or part of development within Swansea SA1, the existing turbine at the Port of Swansea, the proposed Mynydd Brombil wind farm and the proposed wind turbine at Kenfig Industrial Estate will be visible.

Magnitude of Visual Cumulative Effects: Low

13.8.4.184 The existing wind turbine within Swansea Port is a feature within the view, although it will be viewed in conjunction with a number of existing vertical elements and therefore not be prominent. Any future development on land adjacent to the Tidal Basin within



Swansea SA1 will be a prominent feature and will further enclose the view. Views towards the proposed wind farm on Mynydd Brompton and the proposed wind turbine at Kenfig Industrial Estate will be screened from view by existing built form, and therefore will not contribute to cumulative effects. Only a short section of the Lagoon seawall will be visible, with glimpsed views of the Western Landfall building. The Offshore Building will also be visible, although when viewed in conjunction with other existing larger structures, it is not predicted to be a prominent feature and may be missed by the casual observer. Receptors will be on foot and therefore travelling at low speeds. Sequential views will be occasional, as views of the Project and other cumulative developments will be frequently screened by built form.

Significance of Cumulative Visual Effects: Moderate/Negligible

- 13.8.4.185 Receptors are considered low sensitivity and the magnitude of effects is considered to be low. There will be a perception of an increase in built form if land within Swansea SA1 is developed, although the Project is not predicted to significantly contribute to this increase as it will not be a prominent feature of views from this location.
- 13.8.4.186 On balance it is considered that cumulative effects on visual amenity will be moderate/no cumulative significance and not significant under EIA Regulations. Cumulative effects are considered to be neutral, as the Project and development with Swansea SA1, although visible, will be able to be accommodated into the view, due to their form and scale, without adversely affecting the visual qualities that define it.

Viewpoint 13: Kilvey Hill, Swansea

- 13.8.4.187 *Seascape/Landscape Character Area & Designations:* Swansea (G1). No landscape designations.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.188 The viewpoint is not on a recognised footpath, however, Kilvey Hill is a popular location for walkers due to the panoramic views of Swansea and across the Bristol Channel that are available from it.

Sensitivity of Visual Receptors: High - Moderate

- 13.8.4.189 Although this is a locally recognised area for its panoramic views, receptors are not within a designated landscape and it is a landscape that contains a large proportion of existing built elements and form. This urban landscape has evolved over time including the construction of the Meridian Tower and the ongoing development of Swansea SA1 Waterfront.
- 13.8.4.190 *Existing View:* From this elevated location, excellent panoramic views into Swansea Bay are available, centred on the Swansea Dock area. Visual character is dominated by the presence of development within the bay, including residential and industrial areas.
- 13.8.4.191 The Prince of Wales Docks are visible at close distance, beyond terraced residential streets within Port Tennant. The complex of apartment units within the Maritime Quarter lies adjacent to the docklands, containing a number of distinctive large-scale buildings, including the Meridian Tower. The civic core of Swansea is visible beyond, formed by a mixed urban grain. Good views are available across the urban centre of Swansea, looking toward Swansea University and down Mumbles Road (A4067) as it follows the course of the bay.

- 13.8.4.192 To the west, the western sweep of the bay forms the limit of the view, containing the residential areas of Blackpill, Mayals, West Cross and Mumbles, fragmented by areas of tree cover. Mumbles Head and Middle head form landmark topographical features at the western extent of the Bay.
- 13.8.4.193 To the east, the mouth of the Neath estuary is prominent, formed by an open foreshore area and grassy salt marsh within Crymlyn Burrows. Beyond, the sweep of Aberavon sands abuts extensive industrial/ manufacturing units at Port Talbot works, which are a prominent element within the view. The rising profiles of Mynydd-y-Gaer, Mynydd y Dinas and Mynydd Emroch contain the view to the east.
- 13.8.4.194 *Predicted View:* The effect of the Project from Viewpoint 13 is illustrated by the photograph and photomontages in Figures 13.58 and 13.59, Volume 2. The photomontage illustrates that from this elevated location, all elements of the Project will be visible, including the Lagoon seawalls, the Urban and Ecological Parks, the Offshore Building, plus the Western Landfall building.

Magnitude of Visual Effects: Moderate

- 13.8.4.195 The Project will form a recognisable new element within the view. However, the broad sweep of Swansea Bay and the open views out across the Bristol Channel will be retained. The existing built form within Swansea, including the taller residential blocks within the Maritime Quarter and Meridian Tower will remain a prominent feature of views. The broad open, nature of the view will assist in absorbing the Project into the seascape.
- 13.8.4.196 At night the Offshore Building will be viewed against the intrinsically dark waters of Swansea Bay and is predicted to be the most visible, illuminated element of the Project. In addition the lights along the access road to the south of Queen's Dock, the glow of light to the Western Landfall building, plus lighting to adjacent amenity areas may be viewed against the dark waters within the Lagoon. The structural and sculptural elements to the eastern arm of the Lagoon seawalls will also be visible from this elevated location. Although elements of the Project will be visible when lit, especially the Offshore Building, the glow of lights within the expanse of built form that is prominent to the foreground of the view, will be more dominant than lighting associated with the Project. Therefore the magnitude of night time effects is considered to be moderate.
- 13.8.4.197 A difference between the water level in the Lagoon and the external sea level when a 'head of water' is created may result in a visual contrast between the exposed sand within the intertidal areas and the adjacent water, at high and low tides respectively.

Significance of Visual Effects: Major/Moderate

- 13.8.4.198 Receptors are considered high-moderate sensitivity and the magnitude of effects is considered to be moderate. It is predicted that the Project will result in an alteration to the existing view. However, the overall integrity of the existing visual character will be retained. Any alteration in views will not be to the extent where the features that define it will be changed. The built form within the foreground and broad open expanse of water within Swansea Bay will remain the prominent and defining feature of the view.
- 13.8.4.199 On balance, it is considered that effects on visual amenity will be major/moderate and significant under EIA Regulations. Effects are considered to be neutral, as the design of



the Project will be a recognisable new element, although it will complement existing features within the seascape and landscape without resulting in a loss of key elements that define the existing view.

- 13.8.4.200 *Predicted Cumulative View:* From this location it is predicted that development within SA1 Swansea Waterfront, the SUBC, the Mumbles Pier development, the existing turbine at the Port of Swansea, the Abernedd Power Station, Tata Internal Power Generation development, Prenergy Biomass Power Station, the proposed Mynydd Brombil wind farm, the proposed wind turbine at Kenfig Industrial Estate and proposed turbine at Newlands Farm will all be visible.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.201 Looking south east, the eastern arm of the Lagoon seawall and Ecological Park will be viewed in combination with SUBC, which due to its size and mass will be a visible feature. The proposed turbines on Mynydd Brombil and at Kenfig Industrial Estate and Newlands Farm although potentially visible, at a distance of approximately 13.0km, 16.5km and 16.0km respectively, are predicted to be minor components of the view. The proposed developments with Baglan Bay and at the Port Talbot steel works may be visible, although absorbed in to the existing development that currently exists along this stretch of the coastline. Looking south, views in succession are possible, where the western arm of the Lagoon seawall and existing wind turbine in Swansea Port will be visible. Further west the Mumbles Pier development will be visible, although at a distance of approximately 7.0km it is not predicted to be a prominent feature.

Significance of Cumulative Visual Effects: Major/Moderate

- 13.8.4.202 Receptors are considered high-moderate sensitivity and the magnitude of effects is considered to be moderate. The Project and other cumulative developments are viewed in conjunction with existing built form that is prominent within existing views. Therefore the combined effects of the cumulative developments are not predicted to be dominant to the extent where they change the overall character of the view.
- 13.8.4.203 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under EIA Regulations. Cumulative effects are considered to be neutral, as although the Project and other cumulative developments will be visible, most notably the SUBC, the existing view is dominated by existing development.

Viewpoint 14: Memorial Stone, Margam Country Park

- 13.8.4.204 *Seascape/Landscape Character Area & Designations:* Coed Hirwaun (D6). Located on Regional Long Distance Walking Route (Ogwr Ridgeway Walk) within Margam Country Park an Area of Outstanding Historic Interest and within Registered Landscape, Park and Garden of Special Historic Interest (Grade I).

Susceptibility to Change of Visual Receptors: High

- 13.8.4.205 Walkers and tourists on designated footpath and located within an Area of Special Historic Interest. Receptors are likely to be attracted to the area for the elevated views across the adjacent landscape and beyond to Swansea Bay.

Sensitivity of Visual Receptors: High

- 13.8.4.206 Receptors are within a landscape of high historic value and therefore may be highly susceptible to change and responsive to new visual elements of the type proposed.



13.8.4.207 **Existing View:** Located within Margam Country Park, the view from this location contains contrasting industrial and mosaic upland elements. Views into Swansea Bay are partly obscured/ funnelled by the mounded landforms of Mynydd Brombil. Available views look toward the large-scale industrial buildings and infrastructure at Port Talbot works and Eglwys Nunydd reservoir, which are dominant visual elements. Within the middle ground to the south, views look across open, gently undulating land within Margam Moor and into the Bristol Channel.

13.8.4.208 The immediate context to the view is formed by mosaic uplands and hill slopes, such as the rising sides of Craig y Crugwyllt and Cefn Crugwyllt and coniferous forestry at Craig Cwm Maelwg.

13.8.4.209 **Predicted View:** The effect of the Project from Viewpoint 14 is illustrated by the photograph and photomontages in Figures 13.60 and 13.61, Volume 2. The photomontage illustrates that from this elevated location, approximately one third of the western and eastern arms of the Lagoon seawalls will be visible from this direction.

Magnitude of Visual Effects: Low

13.8.4.210 Visibility of the project will be restricted due to screening by local topography and at a distance of approximately 12.0km, it is not predicted to be a prominent feature of the view. Also it is not predicted that there will be perceptible change in the view during periods of high and low tide. Activities taking place within the confines of the Lagoon will not be notable. In addition, the Lagoon seawalls will be viewed in the same portion of the view that contains the Port Talbot steel works.

13.8.4.211 It is predicted that there will be no effects on visual amenity at night from this viewpoint following the construction of the Project, as no illuminated elements will be visible.

Significance of Visual Effects: Minor

13.8.4.212 Receptors are considered high sensitivity and the magnitude of effects is low. The Project would not form a prominent feature and would not change the overall nature of the view. Open views across the adjacent parkland towards Margam Moors and the Bristol Channel would remain intact.

13.8.4.213 On balance, it is considered that effects on visual amenity will be minor and therefore not significant under EIA Regulations. Effects are considered to be neutral, as following the construction of the Project, there will be no material change to the existing visual elements or qualities within the view from this location.

13.8.4.214 **Predicted Cumulative View:** From this location, it is predicted that all or part of the proposed Tata Internal Power Generation development, Prenergy Biomass Power Station, the Mynydd Brombil wind farm, the Mumbles Pier development, plus the proposed wind turbines at Newlands Farm and Kenfig Industrial Estate will be visible.

Magnitude of Visual Cumulative Effects: Moderate/Low

13.8.4.215 Only a small proportion of the overall Project will be visible from this location, which will be viewed in the same arc of view as the Mumbles Pier development. However, at a distance of over 18km to the pier, it is not predicted to be prominent. The proposed wind turbines of Mynydd Brombil will also be viewed in the same arc of the view. Although views will predominantly be restricted to blade tip only, where the towers to the turbines will be visible, they are predicted to be a notable feature, as they will be at

a distance of approximately 3km away. From this location that overlooks the Port Talbot steel works, the proposed developments may be visible, although viewed in conjunction with existing industry. Successive views will be available of these developments and the proposed wind turbine at Newlands Farm and Kenfig Industrial Estate. These two turbines may be viewed as a feature within the view, although they will be seen within a very broad and open landscape. Receptors will be walkers and therefore travelling slowly, and cumulative views may be available from locations along the footpath for approximately 1km.

Significance of Cumulative Visual Effects: Moderate/Negligible

- 13.8.4.216 Receptors are considered high sensitivity and the magnitude of effects is considered to be moderate/low. There may be a slight perception of an increase in built form within the view, however the visibility of the Project and other cumulative developments will not be prominent and will not define the view. This is due to screening reducing the proportion of developments visible, and the broad scale of the seascape/landscape in which they will be viewed.
- 13.8.4.217 On balance, it is considered that cumulative effects on visual amenity will be moderate/no cumulative significance and not significant under EIA Regulations. Cumulative effects are considered to be neutral as the Project and other cumulative developments, although visible, will be able to be accommodated into the view, due to the scale and screening of the existing landscape, without adversely affecting the visual qualities that define it.

Viewpoint 15: Sker Point

- 13.8.4.218 *Seascape/Landscape Character Area & Designations:* Kenfig Sands (LSU1)/Margam and Kenfig Burrows (A1). Located within an Area of Outstanding Historic Interest and adjacent to Wales Coast Path.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.219 Walkers within the designated Area of Outstanding Historic Interest are predicted to be the principle receptor type from this location, where views across the adjacent dunes, beach and Swansea Bay are seen as the primary reason for attraction.

Sensitivity of Visual Receptors: High

- 13.8.4.220 Receptors are within a landscape that is considered to be of high value by virtue of the designations afforded to it. They are predicted to be highly susceptible to change to new visual elements of the type proposed, given the open views to Swansea Bay.
- 13.8.4.221 *Existing View:* Located alongside rocky beach landform, this expansive view looks along the coastline toward Port Talbot and Swansea Bay.
- 13.8.4.222 Within the foreground, grassy dunes at Kenfig Burrows are visible, beyond which the backdrop of the view is contained by upland and hillside slopes of mixed grassland and forestry landcover, including Mynydd Margam and Moel Ton Mawr.
- 13.8.4.223 Dominant features within the view include Port Talbot works, containing large-scale industrial built forms, chimneys and smoke plumes, cranes and other infrastructure. The Port Talbot Harbour dock wall is a notable feature, visible as a linear extension into the bay.

13.8.4.224 Distance views are available into Swansea Bay, where the mixed urban grain of residential development on rising ground, contrasts with larger block units within the Maritime Quarter and other large-scale waterside development. Swansea Port infrastructure is also discernable. Distinctive topographic features include Kilvey Hill and the Mumbles. Beyond Mumbles Head, distance views look towards the Gower.

13.8.4.225 *Predicted View:* The effect of the Project from Viewpoint 15 is illustrated by the photograph and photomontages in Figures 13.62 and 13.63, Volume 2. The photomontage illustrates that from this location the eastern arm of the Lagoon seawalls will be visible, as will the Offshore Building and SSSI information point.

Magnitude of Visual Effects: Low

13.8.4.226 At a distance of approximately 15km, the Lagoon seawalls are predicted to be visible, but not prominent and will occupy only a small proportion of the overall view available. The Project will be viewed against the built form of Swansea and it will screen views of Swansea Beach, although it is predicted that the sweeping arc that defines the bay will remain in intact. At this distance both the Offshore Building and the SSSI information point will be minor elements of the view, and will be seen as an additional built element within an existing urban setting. The elements of the Project visible are likely to form a component of the wider view.

13.8.4.227 At night, lighting along the western arm of the Lagoon seawalls will be screened by the eastern arm of the Lagoon and therefore the Offshore Building will be the only discernible illuminated element of the Project visible from this location. The building will be viewed against a backdrop of the glow of lights to Swansea and at over 15km away, predicted to be undistinguishable from this broad extent of lighting that is a character of night time views. The magnitude of night time effects is considered to be low.

Significance of Visual Effects: Minor

13.8.4.228 Receptors are considered high sensitivity and the magnitude of effects is low. It is predicted that the Project could be constructed without the loss of seascape and landscape features as open views across Swansea Bay and inland towards Mynydd Margam and Moel Ton Mawr that define this view will be retained.

13.8.4.229 On balance it is considered that effects on visual amenity will be minor and therefore not significant under EIA Regulations. Effects are considered to be neutral, as following the construction of the Project, there will be no material change to the existing visual elements or qualities within the view from this location.

13.8.4.230 *Predicted Cumulative View:* From this location it is predicted that all or part of all the cumulative developments will be visible within the view, except for the proposed Mynydd Marchywel wind farm.

Magnitude of Visual Cumulative Effects: Low

13.8.4.231 Combined views of the Project with the Mumbles Pier development, the Abernedd Power Station, Tata Internal Power Generation development, Prenergy Biomass Power Station the SUBC, Swansea SA1, the wind turbine within Swansea Port and the Southern Access Road at Coed Darcy will all be available from this location. The closest of these developments to the viewpoint will be the proposed energy developments within Port Talbot steel works, at a distance of approximately 8.5km they will be viewed within a

broad, open, large scale seascape/landscape. The proposed wind farm on Mynydd Brombil and the proposed wind turbines at Newlands Farm and Kenfig Industrial estate will be viewed in succession to the Project and the other cumulative developments. The turbines on Mynydd Brombil will break the skyline and are predicted to be the most prominent of all cumulative developments. The other single turbine developments may be a notable feature as they will be viewed against a backcloth of the slopes of Mynydd Brombil and Mynydd Margam. The predominant receptor type will be walkers who will travel slowly through the view in terms of speed, although cumulative views are predicted to be short in duration, as topography will screen views out across the surrounding seascape/landscape from much of the area.

Significance of Cumulative Visual Effects: Moderate/Negligible

- 13.8.4.232 Receptors are considered high sensitivity and the magnitude of effects is considered to be low. The Project and the majority of cumulative developments will be a minor component of the wider view, and will not contribute to the view becoming defined by developments.
- 13.8.4.233 On balance it is considered that cumulative effects on visual amenity will be moderate/no cumulative effect and not significant under EIA Regulations. Cumulative effects are considered to be neutral, as the Project and other cumulative developments will be able to be accommodated into the view, due to distance and scale landscape without adversely affecting the visual qualities that define it.

Viewpoint 16: Swansea University Bay Campus

- 13.8.4.234 *Seascape/Landscape Character Area & Designations:* Swansea Port & Crymlyn Burrows (LSU4)/ Swansea Gate Business Park (H2).

Susceptibility to Change of Visual Receptors: Moderate.

- 13.8.4.235 Beach users, predominantly walkers and future students and staff at the SUBC. Long distance views are experienced across Swansea Bay, however, this part of the coastline is difficult to access and is currently going through significant change through the construction of the SUBC.

Sensitivity of Visual Receptors: Moderate

- 13.8.4.236 Most receptors are likely to be users of the facilities on the Lagoon seawalls and within the proposed dune, saltmarsh and coastal grassland area (The Landward Ecological Park) and therefore, are likely to be able to accommodate some new visual elements into the view.
- 13.8.4.237 *Existing View:* The wide, flat expanse of the intertidal area of the beach and views out across Swansea Bay dominate. Within the foreground, the rock armour to the coastal edge extends west where it forms the seawall to Swansea Port. Buildings, cranes, lighting columns and the wind turbine within the docks are all visible above the wall. Beyond the docks and within the same arc of view, Meridian Tower is visible, although not a prominent vertical element. These features are viewed against the elevated urban locations of Swansea. Within the far distance the ridgeline of the hills within the Gower AONB can be seen.
- 13.8.4.238 Looking east across Swansea Bay, the power station within Baglan Bay Energy Park and the steel works at Port Talbot, are viewed against the slopes of Mynydd Emroch, Mynydd Dinas, Mynydd Margam and Mynydd Brombil.

- 13.8.4.239 *Predicted View:* The effect of the Project from Viewpoint 16 is illustrated by the photograph and photomontages in Figures 13.64 and 13.65 and at high tide in Figure 13.66. The photomontages illustrate that from this location within the application site boundary. The proposed sand dunes within the Landward Ecological Park and adjacent to the SUBC will be a visible feature in the foreground distancing the visual landing point of the seawall which will also be visible extending out into Swansea Bay. Looking across the Lagoon towards Swansea and The Mumbles, the western arm of the Lagoon seawall, the turbine and sluice gate housing structure, the Offshore Building and Western Landfall Building will all be visible. The Offshore Building and semi-goliath gantry crane (when in use) are predicted to break the skyline. However, at approximately 5km away they will be minor elements of the view. Activities along the eastern arm of the Lagoon seawalls and within the Lagoon itself will be apparent.
- 13.8.4.240 At low tide and when water flows out of the Lagoon to reveal the sand and gravel within the intertidal area, the vertical extent of the Lagoon seawall visible will increase.
- Magnitude of Visual Effects: High/Moderate (High tide & Low tide)*
- 13.8.4.241 The overlaying of the rock armour and extension of the proposed coastal grassland and sand dunes onto the foreshore, which forms part of the Landward Ecological Park, will be an immediately apparent feature of the view from this location, as will the footpath that passes in front of the SUBC. Along the Crymlyn Burrows frontage, sand accretion is likely to occur due to the increased shelter (reducing the erosion potential) provided by the eastern seawall to south westerly wave conditions. Over time, the extent of dunes adjacent to the seawall may extend further into the intertidal area, further increasing their prominence.
- 13.8.4.242 The eastern arm of the seawall will be most apparent viewed at a distance of approximately 250m at its closest point extending to the south and away from the viewpoint. The construction of proposed coastal grassland and sand dunes extending from the foreshore along this section of the Lagoon seawall, will assist in integrating the seawall into the adjacent surroundings distancing the visible landfall point of the wall from the SUBC.
- 13.8.4.243 At low tide the visible, vertical extent of the Lagoon seawall will increase, which will be most notable along the eastern arm. Extending past the proposed coastal grassland and sand dunes, the full vertical extent of the eastern arm of the seawall will be visible at low tide, within the intertidal area, for a length of approximately 1.5km. The full vertical extent of other sections of the Lagoon seawall will not be visible at low tide and will be viewed at a distance of between 1.5 -5km.
- 13.8.4.244 Due to the horizontal nature of the seawalls, the sense of a large scale seascape will be retained with some foreshortening of views of open water across the Bay, but with retained views to the upland areas to the east and Swansea and the Mumbles to the west. The Offshore Building will be a visible feature within the seascape, although at a distance of approximately 5km it is not predicted to be prominent.
- 13.8.4.245 At night, the lighting of the Offshore Building will be a visible feature, as the lighting will be viewed against the dark skies of Mumbles Head. The glow of the low level lighting along the western arm of the Lagoon seawall and the lights to the access road may also be visible, as will the lighting to the structural and sculptural elements. These lights will however be predominantly viewed against the urban glow of lighting within Swansea

and The Mumbles. Along the eastern arm of the Lagoon seawall, the sculptural elements will be visible feature when lit, viewed at close distance and against a backdrop of the lights of the Port Talbot steelworks and the darker skies of Kenfig Sands. The magnitude of night time effects is considered to be high/moderate.

Significance of Visual Effects: Major/Moderate

- 13.8.4.246 Receptors are considered moderate sensitivity and the magnitude of effects is high/moderate at both high and low tide. The Project, most notably the Ecological Park and eastern arm of the Lagoon Seawalls will result in the most significant changes to the existing view, due to the close distance at which they will be seen. The construction of the Landward Ecological Park will create an attractive feature to the coastal edge and along the boundary of the SUBC that will assist in visually linking the campus with the adjacent foreshore and visually distancing the landing point of the eastern seawall. The Western Landfall building will be viewed in conjunction with existing development within the Swansea Port and therefore significant visual effects are not predicted to occur as a result. The Offshore Building and turbine and sluice gate housing structure, while visible will not be a detracting element in the view, due to the small proportion of the view that they will occupy and the distance at which they will be viewed.
- 13.8.4.247 On balance, it is considered that effects on visual amenity will be major/moderate and significant under EIA Regulations. Effects are considered to be neutral/beneficial. Although the eastern arm of the Lagoon seawall will be a visible feature, the Project will assist in visually enhancing an area that has been associated with industrial decline following the closure of the Oil Refinery, while creating a more active coastal edge through improved access and the introduction of recreational and leisure facilities.
- 13.8.4.248 *Predicted Cumulative View:* From this location the blocks within the SUBC that overlook the proposed Ecological Park will be viewed in the same arc of view as Project and at close distance, forming a dominant feature of the view. Other cumulative developments within the same arc of view include the existing wind turbine in the Port of Swansea Port and the Mumbles Pier development. The proposed wind turbines on Mynydd Brombil, at Kenfig Industrial Estate and Newlands Farm may be viewed in succession.

Magnitude of Visual Cumulative Effects: High/Moderate

- 13.8.4.249 The introduction of the Project will be immediately apparent when viewed in combination with the SUBC, will result in a perceptible increase in development within the view. The existing turbine in Swansea Port, will be viewed in conjunction with existing vertical structures, including cranes and light columns and therefore will not be a significant feature. Other cumulative developments are not predicted to contribute to an increase in development within the view, due to the distance at which they are viewed. Successive views of the Abernedd Power Station within Baglan Bay Energy Park may be a prominent feature. The Tata Internal Power Generation development, plus the Prenergy Biomass Power Station are also predicted to be visible within the portion of the view.

Significance of Cumulative Visual Effects: Major/Moderate

- 13.8.4.250 Receptors are considered moderate sensitivity and the magnitude of effects is also considered to be high - moderate. Receptors within this location are not considered to be highly sensitive to the type of development proposed. However, there will be an increase in the extent of the view that will be defined by development following the construction of Project and the SUBC, plus the proposed Abernedd Power Station.



- 13.8.4.251 On balance, it is considered that cumulative effects on visual amenity will be major - moderate and significant under EIA Regulations. Cumulative effects are considered to be neutral/beneficial. The Project will increase the proportion of the view occupied by development. However, improvements in visual amenity to a degraded, post-industrial landscape that overlooks Swansea Bay, plus enhancements to the public realm and increased leisure and recreational facilities will result following the construction of the Project and SUBC (see Chapter 22 – Economy, Tourism and Recreation).

Viewpoint 17: Crymlyn Burrows, Swansea

- 13.8.4.252 *Seascape/Landscape Character Area & Designations:* Sker Point to Mumbles Head Seascape Unit (RSU1)/Swansea Port & Crymlyn Burrows (LSU4). No seascape/landscape designations.

Susceptibility to Change of Visual Receptors: Moderate

- 13.8.4.253 There is no formal car park and spaces are limited. In addition a tributary of the River Neath that bisects the salt marsh, making access to the beach difficult. However, the area is used by fishermen, bird watchers and is a popular destination for local dog walkers in particular.

Sensitivity of Visual Receptors: Moderate

- 13.8.4.254 Although receptors are within an attractive location, they are not within a designated landscape or seascape and existing views include many manmade features, including Port Talbot steelworks and Swansea Port. It is therefore predicted that they will be able to withstand some new visual elements within views.
- 13.8.4.255 *Existing View:* Located on the beach foreshore at Crymlyn Burrows, broad open views are available from this viewpoint looking in to Swansea Bay. The foreground of the view contains the open beach, beyond which the Eastern Breakwater wall to Swansea Port is visible.
- 13.8.4.256 At close distance to the east, the large-scale works at Baglan Energy Park are prominent, seen against the backdrop of Mynydd Dinas. Port Talbot works are also a characteristic industrial feature within the view, containing a number of large-scale buildings, cranes, chimneys and other infrastructure. The residential community of Baglan lies at the views eastern extent.
- 13.8.4.257 To the west, Swansea Port and associated infrastructure are visible at middle distance, including large-scale infrastructure, cranes and the linear dock wall, extending in to the bay. The western extent of the view is formed by the western curve of Swansea Bay, including the distinctive topography of Mumbles and Middle Head.
- 13.8.4.258 *Predicted View:* The effect of the Project from Viewpoint 17 is illustrated by the photograph and photomontages in Figures 13.67 and 13.68, Volume 2. The photomontage illustrates that from this location on the beach, the eastern arm of the Lagoon seawall will be the most visible feature of the Project. Located at the landward edge of the seawall is the SSSI information point. Extending above the seawalls, the Offshore Building will be visible.

Magnitude of Visual Effects: High

- 13.8.4.259 The eastern arm of the Lagoon seawall will be a visible feature, most notably at low tide when the full vertical extent of the seawall will be visible within the intertidal area. The

existing Eastern Breakwater wall at Swansea Port partially screens views west along the beach, however the construction of the Lagoon seawalls will restrict views further, leading to a foreshortening of views. It is predicted that the overall appearance of the view will change as a result. However, although views of Swansea and The Mumbles will be lost, the seawalls will also screen detracting views towards Swansea Port. In addition, the presence of pedestrians walking along the eastern arm of the Lagoon seawall may add visual interest to the view. Due to the restricted access to the beach at Crymlyn Burrows the adjacent sand dunes and salt marsh are typically visited by receptors in greater numbers than the beach. From these locations, the undulating form of the dunes restricts views towards the Project and effects of the Project will be reduced.

13.8.4.260 As noted in paragraph 13.8.1.31, the Project may result in increased sedimentation within the intertidal area, which over time may result in an extension of the sand dunes along the Lagoon seawall further into the intertidal area and increasing their prominence (refer to Chapter 6). With time this could assist in integrating the Lagoon's eastern wall into its surroundings.

13.8.4.261 At night, the eastern arm of the Lagoon seawalls will screen views of the lighting along the western arm of the Lagoon, to the access road south of Queen's Dock and to the Western Landfall Building and surrounding areas. The low level nature of the lighting and design of the structural and sculptural elements will restrict the glow of lights along the eastern arm of the Lagoon. However, lighting to the Offshore Building will be seen against the intrinsically dark skies surrounding Mumbles Head and is predicted to be a notable feature, especially when the turbines are operational and the localised intensity of the lights are increased. The magnitude of night time effects is considered to be moderate/low.

Significance of Visual Effects: Major

13.8.4.262 Receptors are considered moderate sensitivity and the magnitude of effects is high. Key reference points including those of Baglan Bay Energy Park, the upland areas to the north of Port Talbot and of the steelworks will all remain following the construction of the Project. However, the eastern arm of the Lagoon seawall is predicted to be a defining feature, which will restrict views west towards Swansea and The Mumbles.

13.8.4.263 On balance, it is considered that effects on visual amenity will be major and significant under EIA Regulations. Effects are considered to be adverse, as the Project will lead to an increased sense of enclosure between Crymlyn Burrows and the western parts of Swansea Bay and also the loss of key reference points within the view.

13.8.4.264 *Predicted Cumulative View:* From this location it is predicted that the SUBC will be visible extending above the sand dunes, plus the upper section of the existing wind turbine in Swansea Port will also be visible in the same arc of view as the Project. The proposed Abernedd Power Station, the Mynydd Brombil wind farm and the proposed wind turbine at Kenfig Industrial Estate are predicted to be viewed in succession.

Magnitude of Cumulative Visual Effects: High

13.8.4.265 The introduction of the Project will be immediately apparent feature that would change key elements of the view when viewed in combination with existing cumulative developments.

Significance of Cumulative Visual Effects: Major

- 13.8.4.266 Receptors are considered moderate sensitivity and the magnitude of effects is considered to be high. The combination of the Project and SUBC is predicted to increase the proportion of the view that is defined by development. The SUBC is located at a distance of approximately 1.2km from the viewpoint and therefore this development and the Project will both be viewed at close distance.
- 13.8.4.267 On balance, it is considered that cumulative effects on visual amenity will be major and significant under EIA Regulations. Cumulative effects are considered to be adverse. When the Project is viewed in combination with the SUBC, the view is predicted to be defined more by development than the broad, open sweep of Swansea Bay.

Viewpoint 18: PRow on Mynydd Brombil

- 13.8.4.268 *Seascape/Landscape Character Area & Designations:* Mynydd Margam, Mynydd Emroch and Mynydd Penhydd (F5), on the border with Margam and Mynydd Dinas (B3). Located within the Area of Special Historic Interest.

Susceptibility to Change of Visual Receptors: High

- 13.8.4.269 Walkers within a landscape of Special Historic Interest. Elevated views across surrounding landscape and seascape are predicted to be the primary reason for their visit.

Sensitivity of Visual Receptors: Moderate

- 13.8.4.270 From this section of the footpath, views of the industrial landscape of Port Talbot and adjacent urban areas are an established feature and therefore, receptors may be less sensitive and able to accommodate new visual elements of the type proposed.
- 13.8.4.271 *Existing View:* From this location, on the elevated lower slopes of Mynydd Brombil, visual character is dominated by the presence of Port Talbot works, which dominate the view. Beyond the works, expansive views are available into Swansea Bay and beyond. To the south, distance views are available across the Bristol Channel.
- 13.8.4.272 The visually dominating industrial area is seen at close distance, occupying a wide proportion of the view. Large-scale manmade elements, including block built forms, chimneys and smoke plumes are characteristic features. Port Talbot Harbour dock walls are also visually prominent, extending into the bay. Eglwys Nunydd Reservoir is a notable feature to the south-west.
- 13.8.4.273 To the north, expansive views are available beyond the sloping sides of Mynydd y Castell, looking over Sandfields and Aberavon residential areas. These residential areas contain a mix of terraced and modular residential street patterns, and areas of larger scale built form, including commercial and manufacturing units. Baglan Energy Park includes a number of prominent industrial large-scale units, beyond which the open sweep of foreshore at the Neath estuary mouth are visible. The recess of Swansea Bay is visible to the north, including the distinctive landform of Kilvey Hill. The residential and industrial areas of Swansea are discernable, including a number of landmark buildings, such as the Meridian Tower and other apartment blocks, and Brangwyn Hall.
- 13.8.4.274 *Predicted View:* The effect of the Project from Viewpoint 18 is illustrated by the photograph and photomontages in Figures 13.69 and 13.70. The photomontage illustrates that from this elevated location, all elements of the Project will be visible. The



Lagoon seawalls will be the most visible feature, however, the grasslands, saltmarsh, sand dunes and beach to the Landward Ecological Park will also be a noticeable feature of the Project.

Magnitude of Visual Effects: Moderate/Low

- 13.8.4.275 Although all elements of the Project will be visible, due to the large scale of the seascape/landscape and broad views from this location, it will occupy only a small proportion of the overall view. It will be visible in conjunction with a significant number of prominent manmade features, most notably the structures within Port Talbot steel works, plus the existing Port Talbot Harbour dock walls, which assist in absorbing the Project into the view.
- 13.8.4.276 The Offshore Building will be the most visible of the two buildings proposed, as it will be viewed against open water as opposed to existing built form. In addition, turbine and sluice gate housing structure, with associated semi-goliath gantry crane will be visible, although not prominent features within this portion of the view, due to the distance at which they will be viewed and the cranes' receding black/grey finish.
- 13.8.4.277 The Landward Ecological Park will be viewed in conjunction with Kilvey Hill and its introduction will result in an increase in vegetation to the foreshore, changing the nature of views along this part of Swansea Bay. However, the broad sweeping curve that defines the Bay will be retained.
- 13.8.4.278 At night, lighting to the Offshore Building, the Western Landfall Building and surrounding amenity areas, the low level lighting along the western arm of the Lagoon seawall and to the structural and sculptural elements are all predicted to be visible. The lighting to the Offshore Building plus the lighting to the western arm of the Lagoon seawall, will be viewed within the intrinsically dark water of Swansea Bay and between the glow of lights of the adjacent urban areas within Port Talbot and Aberavon, plus the more distant urban glow of Swansea and the Mumbles. The lighting to the Offshore Building, plus the western arm of the Lagoon seawall may be a notable additional feature, however, it is not predicted to be dominant due to the extensive areas of existing lighting within the view. The lights of the Western Landfall Building and surrounding areas will be viewed against a backdrop of high levels of existing lighting. The magnitude of night time effects is considered to be moderate/low.

Significance of Visual Effects: Moderate/Minor

- 13.8.4.279 Receptors are considered moderate sensitivity and the magnitude of effects is moderate/low. The Project will be a notable additional feature of the view. The view, however, will not be altered to the extent where the features that define it will be changed. Port Talbot steel works, the residential areas within Aberavon and the broad open expanse of water within Swansea Bay will remain the prominent and defining feature of the view.
- 13.8.4.280 On balance, it is considered that effects on visual amenity will be moderate - minor and not significant under EIA Regulations. Effects are considered to be neutral, as although the Project will be a notable additional feature of views, it will be seen in conjunction with existing man-made features. In addition, the design of the Project will complement existing features within the seascape and landscape without resulting in a loss to key elements that define the existing view.



- 13.8.4.281 *Predicted Cumulative View:* From this location it is predicted that all or part of all the cumulative developments will be visible within the view, except for the proposed Mynydd Marchywel wind farm and the proposed wind turbine at Newlands Farm.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.282 At a distance of approximately 500m to the nearest turbine, the proposed wind farm on Mynydd Brombil will be a very prominent feature of the view from this location, and the most prominent of all cumulative developments including the Project. This development, plus that of the proposed turbine at Kenfig Industrial Estate, will be viewed in succession to that of the Project and the other cumulative developments. Within the centre of the view the proposed Tata Internal Power Generation development and Prenergy Biomass Power Station will be seen in conjunction with existing industrial landscape of the steel works. The SUBC and the Southern Access Road to Coed Darcy, may also be notable developments within the view and seen in combination with the Project. The proposed Abernedd Power Station, plus the existing wind turbine at Swansea Port and the development in Swansea SA1 will also be visible within this arc of the view, however it is predicted that due to the backdrop of existing built elements, they will be absorbed into the existing urban landscape. At a distance of over 15km, the proposed Mumbles Pier development will be a minor component of the wider view. Receptors will predominantly be walkers who will be travelling at low speeds, and therefore cumulative views will potentially be possible for a long time period.

Significance of Cumulative Visual Effects: Moderate

- 13.8.4.283 Receptors are considered moderate sensitivity and the magnitude of effects is also considered to be moderate. The introduction of the wind turbines on Mynydd Brombil will effect on visual amenity, as they will introduce manmade elements in to a part of the view where none currently are located. The Project and other cumulative developments however, will be located within an arc of the view where development, including large scale industrial development is a prominent existing feature.
- 13.8.4.284 On balance, it is considered that cumulative effects on visual amenity will be moderate although not significant under EIA Regulations. Cumulative effects are considered to be neutral, as although the Project and other cumulative developments will be visible, the existing view is dominated by existing, large scale industrial development and therefore, the overall nature of the view will not significantly change.

Viewpoint 19: Swansea Bay

- 13.8.4.285 *Seascape/Landscape Character Area & Designations:* Regional Seascape Unit: Sker Point to Mumbles Head Seascape Unit (RSU1)/Swansea Bay (LSU5). No seascape/landscape designations.

Susceptibility to Change of Visual Receptors: High/ Moderate

- 13.8.4.286 Recreational yacht and boat users are likely to be the predominant receptor, although fishing vessels are also likely to be evident within the waters near to this viewpoint. The recreational users may be attracted to the area due to the scenic quality of views that are available, especially towards The Mumbles. Fisherman are more likely to be attracted to the area due to the quality/number of fish as opposed to its scenic qualities and are therefore are considered to be less susceptible to change.

Sensitivity of Visual Receptors: Moderate

- 13.8.4.287 Views of development, including heavy industry are prominent features along the coastline from within Swansea Bay and therefore it is predicted that receptors will be able to accommodate some new elements of the type proposed. Although receptors are not within a designated seascape it is considered to be of high/moderate value due to the areas including the Gower coastline, Mumbles Head, plus Kenfig and Margam Burrows.
- 13.8.4.288 Existing View: Located within Swansea Bay at a distance of approximately 3.5km due south of the promenade (adjacent to 360 Beach and Watersports centre). Looking back across the wide expanse of water towards the coast, Kilvey Hill forms the backdrop to Swansea Port and the residential developments to the Maritime Quarter. Meridian Tower is a prominent landmark within the view. Further to the west, built form along the promenade, including the Civic Centre buildings and the residential areas of Uplands and Townhill are also visible.
- 13.8.4.289 To the east, the sand dunes of Crymlyn Burrows and the bridge of the M4 Motorway that spans the River Neath at Britton Ferry can be seen, as can Aberavon Beach and the built form of Port Talbot. Forming a dominant backdrop to this part of the coastline are the slopes of Mynydd Dinas, Mynydd Emroch and Mynydd Margam.
- 13.8.4.290 *Predicted View:* The existing view from Viewpoint 19 is illustrated by the photograph in Figure 13.71 (Volume 2). No photomontage has been produced from this viewpoint location, as for safety reasons, access to the water was not permitted. It is predicted that from this location the western arm of the Lagoon seawalls, the turbine and sluice gate housing structure, plus the Offshore Building will be the most visible feature of the view. The Western Landfall Building may also be visible, set within the existing structures of Swansea Port.

Magnitude of Visual Effects: High/Moderate

- 13.8.4.291 The Project will be viewed at close distance and will be an immediately apparent feature that will occupy a wide proportion of the view. However the Project, including the vertical structures of the Offshore Building, and turbine and sluice gate housing structure (eg the semi goliath gantry crane when in use) will be viewed against existing built form along the coastline that will reduce effects. In addition the upland areas that currently form the backdrop to the view will be retained.
- 13.8.4.292 The lighting scheme to the Offshore Building will create a dramatic and immediately apparent feature to night time views from within Swansea Bay. The crest wall will screen the effects of the lighting to the western arm of the Lagoon seawall, however, when lit the structural and sculptural elements to the eastern arm of the Lagoon may be visible, although not prominent features. Other lighting, including that of the Western Landfall Building and surrounding areas, and lighting along the access road will be seen existing a backdrop of the existing urban glow of Swansea. The magnitude of night time effects is considered to be high/moderate.

Significance of Visual Effects: Major/Moderate

- 13.8.4.293 Receptors are considered moderate sensitivity and the magnitude of effects is considered to be high/moderate. The Project will become a noticeable feature of the view following its construction. However, the visual character within Swansea Bay will be retained as the Project will be viewed in conjunction with existing built form and the



key references that define the view, including Kilvey Hill, Mynydd Dinas, Mynydd Emroch and Mynydd Margam will all be retained.

13.8.4.294 On balance, it is considered that effects on visual amenity will be major/moderate and significant under EIA Regulations. Effects are considered to be neutral, as the Project although immediately noticeable within views it will be seen in conjunction with existing built form. In addition, due to the simple form of the design, it is considered that the Project can be incorporated into the seascape without degrading the integrity of the existing qualities that define the view.

13.8.4.295 *Predicted Cumulative View:* From this location it is predicted that all cumulative developments will be visible in the same arc of view as the Project, except for the proposed wind turbines at Kenfig Industrial Estate and Newlands Farm, plus the Mumbles Pier development, which will be viewed in succession.

Magnitude of Visual Cumulative Effects: High/Moderate

13.8.4.296 The introduction of the Project into the view will be immediately apparent feature and when viewed in combination with the Mumbles Pier development, which is at a distance of approximately 1.5km there may be a perceived increase in development within Swansea Bay. Other cumulative developments will not be so prominent in the view as they will be viewed in conjunction with existing development, or at a considerable distance from the viewpoint.

Significance of Cumulative Visual Effects: Major/Moderate

13.8.4.297 Receptors are considered moderate sensitivity and the magnitude of cumulative effects are considered to be major/moderate. Cumulative views of the Project and Mumbles Pier development may lead to an increase in the view being defined by development. However the majority of cumulative developments that will be viewed in the same arc of view as the Project are predicted to be absorbed in to the existing urban context, or be minor elements within the view due to distance.

13.8.4.298 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under EIA Regulations. Cumulative effects are considered to be neutral, as all cumulative development can be accommodated into the view without significantly adversely affecting the qualities that define it.

Viewpoint 20: Pant Street, St Thomas, Swansea

13.8.4.299 *Seascape/Landscape Character Area & Designations:* Swansea (G1). No landscape designations.

Susceptibility to Change of Visual Receptors: Moderate

13.8.4.300 Residential properties where the proposed development would likely form an ancillary component of the view. Receptors are not within a designated landscape.

Sensitivity of Visual Receptors: Low

13.8.4.301 Receptors from this location are not predicted to be highly susceptible to change given the limited views towards the Project, and the dominance of existing built form.

13.8.4.302 *Existing View:* From this location, a funnelled view is available down Pant Street, looking in to Swansea Bay. The narrow view is channelled toward the Kings Dock, above the rooftops of Wern Fawr Road. Beyond, distance views in to the bay are available.



13.8.4.303 The view is characterised by the surrounding terraced residential development and activity. Bay fronted facades overlook Pant Street and Dan-y-graig. A number of vertical structures, including lighting columns and telegraph poles are also contained within the view. To the east, built form funnels a narrow view toward Craig-y-darren. To the west, the boundary of Dan-y-graig cemetery is visible.

13.8.4.304 Predicted View: The effect of the Project from Viewpoint 20 is illustrated by the photograph and photomontages in Figures 13.72 and 13.73. The photomontage illustrates that from this location, a short section of the eastern arm of the Lagoon seawall will be the only element of the Project visible.

Magnitude of Visual Effects: Low

13.8.4.305 Existing built form will restrict the extent of the Project that will be visible. The Lagoon seawalls will be viewed against a backdrop of the open water of the Bristol Channel, and the colour of the rock armour is predicted to assist in absorbing the structure into the surrounding seascape.

13.8.4.306 It is predicted that there will be no effects on visual amenity at night from this viewpoint following the construction of the Project, as no illuminated elements will be visible.

Significance of Visual Effects: Minor

13.8.4.307 Receptors are considered low sensitivity and the magnitude of effects is also low. Following the construction of the Project, views out across Swansea Bay towards and the Bristol Channel beyond will be retained from this location. Rows of terraced housing define views and it is predicted that these will remain dominant.

13.8.4.308 On balance, it is considered that effects on visual amenity will be minor and therefore not significant under EIA Regulations. Effects are considered to be neutral, as following the construction of the Project there will be no material change to the existing visual elements or qualities within the view from this location.

13.8.4.309 *Predicted Cumulative View:* From this location it is predicted that the Project will be the only development visible and therefore, there will be no cumulative effects.

Viewpoint 21: Pant y Celyn Road, Townhill Swansea

13.8.4.310 *Seascape/Landscape Character Area & Designations:* Swansea (G1). No landscape designations.

Susceptibility to Change of Visual Receptors: High

13.8.4.311 Residents of properties with elevated views orientated toward the Project. Receptors are not within a designated landscape.

Sensitivity of Visual Receptors: High

13.8.4.312 Receptors are likely to be responsive to new visual elements like the type proposed, due to the open views and dominance of Swansea Bay. Although views contain many existing built elements, the older more settled areas of Swansea are more dominant. Receptors may therefore, be highly susceptible to change.

13.8.4.313 Existing View: From this elevated location, expansive views across Swansea and in to Swansea Bay are available. The foreground of the view is formed by rough grass slope and tree canopies on the embankment below Pant y Celyn Road.



- 13.8.4.314 Urban development within the residential community of uplands forms the middle ground, largely comprising terraced streets. Notable large-scale buildings within the civic core and Maritime Quarter include Swansea Civic Library and Meridian Tower, along with other large apartment blocks. The Vetch Fields redevelopment site is also a notable visual feature within the expanse of urban development.
- 13.8.4.315 To the east, the Swansea Port is notable for the more open urban grain, containing larger scale buildings, cranes and other vertical elements and the dock wall, a dominant visual element extending into the bay.
- 13.8.4.316 To the west, the SUBC buildings are prominent, alongside Singleton Park. Beyond, the western curve of Swansea Bay is visible, containing residential development and areas of tree cover. The distinctive topography of the Mumbles forms the south-western extent of Swansea Bay.
- 13.8.4.317 Predicted View: The effect of the Project from Viewpoint 21 is illustrated by the photograph and photomontages in Figures 13.74 and 13.75. The photomontage illustrates that from this elevated location, the Lagoon seawalls, including the entire length of the western arm, plus the majority of the eastern arm will be visible. The existing dock seawall may screen views of the Landward Urban Park, however areas located adjacent to the Western Landfall Building are predicted to be visible. Views of the Landward Ecological Park will be restricted by vegetation within foreground views.
- 13.8.4.318 The Offshore Building, plus the turbine and sluice gate housing structure and safety zone markers will all be visible components within Swansea Bay. Activities within the Lagoon, most notably sailing will be evident.

Magnitude of Visual Effects: Moderate

- 13.8.4.319 The Project will visually extend across a significant proportion of the view and may lead to a perceived increase in the sense of enclosure to the western half of Swansea Bay, although open views across the Bristol Channel will remain. The sweeping arc of the Bay that extends from Mumbles Head to Swansea Civic Library, which is one of the defining features of the view, will also remain intact.
- 13.8.4.320 The semi-goliath gantry crane (when in use) and the turbine and sluice gate housing structure are predicted to be visible, although at a distance of approximately 5km, not a prominent feature of the view. The Offshore Building may potentially be more visible, due to its size and as it will be viewed against open water. The choice of materials and colours of finishes will assist in absorbing the building into the seascape. The Western Landfall Building will also be visible, although the existing wind turbine is likely to be more visually prominent due to its size and movement of blades.
- 13.8.4.321 A difference between the water level in the Lagoon and the external sea level when a 'head of water' is created may result in a visual contrast between the exposed sand within the intertidal areas and the adjacent water, at high and low tides respectively. The contrast may be most prominent at low tide, when the exposed intertidal area and along the western edge of the Lagoon seawall any contrast with the water held within it.
- 13.8.4.322 At night, low level lighting along the western arm of the Lagoon seawall will be screened by the crest wall. However, the Offshore Building will be viewed against the intrinsically dark open water of the Bay and isolated from other existing illuminated

buildings/structures. Therefore, when lit the building may be a visually prominent feature. The lights to the structural and sculptural elements along the eastern arm of the Lagoon seawall may also be viewed against the dark waters of the Bay, although within the same arc of view as the lights to Port Talbot and Aberavon, which forms the backdrop to this part of the view. Lighting along the access road and to the Western Landfall Building and surrounding amenity areas may also be visible, although viewed in conjunction with the existing urban lighting to Swansea, including the lights of Meridian Tower. The magnitude of night time effects is considered to be high/moderate.

Significance of Visual Effects: High/Moderate

- 13.8.4.323 Receptors are considered to be of high sensitivity and the magnitude of effects high/moderate. The construction of the Project will result in an alteration to the view as it will introduce a large manmade feature that may create a sense of enclosure to the western area of Swansea Bay. However, longer distance views beyond the Lagoon seawalls will be retained, as will the sweeping arc of Swansea Beach, which is a defining feature of the view.
- 13.8.4.324 On balance, it is considered that effects on visual amenity will be high-moderate and significant under EIA Regulations. Effects are considered to be neutral. Although the Project will result in the introduction of an additional manmade feature into the view, the simple, curved form of the Lagoon compliments and reinforces the sweeping form of Swansea Beach.
- 13.8.4.325 *Predicted Cumulative View:* From this location it is predicted that all or part of all cumulative developments will be visible within the view, except for the SUBC, the proposed Abernedd Power Station, the Southern Access road at Coed Darcy and the proposed Mynydd Marchywel wind farm.

Magnitude of Visual Cumulative Effects: Moderate

- 13.8.4.326 The Project will be the most visible development within the view and will be seen in the same arc of view as the existing wind turbine within Swansea Port, developments within Swansea SA1, the proposed Tata Internal Power Generation development, and Prenergy Biomass Power Station in Port Talbot steel works, the proposed turbines to the Mynydd Brombil wind farm, Newlands Farm and Kenfig Industrial Estate. Due to the turbines breaking the skyline and viewed at a similar elevation to the viewpoint location, the wind farm on Mynydd Brombil may be a notable additional development within the view. Successive views of the Mumbles Pier development will also be available. Views towards it will be unrestricted and at a distance of approximately 6km, the hotel/leisure and residential units, which will be back clothed by the scarp slopes of Mumbles Hill, will be a visible although not prominent feature of the view. Although the Project and other cumulative developments will potentially be visible within a wide arc of view, they will be viewed in a large scale and open seascape/landscape character that already contains built form. Receptors will predominantly be residents and therefore they will be static, and views long in duration.

Significance of Cumulative Visual Effects: Major/Moderate

- 13.8.4.327 Receptors are considered high sensitivity and the magnitude of cumulative effects moderate. Land based cumulative developments are predicted to be visible although will be predominately absorbed in to the existing urban context. Therefore the Project will be the most prominent of the cumulative developments.



- 13.8.4.328 On balance, it is considered that cumulative effects on visual amenity will be major/moderate and significant under EIA Regulations. Cumulative effects are considered to be neutral, as the qualities that define the view will not be adversely affected.

Viewpoint 22: Clyne Gardens, Swansea

- 13.8.4.329 *Seascape/Landscape Character Area & Designations:* Swansea Bay (LSU5)/The Mumbles (G6). Located within the Gower AONB and Registered Landscape, Park and Garden of Special Historic Interest (Grade I).

Susceptibility to Change of Visual Receptors: High

- 13.8.4.330 Park users within an AONB and Registered Landscape, Park and Garden of Special Historic Interest, where the landscape is the primary reason for their visit.

Sensitivity of Visual Receptors: High - Moderate

- 13.8.4.331 Receptors are likely to be responsive to new visual elements, however they are likely to be able to accommodate a small degree of visual elements of the type proposed, due to the prominence of existing manmade elements within the same portion of the view as the Project.

- 13.8.4.332 *Existing View:* The mature parkland trees and maintained grass areas within Clyne Gardens, slope relatively steeply away and dominate foreground views. The vegetation, channels views towards the east, where views of the flat expanse of Swansea Beach and the Bay are visible, as is the breakwater wall of West Pier, the wind turbine within Swansea Port, along with other infrastructure and buildings associated with the docks. Forming a backdrop to the view, is the broad expanse of Aberavon Sands and Port Talbot, including the steel works. Rising above the development along this section of the coastline is the upland areas of Mynydd Dinas, Mynydd Emroch and Mynydd Brombil.

- 13.8.4.333 *Predicted View:* The effect of the Project from Viewpoint 22 is illustrated by the photograph and photomontages in Figures 13.76 and 13.77. The photomontage illustrates that from this location the Lagoon seawalls, including both its western and eastern arms will be the most visible feature of the Project. However, over time the colour of the rock armour is predicted to darken and the seawalls will become more regressive in the view. Both the Western Landfall Building plus the Offshore Building will also be visible, although due to their scale, not prominent. Vegetation will partially screen the turbine and sluice gate housing structure, although the safety zone markers will be visible extending above the western arm of the Lagoon seawalls. Sporting activities within the Lagoon, most notably sailing will be evident.

Magnitude of Visual Effects: Moderate/Low

- 13.8.4.334 The Lagoon seawalls will be a recognisable new element within the view. However, the overall nature of the view is not predicted to be change. The ornamental tree planting within the park will remain the dominant feature, and due to the low level nature of the development, views towards Aberavon Sands will be retained, as will views towards the upland areas beyond.
- 13.8.4.335 The difference between the water level in the Lagoon and the external sea level when a 'head of water' is created at high and low tides may be a noticeable from this elevated location. However, due to the angle of view at which the Lagoon is viewed, only a

narrow proportion of the total area inside of the Lagoon is visible and therefore any difference in water levels is not predicted to be prominent.

- 13.8.4.336 At night, the lighting along the western arm of the Lagoon seawalls will be screened from view by the crest wall. Within the distance, the lights of Port Talbot steel works will form the backdrop to night time views, however, the Offshore Building will be visible and illuminated against the intrinsically dark water within the Lagoon and areas within and surrounding Kenfig Sands. The structural and sculptural elements along the eastern arm of the Lagoon seawalls may also be visible when lit. The Western Landfall Building and areas immediately surrounding it will be viewed against existing lighting to the M4 motorway and the fringes of Port Talbot. At a distance of approximately 6km, it is predicted that it will be seen as an illuminated structure within the wider night time view. It should be noted that the park is not open after dusk and therefore unlikely that receptors will experience night time views of the Project. The magnitude of night time effects is considered to be low.

Significance of Visual Effects: Moderate

- 13.8.4.337 Receptors are considered high - moderate sensitivity and the magnitude of effects moderate/low. The Project will be viewed as an additional element within the seascape/landscape. However the integrity of the view is predicted to be maintained, as the features that define it, such as the parkland trees, will remain dominant.
- 13.8.4.338 On balance, it is considered that effects on visual amenity will be moderate and not significant under EIA Regulations. Effects are considered to be neutral as the simple form of the design, allows for the introduction of the Project into the view, without changing the existing visual elements, qualities or features that currently define it.
- 13.8.4.339 *Predicted Cumulative View:* From this location, it is predicted that all or part of all the cumulative developments will be visible within the view, except for the proposed Mumbles Pier development, Swansea SA1 and the proposed Mynydd Marchywel wind farm.

Magnitude of Visual Cumulative Effects: Moderate/Low

- 13.8.4.340 Views of the Project and the other cumulative developments will be viewed in the same arc of the view. At a distance of approximately 8km, the SUBC will be a notable, although not prominent feature, as will the proposed wind farm on Mynydd Brombil, which is approximately 17.5km away. Due to the low level nature of the Coed Darcy Southern Access Road and intervening vegetation, only glimpsed views will be available to its southern extent and it will subsequently be a minor component of the view. The proposed Abernedd Power Station, Tata Internal Power Generation development, Prenergy Biomass Power Station will all be minor elements of the view as they will be seen in conjunction within an existing industrial landscape. Views of the Project and the cumulative developments may be long in duration, as receptors will be on foot and moving at slow speeds.

Significance of Cumulative Visual Effects: Moderate

- 13.8.4.341 Receptors are considered high - moderate sensitivity and the magnitude of cumulative effects moderate/low. There may be some increase in the influence of development within the view. However it is predicted that this will be a result of the Project, as opposed to other cumulative developments, which will be less prominent. The trees

within the park however, will remain the defining feature of the view as opposed to any existing or proposed development.

- 13.8.4.342 On balance, it is considered that cumulative effects on visual amenity will be moderate, although not significant under EIA Regulations. Cumulative effects are considered to be neutral, as although there may be an increase in the perception of developments within the view, their introduction will not change the overall nature or quality of the features that currently define it.

Summary

- 13.8.4.343 Tables 13.22 and 13.23 provide a summary of the potential effects of the Project on visual amenity and the potential cumulative effects of the Project on visual amenity respectively. Table 13.24 presents a summary of the predicted cumulative views of the developments listed in Table 13.12 in conjunction with the Project.

Table 13.22 Summary of potential effects on visual amenity

VP	Location	Easting	Northing	Susceptibility to Change	Sensitivity	Magnitude of Visual Effects	Significance of Visual Effects	Beneficial/Neutral/Adverse
1	Aberavon Sands, south	274633	189343	High	High-Moderate	Moderate	Moderate Not Significant	Neutral
2	Aberavon Sands, north	273089	190995	High	High-Moderate	Moderate	Moderate Not Significant	Neutral
3	Maes Tŷ Canol, Baglan	275530	192793	High	Moderate	Moderate	Moderate Not Significant	Neutral
4	Headland Road, St. Thomas, Swansea	266560	193626	High	Moderate	High/Moderate	Major/Moderate Significant	Neutral
5	The Knab, Adjacent to Mumbles Pier	262458	187751	High	High	High (low tide) Moderate (high tide)	Major/Moderate Significant	Adverse
6	Mumbles Hill Nature Reserve	262778	187473	High	High	High-Moderate	Major/Moderate Significant	Neutral
7	Swansea promenade, near Lido	261990	190586	High	High	High (low tide) Moderate (high tide)	Major (low tide) Major/Moderate (high tide) Significant	Neutral
8	Clyne Golf Course, Swansea	260174	190610	Moderate	High-Moderate	Moderate	Moderate Not Significant	Neutral
9	Nicander Parade, Townhill, Swansea	264797	193582	High	Moderate	Moderate	Moderate Not Significant	Neutral
10	Meridian Quay, Swansea	265574	192356	High	Moderate	High	Major Significant	Beneficial
11	Swansea promenade	265255	192265	High	High	High (low tide) High/Moderate (high tide)	Major Significant	Neutral
12	SA1 Swansea Waterfront	266596	192508	Moderate	Low	Low	Minor Not Significant	Neutral
13	Kilvey Hill, Swansea	266849	193658	High	High-Moderate	Moderate	Major/Moderate Significant	Neutral



Tidal Lagoon Swansea Bay plc

VP	Location	Easting	Northing	Susceptibility to Change	Sensitivity	Magnitude of Visual Effects	Significance of Visual Effects	Beneficial/Neutral/Adverse
14	Memorial Stone, Margam Country Park	281380	186380	High	High	Low	Minor Not Significant	Neutral
15	Sker Point	278883	179959	High	High	Low	Minor Not Significant	Neutral
16	Swansea University, Science and Innovation Campus	269973	192603	Moderate	Moderate	High/Moderate	Major/Moderate Significant	Neutral/Beneficial
17	Crymlyn Burrows, Swansea	271378,	192598	Moderate	Moderate	High	Major Significant	Adverse
18	PROW on Mynydd Brombil	278528	188352	High	Moderate	Moderate/Low	Moderate/Minor Not Significant	Neutral
19	Swansea Bay	264808	189089	High/Moderate	Moderate	High/Moderate	Major/Moderate Significant	Neutral
20	Pant Street, St. Thomas, Swansea	267623	193392	Moderate	Low	Low	Minor Not Significant	Neutral
21	Pant y Celyn Road, Townhill, Swansea	264039	193384	High	High	Moderate	High/Moderate Significant	Neutral
22	Clyne Gardens	261253	190505	High	High-Moderate	Moderate/Low	Moderate Not Significant	Neutral

Table 13.23 Summary of potential cumulative effects on visual amenity

VP	Location	Easting	Northing	Susceptibility to Change	Sensitivity	Magnitude of Cumulative Visual Effects	Significance of Cumulative Visual Effects	Beneficial/Neutral/Adverse
1	Aberavon Sands, south	274633	189343	High	High-Moderate	Moderate	Moderate	Neutral
2	Aberavon Sands, north	273089	190995	High	High-Moderate	Moderate	Not Significant	Neutral
3	Maes Tŷ Canol, Baglan	275530	192793	High	Moderate	Moderate	Moderate	Neutral
4	Headland Road, St. Thomas, Swansea	266560	193626	High	Moderate	High/Moderate	Major/Moderate Significant	Neutral
5	The Knab, Adjacent to Mumbles Pier	262458	187751	High	High	High	High/Moderate Significant	Neutral
6	Mumbles Hill Nature Reserve	262778	187473	High	High	High/Moderate	Major/Moderate Significant	Neutral
7	Swansea promenade, near Lido	261990	190586	High	High	High/Moderate	Major Significant	Neutral
8	Clyne Golf Course, Swansea	260174	190610	Moderate	High-Moderate	Moderate	Moderate	Neutral
9	Nicander Parade, Townhill, Swansea	264797	193582	High	Moderate	Moderate	Not Significant	Neutral
10	Meridian Quay, Swansea	265574	192356	High	Moderate	High	Major Significant	Beneficial
11	Swansea promenade	265255	192265	High	High	Moderate	Major/Moderate Significant	Beneficial
12	SA1 Swansea Waterfront	266596	192508	Moderate	Low	Low	Moderate/No Cumulative Significance	Neutral
13	Kilvey Hill, Swansea	266849	193658	High	High-Moderate	Moderate	Major/Moderate Significant	Neutral
14	Memorial Stone, Margam Country Park	281380	186380	High	High	Moderate/Low	Moderate/No Cumulative Significance	Neutral



Tidal Lagoon Swansea Bay plc

VP	Location	Easting	Northing	Susceptibility to Change	Sensitivity	Magnitude of Cumulative Visual Effects	Significance of Cumulative Visual Effects	Beneficial/Neutral/Adverse
15	Sker Point	278883	179959	High	High	Low	Moderate/ No Cumulative Significance Not Significant	Neutral
16	Swansea University, Science and Innovation Campus	269973	192603	Moderate	Moderate	High/Moderate	Major/Moderate Significant	Neutral/Beneficial
17	Crymlyn Burrows, Swansea	271378,	192598	Moderate	Moderate	High	Major Significant	Adverse
18	PROW on Mynydd Brombil	278528	188352	High	Moderate	Moderate	Moderate Not Significant	Neutral
19	Swansea Bay	264808	189089	High/Moderate	Moderate	High/Moderate	Major/Moderate Significant	Neutral
20	Pant Street, St. Thomas, Swansea	267623	193392	Moderate	Low	N/A	N/A	N/A
21	Pant y Celyn Road, Townhill, Swansea	264039	193384	High	High	Moderate	Moderate Not Significant	Neutral
22	Clyne Gardens	261253	190505	High	High- Moderate	Moderate/Low	Moderate Not Significant	Neutral

Table 13.24 Summary of potential views of cumulative developments in conjunction with the Project.

Development & Location	
Swansea University Bay Campus (SUBC) - located on shoreline adjacent to Crymlyn Burrows	Views of the SUBC and the Project are predicted to be most prominent from locations within the eastern half of the study area. It includes VP1-3 and VP19. From VPs 16, which is immediately adjacent to the campus site and VP17 - Crymlyn Burrows, elements to the Project and the SUBC will form prominent features of views.
Mumbles pier, foreshore and coastal strip redevelopment. Construction of new RNLI Lifeboat Station, Mumbles	Views of the Project with the redevelopment of Mumbles Pier, foreshore and coastal strip and RNLI Lifeboat Station will be possible from the majority of viewpoint locations within the study area. The development will be most prominent from locations within the western half of the study area, including VP5 - The Knab, adjacent to Mumbles Pier, VP7- Swansea Parade, near Lido and VP8 - Clyne Golf Club, Swansea.
Swansea SA1	Views may be possible from the majority of viewpoint locations within the study area. However development within SA1 will be predominantly viewed against existing built form, including from VP10 - Meridian Tower, which will reduce impacts. From VP12, development within SA1 will be prominent, however the Project will not.
Swansea Port Wind Turbine	Located within the site boundary, the turbine will be most prominent from VP10 - Meridian Tower. From other locations from which it will be visible in conjunction with the Project, it will viewed with existing built form, assisting in absorbing it into the wider landscape/seascape.
Mynydd Marchywel Wind Farm	Views of the proposed wind farm will be restricted to locations within Baglan (VP3 - Maes Ty Canol), plus viewpoints 7 - 9 within Swansea. However due to the distance, the wind farm is not predicted to be a prominent feature when viewed in conjunction with the Project.
Southern Access Road at Coed Darcy.	This project may be most notable from locations on Mynydd Brombil, however, overall cumulative impacts on landscape character and visual amenity are not predicted to be significant. This is due to the low level nature of the proposed development.
Wind Turbines on Land at Mynydd Brombil Farm	Cumulative views of wind farm visible in conjunction with the Project visible from a number of locations within the study area. Turbines are predicted to be prominent from VP15 - Sker Point, VP18 - PROW on Mynydd Brombil and VP21 - Pant y Celyn Road, Townhill, Swansea.
Wind Turbine on Newlands Farm, Margam	The wind turbine may be viewed from a number of locations within the study area. However, due to distance it is predicted that apart from VP14 - Memorial Stone, Margam Park, it is predicted to be a minor component of views.
Wind Turbine at Kenfig Hill Industrial Estate	The wind turbine may be viewed from a number of locations within the study area. However, due to distance it is predicted that apart from VP14 - Memorial Stone, Margam Park, it is predicted to be a minor component of views.
Tata Internal Power Generation	Located within the existing Port Talbot steel works. This development is predicted to be most prominent from VP14 - Memorial Stone, Margam Country Park, VP15 - Sker Point, and VP18 - PRow on Mynydd Brombil.
Prenergy Biomass Power Station	Located within the existing Port Talbot steel works. This development is predicted to be most prominent from VP3 - Maes Ty Canol, Baglan and VP14 - Memorial Stone, Margam Country Park, VP15 - Sker Point, VP18 - PRow on Mynydd Brombil.
Abernedd Power Station	Located within Baglan Bay Energy Park, this development will be most prominent from VP2 - Aberavon Sands, North, VP3 - Maes Ty Canol, Baglan, VP16 - Swansea University Science and Innovation Centre and VP17 - Crymlyn Burrows.



13.8.5 Effects on statutory & non statutory designations

Gower Area of Outstanding Natural Beauty (AONB)

- 13.8.5.1 The ZTV (refer to Figure 13.5) indicates that views from within the Gower AONB will be restricted to the north eastern fringe, including the residential areas of Maylas, Clyne Golf Club, plus Clyne Gardens. Views from the latter two locations are represented by viewpoints 8 and 22 respectively.
- 13.8.5.2 Although there may be variations, the susceptibility of visual receptors to change from within the AONB as a whole, is predicted to be high and the sensitivity of visual receptors also high. The viewpoint locations selected indicate that the Project may be a notable element from these locations, and there may be effects on the character and visual amenity. However, as the ZTV indicates, views and therefore effects will be limited to a small proportion of the overall AONB, and it is not predicted that the existing character that defines the AONB will be eroded as a result, or contradict the policies set out within the management plan²¹.
- 13.8.5.3 Lighting to the Project may be a feature of night time views from Clyne Golf Club (Viewpoint 8) and from Clyne Gardens (Viewpoint 22) particularly the Offshore Building, which will be viewed against the intrinsically dark water of Swansea Bay. However, due to the type of recreational facilities, it is predicted that there will be no receptors at these two viewpoints during the hours of darkness. In addition to this, visibility of the Project from within the majority of the AONB is restricted and therefore night time effects are not predicted to be significant.

Landscapes, Parks and Gardens of Special Historic Interest

- 13.8.5.4 A number of the Registered Parks and Gardens are located within urban areas, where existing buildings and mature planting restrict views to very short distances and views of the Project are screened. This includes Brynmill Park, St. James's Garden and Crescent, Cwmgelli Cemetery, Victoria Gardens and Talbot Memorial Park. From these sites there will be no effects on visual amenity following construction of the Project.
- 13.8.5.5 Views of Swansea Bay from within Grade I Registered Singleton Park and Sketty Hall and its essential setting,, are restricted to areas to the south of the Swiss Cottage. However views are restricted by mature trees, which are predicted to screen views of the Project. From this park there will be no effects on visual amenity following construction of the Project.
- 13.8.5.6 From other sites, including Clyne Gardens, Victoria Park, Cwmdonkin Park, Jersey Park, The Gnoll and Margam Park, elements of the Project may be visible.

Victoria Park

- 13.8.5.7 Victoria Park, at a distance of approximately 2.5km to the seawall that forms the western arm of the Lagoon, will be the closest of the Registered Landscapes, Parks and Gardens to the Project. The susceptibility of change of visual receptors from within this park are predicted to be high and the sensitivity of visual receptors high - moderate.

²¹ City and County of Swansea, Gower Area of Outstanding Natural Beauty, Management Plan,(2006) Policies LS1 - LS4, Chapter 5, page 104



- 13.8.5.8 From within the park, views of the Lagoon seawalls, plus the Offshore Building, will be partially filtered by vegetation within the park and also by the railings that enclose it. Elements of the Project that will be visible will also be viewed across the busy A4067 (Oystermouth Road) where traffic is a visual detractor. The abutment to the old slip bridge will be a prominent feature at this close distance and will partially screen views, as will the seawall that divides the beach from the road. Therefore the magnitude of visual effects is considered to be low.
- 13.8.5.9 The Project may be visible from locations within Victoria Park, however it is not predicted to dominate and will not degrade the existing visual quality. Therefore the significance of effect is considered to be moderate/minor, not significant and neutral..
- 13.8.5.10 From within Victoria Park, there may also be views of the Mumbles Pier development and most notably the hotel/leisure and residential blocks. All other cumulative developments are not predicted to be visible. Therefore the magnitude of cumulative effects is considered to be moderate - low and significance of cumulative visual effects, moderate/ no cumulative significance, not significant and neutral.

Clyne Gardens

- 13.8.5.11 From within the Grade I listed Clyne Gardens no cumulative significance, not significant and neutral. Views will be restricted by dense, mature vegetation to southern areas of the site. Views from this area are illustrated by Viewpoint 22. The susceptibility of change of visual receptors from within this park is predicted to be high and the sensitivity of visual receptors high.
- 13.8.5.12 From within areas of the park where views are available, the Lagoon seawalls, Western Landfall Building, the SSSI information point, the Offshore Building and the Landward Urban and Ecological Parks areas may all be visible at a distance of approximately 6.0km. The Project will occupy a wide proportion of views of Swansea Bay and will be a notable, although not prominent feature. However as previously noted, views of the Project will only be available from a small proportion of the overall park and therefore, the magnitude of visual effect is considered to be moderate/low and significance of effects, moderate/negligible, not significant and neutral.
- 13.8.5.13 In addition to the Project, the existing wind turbine within Swansea Port, the SUBC, plus the proposed turbines at Mynydd Brombil and at Newlands Farm and Kenfig Industrial Estate, may also be visible from southern parts of the park and within the same arc of view. From these locations, there may be an increase in the perception of built elements visible following the construction of the Project. However, views of the Project and cumulative developments will be limited to only a small proportion of the overall park and not predicted to be visible from its essential setting. Therefore the magnitude of cumulative effect is considered to be moderate - low and the significance of cumulative effects, moderate/ no cumulative significance, not significant and neutral. .

Cwmdonkin Park

- 13.8.5.14 Views from within Cwmdonkin Park will be predominantly restricted by existing vegetation and built form to the western edge of the park, although filtered views of a section of the western arm of the Lagoon seawall and the Offshore Building may be visible. From within this park, the susceptibility of change of visual receptors are predicted to be high and the sensitivity of visual receptors high - moderate. As views will



be restricted, the magnitude of visual effect is considered to be low and the significance of visual effect, minor, not significant and neutral.

- 13.8.5.15 Within this park, it is predicted that the Mumbles Pier development and the Project will be viewed in succession. There may be a slight increase in the perception of built elements within the view, however any views will be filtered by existing vegetation and will not have a marked effect on the view. Therefore the magnitude of cumulative effect is considered to be low and the significance of cumulative effects, moderate/negligible significance.

Jersey Park

- 13.8.5.16 From Jersey Park, the susceptibility of change of visual receptors from within this park are predicted to be moderate, as one half of the park is used for sport pitches, while the other is a cemetery. Views from within the park and across the surrounding landscape will therefore not be the primary purpose of a receptors visit. The sensitivity of visual receptors is considered to be moderate/no cumulative significance, not significant and neutral.
- 13.8.5.17 Potential views of the Project will be restricted to northern areas within the cemetery, where views towards Swansea Bay are channelled by existing vegetation and topography. The Project would be viewed in conjunction with a number of existing manmade and natural features and will occupy only a small proportion of the overall view. From within the park's essential setting, views towards the project will be screened by dense, mature tree cover. The magnitude of visual effect is predicted to be low and the significance of visual effects, minor, not significant and neutral, as it will be integrated into the existing seascape/landscape.
- 13.8.5.18 It is predicted that the Project will not be viewed in conjunction with any of the cumulative developments and therefore, there will no cumulative effects on visual amenity.

The Gnoll

- 13.8.5.19 Views of the Project from within the park are predicted to be restricted to elevated locations near to the car park, although views may also be available from eastern parts of the park's essential setting. At a distance of approximately 8.5km away, it is predicted that the Lagoon seawalls will be the only element of the Project visible. However it will be a minor component that will be seen in conjunction with a number of existing elements, and will occupy only a small proportion of the wider view. Susceptibility of change of visual receptors from within this park are predicted to be high and the sensitivity of visual receptors high. However due to the factors outlined above, the magnitude of visual effect is predicted to be low and the significance of visual effects, minor, not significant and neutral.
- 13.8.5.20 It is predicted that the turbines of Mynydd Marchywel wind farm may also be visible from this location, although not within the same arc of view. The wind farm is predicted to be the more prominent development, due to being closer in distance to the viewpoint than the Project (approximately 5km) and due to turbines breaking the skyline. Therefore the magnitude of cumulative effects is considered to be low and effects to be of no cumulative significance, not significant and neutral.

Margam Park

- 13.8.5.21 Views from Margam Park towards Swansea Bay and the Project from lower lying areas, including locations to the south east of Margam Castle, will be screened from view by mature tree planting to the boundary of the park. As illustrated by Viewpoint 14, views will be available from elevated locations to the north. However, as noted views of the Project will be partially screened by topography and at a distance of over 12km it is not predicted to be prominent from these elevated locations. Views from the park's essential setting will predominately be screened by the dense coniferous forestry that covers the majority of the upland area to the north of the park. Susceptibility of change of visual receptors from within this park are predicted to be high and the sensitivity of visual receptors high. Given the limited views of the Project from the majority of the park, the magnitude of visual effect is predicted to be low and the significance of visual effects, minor, not significant and neutral.
- 13.8.5.22 It is predicted that cumulative views from within the park will be restricted to elevated locations within northern parts of the park and the more open parts of the essential setting and include views of the proposed Mynydd Brombil wind farm, the Mumbles Pier development, plus the proposed wind turbines at Newlands Farm and Kenfig Industrial Estate. Cumulative effects are predicted to be no greater than those described from Viewpoint 14 - Memorial Stone, Margam Country Park. Therefore receptors are considered high sensitivity and the magnitude of cumulative effects are considered to be moderate/low.
- 13.8.5.23 On balance, it is considered that cumulative effects on visual amenity will be moderate /no cumulative significance and not significant under EIA Regulations. Cumulative effects are considered to be neutral as the Project and other cumulative developments, although visible, will be able to be accommodated into the view, due to the scale and screening of the existing landscape, without adversely affecting the visual qualities that define it

Table 13.25 Summary of potential effects on visual amenity within landscape, parks & gardens of special historic interest

Name	Susceptibility to Change	Sensitivity	Magnitude of Visual Effects	Significance of Visual Effects	Beneficial/Neutral/Adverse
Brynmill Park	N/A	N/A	N/A	N/A	N/A
Clyne Gardens	High	High	Moderate/Low	Moderate/Negligible Not Significant	Neutral
Cwmdonkin Park	High	High-Moderate	Low	Minor Not Significant	Neutral
Cwmgelli Cemetery	N/A	N/A	N/A	N/A	N/A
Jersey Park	Moderate	Moderate	Low	Negligible Not Significant	Neutral
Kilvrough	N/A	N/A	N/A	N/A	N/A
Margam Park	High	High	Low	Negligible Not Significant	Neutral
Penllergaer	N/A	N/A	N/A	N/A	N/A
St. James's Garden & Crescent	N/A	N/A	N/A	N/A	N/A
Singleton Park & Sketty Hall	N/A	N/A	N/A	N/A	N/A



Name	Susceptibility to Change	Sensitivity	Magnitude of Visual Effects	Significance of Visual Effects	Beneficial/Neutral/Adverse
Talbot Memorial Park	N/A	N/A	N/A	N/A	N/A
The Gnoll	High	High	Low	Negligible Not Significant	Neutral
Victoria Gardens	N/A	N/A	N/A	N/A	N/A
Victoria Park	High	High-Moderate	Low	Moderate/ Negligible Not Significant	Neutral

N/A = No effects on visual amenity

Table 13.26 Summary of potential cumulative effects on visual amenity within landscape, parks & gardens of special historic interest

Name	Susceptibility to Change	Sensitivity	Magnitude of Visual Effects	Significance of Visual Effects	Beneficial/Neutral/Adverse
Brynmill Park	N/A	N/A	N/A	N/A	N/A
Clyne Gardens	High	High	Moderate/Low	Moderate/No Cumulative Significance Not Significant	Neutral
Cwmdonkin Park	High	High-Moderate	Low	Moderate/No Cumulative Significance Not Significant	Neutral
Cwmgelli Cemetery	N/A	N/A	N/A	N/A	N/A
Jersey Park	N/A	N/A	N/A	N/A	N/A
Kilvrough	N/A	N/A	N/A	N/A	N/A
Margam Park	High	High	Moderate/Low	Moderate/No Cumulative Significance Not Significant	Neutral
Penllergaer	N/A	N/A	N/A	N/A	N/A
St. James's Garden & Crescent	N/A	N/A	N/A	N/A	N/A
Singleton Park & Sketty Hall	N/A	N/A	N/A	N/A	N/A
Talbot Memorial Park	N/A	N/A	N/A	N/A	N/A
The Gnoll	High	High	Low	No Cumulative Significance Not Significant	Neutral
Victoria Gardens	N/A	N/A	N/A	N/A	N/A
Victoria Park	High	High-Moderate	Moderate/Low	Moderate/No Cumulative Significance Not Significant	Neutral

N/A = No cumulative effects on visual amenity



Landscapes of Outstanding Historic Interest

- 13.8.5.24 Visual effects on the Kenfig & Margam Burrows Registered Landscape of Outstanding Historic Interest are illustrated by Viewpoint 15, located at Sker Point. Views of the Project from within the majority of the designation boundary will be screened by the undulating form of the sand dunes and restricted to the western fringes. From these locations, the Project and most notably the eastern arm of the Lagoon seawalls will be visible, although predicted to form a component of the wider view. Susceptibility of change of visual receptors from within the designated area are predicted to be high and the sensitivity of visual receptors high. As the views of the Project will be limited and where it can be viewed, it is predicted to be a component of the wider view, the magnitude of visual effect is predicted to be low and the significance of visual effects, minor. The Cultural Heritage: Terrestrial Archaeology and Historic Landscape assessment, Chapter 21, Section 21.2 confirms that there will be no effects on this Landscape of Outstanding Historic Interest.

Landscapes of Special Historic Interest

- 13.8.5.25 This landscape of Special Historic Interest includes Margam Park and therefore visual effects from within this area of the designation will be as described in paragraph 13.8.5.21 above. From locations to the north of Margam Park, including locations on Mynydd Margam, views of the project will be significantly restricted by the dense coniferous forestry that defines much of the landscape. Views are predominantly restricted to south western areas including Mynydd Brombil (refer to Viewpoint 18). The susceptibility of change of visual receptors are predicted to be high and the sensitivity of visual receptors high. This viewpoint indicates that all elements of the Project will be visible, however due to the broad seascape/landscape in which it will be viewed and the prominence of existing landscape features, visual effects are predicted to be moderate - low. The Cultural Heritage: Terrestrial Archaeology and Historic Landscape assessment, Chapter 21, paragraph 21.2 confirms that there will be no effects on this Landscape of Special Historic Interest.

National Trails/Long Distance Routes and National Cycle Routes

- 13.8.5.26 Effects on visual amenity from all the National Trails and Long Distance Routes will be greatest from the Wales Coast Path. From sections along the route there are close distance, unobstructed views of the Project. The most significant effects are predicted to occur between the section of the footpath that runs between West Pier to Mumbles Head and this is illustrated by Viewpoints 11 - Swansea Promenade, Viewpoint 7 - Swansea Promenade near the Lido and Viewpoint 5 - The Knab, adjacent to Mumbles Pier. The open views across Swansea Bay from the promenade will allow for unobstructed views of the Project. The Lagoon seawalls will be prominent, most notably at low tide and may result in a perceived sense of enclosure, as views towards Aberavon Sands are screened. However, views to the outer parts of Swansea Bay and the Bristol Channel will be retained.
- 13.8.5.27 Susceptibility of change of visual receptors from along this section of the Wales Coast Path is predicted to be high and the sensitivity of visual receptors high. Therefore it is predicted that the magnitude of visual effect is predicted to be moderate and the significance of visual effects major/moderate.
- 13.8.5.28 Between Kenfig Industrial Estate and Aberavon Sands, which includes the settlement of Margam and Port Talbot docks and from Baglan Bay Energy Park to West Pier, the route



is largely inland and therefore no elements of the Project are predicted to be visible. From these sections of the path, it is predicted that there will be no effects on visual amenity.

- 13.8.5.29 Cumulative visual effects may also occur from locations along the Wales Coast Path, as a number of cumulative developments may be visible in combination with the Project. When travelling west along the section of the path at Aberavon Sands, the Project, may be visible within the same arc of view as the SUBC, the existing wind turbine within Swansea Port and also the Mumble Pier development. The turbines of the Mynydd Brombil wind farm may be viewed in succession and will be a notable feature of the view.

- 13.8.5.30 Views of the Project from the section of the path that extends between Crymlyn Burrows and West Pier, are screened from view by existing, adjacent development within Swansea Port, and therefore it is predicted that there will be no cumulative effects. Although the Project will be visible in the same arc of view as the Abernedd Power Station as the path passes through Baglan Bay Energy Park.

- 13.8.5.31 When walking in a westerly direction towards The Mumbles and along the footpath that follows the route of the Promenade, views of the Project will not be in the main arc of view. The main focus of the view will be dominated by the sweep of Swansea Beach and views towards The Mumbles, including the Mumbles Pier development. Views in succession of this development, plus that of the Project and the single wind turbine within Swansea Port, the SUBC and the proposed turbines of Mynydd Brombil. However, will be available from West Pier to Mumbles Head. When travelling in an easterly direction from Mumbles Head towards West Pier, these developments will be in the same arc of view, except for the Mumbles Pier Development which will be viewed in succession. On balance it is considered that as the receptors are high sensitivity and the magnitude of cumulative effects are high-moderate, the significance of cumulative effects will be major/moderate.

- 13.8.5.32 From locations to the west of Mumbles Head, it is predicted that the Project and cumulative developments will be visible from the footpath and therefore, there will be no cumulative effects from this section of the route.

- 13.8.5.33 It is predicted that views of the Project from the four long distance Recreational Routes will be limited. The ZTV indicates that from the Gower Way, views will be restricted to a location adjacent to the settlement of Three Crosses only. A combination of topography and dense coniferous forestry is predicted to screen views of the Project, from locations along St Illtyd's Way and Coed Morgannwg Way. Therefore from these routes, it is predicted that there will be no visual effects. The project may be visible from a short section of the Ogwr Ridgeway Walk as it passes through Margam Park. Effects from along this section of the route are illustrated by Viewpoint 18, which indicates that due to the screening of local topography, distance and the influence of existing manmade features, the significance of visual effects are considered to be minor.

- 13.8.5.34 National Cycle Network (NCN)4 broadly follows the Wales Coast path before passing through Clyne Valley Country Park. Therefore effects on visual amenity will be as that described for the Wales Coast Path where the two follow the same route. From the remainder of the route, the ZTV indicates that the Project will not be visible and therefore there will be no effects on visual amenity.

- 13.8.5.35 The ZTV indicates that visibility from the other three National Cycle Network routes within the study area, will be limited due to topography screening views. From NCN43 the Project may be visible from within Swansea, near to the Tawe Bridge, where it connects with NCN4. However existing built form will screen views. The ZTV also indicates that the Project may be visible from a section of NCN47, to the east of Neath Abbey. This section is however located within coniferous forestry and therefore views will be screened. Therefore from these three routes there will be no effects on visual amenity.

Transport routes

- 13.8.5.36 The major transport routes within the study area are identified in paragraph 13.4.1.7 and are assessed below.
- 13.8.5.37 The ZTV (refer to Figure 13.5) indicates that from the A465 visibility of the Project will be restricted by topography and therefore there will be no impacts on visual amenity on this route.
- 13.8.5.38 From the M4 motorway, the ZTV indicates that visibility of the Project will be restricted to locations to the east of Swansea. All components of the Project may be visible when travelling west from areas adjacent to Margam and the Taibach area of Port Talbot for a distance of approximately 2.75km. However, due to a combination of mature vegetation and concrete walls adjacent to the carriageway, views will be restricted to brief glimpsed views only. More prominent views of the Project may however be available, from the elevated section of the motorway as it crosses the River Neath.
- 13.8.5.39 The sensitivity of visual receptors along the M4 motorway are predicted to be low and, the magnitude of visual effect is predicted to be low/negligible and the significance of visual effects, minor. Overall effects are considered to be not significant and neutral.
- 13.8.5.40 The ZTV (refer to Figure 13.5) indicates that the Project may be visible from the M48 from locations to the south of Margam Park and also as it passes through Port Talbot. However roadside hedge planting and built for respectively is predicted to screen views of the Project. Views from the bridge as it crosses the River Neath, will be screened by the adjacent M4 motorway. Therefore it is predicted that there will be no visual effects on the M48 as a result of the Project.
- 13.8.5.41 Visibility of the Project from the A4067 will be restricted to locations where it extends from the Civic Offices in Swansea to near Oystermouth Castle in The Mumbles. Views will be intermittently screened by road side grass banks and mature trees. However, it is predicted that relatively unobstructed views of the Project will be available from the carriageway when travelling between Victoria Park and the Civic Offices, a distance of approximately 750m.
- 13.8.5.42 The sensitivity of visual receptors along this section of the A4067 are predicted to be moderate-low and, the magnitude of visual effect is predicted to be moderate/low and the significance of visual effects, moderate/minor. Overall effects are considered to be not significant and neutral. Although the Project will be visible, it will be seen for only a very short section of its route and viewed in conjunction with a number of existing man made components. Therefore the nature of views from the carriageway will not significantly change.

Major Settlements

- 13.8.5.43 As noted within Section 13.4.1 the major settlements within the study area include Swansea, The Mumbles, Port Talbot, Neath, Clydach, Pontardawe and Gorseinon.
- 13.8.5.44 The ZTV (refer to Figure 13.5) indicates that from Clydach, Gorseinon and Pontardawe no elements of the Project will be visible and therefore from these settlements there will be no effects on visual amenity following the construction of the Project.
- 13.8.5.45 Effects on visual amenity will be most significant from Swansea and particularly from locations that over look Swansea Bay. Effects on visual amenity from these locations are represented from the following viewpoints; VP7 - Swansea Promenade, near Lido, VP10 - Meridian Quay and VP11 - Swansea Promenade. From these locations the effects on visual amenity are considered to be significant although not adverse as the existing characteristics of Swansea Bay will be retained.
- 13.8.5.46 Views from the elevated, residential areas of Swansea are represented by VP4 - Headland Road, St. Thomas, VP9 - Nicander Parade, Townhill, VP20 - Pant Street, St. Thomas and VP21 - Pant y Celyn Road, Townhill.
- 13.8.5.47 From these elevated locations, except from VP20 - Pant Street, the Project is predicted to be a noticeable feature of the view. It however, will be viewed in conjunction with existing, complimentary built form and therefore effects are considered to be neutral.
- 13.8.5.48 Effects on visual amenity from the built up areas of The Mumbles are represented by VP5 - The Knab, Adjacent to Mumbles Pier. From this location the Project is predicted to be visible feature within inner areas of the Bay. However, it the scale of the Project fits with the large scale character of the seascape/landscape, reducing effects.
- 13.8.5.49 The tight urban grain of the buildings restrict views of the Project from the majority of The Mumbles and therefore from these locations there will be no significant effects on visual amenity.
- 13.8.5.50 The ZTV (refer to Figure 13.5) indicates that from the urban areas of Neath, views of the Project will be limited to isolated locations to the south of the town centre. In reality, built form is predicted to screen views of the Project and therefore there will be no significant effects on visual amenity from the within the town.

13.9 Potential effects - decommissioning

- 13.9.0.1 During the decommissioning phase, only the turbines and sluice gates will be removed using the semi-goliath gantry crane. All other elements to the Project are proposed to be retained in situ. Therefore the effects on seascape and landscape character will be similar to the effects during operation as discussed above.

13.10 Residual effects

- 13.10.0.1 Mitigation measures, as outlined in Section 13.6 above are embedded within the design of the Project. Residual effects are therefore equivalent to those effects already assessed within the assessment of effects on visual amenity during the construction, operational and decommissioning phases of the Project (refer to Section 13.9).



13.11 Conclusion

- 13.11.0.1 The assessment of effects on seascape and landscape character conclude that during the construction phase of the works, there will be no significant change in seascape or landscape character from within the majority of the study area. This is due in part to the existing industrial/maritime character of the landscape/seascape in which most of the construction work will be undertaken and the short term nature of the works during this phase of the Project.
- 13.11.0.2 Effects on visual amenity during the construction phase of the Project will predominantly be most significant from locations within the application site boundary and from locations immediately surrounding it. This includes locations within Swansea Bay, the eastern areas of Swansea Beach, the Civic Centre and areas to the south of Swansea Marina. From these locations the construction of the Lagoon seawalls may be prominent, although viewed against a backdrop of existing development and in conjunction with existing vessels within Swansea Bay. The significance of effects on visual amenity will diminish with distance, as construction activity will predominantly be viewed as a component of the wider view.
- 13.11.0.3 Effects on seascape and landscape character during the operational phase of the Project are predicted to be significant from locations within or immediately adjacent to the development boundary.
- 13.11.0.4 Within LSU4 - Swansea Port and Crymlyn Burrows, plus the LCAs, H1 - Swansea Port and H2 - Swansea Gate Business Park, effects on seascape and landscape character will be direct and predicted to be significant under EIA Regulations. From Crymlyn Burrows, effects on landscape character are considered to be adverse. The eastern arm of the Lagoon seawalls is predicted to result in an increased perception of manmade elements that form the character within the intertidal zone and resulting in an increased sense of enclosure within this area. However, overall effects within or immediately adjacent to the development boundary are predicted to be beneficial, as there will be an improvement to the public realm and an increase in leisure facilities that will contribute in enhancing the areas character.
- 13.11.0.5 Within western parts of LSU 3 - Aberavon Sands, near to Baglan Burrows and the eastern part of LSU5 - Swansea Bay, adjacent to Swansea Marina, effects on seascape character may be adverse. This will be due the sense of enclosure that the Lagoon seawalls may create, reducing the open character of the Bay within this area. However, overall effects on seascape and landscape character within the study area are predominantly predicted indirect, not significant in terms of EIA Regulations and neutral.
- 13.11.0.6 Significant effects on visual amenity during the operational phase will predominantly occur from locations within close proximity of the Project, including locations along Swansea promenade (VP7), The Knab (VP5), SUBC (VP16), Crymlyn Burrows (VP17) and elevated locations within Swansea that overlook the Bay (VPs 4,6 ,10, 13, 21 and 22). The Project may become a noticeable feature of views from locations along the promenade within Swansea and The Knab in The Mumbles, where there may be a partial foreshortening of views within Swansea Bay, following the construction of the Lagoon seawalls. However, effects are not considered to be adverse as the sweeping curve of the Bay and other defining reference points, including the upland areas of land



to the north of Port Talbot and the open views towards the Bristol Channel will be retained. Effects from Crymlyn Burrows (VP17) are predicted to be adverse. The eastern arm of the Lagoon seawall will result in a loss views across Swansea Bay towards the urban areas of Swansea and The Mumbles, key defining features of the view.

- 13.11.0.7 From the SUBC (VP16), effects are considered to be beneficial. The eastern arm of the Lagoon seawall will be a notable additional feature of the view, although effects will be partially mitigated by the proposed sand dunes to the landward edge of the seawall and in front of the SUBC. The introduction of the Project and in particular the Landward Ecological Park, will improve the visual appearance to an area which was otherwise in decline.
- 13.11.0.8 From elevated areas within the study area, including locations within Townhill, St. Thomas, Mumbles Hill and Meridian Tower, the Project will also be a noticeable feature, however the sweep of Swansea Bay and the open views to the Bristol Channel will also be retained and therefore it is predicted that the Project will be able to be incorporated into the view from these locations without the loss of key defining elements that currently define views from these locations.
- 13.11.0.9 From other viewpoints within the study area, effects are predicted to be not significant and predominantly neutral. The introduction of the Project will be incorporated into the view without changing the characteristics that define or overall nature of them.
- 13.11.0.10 Cumulative effects on visual amenity are predicted to be significant from VP7, located on Swansea Promenade near to the Lido, from Swansea Promenade (VP11), the restaurant on the top floor of the Meridian Tower (VP10), SUBC (VP16) and Crymlyn Burrows (VP17).
- 13.11.0.11 From the viewpoints located on the promenade and from the Meridian Tower the Project will be visible in conjunction with the Mumbles Pier development and the SUBC respectively and as a result there may be a noticeable increase in the perception of development within each of the views. However the developments will positively contribute to the ongoing regeneration of the coastal areas of Swansea, while retaining the key elements that define the existing views.
- 13.11.0.12 Cumulative views from the SUBC (VP16) are also considered to be significant, although beneficial. The Project and the adjacent campus buildings will both be prominent features of the view, leading to a perceptible increase in development. However both developments will contribute to enhancing an area that otherwise was in decline following past industrial activity.
- 13.11.0.13 Cumulative effects are predicted to be adverse from Crymlyn Burrows (VP17) as the Project will be viewed in combination with the SUBC, that may result in the view becoming increasingly defined by development, as opposed to the broad sweep of Swansea Bay.
- 13.11.0.14 From all other locations cumulative effects are predominantly considered to be moderate and not significant under EIA Regulations. Development is a key existing feature that defines many of the views assessed. It is therefore predicted that the Project and other cumulative developments can be accommodated into the view, without adversely affecting, or changing the overall nature of views.



- 13.11.0.15 It is predicted that there will be no significant effects on visual amenity from the statutory and non-statutory designations that have been identified and assessed. This is due to the limited views of the Project available from each of their respective locations.
- 13.11.0.16 Significant effects on visual amenity from national trails/long distance routes and national cycle routes within the study area will be restricted to the Wales Coast Path and in particular the section of the route that extends from West Pier, at Swansea Port to Mumbles Head.
- 13.11.0.17 Effects on seascape and landscape character, plus effects on visual amenity during the decommissioning phase will be similar to those experienced during the landside set up the site and the construction phase of turbine and sluice gate housing structure.

13.12 References

Bridgend County Borough Council. 2005. Bridgend County Borough Council Unitary Development Plan [online]. Available at:
<http://www.bridgend.gov.uk/web/groups/public/documents/services/udpadopteddokument2005reduced.pdf>

Blueflag website
<http://www.blueflag.org/Menu/Awarded+sites/2012/Northern+Hemisphere/Wales>

Cadw/ICOMOS UK. 2001. *Register of Landscapes of Special Historic Interest in Wales Part 2.1.*

Cadw/ICOMOS UK. 2001. *Register of Landscapes of Outstanding Historic Interest in Wales Part 2.2,*

Cadw/ICOMOS UK. 1999. *Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, Part 1: Parks & Gardens*

City & County of Swansea. 2011. Gower AONB Design Guide, Supplementary Planning Guidance [online]. Available at: <http://www.swansea.gov.uk/index.cfm?articleid=43281>

City & County of Swansea. 2006. *Gower Area of Outstanding Natural Beauty Management Plan* [online]. Available at:
<http://www.swansea.gov.uk/index.cfm?articleid=10990>

City & County of Swansea. 2010. Lighting Scheme Guidance for Gower Area of Outstanding Natural Beauty, Supplementary Planning Guidance [online]. Available at:
<http://www.swansea.gov.uk/index.cfm?articleid=41674>

City & County of Swansea. 2008. *Unitary Development Plan* [online]. Available at: <
<http://www.swansea.gov.uk/index.cfm?articleid=20475>

Countryside Council for Wales (CCW). 2009. *Welsh Seascapes and their Sensitivity to Offshore Developments: Method Report* [pdf] Available at:
<http://www.ccg.gov.uk/landscape--wildlife/protecting-our-landscape/seascapes/seascape-assessment-of-wales.aspx>

Department of Trade & Industry. 2005. *Guidance on the Assessment of the Impact of Offshore Wind Farms - Seascape and Visual Impact*.. Available at:
<http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file22852.pdf>



Guidance on the Assessment of the Impact of Offshore Wind Farms (2005), Seascape and Visual Impact, Figure 11, Pg 22:DTI;

Guidelines for Landscape and Visual Impact Assessment, Third Edition' (2013): The Landscape Institute and Institute of Environmental Management and Assessment

Horner and MacLennan and Envision, 2006. *Visual Representation of Windfarms: Good Practice Guide* [pdf]. Available at: < www.catpaisatge.net/fitxers/guies/eolics/A305436.pdf>

Natural Resources Wales, 2013. *LANDMAP Information Guidance Note 3 - Using LANDMAP for Landscape and Visual Impact Assessment of Onshore Wind Turbines* (PDF) Available at: <http://www.ccg.gov.uk/landscape--wildlife/protecting-our-landscape/landmap/landmap-guidance--newsletter.aspx>

Natural Resources Wales, 2013. *LANDMAP Information Guidance Note 4 - LANDMAP and the cultural landscape* (PDF) Available at: <http://www.ccg.gov.uk/landscape--wildlife/protecting-our-landscape/landmap/landmap-guidance--newsletter.aspx>

Natural England. 2012. Natural England Commissioned Report NECR105 -An Approach to Seascape Character Assessment pg.8. Natural England

Natural England. 2012. *Natural England Commissioned Report NECR105 - An Approach to Seascape Character Assessment* [pdf]. Available at: <http://publications.naturalengland.org.uk/publication/2729852>

Natural Resources Wales (formally Countryside Council for Wales). *LANDMAP* [online]. Available at < <http://test.landmap.ccw.gov.uk/>>.

Natural Resources Wales (formall Countryside Council for Wales). *Seascape Assessment of Wales* [online]. Available at <http://www.ccg.gov.uk/landscape--wildlife/protecting-our-landscape/seascapes/seascape-assessment-of-wales.aspx>

Neath Port Talbot County Borough Council. 2008. *Neath Port Talbot County Borough Council Unitary Development Plan* [online]. Available at: <http://www.npt.gov.uk/default.aspx?page=1989>

Scottish Natural Heritage. 2002. *Guidelines on the Environmental Impacts of Windfarms and Small Scale Hydro Electric Schemes* [pdf] Available at: <http://www.snh.org.uk/pdfs/publications/heritagemanagement/Guidelines%20Windfarms%20Hydroelectric%20Schemes.pdf>

Sustrans. *National Cycle Networks* [online]. Available at: < <http://www.sustrans.org.uk/what-we-do/national-cycle-network/>>

Taylor & Francis, 2002. *Guidelines for Landscape and Visual Impact Assessment, Second Edition' (2002): The Landscape Institute and Institute of Environmental Management and Assessment. London: Spon Press*

The Countryside Agency and Scottish Natural Heritage, 2004. *Landscape Character Assessment Guidance for England and Scotland -Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity*. [pdf].; Available at: < www.naturalengland.org.uk/Images/lcatopicpaper6_tcm6-8179.pdf>. [Accessed on 24th July 2012]



The Highland Council. 2010. *Visualisation Standards for Wind Energy Developments* [pdf] Available at: <http://www.highland.gov.uk/NR/rdonlyres/3AB93631-8D75-46C7-B4E2-07B1FE3842FE/0/VisualisationStandardsforWindEnergyDevelopmentsamended200510.pdf>

The Landscape Institute. 2011. *Photography and Photomontage in Landscape and Visual Impact Assessment - Landscape Institute Advice Note 01/11* [pdf] Available at: <http://www.landscapeinstitute.co.uk/PDF/Contribute/LIPhotographyAdviceNote01-11.pdf>

The landscape Institute and IEMA (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition.

The Marine Institute. 2001. *Guide to Best Practice in Seascape Assessment: Countryside Council for Wales (CCW)*, Brady Shipman and Martin and University College Dublin.