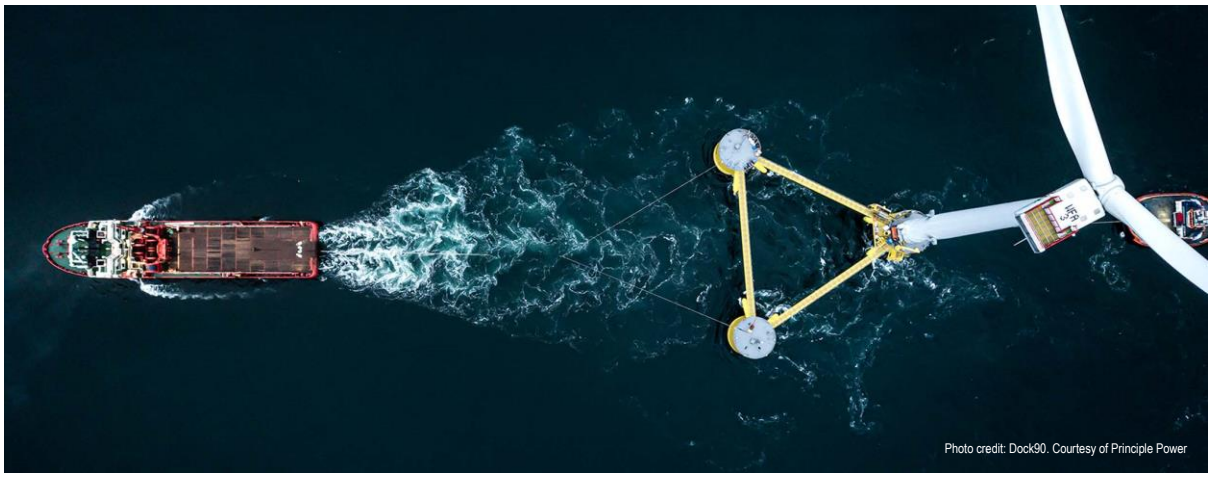

Project Erebus Environmental Statement Chapter 13: Seascape, Landscape and Visual Impact Assessment

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Acronyms

Term	Definition
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
CAA	Civil Aviation Authority
CCW	Countryside Council for Wales
cd	Candela
CEA	Cumulative Effects Assessment
CPRE	Campaign to Protect Rural England
DCO	Development Consent Order
ELC	European Landscape Convention
EIA	Environmental Impact Assessment
ES	Environmental Statement
GIS	Geographic Information System
GLVIA	Guidelines for Visual Impact Assessment
HAT	Highest Astronomical Tide
IALA	International Association of Lighthouse Authorities
ICAO	International Civil Aviation Organization
IR	Infra-Red
km	Kilometre
LAT	Lowest Astronomical Tide
LCA	Landscape Character Area
MCA	Marine Character Area
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MOD	Ministry of Defence
MW	Megawatt
NCA	National Character Area
NE	Natural England

Term	Definition
NPS	National Policy Statement
NRW	Natural Resources Wales
O&M	Operation and Maintenance
OS	Ordnance Survey
PCC	Pembrokeshire County Council
PDZ	Pembrokeshire Demonstration Zone
PINS	Planning Inspectorate
PCNP	Pembrokeshire Coast National Park
PCNPA	Pembrokeshire Coast National Park Authority
RPG	Registered Park and Garden
SAR	Search and Rescue
SCA	Seascape Character Area
SL&V	Seascape, Landscape and Visual
SLVIA	Seascape, Landscape and Visual Impact Assessment
WTG	Wind Turbine Generator
ZOI	Zone of Influence
ZTV	Zone of Theoretical Visibility

Chapter 13 Seascape, Landscape and Visual Impact Assessment

13.1 Introduction

13.1.1.1 The proposed Project Erebus (the Project) is a demonstration scale Floating Offshore Wind (FLOW) development in the Celtic Sea region. The developer Blue Gem Wind (BGW) is a joint venture between Simply Blue Energy (SBE) and TotalEnergies, set up to create a new low carbon offshore energy sector in the region; that contributes to climate change targets, supply chain diversification and energy security.

13.1.1.2 The array area is located approximately 35 km southwest of the Pembrokeshire coastline, covering an area of 43.5 km^2 in water depths of between 65-85 m. The array area is located outside of the 12 nm limit, but all elements of the Project, array area, offshore export cable corridor and landfall, fall within Welsh territorial waters or the Welsh Zone.

13.1.1.3 The Project comprises six to ten Wind Turbine Generators (WTG) with a total generating capacity up to 100 MW. Each WTG is housed on a semi-submersible floating platform with a mooring system comprising a maximum of five catenary mooring lines, up to 870 m in length, and a range of foundation options including drag embedment anchors, driven piles, drilled piles and/or suction piles. Up to 10 dynamic array cables are proposed, with a lazy wave configuration from the semi-submersible floating platform to the seabed. The offshore export cable, up to 49 km in length, links the array area to landfall at West Angle Bay, Pembrokeshire.

13.1.1.4 This chapter of the Environmental Statement (ES) presents the results of the assessment of the likely significant effects of the Proposed Development with respect to seascape, landscape and visual amenity. It should be read in conjunction with the project description provided in Chapter 4: Proposed Development Description and the relevant parts of the following chapters:

- Chapter 21: Landscape and Visual Impacts (due to the inter-relationship with onshore landscape and visual impacts); and
- Chapter 23: Onshore Archaeology and Cultural Heritage (due to the inter-relationship with cultural heritage impacts).

13.1.1.5 This assessment has been undertaken by Optimised Environments Ltd (OPEN). The Chapter has been authored by Simon Martin MLPM CMLI, who has 20 years' experience in SLVIA.

13.1.1.6 This seascape, landscape and visual impact assessment (SLVIA) evaluates the effects of the construction, operation and maintenance, and decommissioning of the offshore infrastructure of the Project, including the WTGs within the array area and offshore cable corridor (the Proposed Development) (shown in Volume 2, Figure 13.1 and described in Chapter 4: Proposed Development Description).

13.1.1.7 It is supported by Volume 3, Technical Appendix 13.1: SLVIA Methodology setting out the full methodology for the SLVIA, which is summarised in Section 13.4.

13.1.1.8 The SLVIA is also supported by plan graphics in Volume 2, Figure 13.1 – Figure 13.20 and visual representations (photomontages) as shown in Volume 2, Figure 13.22 – Figure 13.40.

13.2 Legislation, Policy and Guidelines

13.2.1 Legislation

13.2.1.1 Relevant legislation and guidance documents have been reviewed and taken into account as part of this assessment. Table 13.1 lists the legislation relevant to the assessment of the effects on seascape, landscape and visual receptors.

Table 13.1 – Legislation relative to seascape, landscape and visual receptors

Legislation description	Relevance to assessment
National Parks and Access to the Countryside Act 1949	
National Parks and Access to the Countryside Act 1949 provided the framework for the establishment of National Parks and AONBs. The provisions of this Part 2 of this Act have effect for the purpose of - *(a) conserving and enhancing the natural beauty, wildlife and cultural heritage of the areas specified in the next following subsection; and* *(b) promoting opportunities for the understanding and enjoyment of the special qualities of those areas by the public*.	The Proposed Development will have potential effects on the natural beauty and special qualities of the Pembrokeshire Coast National Park (PCNP). Places a duty on public bodies i.e. "relevant authorities" including for example the Councils, statutory undertakers and in the context of the Development Consent Order (DCO), the Secretary of State, to have regard to the purposes for which National Parks are designated. In relation to the PCNP, this includes both (a) conserving and enhancing the natural beauty; and (b) promoting opportunities for the understanding and enjoyment of the special qualities. The effect on PCNP is assessed in Sections 13.7, 13.8 and 13.9.
Environment Act (1995)	
Sets out the duty of certain bodies to have regard to the purposes for which National Parks are designated (to preserve and enhance the natural beauty of the Park areas and for the purpose of promoting their enjoyment by the public) that they shall seek to foster the economic and social well-being of local communities within the National Park by cooperating with local authorities. If it appears there is a conflict between those purposes then the relevant authority shall attach greater weight to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the area of the National Park.	The Proposed Development will have potential effects on the natural beauty and special qualities of the Pembrokeshire Coast National Park (PCNP). The effect on PCNP is assessed in Section 13.8.
The Marine and Coastal Access Act (2009)	
Provides the framework for marine planning in Wales and across the UK. It sets Welsh Ministers as the Marine Plan authority for the Welsh Inshore and Offshore regions. When	These aspects of the seascape, landscape and visual resource are considered in the assessment of the impacts in Sections 13.7, 13.8 and 13.9.

Legislation description	Relevance to assessment
considering the impact of an activity it states that the marine plan authority (MPA) *'should take into account existing character and quality, how highly it is valued and its capacity to accommodate change...'* (2.6.5.3).	
UK Marine Planning Policy Statement (MPS) (2011)	
Provides the UK's framework for preparing marine plans including the Welsh National Marine Plan. In relation to seascape paragraph 2.6.5.3 advises that *"In considering the impact of an activity or development on seascape, the marine plan authority should take into account existing character and quality, how highly it is valued and its capacity to accommodate change specific to any development. Landscape Character assessment methodology may be an aid to this process."*	These aspects of the seascape, landscape and visual resource are considered in the assessment of the impacts in Sections 13.7, 13.8 and 13.9.
Paragraph 2.6.5.4 states that: *"For any development proposed within or relatively close to nationally designated areas the marine plan authority should have regards to the specific statutory purposes of the designated areas. The design of a development should be taken into account as an aid to mitigation."* Examples of nationally designated areas are given as AONBs, National Parks or Heritage Coasts.	The Proposed Development will have potential effects on the natural beauty and special qualities of the Pembrokeshire Coast National Park (PCNP). The effect on PCNP is assessed in Sections 13.7, 13.8 and 13.9.

13.2.2 National Planning Policy

Table 13.2 – National planning policy relative to assessment of the effects on seascape, landscape and visual receptors

Policy description	NPS Reference	ES Reference
EN-1 Overarching NPS for Energy		
Applicant should carry out a landscape and visual assessment and makes reference to the following documents: Landscape Institute and Institute of Environmental Management and Assessment (2002, 2nd edition): Guidelines for Landscape and Visual Impact Assessment; and	EN-1, Section 5.9.5	The Guidelines for Landscape and Visual Impact Assessment' (GLVIA) (2002, 2nd edition) has been superseded by GLVIA Version 3. Landscape Character Assessment – Guidance for England and Scotland has been superseded by Natural England's 'An Approach to Landscape Character Assessment'.

Policy description	NPS Reference	ES Reference
Land Use Consultants (2002): Landscape Character Assessment – Guidance for England and Scotland.		This SLVIA has been prepared following the updated versions of these documents which are referred to in Section 13.4.
The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.	EN-1, Section 5.9.5	Published landscape character assessments and associated studies for the Study Area are referred to in Section 13.5 of the SLVIA. Local Development Plan policies are considered in Chapter 5: Policy and Legislation.
The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.	EN-1, Section 5.9.6	The effect on landscape components and landscape character during construction and operation are assessed in Section 13.9 of the SLVIA.
The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity.	EN-1, Section 5.9.7	The visual effects of the Proposed Development during construction and operation, including night-time visual effects, are assessed in Section 13.7 of the SLVIA.
Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. Virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.	EN-1, Section 5.9.7	The quality, value and capacity of the landscape to accommodate change are considerations of the landscape assessment. The design of the Proposed Development has considered and addressed the potential impact on seascape, landscape and visual receptors, in order to minimise harm by mitigation of landscape effects as presented in Section 13.8 and 13.9 of the SLVIA. Adverse landscape and visual effects are minimised through environmental mitigation measures.
The duty to have regard to the purposes of nationally designated areas also applies when considering	EN-1, Section	The potential for the offshore elements of the Proposed Development to affect the PCNP has been considered in

Policy description	NPS Reference	ES Reference
applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.	5.9.12 and 5.9.13	Section 13.7 and 13.8 of the SLVIA. Regard has been paid to the statutory purpose of nationally designated landscapes.
Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.	EN-1, Section 5.9.14	The value of the local landscape is a consideration within the SLVIA and is informed by local landscape designations identified in local development plan documents. Effects on landscape character are assessed in respect of each landscape receptor in Section 13.9 of the SLVIA.
The IPC [now the Planning Inspectorate and the Secretary of State] should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.	EN-1, Section 5.9.17	Chapter 3: Site Selection and Alternatives of the ES sets out the iterative process that has influenced the design of the Proposed Development. The mitigation of seascape, landscape and visual effects has been carefully considered in the SLVIA, to minimise 'harm to the landscape' where possible.
Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.	EN-1, Section 5.9.22	Adverse landscape and visual effects are minimised through environmental mitigation measures as presented in Section 13.10 of the SLVIA. The role of the site selection process in minimising landscape and visual effects is presented in Chapter 3: Site Selection and Alternatives of the ES. Choice of colours and materials is set out in Chapter 4: Proposed Development Description.
Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design	EN-1, Section 2.4.2	The Proposed Development has been designed to address potential seascape, landscape and visual effects. Environmental mitigation measures that address seascape, landscape and visual

Policy description	NPS Reference	ES Reference
of the project to mitigate impacts such as noise and effects on ecology.		effects are presented in Section 13.10 of the SLVIA.
Where a proposed offshore wind farm will be visible from the shore, an SVIA should be undertaken which is proportionate to the scale of the potential impacts. Impact on seascape should be addressed in addition to the landscape and visual effects discussed in EN-1.	EN-1, Section 2.6.202	The visibility of the offshore elements of the Proposed Development from the shore is assessed in Section 13.7 of the SLVIA. Impacts on seascape are also addressed in Section 13.8.
Where necessary, assessment of the seascape should include an assessment of three principal considerations on the likely effect of offshore wind farms on the coast: • limit of visual perception from the coast; • individual characteristics of the coast which affect its capacity to absorb a development; and • how people perceive and interact with the seascape.	EN-1, Section 2.6.203	The visibility of the offshore elements of the Proposed Development from the coast and seascape impacts are assessed in Section 13.7 and 13.8.
As part of the SVIA, photomontages are likely to be required. Viewpoints to be used for the SVIA should be selected in consultation with the statutory consultees at the EIA Scoping stage.	EN-1, Section 2.6.204	Viewpoints were agreed in consultation with statutory consultees as described in Section 13.5. Photomontages are included in Volume 2 Figure 13.22 – Figure 13.40.
Magnitude of change to both the identified seascape receptors (such as seascape units and designated landscapes) and visual receptors (such as viewpoints) should be assessed in accordance with the standard methodology for SVIA.	EN-1, Section 2.6.205	The methodology for the assessment of magnitude of change to seascape receptors, designated landscapes and visual receptors is set out in Section 13.4.
Where appropriate, cumulative SVIA should be undertaken in accordance with the policy on cumulative assessment outlined in Section 4.2 of EN-1.	EN-1, Section 2.6.206	The potential for cumulative seascape, landscape and visual effects of the Proposed Development with other projects are considered in Section 13.12
EN-3 National Policy Statement for Renewable Energy Infrastructure		
Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design	EN-3, Section 2.4.2	The Proposed Development has been designed to address potential seascape, landscape and visual effects. Environmental mitigation measures that

Policy description	NPS Reference	ES Reference
of the project to mitigate impacts such as noise and effects on ecology.		address seascape, landscape and visual effects are presented in Section 13.10.
Where a proposed offshore wind farm will be visible from the shore, an SVIA should be undertaken which is proportionate to the scale of the potential impacts. Impact on seascape should be addressed in addition to the landscape and visual effects discussed in EN-1.	EN-3, Section 2.6.202	The visibility of the Proposed Development from the shore and impacts on seascape are assessed in Section 13.7 and 13.8.
Where necessary, assessment of the seascape should include an assessment of three principal considerations on the likely effect of offshore wind farms on the coast: limit of visual perception from the coast; individual characteristics of the coast which affect its capacity to absorb a development; and how people perceive and interact with the seascape.	EN-3, Section 2.6.203	Assessment of the effects of the Proposed Development on seascape is contained in Section 13.8**.**
As part of the SVIA, photomontages are likely to be required. Viewpoints to be used for the SVIA should be selected in consultation with the statutory consultees at the EIA Scoping stage.	EN-3, Section 2.6.204	Viewpoints were agreed in consultation with statutory consultees as described in Section 13.5. Photomontages are included in Volume 2 Figures 13.21 – Figure 13.40.
Magnitude of change to both the identified seascape receptors (such as seascape units and designated landscapes) and visual receptors (such as viewpoints) should be assessed in accordance with the standard methodology for SVIA.	EN-3, Section 2.6.205	The methodology for the assessment of magnitude of change to seascape receptors, designated landscapes and visual receptors is set out in Appendix 13.1 and summarised in Section 13.4.
Where appropriate, cumulative SVIA should be undertaken in accordance with the policy on cumulative assessment outlined in Section 4.2 of EN-1.	EN-3, Section 2.6.206	The cumulative SLVIA of the Proposed Development accords with Section 4.2 of EN-1 and is set out in Section 13.12.
Where a proposed offshore wind farm is within sight of the coast, there may be adverse effects. The IPC should not refuse to grant consent for a development solely on the ground of an adverse effect on the seascape or visual amenity unless:	EN-3, Section 2.6.208	Chapter 4: Site Selection and Alternatives sets out the alternatives that have been considered. The SLVIA is based on a Rochdale Envelope Approach, which has defined a maximum design scenario for assessment, as agreed through stakeholder consultation. The Rochdale

Policy description	NPS Reference	ES Reference
• it considers that an alternative layout within the identified site could be reasonably proposed which would minimise any harm, taking into account other constraints that the applicant has faced such as ecological effects, while maintaining safety or economic viability of the application; or • taking account of the sensitivity of the receptor(s) as set out in EN-1 paragraph 5.9.18, the harmful effects are considered to outweigh the benefits of the proposed scheme.		Envelope Approach and the acknowledged need to maintain flexibility until the detailed design stage, post consent, does not lend itself to further detailed consideration of WTG layout within the array area within the SLVIA. Section 13.10 of this Chapter sets out the embedded mitigation introduced to address effects on sensitive receptors.
Where adverse effects are anticipated either during the construction or operational phases, in coming to a judgement, the IPC should take into account the extent to which the effects are temporary or reversible.	EN-3, Section 2.6.209	Section 13.6 sets out the extent to which the identified effects are temporary or reversible.
Welsh National Marine Plan (2019)		
Proposals should demonstrate how potential impacts on the purposes and special qualities for which National Parks or Areas of Outstanding Natural Beauty have been designated have been taken into consideration and should, in order of preference: a. avoid adverse impacts on designated landscapes; and/ or b. minimise impacts where they cannot be avoided; and/ or c. mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Opportunities to enhance designated landscapes are encouraged.	SOC_06: Designated landscapes	The effects on the PCNP as a result of the Proposed Development being located within part of its setting, is assessed in Section 13.6 and takes into account the identified special qualities. A description of how the effects have been avoided, minimised and mitigated is included in Chapter 3: Site Selection and Alternatives and Section 13.10 of this chapter.
There are also a number of non-statutory designations including Heritage Coasts and Registered Historic Landscapes. Some 42% of Wales' coastline is defined as	Section 128	Chapter 24: Onshore Archaeology and Cultural Heritage considers the effects on Registered Historic Landscapes.

Policy description	NPS Reference	ES Reference
Heritage Coast; often this is contiguous with other designations such as National Parks or AONBs. These non-statutory designations were defined to protect stretches of scenic and undeveloped coastline from unsuitable development.		The recognized value and qualities associated with Registered Historic Landscapes and Heritage Coasts is considered in Section 13.9.
Policy SOC_06 recognises that resilient, diverse, multifunctional landscapes supported by sustainable management practices can provide a range of services and opportunities with the potential to contribute to the achievement of social objectives and improve health and well-being as well as delivering economic benefit. Under this policy, proposals should demonstrate appropriate consideration of the potential impacts of developments and activities on designated landscapes. This policy also encourages opportunities to contribute positively to the protection or enhancement of these areas. National Parks and AONBs are of equal status in terms of landscape and scenic beauty and both should be afforded protection from inappropriate developments.	Section 129 and 130	The effects on the PCNP as a result of the Proposed Development being located within part of its setting, is assessed in Section 13.8 and takes into account the landscape and scenic beauty identified by certain special qualities.
Proposals should demonstrate how potential impacts on seascapes have been taken into consideration and should, in order of preference: a. avoid adverse impacts on seascapes; and/ or b. minimise impacts where they cannot be avoided; and/ or c. mitigate impacts where they cannot be minimised. If significant adverse impacts cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Opportunities to enhance seascapes are encouraged.	SOC_07: Seascapes	The effects on seascapes as a result of the Proposed Development is assessed in Section 13.8. A description of how the effects have been avoided, minimised and mitigated is included in Chapter 3: Site Selection and Alternatives and Section 13.10 of this chapter.
Where there is the potential to significantly change the seascape of an area through proposed developments or plan-making, under Policy SOC_07 the impacts and	Section 135	The effects on seascapes as a result of the Proposed Development is assessed in Section 13.8. This includes

Policy description	NPS Reference	ES Reference
relative value of the altered seascape should be considered as part of decision making. Seascape concerns in themselves need not be a barrier to sensitively sited and designed development and considering seascapes at an early stage should be seen as an approach that can be helpful to identify more widely acceptable solutions and to help steer the right development to the right place.		consideration of the impacts and relative value of the altered seascape.
Proposals should demonstrate that they have assessed potential cumulative effects and should, in order of preference: a) avoid adverse effects; and/ or b) minimise effects where they cannot be avoided; and/ or c) mitigate effects where they cannot be minimised. If significant adverse effects cannot be avoided, minimised or mitigated, proposals must present a clear and convincing case for proceeding. Proposals that contribute to positive cumulative effects are encouraged.	GOV_01: Cumulative effects	The cumulative effect of the Proposed Development is considered in Section 13.12. A description of how the effects have been avoided, minimised and mitigated is included in Chapter 3: Site Selection and Alternatives and Section 13.10 of this chapter.
Future Wales: The National Plan to 2040 (2021)		
The planning system sets policy and takes decisions on on-shore schemes. The Welsh Government is supportive of off-shore proposals and sees them as an important part of our future energy mix but they do not fall within the remit of Future Wales. Policy 17 – Renewable and Low Carbon Energy and Associated Infrastructure advises that "Applications for large-scale wind and solar will not be permitted in National Parks and Areas of Outstanding Natural Beauty and all proposals should demonstrate that they will not have an unacceptable adverse impact on the environment." Policy 18 – Renewable and Low Carbon Energy Developments of National Significance states that "Proposals for renewable and low	Policy 17 and 18	The visual effects of the Proposed Development on communities and the effects on the PCNP as a result of the Proposed Development being located within part of its setting, are assessed in Section 13.7 and 13.8.

Policy description	NPS Reference	ES Reference
carbon energy projects (including repowering) qualifying as Developments of National Significance will be permitted subject to policy 17 and the following criteria: 1. outside of the Pre-Assessed Areas for wind developments and everywhere for all other technologies, the proposal does not have an unacceptable adverse impact on the surrounding landscape (particularly on the setting of National Parks and Areas of Outstanding Natural Beauty); 2. there are no unacceptable adverse visual impacts on nearby communities and individual dwellings"		
Planning Policy Wales 11(PPW) (2021)		
Landscape policy is guided by the European Landscape Convention. The landscape of Wales is stated as a key consideration when developing policies and when proposing development. 6.3.3 notes that "Collaboration and engagement with adjacent planning authorities, Natural Resources Wales (NRW), Cadw and the third sector will be necessary to draw on a wide range of expertise and evidence. This means: ensuring Wales contributes to meeting international responsibilities and obligations for landscapes; ensuring statutorily designated sites are properly protected and managed; ensuring that the value of all landscapes for their distinctive character and special qualities is protected; and ensuring the opportunities landscapes provide for tourism, outdoor recreation, local employment, renewable energy and physical and mental health and well-being are taken into account and multiple well-being benefits for people and communities secured.	Section 6.3 Landscape Section 6.3.3 and 6.3.4	Effects on landscape character are assessed in Section 13.9. The consideration of the opportunity for the generation of renewable energy is presented in Chapter 4: Proposed Development Description. As recognised by NPS EN-1, large scale infrastructure projects are likely to have effects on landscape character.

Policy description	NPS Reference	ES Reference
6.3.4 Where adverse effects on landscape character cannot be avoided, it will be necessary to refuse planning permission.		
Planning authorities have a statutory duty to have regard to National Parks and AONB purposes. This duty applies in relation to all activities affecting National Parks and AONBs, whether those activities lie within, or in the setting of, the designated areas. The designated landscapes should be drivers of the sustainable use and management of natural resources in their areas, and planning authorities should have regard to their identified special qualities in the exercise of their functions and any relevant management plans.	Section 6.3.5	The effects on the PCNP as a result of the Proposed Development being located within part of its setting is assessed in Section 13.7 and 13.8 and take into account the identified special qualities.
In National Parks, planning authorities should give great weight to the statutory purposes of National Parks, which are to conserve and enhance their natural beauty, wildlife and cultural heritage, and to promote opportunities for public understanding and enjoyment of their special qualities.	Section 6.3.6	The SLVIA includes assessment of the effects of the Proposed Development on the natural beauty and special qualities of the PCNP in Section 13.8.
Importance of LANDMAP as an information resource, methodology and monitoring baseline for the landscapes of Wales. LANDMAP assessments can help to inform development management decisions.	Section 6.3.20	The Visual and Sensory Evaluation compiled as a LANDMAP dataset is presented in Figure 13.7 and the information used to inform the assessment of the effects in Section 13.8 and 13.9.
Development Proposals should aim to protect or enhance the natural or historic character and landscape of undeveloped coastlines. The particular landscapes of the coastline should be recognised and protected where they represent significant characteristics of place. Designation as a heritage coast does not directly affect the status of the area in planning terms, however, the features which contributed to the designation of such areas will be important considerations in development plans and in making development management decisions.	Section 6.5.12	The features which contributed to the definition of Heritage Coasts are assessed in Section 13.7 and 13.8 and take into account the identified special qualities.

13.2.3 Local Planning Policy

13.2.3.1 **Table 13.3** lists the local planning policy relevant to the assessment of the effects on seascape, landscape and visual receptors.

Table 13.3 – Local planning policy relative to seascape, landscape and visual receptors

Policy description	Relevance to assessment
Pembrokeshire County Council LDP (2013 - currently undergoing review) *For the County excluding the area of Pembrokeshire Coast National Park	
GN.1 General Development Policy *Development will be permitted where the following criteria are met:* *1. The nature, location, siting and scale of the proposed development is compatible with the capacity and character of the site and the area within which it is located;* *2. It would not result in a significant detrimental impact on local amenity in terms of visual impact, loss of light or privacy, odours, smoke, fumes, dust, air quality or an increase in noise or vibration levels;* *3. It would not adversely affect landscape character, quality or diversity, including the special qualities of the Pembrokeshire Coast National Park and neighbouring authorities.*	The effect of the Proposed Development on landscape character and visual amenity are assessed in Section 13.7, 13.8 and 13.9. The Proposed Development may be visible within the setting of the PCNP. The likely impacts of the Proposed Development on the perceived landscape character and special qualities of the PCNP are assessed in Section 13.8 of the SLVIA.
SP 16 The Countryside *"The essential requirements of people who live and work in the countryside will be met whilst protecting the landscape and natural and built environment of Pembrokeshire and adjoining areas. Development which minimises visual impact on the landscape and relates to one of the following will be promoted:* *1. Enterprises for which a countryside location is essential.* *2. Opportunities for rural enterprise workers to be housed in suitable accommodation that supports their employment62.* *3. The re-use of appropriate existing buildings".*	The effect of the Proposed Development on landscape character and visual amenity of the countryside are assessed in Section 13.7, 13.8 and 13.9.
Pembrokeshire Coast National Park LDP (2020)	
Policy 8 Special Qualities (Strategy Policy) *"The special qualities of the Pembrokeshire Coast National Park will be conserved and enhanced. The priorities will be to ensure that:* *a) The sense of remoteness and tranquillity is not lost and is wherever possible enhanced (see Policy 9).* *c) The pattern and diversity of the landscape is protected and wherever possible enhanced (see Policy 14).* *d) The historic environment is protected and where possible enhanced.* *i) Development of the undeveloped coast is avoided and sites within stretches of the developed coast are protected for uses*	The Proposed Development may be visible within the setting of the PCNP. The likely impacts of the Proposed Development on the perceived landscape character and special qualities of the PCNP are assessed in 13.7 and 13.8 of the SLVIA.

Policy description	Relevance to assessment
that need a coastal location (see Policy 17, Policy 18, Policy 33) and Policy 38). *In assessing the impact upon the special qualities of the National Park, matters of detail and cumulative impact will be given special consideration".*	
Policy 9 Light Pollution *"Proposals that are likely to result in a significant level of external artificial lighting being emitted shall include a full lighting scheme and will be permitted:* *a) where the lighting proposed relates to its purpose; and,* *b) where there is no unacceptable adverse effect on the character of the area, local residents, vehicle users, pedestrians, biodiversity and the visibility of the night sky.* *Wherever possible opportunities to mitigate potential cumulative impacts on the night sky should be explored".*	The aviation lighting associated with the Proposed Development may be visible within the setting of the PCNP at night. The likely impacts of the lighting of the Proposed Development on the character of the area, visual amenity and visibility of the night sky of the PCNP are assessed in Section 13.713.6 of the SLVIA.
Policy 14 Conservation and enhancement of the Pembrokeshire Coast National Park *"Development will not be permitted where this would have an unacceptable adverse effect on the qualities and special landscape and seascape character of the Pembrokeshire Coast National Park including locally distinctive characteristics by:* *a) causing visual intrusion; and/or,* *b) introducing or intensifying a use which is incompatible with its location; and/or* *c) failing to harmonise with, or enhance the landform, landscape and seascape character of the National Park; and/or* *d) losing or failing to incorporate important traditional features.* *In assessing the impact upon the National Park, matters of detail and cumulative impact will be given special consideration".*	The Proposed Development may be visible within the setting of the PCNP. The likely impacts of the Proposed Development on the perceived landscape character and special qualities of the PCNP are assessed in Section 13.6 of the SLVIA.
Policy 33 Renewable and Low Carbon Energy *"Proposals for renewable and low carbon energy development including those relating to wind, solar and hydro power, anaerobic digestion and biomass will be permitted subject to the following criteria:* *a) Small and medium scale renewable energy schemes would not individually or cumulatively have an unacceptable adverse effect on the visual amenities, landscape character and/or nature conservation value of the local area.* *b) Large scale renewable energy and low carbon energy schemes would not individually or cumulatively have an unacceptable adverse effect on the special qualities of the National Park.* *c) Onshore connections to off- shore renewable energy generators would not have an unacceptable adverse effect on the visual amenities, landscape character or nature*	The Proposed Development may be visible within the setting of the PCNP. The likely impacts of the Proposed Development on the visual amenity, perceived landscape character and special qualities of the PCNP are assessed in Section 13.6 of the SLVIA.

Policy description	Relevance to assessment
conservation of the developed and undeveloped coast. Where an undeveloped coastal location is required proposals need to demonstrate why the location is necessary with the least obtrusive approach to design being taken (See also Policy 8, Policy 9 and Policy 62). *d) All renewable and low carbon energy development proposals will be required to demonstrate that:* *i. Measures have been taken to minimise impacts on the landscape and natural environment of the National Park.* *ii. There will be no unacceptable impacts on residential amenity.*	

13.2.4 Guidance

13.2.4.1 Recognisance has been taken of the following best practice guidelines / guidance:

- Landscape Institute and IEMA (2013) - Guidelines for Landscape and Visual Impact Assessment: Third Edition (GLVIA3);
- Landscape Institute (2019). Visual Representation of Development Proposals;
- Landscape Institute (2021). Landscape Value and Valued Landscapes. A Technical Guidance Note;
- Natural England (2012). An Approach to Seascape Character Assessment;
- Natural England (2014). An Approach to Landscape Character Assessment;
- Natural Resources Wales (2021). Using LANDMAP in LVIA;
- Natural Resources Wales (2019). Seascape and sensitivity to offshore wind farms in Wales: Strategic Assessment and Guidance, Stages 1-3;
- NatureScot (2017) - Siting and Designing Wind farms in the Landscape, Guidance (Version 3) (herein referred to as 'NatureScot Siting and Designing');
- NatureScot (2017) - Visual Representation of Wind farms, Guidance (Version 2.2) (herein referred to as 'NatureScot Visual Representation');
- The Planning Inspectorate (2019) – Advice Note 17 Cumulative Effects Assessment;
- The Planning Inspectorate (2018) Advice Note Nine: Rochdale Envelope; and
- Scottish Natural Heritage (NatureScot) (2012). Assessing the Cumulative Impact of Onshore Wind Energy Developments.

13.3 Consultation and Scoping

13.3.1.1 The Applicant submitted a Scoping Report (MarineSpace 2019) in support of a formal request for a Scoping Opinion to NRW and The Planning Inspectorate (on behalf of Welsh Ministers) in October 2019. The Scoping Report set out the proposed SLVIA methodologies, outline of the baseline data collected to date and proposed, and the scope of the assessment. A Scoping Opinion was received on 22 January 2020 from NRW. Table 13.4 sets out the comments received in respect of SLVIA matters and how these have been addressed in this ES. Regard has also been given to other stakeholder comments that were received in relation to the Scoping Report and during consultation undertaken prior to submission in relation to the SLVIA. Comments that relate to the LVIA are set out in Chapter 21 (Table 21.4).

Table 13.4 – Consultation and Scoping Opinion (SLVIA)

Consultee	Response	Applicant Action
NRW (Scoping Opinion) January 2020	We advise the addition of the National Park Management Plan and reference to the Special Qualities of the park into the baseline data for the Pembrokeshire Coast National Park. It would also be advisable to refer to the detailed assessments in LANDMAP where the landfall and substation proposals are concerned.	The likely impacts of the Proposed Development on the special qualities of the PCNP are assessed in Section 13.8.7. Detailed assessments in LANDMAP are referred to in the assessment of the onshore substation and landfall in Chapter 21: Landscape and Visual Impacts.
NRW (Scoping Opinion) January 2020	With regard to the Seascape Character Areas identified in the National Park's Seascape Character Assessment, we suggest that SCA32 Inner Milford Haven is included in relation to the potential landfall/substation. A number of other factors are noted in the SCAs as well as those mentioned in the report e.g. coastal splendour; remote, unspoilt cliffs & sheltered bays. Full account needs to be taken of factors contributing to sensitivity.	The likely impacts of the Proposed Development on Seascape Character Areas within the PCNP are assessed in Section 13.8.
NRW (Scoping Opinion) January 2020	With regard to the Landscape Character Areas identified in the National Park's Landscape Character Assessment, we suggest that LCA9 Marloes Peninsula and LCA10 Skomer & Skokholm are included, as these landscapes have the potential for visual impacts.	The likely impacts of the Proposed Development on Landscape Character Areas within the PCNP are assessed within the assessment of potential seascape impacts in Section 13.8.
NRW (Scoping Opinion) January 2020	With regard to potential mitigation (7.8.4) we advise that the size and height of WTGs, and the location, orientation and spread of the array and the inclusion or exclusion of lighting are also potential mitigation options for the project.	Standard mitigation measures are presented in Section 13.4.6.

Consultee	Response	Applicant Action
NRW (Scoping Opinion) January 2020	We note that direct physical impacts on the Heritage Coasts of South Pembrokeshire and Marloes & Dale have been scoped into the designated sites within Section 6.1 of the Scoping report. However, we recommend that potential landscape and seascape impacts on the Heritage Coasts should also be included in the submitted ES.	The features which contribute to the definition of Heritage Coasts are considered in the assessment of effects on the seascape character, special qualities and visual amenity of the PCNP in Section 13.7 and 13.8.
NRW (Scoping Opinion) January 2020	We suggest that, as well as the largest scale of WTG anticipated, consideration should also be given to the orientation of the array in relation to high sensitivity receptors i.e. Pembrokeshire Coast National Park and highly sensitive viewpoints. The orientation and spread of the array can affect the degree of impact on a visual receptor. In addition, the height of the offshore platforms as well as the height of the WTGs needs to be taken into account. We note that WTGs would be required to be marked in accordance with aviation requirements. If lighting is required, an assessment of night-time impacts would also be required. Dark skies are a feature of many offshore areas at night and contribute to perceptions of tranquillity & remoteness.	The SLVIA is based on the maximum design scenario (MDS) set out in Section 13.6.1. Night-time visual impacts from WTG aviation lighting are assessed in Section 13.7.18.
NRW (Scoping Opinion) January 2020	It is recommended that the applicant engage with NRW Advisory to support selection of viewpoints and photomontage production.	Viewpoints listed in Table 13.13 have been agreed in consultation with NRW.
NRW (Scoping Opinion) January 2020	Please note that NRW have commissioned evidence reports on Offshore Wind Development: 1. Ready Reckoner, 2. Siting Guidance & 3. Sensitivity Assessment. These reports are principally focussed on the visual effects in relation to Designated Landscapes, therefore, rather than our Marine Character Areas the assessment units used are bespoke to the assessment and the marine settings of Designated Landscapes. It should be noted that the reports are an evidence base, rather than NRW's position or guidance.	NRW commissioned evidence reports have been considered in the preparation of the SLVIA.
NRW (Consultation meeting) April 2021	NRW highlighted the 3-stage report on Offshore Wind Development: 1. Ready Reckoner, 2. Siting Guidance & 3. Sensitivity Assessment. Suggested that sea-based recreational users/vessels should be considered as a sensitive receptor, such as ferry	The likely impacts of the Proposed Development on sea-based users of the Skomer Island ferry are assessed in Section 13.7.17. The SLVIA includes assessment of the effects of

Consultee	Response	Applicant Action
	routes/recreational routes e.g., Skomer island. NRW recommended that the method for assessing effects of the offshore array on special qualities of the PCNP should link into LANDMAP and be appropriate for Wales. General agreement that the proposed viewpoints were appropriate for the SLVIA and in suitable areas of the PCNP, however an action was taken for NRW to review the proposed viewpoint locations and provide comments/agreement on the viewpoints in order to allow surveys/photography to be undertaken.	the Proposed Development on the special qualities of the PCNP in Section 13.8. LANDMAP assessments are considered within the assessment of SCAs within the PCNP in Section 13.8. Viewpoints listed in Table 13.13 have been agreed in consultation with NRW and are assessed in Section 13.7.
NRW (Consultation meeting) April 2021	Comments relate to viewpoints in the PCNP only. <u>Terrestrial elements</u> The viewpoints for the cable route and substation seem sensible. It may be that Viewpoint 8 at Angle Bay needs more than one view/different precise location, depending on exactly where the landfall is and what technique is used (HDD versus trenched/visible cables). <u>Night-time viewpoints</u> There is a Dark Sky Discovery Site at Kete (car park) on St Ann's Head. Other suitable locations at roads/car parks may be available. Information on Dark Skies provided. <u>Offshore elements viewpoints</u> Suggest additional viewpoints at: • Near Carreg Fran or Pen Pedol on the Coast Path on the St David's Peninsula • Coast path at Hooper's Point east of Marloes Sands • Perhaps site Viewpoint 6 South Hook Point slightly farther west towards Kilroom • Coast path near Sheep Island/east towards Gutter Hole on Angle Peninsula • High point & Viewpoint marked on OS near Golden Plover, Cold Comfort north of Castlemartin ranges • East of Elegug Stacks on Coast path, Mewsford Point/Saddle Head	Viewpoints listed in Table 13.13 have been agreed in consultation with NRW and are assessed in Section 13.7.

Consultee	Response	Applicant Action
	This would capture more of the sensitive sections of the coast with sea views towards the development. Consider a view at sea from a recreational/tourist vessel/area where these vessels travel around Skokholm/Skomer, if this is possible.	
NRW (Consultation meeting) May 2021	We have reviewed the comments on the suggested viewpoints and the useful map with extra viewpoints and offer the following advice. All the viewpoints are likely to need micro-siting, dependent on field work. VP6 South Hook Point – agreed VP12 Carreg Fran possibly could replace VP1, depending how much of a view there is from Caerfai Bay. There may be more of a view from Pen y Cyrwy or the fort to the east than from the Bay/car park. However, it would be useful to have sequential views along this stretch of coast so preferably include both. VP13 Hooper's Point - agreed VP14 Coast Path near Sheep Island – agreed VP15 Cold Comfort/Golden Plover – this is a public viewing area over the Castlemartin ranges next to the observation tower, with sea views to the west/south west. VP8 is likely to be more suitable for views to the substation/cable route – suggest including both. VP16 East of Elegug Stacks – possibly could replace VP9 depending on the views west from there. VP16 may have more direct w/sw views, but preferably include both as sequential views along this section of coast. VP 17 & 18 were suggested by PCC, so will leave comment on these to them. <u>Night-time Viewpoints</u> In consultation with PCNP, the following are suggestions for possible night time viewpoints in addition to the previously suggested Kete car park on St Ann's Head: Freshwater West (SR885998) West Dale Bay (SM799060) Martin's Haven car park (SM761089) Marloes NT car park (SM77952 08188)	Viewpoints listed in Table 13.13 have been agreed in consultation with NRW and are assessed in Section 13.7.

Consultee	Response	Applicant Action
NRW (Consultation meeting) September 2021	NRW asked if the photomontages will be available on hard copy prints. NRW asked if any alternative scenario will be considered in the SLVIA in term of WTG dimensions and number, for example, the larger number of smaller WTGs.	Hard copy printed versions of the photomontage visualisations in Volume 2, Figure 13.22 -13.40 have been provided to NRW. The SLVIA is based on the maximum design scenario (MDS) set out in Section 13.6.1.
NRW (Consultation) October 2021	NRW advice provided in response to the proposed cumulative effect assessment (CEA) approach for the SLVIA (dated 17/09/2021). It was agreed to scope out the following projects from the CEA: META Warrior Way, Bombora Wave Energy, Greenlink Interconnector, Pembroke Dock Slipway and Milford Haven Port Authority (MHPA) dredging. Feedback provided on other projects for the CEA is summarised as follows: **META project East Pickard Bay & Dale Roads** - We have some concerns regarding cumulative visibility because they are relatively close to shore and likely to be visible from sections of coast and Wales Coast Path within the National Park. There is likely to be some visibility and it is difficult to rule out whether these are likely to be significant without further information and preferably visual images showing these consented projects. **Pembrokeshire Demonstration Zone (PDZ)** - We have some concerns regarding cumulative visibility with this project and require clarification that the project is now a proposed substation link. Insufficient detail may be available but we advise clarification on the proposals for the PDZ and the amount of detail available. **Project Valorous** - Given that this project appears highly likely to come forward and is being proposed by the same developer, we question whether the information required to carry out a cumulative assessment can be made available to allow this to be carried out. A worst-case scenario of turbine height and layout could potentially be used and potentially some viewpoints could be assessed with photomontages included. Cumulative assessments may also be	The likely cumulative impacts of the Proposed Development are assessed in Section 13.12, which sets out the approach to the cumulative assessment and projects included following feedback from NRW.

Consultee	Response	Applicant Action
	extended as detailed information on new proposals come forward. **Rhoscrowther Wind Farm** - should be included for consideration of both onshore and offshore cumulative effects. There are potential cumulative effects in views from the Dale peninsula, where this project would be highly visible across the Haven and Angle Peninsula. There would likely be views of the Erebus project in the same panorama and sequentially.	
Pembrokeshire County Council (Consultation meeting) April 2021	Highlighted draft County landscape character assessment as a relevant baseline source. Keen for WTG aviation lighting to be assessed, including how this may be viewed over distance and how this would impact on the PCNP special qualities. PCC keen that light pollution aspect of WTG lighting is considered in the SLVIA. Point source of light pollution and how this can affect special qualities of the PCNP. Requested that the St David's Peninsula must be included within the Study Area and viewpoints. Include a viewpoint from high ground on St David's peninsula, potentially at Carn Llidi. A viewpoint from the Preseli Hills was also suggested, which provides elevated long-distance views from distant inland areas of PCNP. The effects of lighting on the viewpoint from high ground on St David's peninsula (Carn Llidi) and from Preseli Hills were discussed and although their long distance was noted, it was agreed to consider these further, to determine if they are required. General agreement that the proposed viewpoints were appropriate for the SLVIA and in suitable locations, however an action was taken for PCC to review the proposed viewpoint locations and provide comments/agreement on the viewpoints in order to allow surveys/photography to be undertaken.	The Pembrokeshire Landscape Character Assessment (Consultation Draft) (PCC, 2019) is considered in the baseline in Section 13.5.4 and assessments in Sections 13.8 and 13.9. Night-time visual impacts from WTG aviation lighting are assessed in Section 13.7.18. St David's Peninsula included in Study Area (Volume 2, Figure 13.1) and Viewpoint 1 Caefrai Bay (Figure13.22a-f) and Viewpoint 15 Carn Llidi (Figure 13.36a-h). Viewpoints in the Preseli Hills have been scoped out of the SLVIA due to their long distance from the array area and location outside the Study Area.
Pembrokeshire County Council (Consultation) May 2021	There will need to be a recognition in the LVIA that the coastline (and its users) being a linear feature, is likely to be subject to the impacts in an almost continuous manner, to a greater or lesser degree. Obviously, there are stretches where the coast path might disappear behind coast vegetation, but	The likely impacts of the Proposed Development on users of the Pembrokshire Coast Path are assessed in Section 13.7.16 and from

Consultee	Response	Applicant Action
	these are relatively scarce. So the impacts of the WTGs will be almost continually visible (under the right conditions) subject to distance. This will also apply to the visibility of the lights at night, so whilst viewpoints will have specific records of visibility, there will have to be recognition that whole stretches of the National Park's best asset will be affected in the manner recorded. This compares with an LVIA for a land-based development where often only glimpses of a development might be possible from particular stretches of path, brows of hills, gateways etc. This should also be remembered for recording of the effects at night. Dark Skies Locations are mentioned and you have stated they will be the focus of your assessment, however, the effects (if present) will be continuous and are likely experienced in more populated locations where people are 'winding down' for the night such as near settlements and remoter recreational locations such as pubs, caravan and camping locations, popular coastal parking areas etc. It is likely that that these may not coincide with 'Dark Skies' locations but they are likely to be more populated. Sight of columns or hubs would have a significant effect upsetting the particular qualities of the remote and scenic locations, but that blades-only would be less-so. It will be important to undertaken assessments in clear conditions.	several representative viewpoints in Section 13.7. Night-time visual impacts from WTG aviation lighting are assessed in Section 13.7.18. The SLVIA includes assessment of the effects of the Proposed Development on the special qualities of the PCNP in Section 13.8. Assessments were undertaken in clear conditions as shown in the photomontages in Figures 13.22 – 13.40.
Pembrokeshire County Council (Consultation) September 2021	PCC asked if the WTGs will have lights on and if these will be visible. PCC raised a query about the landscape and visual effects of the development on the purpose of the PCNP, particularly if the turbine column or hub are visible, suggesting that the impact may be mitigated by reducing the WTG tip height and questioning whether the assessment of the worst-case scenario WTG height is the best way forward, given the status of the PCNP designation.	Night-time visual impacts from WTG aviation lighting are assessed in Section 13.7.18. The SLVIA is based on the maximum design scenario (MDS) set out in Section 13.6.1.
Pembrokeshire Coast National Park Authority (Consultation meeting)	General agreement that the proposed viewpoints were appropriate for the SLVIA and in suitable locations of the PCNP, however an action was taken for PCNPA to review the proposed viewpoint locations and provide comments/agreement on the	Viewpoints listed in Table 13.13 have been agreed in consultation with NRW and are assessed in Section 13.7.

Consultee	Response	Applicant Action
April 2021	viewpoints in order to allow surveys/photography to be undertaken.	
Pembrokeshire Coast National Park Authority (Consultation) May 2021	The minutes from the consultation held on the 01/04/2021 were circulated to PCNPA but no response was received. A follow up email was sent on the 31/05/2021 requesting feedback, specifically on viewpoints but no response was received.	
Pembrokeshire Coast National Park Authority (Consultation) September 2021	PCNPA were invited to the consultation meeting held on the 02/09/2021 but no response was received and PCNPA did not attend the meeting.	
National Trust (Consultation Letter) August 2021	The LVIA information and visualisations provided to date have provided reassurance on the landscape impact of the scheme and that a relatively low impact scheme can be brought forward. National Trust owns and manages a diverse range of land on the south Pembrokeshire coast which will have sight to the Erebus project, including our key beach at Freshwater West. We would note the need to consider night-time visualisations and request that further options and alternatives be considered prior to submission. Should night-time lighting form part of the project, we await details on mitigation and a proposed package of landscape and visual compensation in relation to night-time harm. We would request a paper copy of the submitted LVIA.	The effects of the Proposed Development on views from Freshwater West are assessed from Viewpoint 10 in Section 13.7.10 and shown in Volume 2, Figure 13.31a-f, including a night-time visualisation. Night-time visual impacts from WTG aviation lighting are assessed in Section 13.7.18. Hard copy printed versions of the photomontage visualisations in Volume 2, Figure 13.22 -13.40 have been provided to National Trust.
The Wildlife Trusts (Scoping Opinion) January 2020	The Zone of Theoretical Visibility (ZTV) should include both Skomer and Skokholm islands and the appointed landscape architects should visit both when assessing key viewpoints from within the ZTV. We request a Photomontage for the proposed floating offshore wind farm from both islands.	Viewpoints from both Skomer and Skokholm have been included in the SLVIA with photomontages. The appointed landscape architects visited both islands when assessing these viewpoints. The likely visual impacts of the Proposed Development on people visiting Skomer and Skokholm is assessed in Section 13.7.4 and 13.7.11, and shown in the photomontages in Figure 13.25a-h (Viewpoint 4 - Skomer) and Figure 13.32a-f (Viewpoint 11 - Skokholm).

Consultee	Response	Applicant Action
		The likely impacts of the Proposed Development on the seascape character of these islands is also considered in Section 13.8.2 and 13.8.3.
The Wildlife Trusts (Consultation) May 2021	The Wildlife Trusts are happy with the suggested viewpoint locations on both Skokholm and Skomer, both are accessible and essentially on pre-existing paths.	Viewpoints listed in Table 13.13 have been agreed in consultation with the Wildlife Trusts and are assessed in Section 13.7.
Public consultations - virtual exhibition and information day events (Hundelton Church Hall and Angle Village Hall) July 2021	Clear images and maps to show cable routes and visual impact. The photomontages were really helpful for explaining the extent to which the wind farm might be visible on a clear day from the cliff tops The simplicity and detail are excellent. The visual impact is greater than anticipated, especially from the north, if other sites get developed this may cause concern.	Photomontages provided in virtual exhibition, at information data events for public display and included in Volume 2, Figures 13.22 – 13.40.

13.4 Assessment Methodology and Significance Criteria

13.4.1 Overview

13.4.1.1 This section sets out the scope and methodology for the EIAR assessment for seascape, landscape and visual amenity. The onshore LVIA methodology is set out in Chapter 21: Landscape and Visual Impacts. The project-wide generic approach to assessment is set out in Chapter 2: Overview of EIA methodology. The approach for seascape, landscape and visual amenity is consistent with that provided in the Scoping Report (MarineSpace, 2019) but the scope and methodology has been developed as the Proposed Development design has evolved and responds to feedback received to date as set out Section 13.3.

13.4.1.2 The methodology for the assessment of seascape, landscape and visual impacts of the Proposed Development (consisting of WTGs, their semi-submersible floating platforms, array cable and offshore export cable) is set out in full in Volume 3 Technical Appendix 13.1 SLVIA Methodology. An overview is provided in the following sections.

13.4.2 Study Area

13.4.2.1 The spatial scope of the SLVIA Study Area is defined as 50 km from the Proposed Development as illustrated in Volume 2 Figure 13.2.

13.4.2.2 The Proposed Development is located offshore in the Celtic Sea, approximately 35.0 km from the closest section of the mainland Pembrokeshire coastline at St Ann's Head, and 30.1 km from the closest land at Skomer Island.

13.4.2.3 The SLVIA Study Area is defined as the outer limit of the area where significant effects could occur, based on professional judgement, guidance, consultations with relevant stakeholders, the Zone of Theoretical Visibility (ZTV) (Volume 2, Figure 13.11a-b) and identification of potential impact pathways.

13.4.2.4 Broadly, the SLVIA Study Area is formed by the Celtic Sea, the West and South Pembrokeshire Coastal Waters and Islands, Milford Haven, and the Pembrokeshire coastline between St David's Head in the north to Stackpole Head in the south.

13.4.2.5 Seascape, landscape and visual effects of the Proposed Development outside the 50 km radius SLVIA Study Area are scoped out of SLVIA as they are unlikely to be significant.

13.4.3 Desk Study

13.4.3.1 Baseline data collection has been undertaken to obtain information over the Study Area described in Section 13.5: Baseline Conditions. The current baseline conditions presented in 13.5: Baseline Conditions sets out currently available information from the Study Area.

13.4.3.2 The data sources that have been collected and used to inform this SLVIA are summarised in Table 13.5.

Table 13.5 – Data sources used to inform the SLVIA

Source	Date	Summary
CADW		Register of Historic Landscapes in Wales (available online: https://cadw.gov.wales/advice-support/historic-assets/conservation-areas-and-other-historic-assets/other-historic-assets-0
Campaign to Protect Rural England (CPRE)	2016	Interactive maps of the UK's light pollution and dark skies as part of a national mapping project (LUC/CPRE, 2016). Open Source data used to understand and illustrate baseline lighting levels. (available online: https://www.nightblight.cpre.org.uk/)
Google Earth Pro	2020	Aerial photography
Long Distance Walkers Association	2020	Overview map for Long Distance Paths and Walks (available online: https://www.ldwa.org.uk/ldp/public/ldp_overview_map.php)
Met Office	2010-2020	Visibility Data. Visibility bands every 1 km up to 30 km, then every 5 km up to 50 km, then every 10 km up to 70 km, and >70 km
National Trust	2020	Any specific visitor attractions / tourist destinations (available online: https://www.nationaltrust.org.uk/days-out)
NRW	2015	National Seascape Assessment for Wales (NRW Evidence Report No. 80) https://naturalresources.wales/media/682028/mca-00-technical-report-summary-method-appendix.pdf

Source	Date	Summary
NRW	2009	Wales National Landscape Character Areas https://naturalresources.wales/evidence-and-data/maps/nlca/?lang=en
NRW		LANDMAP https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/evidence-to-inform-development-planning/landmap-the-welsh-landscape-baseline/?lang=en
NRW	2021	Dark Skies and Light Pollution Map Wales https://luc.maps.arcgis.com/apps/opsdashboard/index.html#/1cd6ba8a1d7d4a62aff635cfcbaf4aec
Oceanwise		Marine and coastal mapping data, ferry routes.
OPEN internal dataset	2020	Public Rights of Way
Ordnance Survey	2019	1:50,000 scale mapping
Ordnance Survey	2019	1:25,000 scale mapping
Ordnance Survey Open Data	2019	OS County Region, Local Unitary Authority, Railways, Road and Settlements
Ordnance Survey	2019	OS Terrain 5 Digital Terrain Model (DTM)
Royal Yachting Association (RYA)	2013	Cruising routes for recreational yachting
PCNP/NRW	2013	PCNP Seascape Character Assessment https://www.pembrokeshirecoast.wales/wp-content/uploads/archive/npa_2013_13_06_26_ordinary_spg_report_web_only_full_version_of_annex_2.pdf
PCNP	2020	PCNP Landscape Character Supplementary Planning Guidance (SPG) (Interim SPG for LDP2) https://www.pembrokeshirecoast.wales/planning/planning-policy/local-development-plan-2/supplementary-planning-guidance-ldp2/landscape-supplementary-planning-guidance-interim/
Pembrokeshire County Council	2019	Pembrokeshire Landscape Character Assessment (Consultation Draft) https://www.pembrokeshire.gov.uk/adopted-local-development-plan/landscape-character-assessment
Pembrokeshire County Council	2013	Pembrokeshire County Council Local Development Plan (LDP) and Local Development Plan Review (LDP2) https://www.pembrokeshire.gov.uk/local-development-plan

Source	Date	Summary
Sustrans	2020	National Cycle Network (GIS dataset) (available online: https://www.sustrans.org.uk/)

13.4.4 Site Visit / Surveys

13.4.4.1 The SLVIA undertaken as part of the ES has been informed by desk-based studies, stakeholder consultations and field survey work undertaken within the SLVIA Study Area. The landscape, seascape and visual baseline has been informed by desk-based review of landscape and seascape character assessments, and the ZTV, to identify receptors that may be affected by the Proposed Development and produce written descriptions of their key characteristics and value.

13.4.4.2 Interactions have been identified between the Proposed Development and seascape, landscape and visual receptors, to predict potentially significant effects arising and measures are proposed to mitigate effects.

13.4.4.3 For those receptors where a detailed assessment is required, primary data acquisition has been undertaken through a series of surveys. These surveys include field survey verification of the ZTV from terrestrial landscape character areas (LCAs), seascape based surveys to Skomer and Skokholm Islands, micro-siting of viewpoint locations, panoramic baseline photography and visual assessment survey from all representative viewpoints. These surveys were undertaken in June and August 2021 as described in Table 13.6. Field work over the duration of the assessment has been partly restricted due to the travel restrictions in place during the COVID-19 pandemic, including requirements for assessors to 'stay local/at home' during certain periods, restricted access to certain visitor locations due to closures and limited accommodation availability.

Table 13.6 – Site surveys undertaken

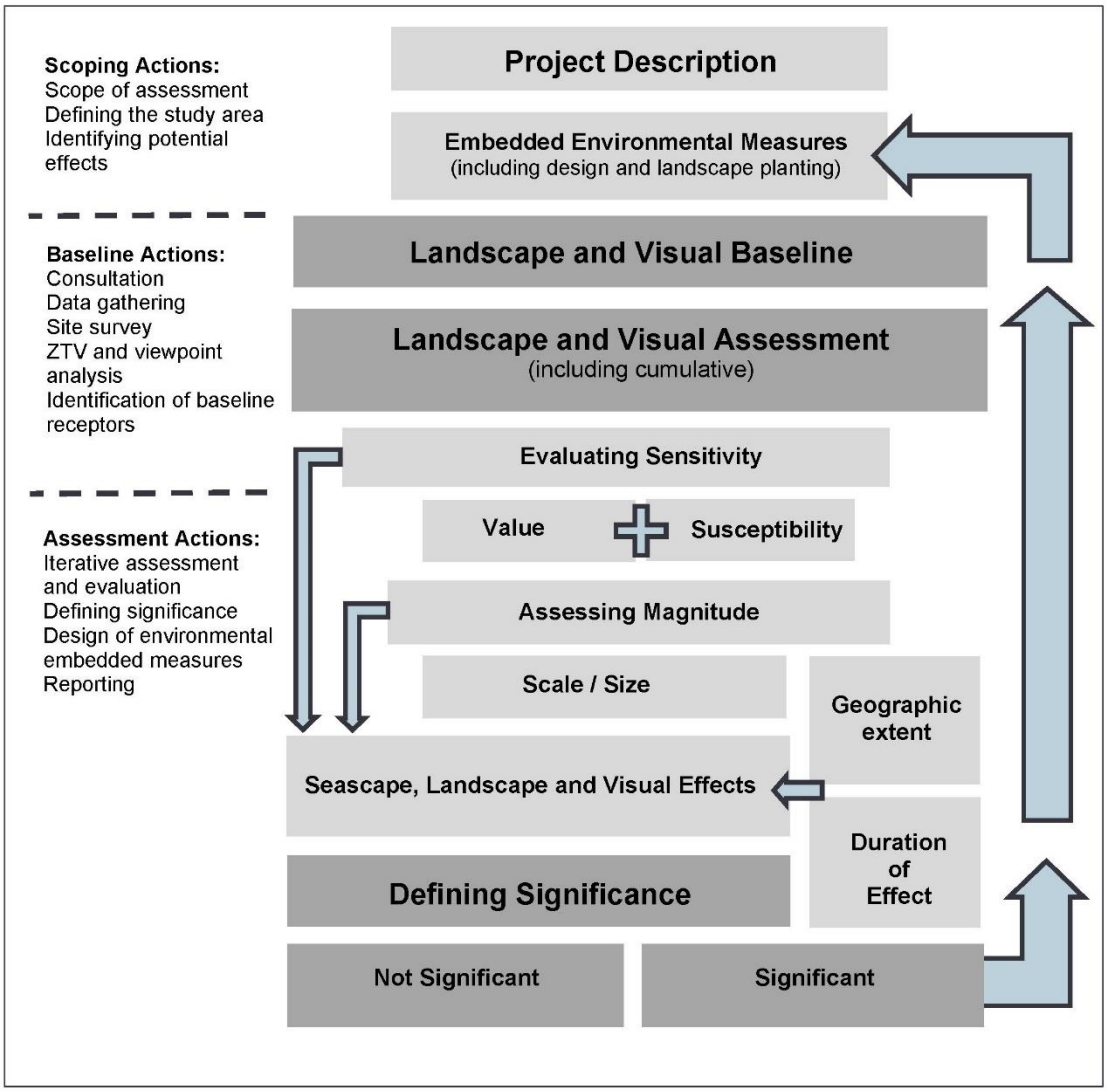
Survey date	Scope of survey	Survey status
June 2021	Seascape, landscape and visual assessment surveys primarily within the Pembrokeshire Coast National Park, coastal waters and islands, to undertake viewpoint photography and collect baseline data on seascape character, landscape character and visual amenity associated with views of the Proposed Development and in accordance with methodology such as in GLVIA3 (Landscape Institute, 2013) and TGN 06/19 (Landscape Institute, 2019).	Surveys completed, with further surveys to be undertaken from remaining night-time viewpoints.
August 2021	Completion of night-time viewpoint photography from Viewpoint D and further inter-related surveys within the onshore LVIA Study Area.	Surveys completed

13.4.5 Assessment of Potential Effect Significance

Overview

13.4.5.1 The assessment has been undertaken in accordance with the Landscape Institute and IEMA (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3), and other best practice guidance. An overview of the SLVIA process is provided here and illustrated, diagrammatically in Table 13.7.

Table 13.7 – Overview of approach to SLVIA



13.4.5.2 The SLVIA assesses the likely effects that the construction, operation and decommissioning of the Proposed Development on the seascape, landscape and visual resource, encompassing effects on seascape/landscape character, designated landscapes, visual effects and cumulative effects.

13.4.5.3 An appropriate and proportionate level of assessment has been undertaken and agreed through consultation at the scoping stage. The level of assessment may be 'preliminary' (requiring desk-based data analysis) or 'detailed' (requiring site surveys and investigations in addition to desk-based analysis).

13.4.5.4 The seascape, landscape and visual assessment unavoidably, involves a combination of quantitative and qualitative assessment and wherever possible a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach.

Defining impact significance

13.4.5.5 The seascape, landscape and visual effects (and whether they are significant) is determined by an assessment of the 'sensitivity' of each receptor or group of receptors and the 'magnitude of change' that would result from the Proposed Development.

13.4.5.6 The evaluation of sensitivity takes account of the value and susceptibility of the receptor to the Proposed Development. This is combined with an assessment of the magnitude of change which takes account of the size and scale of the proposed change. By combining assessments of sensitivity and magnitude of change, a level of seascape, landscape or visual effect can be evaluated and determined. The resulting level of effect is described in terms of whether it is significant or not significant, and the geographical extent, duration and the type of effect is described as either direct or indirect; temporary or permanent (reversible); cumulative; and beneficial, neutral or adverse.

Sensitivity

13.4.5.7 The sensitivity of seascape, landscape and visual receptors is an expression of the combination of the judgements made about the value of that receptor and its susceptibility to the specific type of change or the development proposed. Landscape value is the ‘inherent’ component, which is independent of the development proposal, while the other component, susceptibility, is development specific.

13.4.5.8 The value of a seascape, landscape or view receptor is a reflection of the value that society attaches to that seascape, landscape or view. There are a range of factors that are used to establish value but the presence of designations at national or local levels often reflects the level of value or importance they signify to society. The range of factors that can be considered when identifying landscape value include natural heritage, cultural heritage, landscape condition, associations, distinctiveness, recreational, perceptual (scenic), perceptual (wildness and tranquillity) and functional factors (Landscape Institute, 2021).

13.4.5.9 The susceptibility of a seascape or landscape to change is a reflection of its ability to accommodate the changes that will occur as a result of the addition of the Proposed Development, based on its characteristics, robustness, scale, topography, openness/enclosure, perceptual qualities and the associations between the landscape/seascape receptor and the Proposed Development. The susceptibility of visual receptors (people) relates mainly to the activity of the viewer (residents, motorists, walkers etc) and the experience of the viewer - the extent to which attention or interest may be focused on the view and visual amenity, which combine to influence how susceptible viewers are to the potential effects of the Proposed Development.

13.4.5.10 An overall assessment of the sensitivity of each seascape, landscape and visual receptor has been made by combining the assessment of the value of the receptor and its susceptibility to change. In SLVIA, sensitivity is specific to the Proposed Development and to the location in question. An overall level of sensitivity has been applied for each visual receptor or view – high, medium-high, medium, medium-low or low. These levels are not defined as such, however the basis for sensitivity assessments has been made clear using evidence and professional judgement in the evaluation of each receptor, with reference to criteria that tend towards higher or lower sensitivity levels as set out in Volume 3 Technical Appendix 13.1: SLVIA Methodology.

Magnitude

13.4.5.11 The magnitude of change affecting seascape, landscape and visual receptors is an expression of the scale of the change that will result from the Proposed Development and is dependent on a number of variables regarding the size or scale of the change that will arise as a result of the Proposed Development. The geographic extent over which the change will be experienced is also assessed, which is distinct from the size or scale of change. Magnitude levels for the SLVIA are defined in Table 13.8.

Table 13.8 – Magnitude Levels for Seascape, Landscape and Visual Receptors

Magnitude	Definition
High	The Proposed Development will result in a high level of alteration to the baseline characteristics of the seascape/landscape or existing view, forming the prevailing influence and/or introducing elements that are uncharacteristic in the baseline landscape/seascape or view. The addition of the Proposed Development will result in a large-scale change, loss or addition to the baseline seascape/landscape or view.
Medium-high	Intermediate rating with combination of criteria from high magnitude (described above) and medium magnitude (described below).
Medium	The Proposed Development will result in a medium level of alteration to the baseline characteristics of the seascape/landscape or existing view, forming a readily apparent influence and/or introducing elements that are potentially uncharacteristic in the baseline seascape/landscape or view. The addition of the Proposed Development will result in a medium-scale change, loss or addition to the baseline seascape/landscape or view.
Medium-low	Intermediate rating with combination of criteria from medium magnitude (described above) and low magnitude (described below).
Low	The Proposed Development will result in a low level of alteration to the baseline characteristics of the seascape/landscape or existing view, providing a slightly apparent influence and/or introducing elements that are characteristic in the baseline seascape/landscape or view. The addition of the Proposed Development will result in a small-scale change, loss or addition to the baseline seascape/landscape or view.
Negligible	The Proposed Development will result in a negligible alteration to the baseline characteristics of the seascape/landscape or existing view, providing a barely discernible influence and/or introducing elements that are substantially characteristic in the baseline seascape/landscape or view. The addition of the Proposed Development will result in negligible change, loss or addition to the baseline seascape/landscape or view.

Significance of Effect

13.4.5.12 The significance of the effect upon seascape, landscape and visual receptors is determined by correlating the magnitude of the impact and the sensitivity of the receptor, as presented in Table 13.9.

13.4.5.13 The significance of the effect on each seascape/landscape character and visual receptor is dependent on all of the factors considered in the sensitivity of the receptor and the magnitude of change resulting from the Proposed Development. Factors which influence levels of sensitivity and magnitude of change assessed in the SLVIA are set out in full in Volume 3 Technical Appendix 13.1: SLVIA Methodology. Judgements on sensitivity and magnitude of change are combined to arrive at an overall assessment as to whether the Proposed Development will have an effect that is significant or not significant on each seascape/ landscape and visual receptor.

13.4.5.14 The matrix in Table 13.9 is used as a guide to help inform the threshold of significance when combining sensitivity and magnitude to assess significance. On this basis potential impacts are assessed as of negligible, minor, moderate and major. In those instances where there would be no effect, the magnitude has been recorded as 'Zero' and the level of effect as 'None'.

13.4.5.15 For the purposes of this assessment, any effects with a significance level of major and major/moderate have been deemed significant in EIA terms (dark shaded boxed in Table 13.9**)**. 'Moderate' levels of effect (indicated in mid-grey in Table 13.9) have the potential, subject to the assessor's professional judgement, to be considered as significant or not significant, depending on the sensitivity and magnitude of change factors evaluated. These assessments are explained as part of the assessment, where they occur. Significance can therefore occur at a range of levels depending on the magnitude and sensitivity, however in all cases, a significant effect is considered more likely to occur where a combination of the variables results in the Proposed Development having a defining effect on the landscape/seascape character or view. Definitions are not provided for the individual categories of significance shown in the matrix and the reader should refer to the detailed definitions provided for the factors that combine to inform sensitivity and magnitude

13.4.5.16 Effects assessed as being either moderate/minor, minor, minor/negligible or negligible level are assessed as not significant (white shaded boxes in Table 13.9).

13.4.5.17 In line with the emphasis placed in GLVIA3 upon the application of professional judgement, an overly mechanistic reliance upon a matrix is avoided through the provision of clear and accessible narrative explanations of the rationale underlying the assessment made for each landscape and visual receptor.

Table 13.9 – Impact Significant Matrix

		Sensitivity				
		High	**Medium-high**	**Medium**	**Medium-low**	**Low**
Magnitude	**High**	Major (**Significant**)	Major (**Significant**)	Major / moderate (**Significant**)	Moderate (**either significant or not significant**)	Moderate (**either significant or not significant**)
	Medium-high	Major (**Significant**)	Major/ moderate (**Significant**)	Moderate (**either significant or not significant**)	Moderate (**either significant or not significant**)	Moderate / minor (**Not significant**)
	Medium	Major / moderate (**Significant**)	Moderate (**either significant or not significant**)	Moderate (**either significant or not significant**)	Moderate / minor (**Not significant**)	Minor (**Not significant**)
	Medium-low	Moderate (**either significant or not significant**)	Moderate (**either significant or not significant**)	Moderate/ minor (**Not significant**)	Minor (**Not significant**)	Minor (**Not significant**)
	Low	Moderate / minor (**Not significant**)	Moderate / minor (**Not significant**)	Minor (**Not significant**)	Minor (**Not significant**)	Negligible (**Not significant**)
	Negligible	Minor (**Not significant**)	Minor (**Not significant**)	Minor (**Not significant**)	Negligible (**Not significant**)	Negligible (**Not significant**)

Geographical extent

13.4.5.18 The geographic extent over which the seascape/ landscape and visual effects will be experienced is also assessed, which is distinct from the size or scale of effect. This evaluation is not combined in the assessment of the level of magnitude, but instead expresses the extent of the receptor that will experience a particular magnitude of change and therefore the geographical extents of the significant and not significant effects. The geographic extent of the effects varies depending on the specific nature of the Proposed Development and is principally assessed through analysis of the extent of perceived changes through visibility of the Proposed Development using the ZTV (Volume 2, Figure 13.11a-b) and field survey verification.

Duration and reversibility

13.4.5.19 The duration and reversibility of seascape, landscape and visual effects is based on the period over which the Proposed Development is likely to exist and the extent to which it will be removed and its effects reversed at the end of that period. OPEN's methodology does not include duration and reversibility as part of magnitude of change, as there is potential that the reversibility aspect could alter or reduce potentially significant effects even though they are long-term. The duration and reversibility of the effects is instead determined separately in relation to the assessed effects.

13.4.5.20 Long-term, medium-term and short-term seascape/ landscape effects are defined as follows:

- long-term – more than 10 years;
- medium-term – 6 to 10 years; and
- short-term – 1 to 5 years.

13.4.5.21 Duration and reversibility are not incorporated into the assessment of magnitude of change, but are stated separately in relation to the assessed effects (i.e. as short/medium/long-term and temporary/permanent) and are considered as part of drawing conclusions about significance, combining with other judgements on sensitivity and magnitude, to allow a final judgement to be made on whether each effect is significant or not significant.

Visibility

13.4.5.22 The varied clarity or otherwise of the atmosphere will reduce the number of days (the 'frequency') upon which views of the Proposed Development will be available from the coastline and hinterland, and is likely to inhibit clear views, rendering the WTGs located at long distance offshore, as visually recessive within the wider seascape. The effects of the construction and operation of the offshore infrastructure will vary according to the weather and prevailing visibility. This means that effects that are may be significant in the SLVIA under 'very good' or 'excellent' (i.e. worst-case/optimum) visibility conditions, may be not significant under moderate, poor or very poor visibility conditions.

13.4.5.23 Within the visual assessment there is an assessment of the frequency or 'likelihood' of effect' for each viewpoint, based on the distance of the Proposed Development, Met Office visibility data and professional judgement based on experience of viewing offshore wind farms in different conditions and distances. Likely visibility frequency has therefore been taken into consideration in the assessment of magnitude and significance, with greater weighting for viewpoints located at very long distances, over 40 km, where 'excellent' visibility is required and is known to occur infrequently.

13.4.5.24 For receptors and viewpoints located at closer range, where visibility frequency is likely to be higher, and less of a factor in the magnitude of change, judgements are based on a worst-case position of optimum visibility. The photographs used in the photomontages shown in Volume 2 Figures 13.20 – Figure 13.40 were captured in June 2021 (with the exception of one night-view captured in August 2021) in excellent visibility conditions and show this maximum potential visibility of the Proposed Development. In reality the degree and extent of visual effects arising from the Proposed Development will be influenced by the prevailing weather and visibility conditions and such excellent visibility occurs relatively infrequently, as described in Section 13.5.2.

Scope of assessment

13.4.5.25 The SLVIA methodology provides for an approach to identifying receptors that could be significantly affected by the Proposed Development that need to be 'scoped in' for further assessment in the SLVIA (scoped in) and receptors that could not be significantly affected and that can be 'scoped out' of the assessment. This 'initial assessment' is undertaken as part of the assessment of potential effects in Section 13.6.

13.4.5.26 The general principle is that receptors that could be significantly affected will be identified based on their sensitivity/importance/value and the spatial and temporal scope of the assessment. Consultation has also informed the selection of potential receptors that could be significantly affected by the Proposed Development.

13.4.5.27 The assessment of whether an effect has the potential to be of likely significance has been based upon review of existing evidence base, consideration of commitments made (embedded environmental measures), professional judgement and where relevant, recommended aspect specific methodologies and established practice. In applying this judgement, use has been made of a simple test that to be significant an effect must be of sufficient importance that it should be taken into consideration when making a development consent decision.

13.4.5.28 For those matters 'scoped in' for assessment, the approach to level of assessment is tiered. A 'preliminary' or 'detailed' assessment is undertaken as follows:

- a 'preliminary assessment' approach for an environmental aspect / effect which may include secondary baseline data collection (for example desk-based information) and qualitative assessment methodologies. A preliminary assessment of all seascape, landscape and visual receptors within the ZTV is undertaken in Table 13.22 to Table 13.28 in Section 13.7 (visual receptors), Section 13.8 (seascape receptors) and Section 13.9 (landscape receptors), using desk-based information and ZTV analysis (Volume 2, Figure 13.14 – 13.17). The preliminary assessment identifies which seascape, landscape and visual receptors are unlikely to be significantly affected, which are subject to a preliminary assessment, and those receptors that are more likely to be significantly affected by the Proposed Development which require a 'detailed assessment'; and
- a 'detailed assessment' approach is undertaken for seascape, landscape and visual receptors/effects that are identified in the preliminary assessment as requiring detailed assessment. This detailed assessment may include primary baseline data collection (for example through site surveys), quantitative and qualitative assessment methodologies, and modelling such as ZTV analysis (Volume 2, Figure 13.14 – 13.17) and wireline/photomontage visualisations (Volume 2, Figures 13.21 – 13.39).

13.4.5.29 To ensure the provision of a proportionate EIA and an ES that is focused on likely significant effects, the assessment takes into account the considerable levels of existing environmental information available, extensive local geographical knowledge and understanding of the site and surroundings gained from ongoing site selection analysis and environmental surveys.

13.4.5.30 The spatial and temporal scope of the assessment enables the identification of receptors which may experience a change as a result of the Proposed Development. The receptors identified that may experience likely significant effects for seascape, landscape and visual amenity are set out in the preliminary assessment in Table 13.22 to Table 13.28 and assessed in detail in Section 13.7 - 13.9.

Visual representations methodology

13.4.5.31 The methodology for the production of visual representations (photomontages and ZTVs) of the Proposed Development is set out in full in Volume 3 Technical Appendix 13.1: SLVIA Methodology.

13.4.5.32 The visual representations presented in Volume 2, Figures 13.21 to Figure 13.40, have been produced in accordance with Visual Representation of Wind farms (NatureScot, 2017) and Visual Representation of Development Proposals (TGN 06/19) (Landscape Institute, 2019).

13.4.5.33 The ZTVs in Volume 2, Figures 13.11 to Figure 13.20 have also been produced in line with guidance in Visual Representation of Wind farms (NatureScot, 2017) and are generated using GIS software (ESRI ArcGIS Version 10.5) to model the theoretical visibility of the Proposed Development.

13.4.5.34 ZTVs and visual representations are produced on the assumption that the Proposed Development WTGs are floating on Highest Astronomical Tide (HAT) sea level at their maximum blade tip height (270m). Sea level is modelled at 4.14m above Ordnance datum (OD), which is equivalent of HAT for Milford Haven (7.85m above Chart Datum (CD)).

13.4.6 Standard Mitigation

13.4.6.1 A range of standard mitigation measures has already been applied to the Project as part of the over-arching site selection and iterative design process (see below and Chapter 3: Site Selection and Alternatives). These have been introduced in order to minimise potential impacts of the Proposed Development on any affected receptors.

13.4.6.2 Standard mitigation measures which the Proposed Development has already implemented, or is committed to in the future, in order to minimise potential impacts on seascape, landscape and visual receptors are listed below.

- Maximum blade tip height is 270 m from HAT and maximum rotor diameter of 242 m.
- The colour of the WTG tower and blades will be agreed with relevant stakeholders and will likely be RAL 7035 (light grey) from 15 m above water line which provides standard mitigation as a recessive colour in the seascape/sky backdrop. The Structure (Floater and Tower) will likely be painted RAL 1023 (traffic yellow) from the Floater Water Line to approximately +15 m above Floater Water Line.
- The Project will comply with legal requirements with regards to shipping, navigation and aviation marking and lighting.
- The Project will agree a lighting scheme for the aviation lighting of structures (turbines and offshore support platforms) above 60 m in height with the relevant authorities. Aviation warning lights will have reduced intensity at and below the horizontal and allow a further reduction in lighting intensity when the visibility in all directions from every wind turbine is more than 5 km.

13.4.7 Assessment for Residual Effect Significance

13.4.7.1 The impact assessments and conclusions on significance of effect presented in Section 13.6 assume that these standard mitigation measures listed above have been successfully implemented. Where significant environmental impacts remain even after these standard measures have been factored in, then project-specific mitigation measures are detailed and the residual significance of effect presented.

13.4.8 Limitations to Assessment

13.4.8.1 There are some data limitations relating to seascape, landscape and visual amenity however these do not affect the robustness of this assessment as the gaps are limited and wouldn't affect the assessments of likely significance assessed for relevant receptors.

13.4.8.2 There are limitations in the production of photomontage and wireline visualisations and ZTVs as assessment tools, and limitations in the accuracy of digital terrain model (DTM) data, which are described in Volume 3 Technical Appendix 13.1: SLVIA Methodology. The use of detailed terrain models (OS Terrain 5), production of visualisations to recognised standard and field survey assessment of impacts minimises these limitations.

13.4.8.3 Met Office visibility data has limitations in its application to judgements about wind farm visibility. The visibility data provides some understanding and evidence basis for evaluating the visibility of the WTGs against their background. Effects have not been downgraded either in magnitude or significance due to variations as a result of weather/visibility and how frequently/infrequently the effects will be experienced. Effects are based on the worst-case with clear visibility and need to be considered in context of the limited time effects will actually occur.

13.4.8.4 Some data limitations have arisen due to restrictions or delay to site surveys as a result of COVID-19 restrictions, however limitations have been minimised through the timing of surveys when travel and access restrictions were eased. PINS Advice Note Seven notes the need for flexibility and agreement of stakeholders as a result of COVID-19 restrictions.

13.4.8.5 As described in full in Section 13.12, there are limitations with regards projects included in the cumulative assessment, particularly those at Scoping stage such as Project Valorous, in terms of the degree to which they are well-defined or of sufficient detail to the point that they can be assessed, and how likely the projects are to be taken forward as currently defined. There are uncertainties still present, in particular, for Project Valorous, no lease agreement is in place yet, geophysical and geotechnical studies are not complete, and the dimension of the turbines are not confirmed.

13.5 Baseline Conditions

13.5.1 Introduction

13.5.1.1 An overview of the current baseline conditions for seascape, landscape and visual amenity is outlined in this section and then subsequently described in further detail within each of the main receptors in the assessment in Section 13.7 - 13.9.

13.5.1.2 The baseline provides *a 'description of the relevant aspects of the current state of the environment (baseline scenario)'* as required by the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. The 'relevant aspects' for seascape, landscape and visual are considered to be those that may be changed by the Proposed Development, either through physical effects or visibility/views of the Proposed Development.

13.5.1.3 In line with GLVIA3 (Landscape Institute, 2013), the baseline therefore *'establishes the area in which the development may be visible'* in order to define the relevant aspects of the current seascape, landscape and visual environment of the SLVIA Study Area.

13.5.2 Visual baseline - views and visual amenity

Nature of views – overview

13.5.2.1 An understanding of the baseline visual resource and nature of views is provided in the National Seascape Assessment for Wales (NRW, 2015), with reference to the three national Marine Character Areas (MCAs) (West Pembrokeshire (MCA18), Milford Haven (MCA21) and South Pembrokeshire (MCA22)), which define the majority of the coastal and inshore waters of Pembrokeshire.

13.5.2.2 The views from the northern part of the SLVIA Study Area from the West Pembrokeshire Coastal Waters and Islands (MCA18) are described (NRW, 2015) as having '*uninterrupted vistas define character, including to famous cliffs, islands (Ramsey, Skomer and the Bishops) and open sea from several high viewpoints –accessible via the Coast Path'*. The presence of islands is noted as featuring *'heavily in views being overlooked from the mainland'*. Ramsey, Skomer and Skokholm are all noted as being '*an integral part of sea views from the coastline'*. Strong intervisibility between the north and south cliffs enclosing St Brides Bay can also be gained from the numerous headlands. The elevated peaks of Carn Llidi and Garn Fawr are also noted as providing *'opportunities for panoramic views of the coastline'*; and *'the view from Carn Llidi to Ramsey Island known as an iconic National Park view'*.

13.5.2.3 The views from the central part of the SLVIA Study Area fall within Milford Haven (MCA21) and are described as *'varied views within the estuary often contained and channelled by the surrounding steep hills of PCNP, opening up towards the wide estuary mouth. The oil refinery and associated infrastructure dominates views into the MCA, including from the surrounding seas'*. The presence of man-made elements and industrial influences is much more notable in views around Milford Haven within this central part of the SLVIA Study Area, with *'masts, industrial towers, chimneys and the network of electricity pylon lines all form features on the skyline in distant cross-estuary views; ferries and large tankers become the focus in the middle ground'.* Visibility and views also notable as changing along with the character of the ria system; *'open and panoramic views can be gained from headlands across the Haven north and south, from Rat Island to St Ann's Head and out to open seas'.*

13.5.2.4 From the South Pembrokeshire coast (MCA 22) in the southern parts of the SLVIA Study Area, there are *'wide, unspoilt views out to sea and along the coastline from headlands and cliff tops, as well as from sections of the Pembrokeshire Coast Path, including views to Caldey Island, as well as Lundy Island and the North Devon coast'.* The views from the sea and from headlands along this predominately unsettled coastline are noted as being *'key to how this area is experienced, with red sandstone cliffs and white limestone cliffs creating areas of distinct character and a dramatic backdrop'*. Prominent local landmarks are located on these low cliffs, '*forming historical features when viewed from the sea'* and the headlands of St Govan's Head, Stackpole Head and Old Castle Head *'act is visual markers for sea users'*.

13.5.2.5 The nature of views from the PCNP coastline is also described in PCNP Seascape Character Assessment (PCNP, 2013), which highlights '*the intervisibility of shore, hillslope and sea'* and '*the overriding visual experience of the Pembrokeshire seascape is of open sea meeting diverse and indented coasts of rocky cliffs and shores, interspersed with sweeping sandy bays and dunes and intimate coves and harbours'*. The '*diversity of views'* is noted, including both *'panoramic and long-distance views out over the open sea, particularly from the headlands'* and *'small scale, enclosed views to the horizon framed by landform in the many coves and beaches'*. There are both *'open views to an unspoilt sea horizon'*, often experienced from key places such as headlands, coastal hills and the Pembrokeshire Coast Path, but also contained views, where *'rocky landforms frame views out to open sea to the west'*. The presence of *'strategic commanding views of the sea and coast'* often from, or featuring historic monuments, is also notable. Given this visual diversity, coastal views feature extensively in art and the area's seascapes have inspired many artists.

13.5.2.6 The PCNP Special Qualities Background Paper (PCNP, 2018) identifies a number of the special qualities of the PCNP that place particular value on the views and visual amenity of the Pembrokeshire coastline:

- *'Coastal splendour – the splendour of its coastline, its spectacular scenery, and rugged, unspoilt beauty, provide a scenic quality which was recognised in its designation as a National Park'. 'Spectacular, panoramic views' are referred to as part of this special quality;*
- *'Space to breathe – the opportunity to access many areas for enjoyment of the stunning views'; and*
- *'Diversity and combination of Special Qualities' – the blend of sea, beautiful landscapes, rivers, cliffs and stunning views make this a unique environment in Britain'.*

Blade Tip ZTV

13.5.2.7 The visual baseline focuses on and describes the area in which the Proposed Development may be visible, as defined by its Zone of Theoretical Visibility (ZTV) (Volume 2, Figure 13.11a-b), the different groups of people who may experience views of the Proposed Development (visual receptors), the viewpoints where they will be affected and nature of views at those points.

13.5.2.8 Seascape, landscape and visual effects will only occur where the Proposed Development is visible and its introduction of changes or influences the visual amenity and views experienced by people. The area from which the Proposed Development may be visible is defined by the Blade Tip ZTV shown in Volume 2, Figure 13.11a (A3) and Figure 13.11b (A1). The ZTV is based on the maximum blade tip height of the Proposed Development (270 m).

13.5.2.9 The ZTV has been calculated using digital terrain data, which does not account for the screening effects of vegetation or built form. It also does not indicate the decrease in visibility that occurs with increased distance from the array area or atmospheric visibility due to the weather conditions. The Blade Tip ZTV therefore presents a theoretical worst-case and is likely to overstate the actual visibility of the Proposed Development, which would be further screened by vegetation or built form and prevailing atmospheric conditions.

13.5.2.10 The ZTV in Volume 2, Figure 13.11b shows that there is no visibility of the Proposed Development from the seascape beyond approximately 70 km, due to the effects of earth curvature occurring, which would effectively 'hide' the WTGs behind the horizon beyond this distance, and very limited visibility of reduces numbers of blade tips between 60-70 km.

13.5.2.11 The ZTV (Volume 2, Figure 13.11b) also shows that the Proposed Development will not be visible from areas shown in 'white' in the mapping with no ZTV colouring, where the terrain prevents views of the Proposed Development. Notably, these areas where the Proposed Development will not be visible include:

- The seascape and Pembrokeshire coastline to the north and east of St. David's Head, extending outside the SLVIA Study Area;
- Much of the seascape between St David's Head and Ramsey Island, including Whitesands Bay, much of the Ramsey Sound and the north side of Ramsey Island, where views towards the Proposed Development are screened by the landform of Ramsey Island;
- The southern parts of the seascape of St Bride's Bay and its coastline between Nolton Haven and Little Haven, and the northern Marloes coastline and waters between Little Haven and Skomer Island, where views towards the Proposed Development are screened by the landform of Skomer Island and Marloes;
- Parts of the Broad Sound where views towards the Proposed Development are screened by the landform of Skokholm Island;
- Areas of Outer Milford Haven along the inland side of the coastline between St Ann's Head, Dale, Dale Roads and Sandy Haven, where the intervening landforms at St Ann's Head prevents views of the Proposed Development;
- Large areas of Inner Milford Haven, between Milford Haven itself, Pembroke Dock, Pembroke, the Pembroke River and Angle/Angle Bay, where the landforms that form the estuary limit views out to the open seascape; and
- The seascape and coastline to the east of St Govan's Head, extending to Stackpole, Stackpole Quay and Freshwater East.

13.5.2.12 The ZTV (Volume 2, Figure 13.11b) shows that the main areas of higher theoretical visibility of the Proposed Development will be from the open seas within the SLVIA Study Area, the offshore and inshore waters to the south and west of the Pembrokeshire coast and the adjacent south-western facing coastlines of the PCNP, including:

- the coastal waters and south-western coastal edges of the seascape around Skokholm and Gateholm islands, at distances of approximately 30.3 km from Skokholm;
- the coastal waters and south-western coastal edges of Skomer Island, at distances of approximately 33.7 km from Skomer;
- the coastal parts of the Marloes and Dale area between Marloes peninsula, Marloes Sands, West Dale Bay and St Ann's Head at distances of approximately 35.2 km-from St Ann's Head;
- parts of Outer Milford Haven, between St Ann's Head on the north side and West Angle Bay and Sheep Island on the southern side, at distances of approximately 39.3 km from West Angle Bay;
- The coastline and coastal waters between Sheep Island and Freshwater West, at distances of approximately 40.6 km from Freshwater West;

- The coastal waters and south-western coastline of the Castlemartin area (between Castlemartin, Stack Rocks and St Govan's Head), at distances of approximately 39 km from Linney Head and 42.5 km from Stack Rocks;
- The coastal waters and southern facing coastline of St David's peninsula, Ramsey Island and the northern parts of St Brides Bay, at distances of 47.8 km from Caerfai Bay and 43.5 km from Ramsey Island; and
- Scattered elevated inland areas at 40-50 km to the north and south of Milford Haven outside the PCNP.

Visual Receptors

13.5.2.13 The principal visual receptors in the SLVIA Study Area are focused along the closest sections of the Pembrokeshire coastline, including people within settlements, driving on roads, visitors to tourist facilities or historic environment assets, and people engaged in recreational activity such as on walking and cycle routes where the sea is a strong influence in the baseline view.

13.5.2.14 The ZTV has been used to identify all of the visual receptors within the SLVIA Study Area that may have visibility of the Proposed Development, as shown in Volume 2, Figure 13.17a. These receptors that define the baseline are identified in Table 13.10. All other receptors that are not within the ZTV are scoped out of the SLVIA and are not considered further.

Table 13.10 – Visual receptors within ZTV

Type of receptor	Visual receptors partially within the ZTV
Settlements	Hundleton, Milford Haven, Nolton Haven, Stackpole, St David's, Upper Solva
Long distance recreational routes	Wales Coast Path (Pembrokeshire Coast Path) National Cycle Network Route (NCR) 4
Recreational ferry routes	Martin's Haven to Skomer Island St Justinians to Ramsey Island
Main road routes	A477, A487, A4076 B4319, B4320, B4325, B4326, B4327, B4341, B4583
Pembrokeshire beaches	Rickets Head Beach, Porthlysgi Bay, Caerbwdy Bay, Bullslaughter Bay, Frainslake Sands, Freshwater West, Marloes Sands, Westdale Bay
National Trust sites	Caerbwdy and Carn Nwchwm, Freshwater West and Gupton Farm, Kete, Llanunwas, Marloes Peninsula, Pointz Castle to Pen-y-Cwm, Solva Coast, St David's Commons, Stackpole Estate, St David's Head, Treginnis Peninsula.
Wildlife Trust / RSPB Reserves	Grassholm Island, Ramsey Island, Skokholm Island, Skomer Island

Wales Coast Path (Pembrokeshire Coast Path)

13.5.2.15 The Wales Coast Path is a continuous waymarked path around its entire coast. Through Pembrokeshire the path is referred to as the Pembrokeshire Coast Path and has National Trail status. The Pembrokeshire Coast Path enters the SLVIA Study Area at St David's Head in the north, taking a route south that largely follows the coastline to Stackpole at the southern edge of the SLVIA Study Area (Volume 2, Figure 13.17b). The large majority of the path also lies within the designated landscape of the PCNP, with the exception of the sections around inner Milford Haven. The closest part of the Pembrokeshire Coast Path is located 35.9 km from the Proposed Development. The total length of the path through the SLVIA Study Area is approximately 163 km. PCNP/Visit Pembrokeshire estimate that 10 to 15 days are required to complete the full walk between St Dogmaels in the north to Amroth in the south.

13.5.2.16 The Pembrokeshire Coast Path provides opportunities to provides access tracts of coast where in many places, no other means of public access exists. It also offers a linear experience where users of the path along the coastline are afforded views of the sea in an almost continuous manner, to a greater or lesser degree, with encloses bays, landforms and coast vegetation providing some stretches where views of the sea disappear, but these are relatively scarce and the sea is almost continually visible. There are also over 200 circular walks which link to the Pembrokeshire Coast Path and provide half day routes, short walks, plus easy access walks.

13.5.2.17 The 'Coast Path Challenge National Trail certificate scheme', defines 28 sections of the Pembrokeshire Coast Path, some of which fall within the SLVIA Study Area as listed in Table 13.11 and are mapped in Volume 2 Figure 13.17b. These sections are used as the basis for the further description and assessments of the visual effects of Proposed Development on views from the Pembrokeshire Coast Path in Section 13.6.

Table 13.11 – Pembrokeshire Coast Path

Section	From	To	Length (km)
3	Manorbier	Stackpole Quay	1.1
4	Stackpole Quay	Stack Rocks	12.0
5	Stack Rocks	Freshwater West	13.4
6	Freshwater West	Angle Church	12.7
7	Angle Church	Power Station	10.5
8	Power Station	Pembroke	6.8
9	Pembroke	Cleddau Bridge	3.9
10	Cleddau Bridge	Gelliswick	11.8
11	Gelliswick	Dale Village	26.1
12	Dale Village	West Dale Beach	9.9
13	West Dale Beach	Martin's Haven	6.8
14	Martin's Haven	St Bride's Beach	6.9
15	St Bride's Beach	Broad Haven	9.8
16	Broad Haven	Newgale	7.8
17	Newgale	Solva	1.2
18	Solva	Porthclais	8.5
19	Porthclais	St Justinians	8.4
20	St Justinians	Penberry	5.8

National Cycle Network Route (NCR) 4

13.5.2.18 NCR 4 is a long-distance cycling route from London to Fishguard in west Wales. There are two sections of NCR4 in the SLVIA Study Area, one in the north near St David's and one further south between Newgale Sands/Nolton Haven and Broad Haven (Volume 2, Figure 13.17a). The northern section near St David's is set back from the coast, to the north and east of St David's, is located over approximately 48 km from the Proposed Development and only affords coastal views over a short section to the east of St David's where it runs along minor roads parallel to the coast to the north of Caerfai Bay. The section of NCR4 that enters the Study Area to the south of Newgale Sands, largely follows the coastline and affords sea views out over the cliffs and havens to St Bride's Bay between Nolton Haven and Broad Haven. This is the closest point of NCR4 to the Proposed Development, at Broad Haven, at a distance of 47.3 km. Beyond Broad Haven, NCR4 extends takes a route inland and exits the SLVIA Study Area.

Main road routes

13.5.2.19 There are very few main 'A' roads within the SLVIA Study Area, with the principal main road route with potential for sea views being the A487 running between St David's and Solva, in the northern part of the SLVIA Study Area, located over approximately 48 km from the Proposed Development (Volume 2, Figure 13.17a). The A4076 and A477 connect Milford Haven with Johnston and Haverfordwest but they are set well inland, to the north of the inner Milford Haven, with limited views out to the Pembrokeshire coast to the west. The coastal parts of the SLVIA Study Area accessed primarily by minor road and several 'B' class roads, the closest of which with sea views being the B4320, B4327 and the B4319, all of which are over 39 km from the Proposed Deveopment. The B4320 affords intermitted views out to sea between Corston Beacon and West Angle Bay; the B4319 affords sea views between Warren and Freshwater West; and the B4327 mainly affords views north over St Bride's Bay.

Recreational ferry routes and Wildlife Trust/RSPB reserves

13.5.2.20 There are two main recreational ferry routes in the SLVIA Study Area which take visitors to from Martin's Haven to Skomer Island; and from St Justinians to Ramsey Island (Volume 2, Figure 13.17a). Skomer Island day trips allow visitors to land on the island between April and October after a 15 minute boat trip from Martin's Haven, to experience the wildlife and trails on Skomer before being picked up and returning to the mainland later in the day (5 hours). Skomer is a National Nature Reserve, surrounded by high dramatic sea cliffs and one of the most notable wildlife sites in Wales, primarily for its Puffins, yet the island and surrounding waters also boasts Manx Shearwaters, Dolphins, Harbour Porpoises, Atlantic Grey Seal, Razorbills, Gannets, Fulmars and the unique Skomer Vole. The island is surrounded by rich waters for wildlife which are part of the designated Marine Nature Reserve. There are panoramic views over Skomer, out to the Irish Sea and along the Pembrokeshire Coast from the elevated ground on the island such as the trig point (Viewpoint 4) (Volume 2, Figure 13.24).

13.5.2.21 Unlike Skomer, there are no day visitors on Skokholm Island, however visitors can stay on the island in limited numbers with self-catering visitor accommodation located in the 18th Century Farmhouse and renovated cow barns for short stays.

13.5.2.22 Ramsey Island is a dramatic offshore island has cliffs that rise up to 120 m, making them perfect for breeding seabirds, flocks of choughs and peregrines. Visitors can access the island via boat trip from St Justinians between April to 30th September and once on the island, there are walks along the coastal heathland and opportunities to experience the wildlife, taking in the views across the Irish Sea.

Pembrokeshire beaches

13.5.2.23 The beaches within Pembrokeshire act as key visitor focus along the coastline. There is a diversity of beaches including those with golden sands backed by dunes like Freshwater West and Broad Haven South, to small, secluded rocky coves, such a Cwm yr Eglwys. Protected by their National Park status, the PCNP's beaches have some of the cleanest waters and sands with many having Blue Flag and Green Coast awards. The main visitor beaches within the SLVIA Study Area that are highlighted by Visit Pembrokeshire are mapped in Volume 2 Figure 13.17a. Those within the ZTV include Porthclais Harbour, Caerfai Bay (Viewpoint 1), Nolton Haven (Viewpoint 2), Marloes Sands (near Viewpoint 13), West Dale Beach (near Viewpoint 12), West Angle Bay (Viewpoint 7) and Freshwater West (Viewpoint 10).

National Trust sites

13.5.2.24 The National Trust cares for approximately 96.5 km of Pembrokeshire's coastline. There are several National Trust sites within the SLVIA Study Area (Volume 2 Figure 13.17b), many of which are promoted by the National Trust as providing access to the best beaches, places for wildlife or heritage and they often providing a focus for visitor parking and access to the coastline. The main sites within the SLVIA Study Area consist, from north to south, St David's Head, Treginnis Peninsula, Caerbwdy and Carn Nwchwm, Solva Coast, Pointz Castle to Pen-y-Cwm, Marloes Peninsula, Kete, Freshwater West and Stackpole Estate. Many of these sites are promoted by the National Trust for public access and form areas of accessible coastline.

Blade Tip ZTV (with surface features)

13.5.2.25 The ZTV in Volume 2, Figure 13.12, accounts for some of the screening effects of woodland and settlements, which have been digitally added (both defined by OS OpenMap Local and indicatively modelled at 10 m height) to illustrate the reduced theoretical visibility that is gained when taking these surface features into account.

13.5.2.26 Visibility from streets, open spaces and low storey buildings within settlements will typically be contained within the built environment by surrounding built form. This is particularly evident in the ZTV in the Milford Haven area, where it shows that the presence of larger developed areas between Milford Haven and Pembroke Dock will limit views of the Proposed Development. Larger areas of woodland are generally located away from the coast and are often within the lower-lying ground and valleys, which limits their screening function, however areas of woodland do contribute to further limiting visibility of the Proposed Development particularly from the more distant parts of the Study Area away from the coast, between 40-50 km.

Horizontal Angle ZTV

13.5.2.27 The 'horizontal angle ZTV' in Volume 2, Figure 13.13 measures how much of the horizontal field of view is occupied by the Proposed Development, in theoretical views. It is calculated from a grid of receptors in the Study Area and measures the maximum spread from the furthest left to the furthest right theoretically visible turbine of the Proposed Development, as a horizontal angle in degrees. The horizontal angle ZTV provides a more realistic picture of the likely effect of the Proposed Development because the results reflect the effect that distance has on its apparent size and horizontal spread: a large object up-close has more visual impact than the same sized object further away (all other things being equal). The horizontal angle ZTV is displayed using coloured bands showing incremental degrees of horizontal angle, in order to highlight areas of higher effect.

13.5.2.28 The horizontal angle ZTV shows that the widest horizontal field of view is occupied in close proximity to the Proposed Development, particularly within the site itself, where the turbines occupy more than 180 degrees (50%) of the field of view, and within approximately 3 km, where it will occupy 90 - 180 degrees (25 to 50%) of the field of view. The horizontal angle ZTV also allows the following assessments to be made:

- the horizontal field of view occupied by the Proposed Development decreases considerably with distance;
- the Proposed Development will occupy less than 10 degrees of the horizontal field of views from the majority of onshore areas in the Study Area with visibility;
- the Proposed Development will occupy 10-20 degrees of the horizontal field of views from the closest terrestrial areas at Skomer, Skomer Island, Marloes Peninsula, Castlemartin and Outer Milford Haven;
- there will be no views from onshore areas of the SLVIA Study Area in which the Proposed Development will occupy more than 20 degrees of the horizontal field of view; and
- from the most distant parts of the SLVIA Study Area to the north at St David's peninsula, the Proposed Development will occupy less than 5 degrees of the horizontal field of some views.

13.5.2.29 The horizontal angle ZTV illustrates how the visual effect of the Proposed Development will diminish with distance; with less visual effect from distant locations, where it occupies a small angle of view, and a greater visual effect from locations at very close proximity in the sea near to the array area, where it occupies a larger angle of view at close range.

13.5.2.30 It should also be noted that this theoretical measure includes the full angle from the furthest left to the furthest right extent of the Proposed Development, and that in reality the WTGs are sited with visible space/gaps between them, which allow views through the site to the seascape or skyline beyond.

Visibility

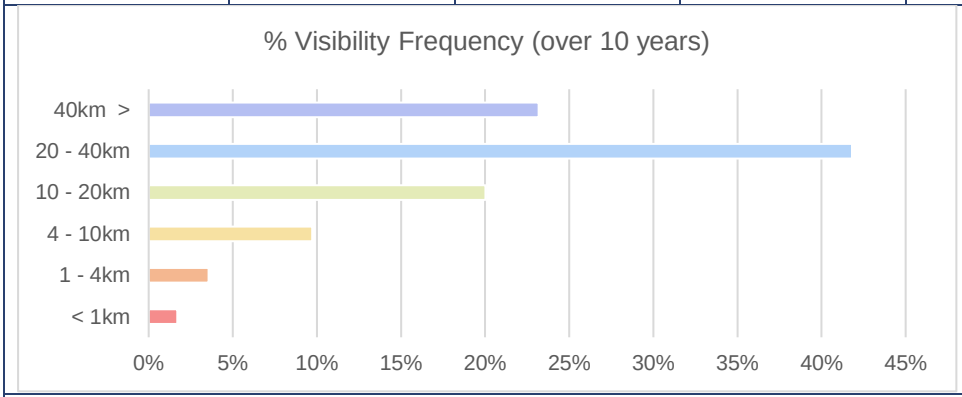
13.5.2.31 Whilst ZTV mapping can model the theoretical visibility of the Proposed Development, it is important to note that atmospheric conditions will affect visibility. The Met Office defines visibility as *'the greatest distance at which an object can be seen and recognised in daylight, or at night could be seen if the general illumination were raised to a daylight level'* (Met Office, 2000).

13.5.2.32 A quantitative description of the existing visibility is provided using METAR visibility data from the closest Met Office weather station at Milford Haven, to highlight potential trends in the visibility conditions of the Study Area. This 'visibility data' shows a 10-year average of the frequency of observations at measured distances from the station between January 2011 to December 2020.

13.5.2.33 Visibility range and frequency is mapped in Volume 2 Figure 13.19, in the context of the wind farm array area site using visibility ranges based on Met Office visibility definitions: < 1 km Very Poor; 1 – 4 km Poor; 4 -10 km Moderate; 10 – 20 km Good; 20 – 40 km Very Good; 40 km > Excellent. The visibility range is shown in bands extending from the wind farm array area and is combined with the ZTV of the Proposed Development to show the likely frequency of visibility over at difference distances, as shown in Table 13.12.

Table 13.12 –Frequency of Visibility at Different Ranges as a Percentage

Visibility (km)	Yearly average visibility frequency (%)	Visibility range and definition	% visibility frequency (over 10 years)	Days per year visibility frequency (10 year average)
0.00 => 0.99	1.70	<1 km Very poor	1.7%	6.20
1.00 => 1.99	0.83	1-4 km Poor	3.56%	12.99
2.00 => 2.99	1.24			
3.00 => 3.99	1.49			
4.00 => 4.99	1.57	4-10 km Moderate	9.72%	35.48
5.00 => 5.99	1.61			
6.00 => 6.99	1.57			
7.00 => 7.99	1.52			
8.00 => 8.99	1.61			
9.00 => 9.99	1.84			
10.00 => 10.99	1.70	10-20 km Good	20.02%	73.73
11.00 => 11.99	1.57			
12.00 => 12.99	1.69			
13.00 => 13.99	1.89			
14.00 => 14.99	2.08			
15.00 => 15.99	2.22			
16.00 => 16.99	2.26			
17.00 => 17.99	2.19			
18.00 => 18.99	2.23			
19.00 => 19.99	2.19			
20.00 => 20.99	2.23	20-40 km Very good	41.81%	152.61
21.00 => 21.99	2.23			
22.00 => 22.99	2.28			
23.00 => 23.99	2.21			
24.00 => 24.99	2.20			
25.00 => 25.99	2.16			
26.00 => 26.99	2.24			
27.00 => 27.99	2.10			
28.00 => 28.99	2.26			
29.00 => 29.99	2.26			
30.00 => 34.99	10.42			
35.00 => 39.99	9.23			
40.00 => 44.99	7.51	40 km > Excellent	23.18%	84.61
45.00 => 49.99	5.21			
50.00 => 59.99	6.34			
60.00 => 69.99	1.63			
>= 70.00	2.49			



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13.5.2.34 Although there are limitations to how this data can be applied to judgements about windfarm visibility, the visibility data provides context for an evidence basis for evaluating the visibility of the Proposed Development in the prevailing conditions.

13.5.2.35 The visibility of the Proposed Development that will be experienced by people will be influenced substantially by the prevailing weather and visibility conditions in the area. The visibility frequency data presented Table 13.12 provides an understanding about the amount of time when visibility is experienced at the distances required to see the Proposed Development and Volume 2 Figure 13.19 relates this visibility data to the geographic extent of the SLVIA Study Area.

13.5.2.36 The Marloes and Dale coastline, outer Milford Haven, Skomer and Skokholm Islands, and the Angle Peninsula fall within 30-40 km of the Proposed Development. The Met Office data shows that visibility over 30 km occurs for approximately 43% of the time over the 10-year period. This equates to approximately 157 days per year on average that there is visibility beyond 30 km when there would be visibility of the Proposed Development at this distance.

13.5.2.37 The remaining land area of the SLVIA Study Area including St David's peninsula, St Bride's Bay, inner Milford Haven and the south Pembrokeshire coast falls within 40-50 km of the Proposed Development. The Met Office data shows that visibility frequency drops sharply at these longer distances, such that 'excellent' visibility over 40 km occurred for only 23% of the time over the 10-year period. This would equate to approximately 85 days per year on average that there is visibility beyond 40 km when there would be visibility of the Proposed Development at this distance.

13.5.2.38 The Met Office visibility data allows some quantification of the likely frequency of visibility of the Proposed Development from individual viewpoints, based on the distance of each viewpoint location. The Met Office visibility frequency data is used to inform an assessment of the 'likelihood of effect' from each viewpoint in Section 13.7, in order to qualify any significant effects assessed in optimum visibility conditions with how likely they are to actually occur given the prevailing weather/ visibility conditions. The viewpoints included in the SLVIA range from 31.2 km to 50.7 km from the Proposed Development, with assessments of likelihood of effect varying from 43% at the closest viewpoint (Viewpoint 11 Skokholm Island) to 10% at the more distant viewpoints (such as Viewpoint 15, Carn Llidi).

Viewpoints

13.5.2.39 The term 'viewpoint' is used to define a place from where a view is gained, and that represents specific conditions or viewers (visual receptors).

13.5.2.40 Viewpoints have been selected within the SLVIA Study Area based on consultee feedback, the ZTV for the Proposed Development (Volume 2, Figure 13.11a-b), identification of the landscape and visual receptors within the ZTV, wireline analysis and field survey observations. Consultations for the Project engaged with NRW Advisory, PCNP, Pembrokeshire County Council, National Trust and the Wildlife Trusts. Agreement of viewpoint locations for use in the SLVIA has been reached following consideration of the combined feedback from consultees and discussion during consultations meetings in April/May 2021, as set out in Table 13.4.

13.5.2.41 Viewpoints within the SLVIA Study Area are set out in Table 13.13 and shown in Volume 2, Figure 13.9. The viewpoints take into account a range of factors, including:

- a range of viewpoints from where there are likely to be significant effects;
- those representative of views within the Study Area, from specific viewpoints and illustrative of certain effects;

- the accessibility to the public, and potential number and sensitivity of viewers who may be affected;
- the viewing direction, distance and elevation, including a range of distances between 31.2 km to 50.7 km to test threshold of significance from coastal to inland areas);
- the nature of the viewing experience and activities (e.g. static views, views from settlements, tourist destinations, and views from sequential points along roads and recreational routes, such as the Pembrokeshire Coast Path);
- the view type (for example panorama, vistas and glimpses);
- areas of high landscape, scenic or recreational value. All of the viewpoints are located within the PCNP;
- various landscape character areas and local authority administrative areas; and
- potential for integrated approach – viewpoints representing several aspects from the same location, such as visual effects of the offshore and onshore infrastructure, or views representing onshore cultural heritage assets.

13.5.2.42 Baseline panoramas showing the existing view from these viewpoints are shown in the relevant baseline panoramas that are cross referenced for each viewpoint in Table 13.13. The nature of views from these viewpoints is described for each viewpoint within the baseline description of each geographic area that follows.

Table 13.13 – Viewpoints included in SLVIA

No	Viewpoint	Grid Ref
Day-time viewpoints		
1	Caerfai Bay	E175927 N224367
2	St Brides Bay, Nolton Haven	E185610 N218634
3	Marloes Beacon	E178501 N208460
4	Skomer Island	E172692 N209460
5	St Ann's Head	E180608 N202880
6	South Hook Fort	E186884 N205454
7	West Angle Bay	E184949 N203655
8	B4320, near Wogaston	E191686 N200120
9	Stack Rocks	E192511 N194494
10	Freshwater West Beach	E188561 N199649
11	Skokholm Island	E173001 N204598
12	Hooper's Point	E178887 N206354
13	Sheep Island	E184507 N202078
14	Castlemartin Range Trail (Cold Comfort)	E192688 N197722
15	Carn Llidi	E173791 N228002
Night-time viewpoints		
A	Martin's Haven, National Trust	E175874 N209221
B	Kete National Trust (Car Park)	E180268 N204280
C	Freshwater West Beach	E188564 N199561
D	Marloes National Trust (Car Park)	E177973 N208179

The existing view and sensitivity to change for each of the above viewpoints is described in Section 13.7. Baseline photographic panoramas showing the existing view from each viewpoint are shown in Volume 2 Figures 13.21 – Figure 13.40.

Dark skies and night-time lighting

13.5.2.43 The baseline lighting conditions across the SLVIA Study Area vary considerably and there is no single data source that serves to provide a detailed or quantitative evidence base of the existing night-time lighting levels. The Campaign to Protect Rural England (CPRE) has produced interactive maps of the UK's light pollution and dark skies as part of a national mapping project (LUC/CPRE, 2016).

13.5.2.44 A web-based map/dataset of dark skies and light pollution in Wales has also been produced as part of the Tranquillity and Place – Dark Skies (NRW, 2021) Report, which allows levels of baseline levels of light radiance to be understood and illustrated within the PCNP, as shown in Volume 2, Figure 13.10. Each pixel shows the level of radiance (light) shining up into the night sky. These have been categorised into colour bands to distinguish between different light levels from low to high levels of baseline night-time lighting.

13.5.2.45 The dark skies and light pollution in Wales map shown in Volume 2, Figure 13.10 shows that the brightest area of lighting is located at the Valero oil refinery and Pembroke Power Station at Rhoscrowther, located on the edge of the PCNP boundary. This facility is highly lit up with numerous forms of ground level and stack lighting, forming the brightest area at night. The skyglow from light emitted from this facility is evident in views from the PCNP and the individual red aviation lighting of tall stacks are visible as point features in views.

13.5.2.46 Areas of brighter lighting radiance are also focused around Milford Haven, with a degree of intensity along transport corridors. The majority of the coastal urbanised areas around inner Milford Haven and Pembroke Dock fall within the 'brightest' to 'brighter' light radiance category (the greatest, light-influenced end of the spectrum). Lighting kept on for longer than it is needed or units that spill light upwards, rather than to where it is most needed, contribute to sky glow, light intrusion and add to light pollution.

13.5.2.47 Much of this inner Milford Haven area with brightest lighting at night is outside the PCNP, however there is a transition from this urbanised area of greatest light influence into parts of the PCNP around outer Milford Haven and the surrounding landscape. There is a transition from brighter to darker skies with increasing distance from Milford Haven to the north and south, and towards the PCNP coastline. Other more contained areas of brighter light influence within the PCNP include the smaller settlements in the Study Area, such as St David's, Broad Haven/Little Haven, St Ishmael's, Dale and Angle; military bases such as the Merrion Camp and Cawdor Barracks; and close to the A487 and around caravan parks. The dataset also indicates areas of brighter lighting in the waters of St Brides Bay, which may indicate lighting of vessels at anchor.

13.5.2.48 The relatively less light influenced, darker areas of the PCNP coincide with the coastal landscape of the PCNP and the inshore waters of the Pembrokeshire coastline. Parts of the Pembrokeshire Coast National Park are still relatively undeveloped with minimal impact of lighting on the night sky. The large majority (95%) of the PCNP falls within the two darkest night sky categories. Generally, there is a lack of light pollution, producing dark night skies, although there are views to sources of light outside the PCNP, particularly Pembroke Power Station and Valero oil refinery at Rhoscrowther, and urban areas around Milford Haven. In general though, existing sources of light at the coast tend to be limited to point sources of light from isolated coastal dwellings, lit vessels and cardinal buoys in the sea at night, and the lighthouses on Skokholm and St Ann's Head, which are a strongly associated coastal and maritime feature. The Smalls and Bishop lighthouses are features on isolated islands further out to sea.

13.5.2.49 The Background Paper: Special Qualities of PCNP report (PCNPA, 2018) describes the night skies as part of the special quality of 'Remoteness, Tranquillity and Wildness' in the PCNP, as follows *'Part of the special appreciation of the National Park is the ability to absorb not only the tranquillity and sense of calm during the day, but the big skies of the evening and the radiance of the stars on a clear night. Areas with substantial night-time light pollution within the National Park, are centred upon the main settlements of Tenby and Saundersfoot and St Davids, although moderate night time light pollution is identified for the southern slopes of the Preseli Hills and the hinterland for Tenby and Saundersfoot. One particularly unique aspect is the lack of light pollution of the night sky. It is wonderful to get such a clear view of the "greatest show on earth", this may be another aspect of the Park which is worth promoting'.*

13.5.2.50 The PCNP attracts people wishing to appreciate the night-time sky with an absence of night-time light pollution. The PCNP promotes eight 'dark sky discovery sites', as locations to find the PCNP's darkest skies, which offer specific points to view the night sky. Three of these dark sky discovery sites are within the SLVIA Study Area (Volume 2, Figure 13.10) at Martin's Haven (National Trust Car Park), Kete (National Trust Car Park) and Broadhaven South (Car Park). The sensitivity of these viewing locations to the potential effects of the aviation lights is considered to be higher than other areas of the PCNP, as they are specifically promoted by the PCNPA to encourage visitors to these sites with the express intention of viewing the night sky and this experience could be affected by other sources of light.

13.5.2.51 The intervisibility of these dark sky discovery sites within the nacelle mounted aviation lighting of the Proposed Development is shown in Volume 2 Figure 13.20. Kete National Trust car park is within the ZTV and a representative night-time viewpoint has been included at Viewpoint B Kete (Volume 2, Figure 13.37). Martin's Haven National Trust car park has no visibility of the Proposed Development, as it is outside the ZTV, however there are views from the nearby lookout station on the path towards Wooltack Point, therefore a night-time viewpoint has been included at this location Viewpoint A, Martin's Haven, National Trust (Volume 2, Figure 13.36). The baseline night-time views and sensitivity to change from these locations are described in Section 13.7. Broadhaven South (Car Park) is outside the ZTV and will afford no views of the Proposed Development at night. A further dark sky discovery site is located just outside the SLVIA Study Area at Newgale Beach (National Trust Car Park), which is also outside the ZTV and will afford no views of the Proposed Development at night.

13.5.3 Seascape character

Seascape overview

13.5.3.1 The array area covers an offshore area of 43.5 km^2 located within the Celtic Sea, approximately 35.0 km from the closest section of the mainland Pembrokeshire coastline at St Ann's Head, and 30.1 km from the closest land at Skomer Island (Volume 2 Figure 13.2). Broadly, the SLVIA Study Area is formed by the Celtic Sea, the West and South Pembrokeshire Coastal Waters and Islands, St. Brides Bay, Milford Haven, and the Pembrokeshire coastline between St David's Head in the north to Stackpole Head in the south.

13.5.3.2 An overview of the Study Area is provided in the Pembrokeshire Seascape Character Assessment (PCNP, 2013) *'The Study Area is on Great Britain's remote western seaboard facing and including parts of the Atlantic Ocean/Celtic Sea, St George's Channel, Cardigan Bay and the Bristol Channel. The sea and coast are exposed to, and often governed by, the prevailing south westerlies. The maritime weather conditions combined with the depth of the sea and nature of the seabed essentially define the character of the marine areas. The remote and exposed islands and islets with associated reefs and isolated lighthouses are key features of the Pembrokeshire seascape. The coast's distinctive and varied rock formations interact with the force of the sea and weather to create a wide range of dramatic coastal seascapes. Inland, Milford Haven and the Daugleddau provide contrasting sheltered seascapes, penetrating deep into Pembrokeshire's countryside.*

13.5.3.3 *Seascape character is enhanced by diverse marine and coastal habitats and wildlife of international and national importance including cetaceans e.g. dolphins and coastal birds e.g. puffins and choughs. Prehistoric promontory forts, more recent military installations, religious buildings, harbours and other historic features and wrecks indicate the area's strong connection to ancient seaways and reinforce its strong sense of place.*

13.5.3.4 *The area's qualities attract tourism and leisure pursuits, which make an important contribution to the local economy and character, but can also lead to pressures on the coast and sea. The energy and related industry, both carbon based e.g. liquid natural gas, and developing renewables, are further forces for change with potentially strong influences on character. Traditional uses such as fishing, particularly potting, still contribute to the local economy and character'.*

13.5.3.5 The influence of the sea on the character of the Pembrokeshire coastline has also been deftly described recently in the BBC 'A Wild Year' series: *'In this far south-west corner of Wales, lies Pembrokeshire's wild and rugged coast. Twisting and turning along the edge of the Atlantic. Life on this ancient coastline is defined by the power of the sea. At times these are dangerous waters, but the sea also embraces this coast with warm currents from across the ocean. The patterns of the tides. The changing moods of the sea. The cycle of the seasons. All give rhythm to the lives of those who live here'.*

National Seascape Assessment for Wales

13.5.3.6 The Proposed Development is situated in offshore waters beyond 12 nautical miles and is therefore beyond the seaward limits of the Marine Character Areas (MCAs) identified in the National Seascape Assessment for Wales (NRW, 2015) (Volume 2 Figure 13.3a) and the Seascape Character Areas (SCAs) identified in the Pembrokeshire Seascape Character Assessment (PCNP, 2013) (Volume 2 Figure 13.3b).

13.5.3.7 The array area is located beyond the nearest MCA of the National Seascape Assessment for Wales, the Southern Pembrokeshire Open Waters MCA (MCA 23). This MCA encompasses the waters surrounding the southern coast of the Pembrokeshire peninsula, forming part of the bus sea route of the Bristol Channel linking south Wales with the English south west coast. It is an open seascape within a simple, consistent and unified marine character and at vast scale and sense of openness and exposure, with its qualities determined almost entirely by the natural forces of water, through swell, waves and wind. It forms the open seascape setting to the wide views from the headlands and cliff tops of the Pembrokeshire coast along the edge of MCA 22 South Pembroke Coastal and Inshore Waters. These coastal and inshore waters of MCA22 include rock reef, shoals and sand banks, with a diverse rugged coast with rocky sections, steep cliffs, arches and stacks, interspersed with small covers, bays and sandy beaches.

13.5.3.8 At the national level, the northern part of the Study Area consists of West Pembrokeshire Coastal Waters and Islands (MCA 18) and the West Pembrokeshire Islands, Bars and Inshore Waters (MCA 19). MCA 18 covers the most western part of Wales, stretching from Strumble Head to St Ann's Head in the south, including the island of Ramsey, Skomer and Skokholm, which frame St Bride's Bay. It has a diverse coastline with rugged steep cliffs, punctuated by sandy foreshores, steep narrow valleys, harbours and isolated bays. St Bride's is a broad sweeping bay with a westerly aspect, gently falling away from the beaches at Newgale Sands and Broad Haven. St David's peninsula is backed by the highly prominent landform of Carn Llidi, an abrupt volcanic outcrop. There are hazardous seas around the islands in Ramsey Sound and Jack Sound, biodiverse waters and coastlines, with Marine Nature Reserve and NNR designations, and there is a strong sense of time depth. The seas attract much fishing activity and are used by commercial ships anchoring while waiting access Milford Haven.

13.5.3.9 The central part of the seascape of the SLVIA Study Area comprises the drowned river estuary of Milford Haven (MCA 21). It includes the tidal reaches of the Cleddau, Cresswell, Carew and Pembroke rivers, with sheltered bays and shallow creeks, surrounded by rolling and occasionally steep sided hills with distinctive woodland down to the waters edge. Milford Haven is a major deep sea port, with Pembroke Dock and Milford Docks, and extensive industrial facilities, power stations, oil refineries, the largest oil/gas/petrochemical storage facilities in the UK, and larger urban areas and dispersed settlement. Views are therefore varied, within the estuary often being contained and channelled, opening up towards the wide estuary mouth, with oil refineries and infrastructure dominating views into the MCA from surrounding areas.

13.5.3.10 The southern portion of the SLVIA Study Area falls within the MMO Seascape Assessment (MMO, 2018) and consists of the Bristol Channel Approaches (MCA 51) and a small part of the Lundy and Outer Bristol Channel (MCA 51).

Pembrokeshire Seascape Character Assessment (PCNPA, 2013)

13.5.3.11 The Pembrokeshire Seascape Character Assessment (PCNPA, 2013) defines SCAs at a local level, an appropriate level to provide the baseline seascape characterisation for the SLVIA and is set within the framework of the regional Welsh Seascapes study completed by Countryside Council for Wales (CCW) in 2009 and the National Seascape Assessment for Wales (NRW, 2015) (Volume 2, Figure 13.3a).

13.5.3.12 The Marine Policy Statement (MPS) (UK Government, 2011) states the European Landscape Convention (ELC) definition of landscape (which includes marine areas) as *"an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors"*. It adds that in the context of the UK Marine Policy Statement, *"references to seascape should be taken as meaning landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other."*

13.5.3.13 The seascape impact assessment in this SLVIA therefore focuses particularly on areas of onshore landscape with views of the coast or seas and marine environment, as perceived by people, on the premise that the most important effect of offshore windfarms is on the perception of seascape character from the coast.

13.5.3.14 This definition of seascape is best reflected by the seascape baseline provided by the Pembrokeshire Seascape Character Assessment (PCNPA, 2013), which defines inland boundaries of SCAs that include land which has a strong visual relationship with the sea/tidal waters and coastal landscape character types such as dunes or cliffs (Volume 2, Figure 13.3b).

Seascape Receptors

13.5.3.15 The array area is located approximately 2.2 km beyond the nearest SCA, the Southern Offshore Waters SCA (SCA 30). The offshore cable corridor is located within the Southern Offshore Waters SCA (SCA 30), the Southern Inshore Waters (SCA 29) and Outer Milford Haven (SCA 31). There is also visibility of the Proposed Development from a number of SCAs covering the inshore waters off Pembrokeshire and its coastline (Volume 2, Figure 13.3b), where land-sea interactions are focussed and where the effects of the Proposed Development, as perceived by people, are most likely to occur. These SCAs define the baseline and are identified in Table 13.14. All other SCAs that are not within the ZTV or that have no land and are entirely offshore, are scoped out of the SLVIA and are not considered further.

Table 13.14 – Seascape receptors within ZTV

Type	Receptor
Seascape Character Areas (SCAs)	SCA15 - St Davids Head SCA16 - Whitesands Bay SCA17 - Ramsey Sound SCA18 - Ramsey Island coastal waters SCA19 - Bishops and Clerks SCA20 - St Brides Bay coastal waters north SCA21 - St Brides Bay coastal waters east SCA22 - St Brides Bay coastal waters south - Borough Head SCA23 - St Brides Bay south coastal waters - The Nab Head SCA24 - St Brides Bay SCA25 - Skomer Island and Marloes Peninsula SCA26 - Skokholm and Gateholm coastal waters SCA27 - Grassholm and the Smalls SCA29 - Southern inshore waters SCA30 - Southern offshore waters SCA31 - Outer Milford Haven SCA32 - Inner Milford Haven SCA34 - Freshwater West SCA35 - Castlemartin coastal waters SCA36 - Stackpole coastal waters SCA37 - Freshwater East and Manorbier

13.5.3.16 A description of the baseline seascape character and sensitivity to change for each of the above SCAs that are identified in the preliminary assessment (Table 13.26) as requiring detailed assessment, is set out in Section 13.8. A summary description and key characteristics of SCA 29, SCA 30 and SCA31, in which the Proposed Development is either located or in closest proximity, are described in Table 13.15 below.

Table 13.15 – SCAs within which the Proposed Development is located

SCA	Description
Southern Offshore Waters (SCA 30)	This very large area stretches off the south coast from Caldey Island in the east, running south and west to 42 km offshore. It is mainly moderately deep. The east forms the setting to Caldey Island and the area is busier as part of the approaches to Milford Haven to the west as well as around Caldey, used by leisure sailors. The area is used as the outer part of the Castlemartin MOD range.

SCA	Description
	Key characteristics -Very large area of sea, 30-100 m deep on gravelly sand seabed with low wave stress. -There are numerous wrecks in the area. -Small part in the Pembrokeshire Marine SAC. -The area is used for fishing, ferries and commercial shipping. -Land would be apparent to the east and forms part of the unspoilt view from the southern coast, including from the Pembrokeshire Coast Path. -Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure. -The area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.
Southern Inshore Waters (SCA 29)	This area stretches off the south coast from Skomer to south of Lydstep Point, wrapping around the coastal seascape areas. It is mainly moderately deep except for St Gowan's Shoal to the east. The west forms the setting to the islands and also is busy as part of the approaches to Milford Haven. The east is used as part of the Castlemartin MOD range. Key characteristics -Large area of sea, mainly 30-60 m deep on gravelly sand bed with shallower waters over sand on St Gowan Shoals to east [10-30 m deep]. -Generally low wave stress although potential for steep seas south of St Ann's Head. -The majority of the area is within the Pembrokeshire Marine SAC. -There are numerous wrecks in the area, many focussed on the approaches to Milford Haven. -The area is used for ferries, commercial shipping and fishing, as well as a MOD practice range. -The area wraps around Skomer and Skokholm to the west forming an important part of their setting and the islands are strong features in this area's character. -The area forms part of the unspoilt view from the western and southern coast, including from the Pembrokeshire Coast Path. -Land would be less apparent to the east but still a feature. -Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure. -The areas qualities are determined primarily by the natural forces of water, through swell and waves, and wind.
Milford Haven (SCA 31)	The area forms the outer part of Milford Haven which is a large sheltered drowned ria. The mouth of the Sound has an exposed open sea aspect with strong tides and currents contrasting with the sheltered bay of Dale, small beach at West Angle Bay, and creeks such as Sandyhaven Pill. There is nature conservation interest especially around Dale and coastal forts relating to the Haven's historic strategic value. The sea area is busy with ferry and commercial shipping, with the refinery and other energy and port infrastructure in background views and the area is popular for recreation and sailing, especially around Dale. Key characteristics -Large sheltered drowned ria with red steep sandstone cliffs and sheltered bays and shallow creeks.

SCA	Description
	-Mouth of the Haven has an open sea character with strong currents and swell. -Rolling inland landcover comprises open arable and pasture with low hedgebanks, with deciduous woodland in incised valleys. -Traditional and medieval settlements. -Historical military features and associations including forts. -Busy natural harbour mouth with large vessels including tankers and ferries using the waters. -Popular for sailing and other recreation especially around Dale. -The coastal path runs around the entire sea edge. -Wide and contained views.

13.5.4 Landscape character and designations/defined areas

National Landscape Character Areas (NLCA)

13.5.4.1 At the National level, the West and North Pembrokeshire Coast NCA (43) and South Pembrokeshire Coast NCA (47) form the coastal parts of the SLVIA Study Area. These are backed by Milford Haven (48) and a small part of the Taf and Cleddau Vales (44) (Volume 2, Figure 13.4).

13.5.4.2 The West and North Pembrokeshire Coast NCA (43) is described (NRW, 2009) as *'the western and northern extents of the Pembrokeshire coastline and hinterland. Much of the area is within the PCNP. The gently undulating, productive, agricultural landscape is edged by some of the most spectacular and rugged coastline in southern Britain. The landscape dramatically terminates with steep cliffs, and includes a number of remote islands, being remnants of peninsulas. The coastal areas also include a number of distinctively shaped rocky hills, that together with coastal slopes, include areas of heather and heath, stone walls or hedgebanks, and a far more remote feeling than many of the nearby inland landscapes. The area includes a number of Registered Historic landscapes and notably the 'city' of St David's, home to Wales' Patron Saint, with its fine cathedral set inconspicuously within a sheltered valley yet near the old sea routes of the west. The area is of international importance for its coastal landscape and wildlife, and there are many popular tourist destination 'honeypots' with walking, beach and various coastal recreational pursuits, including boat trips to some of the islands to observe wildlife'.*

13.5.4.3 The South Pembrokeshire Coast NCA (43) (is described (NRW, 2009) as spanning *'from Pendine in the east to the limestone cliffs and bays of the Angle Peninsula in the west. It incorporates numerous popular beaches, villages and the notable historic seaside town of Tenby. Mostly within PCNP, the area also contains the Manorbier and Stackpole Warren Landscapes of Special Historic Interest and military firing ranges at Castlemartin, Manorbier, Penally and Pendine. There are also sections of Heritage Coast. Inland, a limestone plateau with gentle rolling scarp and vale landform is covered by mixed agricultural fields and hedgerows. In the east there are numerous small, enclosed, wooded incised valleys. Generally, the inland landscape terminates abruptly in spectacular cliffs with headlands and with sandy bays sometimes backed with dunes. Strong Medieval influences are apparent with prominent open field systems around Manorbier. Mining and quarrying remains (for limestone, iron, coal) are seen in the eastern part, coinciding with the edge of the South Wales Coalfield. Today, the coast forms a focus for tourism and recreation activities and the attractive seaside towns of Tenby and Saundersfoot are very popular. In contrast a large area of coast is used by the military as artillery ranges and retains a sense of remoteness'.*

13.5.4.4 The Milford Haven NCA (48) is described (NRW, 2009) as *'a drowned river valley or ria, providing an expanse of deep-water anchorage for today's oil-carrying super tankers. It is a naturally strategic place, with outer headlands and cliffs ideal for defensive installations. Today it conveys the sense of being both industrially of supra-importance, and of a maritime playground for sailors and yachtsmen. Its role as an important military bastion did not cease until after the Second World War. The area is served by the towns of Haverfordwest, Milford Haven and Pembroke, whose existence and character relate closely to the ria. Elsewhere, villages and hamlets are dispersed along roads, their intersections or at former landing places for cross-Haven ferries. The prominent industry at Pembroke Dock and Milford Haven, with oil refineries and their jetties dominating the coastal landscape at the mouth of the Haven, contrasts remarkably with the intimate and rural landscapes of the inland ria or Daugelllau, and its surrounding woodland slopes and farmland. The modern industrial leviathans also co-exist with areas that are of international and national nature conservation interests. The Daugleddau estuaries and the Cleddau river basins form part of the Pembrokeshire Coast National Park'.*

Pembrokeshire Landscape Character

13.5.4.5 The landscape of the onshore parts of the Study Area is described further in relation to the draft Pembrokeshire Landscape Character Assessment (PCC, 2019) and PCNP Landscape Character Assessment (PCNPA, 2020) within the SLVIA Study Area, which are illustrated in Volume 2, Figure 13.5a.

13.5.4.6 The effect of the Proposed Development on landscape character is considered on landscape character areas (LCAs) outside and inland of SCAs, where there may be some intervisibility of the Proposed Development, but where the land is unlikely to have a strong visual relationship with the sea/tidal waters. SCAs already include and define the characteristics of land which has a strong visual relationship with the sea/tidal waters and coastal landscapes such as dunes or cliffs. These areas of the LCAs that fall outside the defined SCAs are identified in Volume 2, Figure 13.5b. They are considered unlikely to experience significant effects as a result of the Proposed Development because it is located in the sea, and these are landscapes that do not have a strong visual relationship with the sea, where its character is fundamentally defined by other characteristics.

13.5.4.7 The ZTV has been used to identify all of the LCA receptors within the SLVIA Study Area that may have visibility of the Proposed Development and are also primarily located outside the SCAs already identified in Table 13.14. These LCAs are shown with the ZTV in Volume 2 Figure 13.15a-b and identified in Table 13.16.

13.5.4.8 These LCAs outside the defined SCAs generally consist of the inland parts of the SLVIA Study Area near St David's in the north; the Pelcomb/Simpson's Cross and Johnston Lowlands between Milford Haven and Haverfordwest; and the Hundleton and Lamphey area to the south of Pembroke. All other LCAs that are either within the areas covered by SCAs or are not within the ZTV, are scoped out of the SLVIA and are not considered further.

Table 13.16 – Landscape receptors within ZTV

Type	Receptor
Landscape Character Types (LCTs)	PCNP Landscape Character Assessment (PCNPA, 2020): LCA4 -Manorbier/Freshwater East LCA5 - Stackpole LCA - Castlemartin/Merrion Ranges LCA8 - Freshwater West/Brownslade Burrows LCA9 - Marloes LCA11 - Herbrandston Refinery Fringe LCA12 - St Brides Bay LCA15 - Dowrog & Tretio Commons LCA16 - Carn Llidi LCA17 - St Davids LCA18 - St Davids Headland Pembrokeshire Landscape Character Assessment (PCC, 2019): cLCA7 - Pelcomb and Simpsons Cross cLCA9 - Johnston Lowlands cLCA10 - The Haven North cLCA22 - Milford Haven cLCA23 - Southern Haven Industrial Fringe cLCA25 - Hundleton and Lamphey

13.5.4.9 A description of the baseline landscape character and sensitivity to change for each of the above LCAs that are identified in the preliminary assessment (Table 13.27) as requiring detailed assessment, is set out in Section 13.9. A summary description and key characteristics of SCA 29, SCA 30 and SCA31, in which the Proposed Development is either located or in closest proximity, are described in Table 13.15 below. Character area descriptions for all these LCAs are set out in detail in the published Pembrokeshire Landscape Character Assessment (PCC, 2019) and PCNP Landscape Character Assessments (PCNPA, 2020).

Landscape designations/defined areas

13.5.4.10 The landscape of certain parts of the SLVIA Study Area have been designated or defined due to their scenic qualities or historic landscape qualities as shown in Volume 2 Figure 13.6. The ZTV has been used to identify landscape designations and defined areas within the SLVIA Study Area that may have visibility of the Proposed Development, as shown in Volume 2, Figure 13.16. All other landscape designations or defined areas that are not within the ZTV are scoped out of the SLVIA and are not considered further.

Table 13.17 – Landscape designations/defined areas within ZTV

Type	Receptor
Landscape Designations and Defined Areas	National Parks: Pembrokeshire Coast National Park (PCNP) Heritage Coasts: Marloes and Dale South Pembrokeshire St. Brides Bay St. David's Peninsula Historic Parks and Gardens Warpool Court Hotel Orielton Stackpole Court Registered Landscapes of Outstanding and of Special Interest in Wales Stackpole Warren St David's Peninsula Skomer Island Milford Haven

Pembrokeshire Coast National Park (PCNP)

13.5.4.11 The PCNP covers over 615 km^2 in total, with approximately 171 km^2 of the PCNP being located within the SLVIA Study Area (Volume 2, Figure 13.6). The PCNP covers almost all the Pembrokeshire Coast, every offshore island, the Daugleddau estuary and large areas of the Preseli Hills and the Gwaun Valley (which lie outside the SLVIA Study Area). It is one of the smallest UK National Parks but is unusual in that it is designated primarily for its coastal landscape – nowhere in the PCNP is more than 16 km from the sea.

13.5.4.12 The PCNP Management Plan (2020-2024) Background Paper: The State of the Park identifies a number of distinct landscape characteristics and sensitivities of the PCNP, as follows:

- The intricate, complex, rugged, indented natural coasts with dramatic headlands and islands e.g. St Davids Head, Skomer, Ramsey Island, Strumble Head, Stackpole Head;
- Important focal points along the coast and out to sea including islands, islets, headlands and distinctive sweeping beaches such as Whitesands Bay, Freshwater West and Newport Bay;
- Unspoilt hills and backdrops which contribute to seascape character e.g. Carn Llidi, Mynydd Carningli and the Preselis;
- Views from key places such as headlands, coastal hills and the Coast Path;
- Tranquil seascapes where there is little disturbance and signs of development; dark skies;
- Remote undeveloped seascapes with wild, highly natural, elemental character such as the islands, north coast south west of Strumble Head and Castlemartin peninsula;
- Secluded and tranquil, well-treed character of the Daugleddau estuary;
- Small scale, traditional historic coastal settlements such as Solva, Abercastle, Porthgain and Newport, and harbours such as Porthclais and Stackpole Quay;

- Other coastal conservation areas with dramatic settlement features, such as the skyline and harbour of Georgian Tenby;
- Presence of coastal and island historic features such as peninsula forts, castles, chapels, other buildings and structures and other heritage features which have a strong relationship with the coast and sea visually, physically and culturally; and
- Presence of coastal edge and island habitats with high biodiversity e.g. Skomer Marine Conservation Zone, National Nature Reserves including Ramsey Island, Special Areas of Conservation covering the majority of the coast and inshore waters, Sites of Special Scientific Interest.

13.5.4.13 The statutory purposes of National Parks as set out in the National Parks and Access to the Countryside Act 1949 are:

- 'To conserve and enhance the natural beauty, wildlife and cultural heritage of the National Parks; and
- To promote opportunities for the public understanding and enjoyment of the special qualities of the Parks'.

13.5.4.14 The special qualities of the PCNP have been defined in the PCNP Management Plan (2015-2019) Background Paper: Special Qualities of PCNP (PCNPA, 2018), as indicators of what comprises its natural beauty. They have been defined as a result of public consultation, stakeholder engagement and technical evidence prepared by the PCNP since its designation, including LANDMAP, the PCNP landscape character assessment (PCNPA 2011/2020) and seascape character assessment (PCNPA, 2013).

13.5.4.15 The special qualities of the PCNP are defined in the Background Paper: Special Qualities of PCNP report (PCNPA, 2018) are as follows (numbers provided for reference in this SLVIA):

1. '*Coastal Splendour;*
2. *Diverse Geology;*
3. *Diversity of Landscape;*
4. *Distinctive Settlement Character;*
5. *Rich Archaeology;*
6. *Cultural Heritage;*
7. *Richness of Habitats and Biodiversity;*
8. *Islands;*
9. *Accessing the Park;*
10. *Space to Breathe;*
11. *Remoteness, Tranquillity & Wildness; and*
12. *Diversity and Combination of Special Qualities'*

13.5.4.16 Special qualities that are relevant to seascape/landscape character and visual amenity that are scoped in to this SLVIA as having potential to be significantly affected by the Proposed Development are described as follows in Table 13.18.

13.5.4.17 Special qualities that are scoped out of the SLVIA as they are not seascape, landscape and visual matters are: '2. Diverse Geology'; 4. Distinctive Settlement Character; 5. Rich Archaeology; 6. Cultural Heritage; 7. Richness of Habitats and Biodiversity; and 9. Accessing the Park. The effect of the Proposed Development on special quality 7 is considered in Chapter 9: Marine and Coastal Ecology; Chapter 11: Offshore Ornithology and Chapter 12: Marine Mammals and Reptiles; and effects on Special Quality 5 and 6 are considered in Chapter 23: Onshore Archaeology and Cultural Heritage

Table 13.18 – PCNP Special Qualities relevant to seascape/landscape character and visual amenity

Special quality	Description (Background Paper: Special Qualities of PCNP report (PCNPA, 2018))
1. Coastal splendour	*'The Pembrokeshire Coast National Park is widely recognised as Britain's only predominantly coastal National Park. The splendour of its coastline, its spectacular scenery, and rugged, unspoilt beauty, provide a scenic quality which was recognised in its designation as a National Park.* *To the north of the National Park, the pattern of tall cliff faces, headlands, and small sandy / shingle beaches, caves and stacks, provide strong sense of place and an outstanding rugged coast. Dinas Head, with cliffs at 140 metres, provides spectacular, panoramic views across Fishguard Bay to the south and Newport Bay to the North. Here, sea birds, choughs, peregrine falcons and ravens find nest sites at platforms and crevices of the cliff face.* *The western stretches of the National Park are permeated by the constant presence of the sea, in sight and sound. There is a constant awareness of the wind and sea, sharpened by the sound of crashing waves along the beaches of St Brides Bay, when the prevailing south westerlies reach sufficient strength.* *The southern coast continues with the Angle peninsula, and further along to the sandy beach and dunes of Freshwater West. From this point, the sheer cliffs are punctuated by sheltered coves, stacks, arches, swallow holes and blow holes, etched out of the cliff face. The Green Bridge of Wales, near Castlemartin, is a spectacular natural limestone arch, carved by the actions of the sea, and provides just one example of the breathtaking landscape along this coast'.*
3. Diversity of Landscape	*'Despite the density of population, and the coastal nature of much of the National Park, it still manages to intrigue and interest with its diversity. The varied landforms of the National Park are overlaid by millennia of activity by man, in many places the traditional hedgebanks provide a tangible link to the past, as well as defining the field pattern in ways which impart a rich texture to the open landscape where small areas of woodland and scrub serve as punctuation points. Much of the rural National Park is dominated by a farmland landscape and traditional built forms predominant in the villages and agricultural buildings, contributing strongly to the sense of place, and in the north of the National Park, contrasting strongly with the open moorland of the Preseli Hills'.*
8. Islands	*'The spectacle of the islands off the Pembrokeshire Coast contributes greatly to the sense of place, and feeling of remoteness, with their outstanding visual and landscape scenery. They are highly attractive coastal wilderness areas, virtually undisturbed and rich in wildlife.*

Special quality	Description (Background Paper: Special Qualities of PCNP report (PCNPA, 2018))
	The islands are variously home to chough, peregrine and sea birds including Manx shearwaters, guillemots, storm petrels, razorbills and gannets as well as supporting in most cases, breeding colonies of grey seals, with pups being born each year amongst the caves and small beaches. The success of the island breeding colonies is celebrated. and recognised in their international designations. Skomer is also home to the unique Skomer vole. *It is not only the wonder of the wildlife which makes these islands special, their historical and archaeological significance can be dated back to some 5,000 years. Bronze Age cairns and Iron Age field systems make Ramsey and Skomer exceptional places.* *Caldey – the most cultivated of the islands - is home to a Cistercian abbey and local population. The Christian presence continues a tradition of over 1,000 years. A sense of quiet and tranquillity pervades the island, despite the large number of day visitors through the season'.*
10. Space to breathe	*'The sometimes blistering westerly winds, which bring clean and fresh air, the clean coastal water, and the clean environment are highly valued by residents and visitors alike and are a special quality of the National Park. The relatively undeveloped areas of the Park, and the opportunity to access many areas provides a sense of exhilaration and liberty, or moments for quiet reflection or enjoyment of the stunning views. All this is possible, even though the nearest settlement is never far away.* *"I'm sure it has all been listed before but I found the peace, beauty, clean air, exhilaration of the wind and waves while in a small boat to be paramount. To observe nature away from the crowds yet be near enough to friendly people when company was required went very well on my holiday".*
11. Remoteness, tranquillity and wildness	*The relatively open character of the Preseli Hills, and the lack of cover and shelter provides a strong sense of exposure among the summits and upper slopes of these hills. They provide a sense of space and isolation, providing for moments of reflection and calm away from the bustle of everyday life. Whilst the feeling of upland exposure of the Preseli Hills is not much replicated elsewhere within the National Park, it can be found at Strumble Head and Cemaes Head. There are also however, areas within the National Park where the sense of tranquillity and peace are engendered from the intimacy and closeness of the landscape. Cwm Gwaun valley, with its pervading sense of shelter, provided by the enclosed landform, woodland and dense hedgerow network, provide a sense of tranquillity and solitude in a relatively small area, as does the Solva valley. And yet still a sense of remoteness and tranquillity can be found at the exposed and relatively isolated stretches of Freshwater West, evoked by the wind swept undulating sand dunes. And finally the upper stretches of the Daugleddau, provide a great sense of tranquillity, a sense of quiet backwater, magnified by the surrounding landform, dense woodland and strands of trees.* *"The silence has a magical quality all too rare these days".* *Part of the special appreciation of the National Park is the ability to absorb not only the tranquillity and sense of calm during the day, but the big skies of the evening and the radiance of the stars on a clear night. Areas with substantial night time light pollution within the National Park, are centred upon the main settlements of Tenby and Saundersfoot and St Davids, although moderate night time light pollution is identified for*

Special quality	Description (Background Paper: Special Qualities of PCNP report (PCNPA, 2018))
	the southern slopes of the Preseli Hills and the hinterland for Tenby and Saundersfoot. *"One particularly unique aspect is the lack of light pollution of the night sky. It is wonderful to get such a clear view of the "greatest show on earth", this may be another aspect of the Park which is worth promoting".*
12. Diversity and Combination of Special Qualities	*'It is not only the individual special qualities which make the National Park special, it is the combination of special qualities, with the variety and distribution within a relatively small area which helps to create its uniqueness. The sound and sights of the sea, nestled alongside the rolling landscapes, wooded valleys and upland plateaus of the National Park create a distinctive combination of colour, contrast and change within just a few miles, and provides a range of landscapes and intangible experiences, which is rarely found.* *It is not only the existence of these qualities, but the perception of their permanence, of the protection that a National Park affords which in itself provides reassurance.* *"The blend of sea, beautiful landscapes, rivers, cliffs and stunning views make this a unique environment in Britain".*

Heritage Coasts

13.5.4.18 A number of Heritage Coasts are defined along almost the entirety of the nearshore waters and coastline of the PCNP, except for inner Milford Haven (Volume 2, Figure 13.6) and fall within the ZTV, consisting of St. David's Peninsula, St. Bride's Bay, Marloes and Dale, and South Pembrokeshire Heritage Coasts. Heritage Coasts were established to protect and conserve the best stretches of undeveloped coast in England, however there are no statutory requirements or powers associated with the Heritage Coast definition. As their geographic area is largely coincident with the PCNP, and their purpose aligns with the statutory purpose of the PCNP 'to conserve and enhance the natural beauty, wildlife, and cultural heritage', the effects of the Proposed Development on Heritage Coasts are considered as integral to the assessment of the PCNP set out in this SLVIA. Cultural heritage matters are also addressed in Chapter 23: Onshore Archaeology and Cultural Heritage of this ES.

13.6 Potential Environmental Effects

13.6.1 Maximum Design Scenario

13.6.1.1 A Project Design Envelope (PDE) approach has been adopted, as described in Chapter 4: Proposed Development Description, which sets out a series of design options for the project, containing both a realistic minimum and maximum extent/value for key project components. Further details of the use of a PDE or "Rochdale envelope" are also provided in Chapter 2: Overview of EIA Methodology.

13.6.1.2 Assessing using a parameter-based design envelope approach means that the assessment considers a maximum design scenario (MDS) whilst allowing the flexibility to make improvements in the future in ways that cannot be predicted at the time of the application. The assessment of the MDS for each receptor establishes the maximum potential adverse impact and as a result, impacts of greater adverse significance would not arise should any other development scenario (as described in Chapter 4: Proposed Development Description) to that assessed within this Chapter be taken forward in the final scheme design.

13.6.1.3 The design parameters that have been identified to be relevant to seascape, landscape and visual amenity are outlined in Table 13.19 below and are in line with the PDE, which is described in full for the offshore project infrastructure in Section 4.6 of this ES. The applicable parameters to establish the MDS for the SLVIA are explained and set out as follows.

Table 13.19 - Project Design Envelope Parameters Relevant to Seascape, Landscape and Visual

Potential Pathway Change / Impact	Realistic Worst Case Scenario	Justification
Effects of the construction, operation and maintenance, and decommissioning of the offshore elements of the Proposed Development on seascape character, landscape character and views (visual amenity).	<u>Offshore site boundary:</u> Array area located approximately 35 km from the mainland Pembrokeshire coastline covering an area of 43.5 km^2, see Volume 2, Figure 13.1. <u>Rated site capacity</u>: Up to 100 MW. <u>WTG design assumptions:</u> Offshore WTGs with three blades and a horizontal rotor axis. WTGs mounted on semi-submersible platforms. Maximum blade tip height 270 m above HAT Maximum rotor diameter 242 m Maximum hub height 149 m above HAT Tubular steel tower painted RAL 7035 (light grey) from 15 m above water line, yellow below. <u>WTG array layout:</u> The Project will comprise six to ten WTGs, depending on the WTG capacity, to achieve up to 100 MW capacity. Two indicative Project array area layouts for 6 WTGs and 10 WTGs are shown in Volume 2, Figure 4.7. The MDS for the SLVIA consists of seven offshore WTGs at the maximum blade tip height (270 m).	The MDS assessed for the SLVIA utilises the maximum height WTG and consists of seven x 270 m blade tip WTGs, as shown in Volume 2, Figure 13.1. This MDS has the highest WTG blade tip height (270 m), largest rotor diameter (242 m), consisting of seven WTGs occupying locations that represent the maximum impacts arising from the full extent of the array area. WTGs are also located in positions that are weighted towards the coastward perimeter of the array area, to represent the maximum effect in terms of the proximity, scale and prominence of the WTGs in coastal views from receptors around the Pembrokeshire coastline and to the north and south of the Solas Cable, representing the maximum 'lateral spread' (north-south) in the field of view. WTGs with the highest 270 m blade tip height will have a wider geographic extent of effect over a larger ZTV than the minimum 196 m minimum blade tip height WTG. They will be visible from a

Potential Pathway Change / Impact	Realistic Worst Case Scenario	Justification
	WTG lighting: Red, medium intensity aviation warning lights (2000 candela (cd)) will be located on either side of the nacelle (149 m hub height for 270 m WTGs) of all WTGs of the MDS layout shown in Volume 2 Figure 13.1. Aviation warning lights will flash simultaneously with a Morse W flash pattern and be able to be switched on and off by means of twilight switches. Aviation warning lights will have reduced intensity at and below the horizontal and allow a further reduction in lighting intensity when the visibility in all directions from every WTG is more than 5 km. Marine aid to navigation lights will be fitted at the platform level on all WTGs shown in Volume 2, Figure 13.1 at platform level. These lights will be synchronized to display simultaneously an IALA "special mark" characteristic, flashing yellow, with a range of not less than five (5) nautical miles.	wider geographic area, since they are 74 m higher and it is their height which contributes most to the geographic extent of visibility. The highest 270 m blade tip height WTGs will appear to have a larger scale in views than the 196 m WTGs, both in terms of their blade tip height and in terms of the appearance of the larger rotor of the WTG (which is 68 m larger). The effect that results from the additional WTGs of smaller size in the 10 x 196 m WTG layout Volume 2, Figure 4.7 is considered to be outweighed by the larger height and scale of the 270 m WTGs, with the overall area occupied by WTGs being equal.

13.6.1.4 Considering all of the factors described above, the MDS layout shown in Volume 2, Figure 13.1, is considered to be representative of the worst case in terms of seascape, landscape and visual effects, and is the MDS assessed in the SLVIA and shown in the visual representations in Volume 2, Figures 13.21 – 13.39. Effects of greater adverse significance are not predicted to arise should any other development scenario (based on details within the project design envelope) to that assessed, be taken forward in the final design scheme.

13.6.2 Potential seascape, landscape and visual effects

13.6.2.1 Potential effects on seascape, landscape and visual receptors that have been scoped in for assessment are summarised in Table 13.20.

Table 13.20 – Potential effects on seascape, landscape and visual receptors scoped in for further assessment

Phase	Activitity or impact	Potential effect
Construction and decommissioning	Effects (daytime) of the construction and decommissioning of the offshore elements of the Proposed	Potential for short-term, temporary impacts on perceived seascape character of SCAs, arising as a result of the construction activities and

Phase	Activitity or impact	Potential effect
	Development on seascape character receptors (SCAs).	structures located within the offshore site boundary, which may alter its seascape character and the perceived character of the wider seascape through visibility of these changes.
	Effects (daytime) of the construction and decommissioning of the Proposed Development on landscape character receptors (LCAs) located outside and inland of SCAs.	Potential for short-term, temporary impacts on perceived landscape character of LCAs located outside and inland of SCAs, arising as a result of the construction activities and structures located within the offshore site boundary, which may be visible from the coast (during very good and excellent visibility conditions) and may therefore affect the perceived character of the landscape. Areas of coastal landscape LCAs which are located within defined SCAs are considered as part of the seascape assessment.
	Effects (daytime) of the construction of the of the Proposed Development on perceived landscape character / special qualities of designated landscapes.	Potential for short-term, temporary impacts on perceived landscape character and special qualities of designated landscapes, arising as a result of the construction activities and structures within the offshore site boundary, which may be visible from the coast (during very good and excellent visibility conditions) and may therefore affect the perceived character and qualities of the landscape.
	Effects (daytime) of the construction and decommissioning of the Proposed Development on visual receptors and viewpoints.	Potential for short-term, temporary impacts on views and visual amenity experienced by people from principal visual receptors and representative viewpoints, arising as a result of the construction activities and structures, which may be visible from the coast (during very good and excellent visibility conditions) and may therefore affect views and visual amenity.
Operation and maintenance	Effects (daytime) of the operation and maintenance of the Proposed Development on seascape character of receptors (SCAs).	Potential for long-term, reversible impacts on perceived seascape character (SCAs), arising as a result of the operational WTGs, substations

Phase	Activitity or impact	Potential effect
		and maintenance activities located within the array area, which may alter the seascape character of the array area itself and the perceived character of the wider seascape.
	Effects (daytime) of the construction and decommissioning of the Proposed Development on landscape character receptors (LCAs) located outside and inland of SCAs.	Potential for long-term, reversible impacts on perceived landscape character of LCAs located outside and inland of SCAs, arising as a result of the construction activities and structures located within the offshore site boundary, which may be visible from the coast (during very good and excellent visibility conditions) and may therefore affect the perceived character of the landscape. Areas of coastal landscape LCAs which are located within defined SCAs are considered as part of the seascape assessment.
	Effects (daytime) of the operation and maintenance of the of the Proposed Development on perceived landscape character / special qualities of designated landscapes.	Potential for long-term, reversible impacts on perceived landscape character and special qualities of designated landscapes, arising as a result of the construction activities and structures within the offshore site boundary, which may be visible from the coast (during very good and excellent visibility conditions) and may therefore affect the perceived character and qualities of the landscape.
	Effects (daytime) of the operation and maintenance of the Proposed Development on visual receptors and viewpoints.	Potential for long-term, reversible impacts on views and visual amenity experienced by people as principal visual receptors and representative viewpoints, arising as a result of the operational WTGs, substations and maintenance activities when visible from the coast (during very good and excellent visibility conditions).
	Effects (night-time) of the operation and maintenance of the Proposed Development lighting on visual receptors / viewpoints and the dark	Potential for long-term, reversible effects on views and visual amenity experienced by people from principal visual receptors and representative viewpoints, including from within

Phase	Activitity or impact	Potential effect
	night skies quality of the PCNP during operation.	the PCNP, arising as a result of the marine navigation and aviation lights. Potential for significant effect on perception of dark night skies qualities experienced within the PCNP arising from the Proposed Development outside the SDNP.

13.6.2.2 A number of potential activities or impacts have been scoped out from further assessment, resulting from a conclusion of no likely significant effect as set out in Table 13.21. These conclusions have been made based on the knowledge of the baseline environment, the nature of planned works and the wealth of evidence on the potential for impact from such projects more widely.

Table 13.21 – Activities or impacts scoped out of the assessment

Phase	Activitity or impact	Justification for scoping out
Construction and decommissioning	Construction and decommissioning phase seascape, landscape and visual impacts of the Proposed Development outside the 50 km radius SLVIA Study Area (Figure 13.2).	The 50 km radius SLVIA Study Area is defined to an outer limit within which significant effects could occur. Significant effects will not occur beyond 50 km due to the limited changes to views arising from the Proposed Development at distances of over 50 km.
	Impacts of the construction and decommissioning of the Proposed Development on physical aspects of landscape character.	Due to the location of the Proposed Development at considerable distance offshore, it will only impact on the perception of character and qualities – which is considered as an indirect effect in LVIA. No physical attributes that define landscape character or special qualities of designated landscapes will be changed as a result of the Proposed Development.
	Impacts of the construction and decommissioning of the Proposed Development on landscape character of parts of LCAs that are within defined SCAs	Coastal landscapes with a strong visual relationship with the sea/tidal waters and coastal landscapes are considered as part of the seascape assessment.
	Impact of the Proposed Development lighting on seascape and landscape character at night during construction and decommissioning.	Construction and decommissioning of the WTGs of the Proposed Development will not take place at night (although some construction such as cable

Phase	Activitity or impact	Justification for scoping out
		laying may be undertaken at night).
Operation and maintenance	Operation and maintenance phase seascape, landscape and visual impacts of the Proposed Development outside the 50 km radius SLVIA Study Area (Figure 13.2).	The 50 km radius SLVIA Study Area is defined to an outer limit within which significant effects could occur. Significant effects will not occur beyond 50 km due to the limited changes to views arising from the Proposed Development at distances of over 50 km.
	Operation and maintenance phase seascape, landscape and visual impacts of the Proposed Development on receptors located outside the ZTV (Figures 13.14 – 13.17).	The Proposed Development will have no impacts on receptors located outside the ZTV i.e. those which have no views/visibility of the Proposed Development. All seascape, landscape and visual receptors located outside the ZTV (Figures 13.14 – 13.17) are scoped out and not assessed any further.
	Impacts of the operation and maintenance of the Proposed Development on landscape character of parts of LCAs that are within defined SCAs	Coastal landscapes with a strong visual relationship with the sea/tidal waters and coastal landscapes are considered as part of the seascape assessment.
	The seascape, landscape and visual effects of the operation of the offshore cable route.	Cable is located below the sea surface so would not be visible as part of the seascape or views once operational and would therefore have no operational effect on seascape, landscape and visual receptors.
	Impact of the array area lighting on seascape and landscape character at night during operation and maintenance.	The matter of visible aviation lighting assessment will be assessed as wholly a visual matter as it is considered that the proposed aviation lighting will not have significant effects on the perception of landscape or seascape character, which is not readily perceived at night in darkness. No attributes of seascape or landscape character will be changed as a result of the lighting of the Proposed Development.

13.6.3 Construction and decommissioning phase effects

13.6.3.1 The construction and decommissioning of the Proposed Development have the potential to result in significant effects on the visual amenity and perceived seascape character of those receptors scoped into the detailed assessment in Table 13.22 to Table 13.28.

13.6.3.2 As described in Table 13.20, construction and decommissioning phase effects on visual amenity and seascape character will occur as a result of the construction activities, including laying new offshore export cables to shore; the construction phase for the installation of and WTGs; windfarm service vessels and; and partially constructed offshore elements; all of which may combine to alter the visual amenity and seascape character through visibility of the construction and decommissioning activities. Temporary impacts may also arise as a result of the WTG fabrication in the locality of the installation port (to be determined) and temporarily during the tow out from the port facility. Temporary effects resulting from WTG fabrication will also be associated with port operations and typically industrialised setting and are not expected to be significant.

13.6.3.3 The residual effects arising as a result of the construction and decommissioning of the Proposed Development are assessed as being of the same magnitude and significance on all seascape, landscape and visual receptors as those arising due to their operation and maintenance, as assessed in Section 13.7 - 13.9, with the residual effects being short-term and temporary, occurring during the length of the construction and decommissioning phase and differing in nature from the operational effects mainly due the influence of the various construction vessels in the seascape, including cable laying vessels closer to shore within the export cable array area corridor, during the construction and decommissioning phase that will not be present or result in effects during the operational phase.

13.6.4 Potential receptors

13.6.4.1 For those matters ‘scoped in’ for assessment (Table 13.20), the approach to level of assessment is tiered. A ‘preliminary’ or ‘detailed’ assessment is undertaken as follows:

- a ‘preliminary assessment’ approach for an environmental aspect / effect which may include secondary baseline data collection (for example desk-based information) and qualitative assessment methodologies. A preliminary assessment of all seascape, landscape and visual receptors within the ZTV is set out in Table 13.22 to Table 13.28 in Section 13.7 (visual receptors), Section 13.8 (seascape receptors) and Section 13.9 (landscape receptors), using desk-based information and ZTV analysis (Volume 2, Figure 13.14 – Figure 13.17). The preliminary assessment identifies which seascape, landscape and visual receptors are unlikely to be significantly affected, which are subject to a preliminary assessment, and those receptors that are more likely to be significantly affected by the Proposed Development, which require a ‘detailed assessment’; and
- a ‘detailed assessment’ approach is undertaken for seascape, landscape and visual receptors/effects that are identified in the preliminary assessment as requiring detailed assessment. This detailed assessment, presented in Section 13.7 (visual receptors), Section 13.8 (seascape receptors) and Section 13.9 (landscape receptors), may include primary baseline data collection (for example through site surveys), quantitative and qualitative assessment methodologies, and modelling such as ZTV analysis (Volume 2, Figure 13.14 – Figure 13.17) and wireline/photomontage visualisations (Volume 2, Figures 13.21 – 13.39).

13.6.4.2 The assessment of whether an effect has the potential to be of likely significance has been based upon review of existing evidence base, consideration of commitments made (embedded environmental measures), professional judgement and where relevant, recommended aspect specific methodologies and established practice. In applying this judgement, use has been made of a simple test that to be significant an effect must be of sufficient importance that it should be taken into consideration when making a development consent decision.

13.6.4.3 To ensure the provision of a proportionate EIA and an ES that is focused on likely significant effects, the assessment takes into account the considerable levels of existing environmental information available, extensive local geographical knowledge and understanding of the site and surroundings gained from site selection analysis and environmental surveys.

13.6.5 Effects on Human Health and Population

13.6.5.1 There will be no effects on population or human health in relation to seascape, landscape and visual.

13.7 Potential Visual Effects

13.7.1 Preliminary Assessment

13.7.1.1 A preliminary assessment of the effects of the operation and maintenance of the Proposed Development on representative viewpoints in the SLVIA Study Area is presented in Table 13.22. A detailed assessment follows in Sections 13.7.2 to 13.7.15 for each viewpoint that is identified in the preliminary assessment as requiring detailed assessment.

Table 13.22 - Preliminary Assessment Representative Viewpoints

No	Viewpoint	Distance to array area (km)	Horizontal Field of View (degrees)	Turbines visible		Preliminary Assessment
				Blades	Hubs	
Day-time viewpoints						
1	Caerfai Bay Figure 13.22	47.85	8°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.2.
2	St Brides Bay, Nolton Haven Figure 13.23	49.19	9°	7	3	No potential for significant effects - scoped out of further assessment. Limited visibility of Proposed Development, consisting of two turbine rotors at long distance, with majority of Proposed Development screened by intervening landform.

No	Viewpoint	Distance to array area (km)	Horizontal Field of View (degrees)	Turbines visible		Preliminary Assessment
				Blades	Hubs	
3	Marloes Beacon Figure 13.24	36.99	12°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.3.
4	Skomer Island Figure 13.25	33.74	12°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.4.
5	St Ann's Head Figure 13.26	35.18	12°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.5.
6	South Hook Fort Figure 13.27	41.84	10°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.6.
7	West Angle Bay Figure 13.28	39.25	11°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.7.
8	B4320, near Wogaston Figure 13.29	43.67	10°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.8.
9	Stack Rocks Figure 13.30	42.51	10°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.9.
10	Freshwater West Beach Figure 13.31	40.61	10°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.10.
11	Skokholm Island Figure 13.32	30.35	14°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.11.
12	Hooper's Point Figure 13.33	35.89	11°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.12.
13	Sheep Island Figure 13.34	38.07	11°	7	7	Potential for significant effects that require further

No	Viewpoint	Distance to array area (km)	Horizontal Field of View (degrees)	Turbines visible		Preliminary Assessment
				Blades	Hubs	
						assessment, undertaken in Section 13.7.13.
14	Castlemartin Range Trail (Cold Comfort) Figure 13.35	43.75	10°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.14.
15	Carn Llidi Figure 13.36	50.01	7°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.15.
Night-time viewpoints						
A	Martin's Haven, National Trust (Car Park) Figure 13.37	35.66	11°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.18.
B	Kete National Trust (Car Park) Figure 13.38	35.70	12°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.18.
C	Freshwater West Beach Figure 13.39	40.58	10°	7	7	Potential for significant effects that require further assessment, undertaken in Section 13.7.18.
D	Marloes National Trust (Car Park) Figure 13.40	36.41	9°	2	1	No potential for significant effects - scoped out of further assessment. Limited visibility of Proposed Development, with only one turbine theoretically visible and the majority of reminder screened by intervening landform.

13.7.1.2 A preliminary assessment of the effects of the operation and maintenance of the Proposed Development on the visual receptors in the SLVIA Study Area is presented in Table 13.23 with reference to the ZTV analysis in Volume 2 Figure 13.17a. A detailed assessment follows in Sections 13.7.16 to 13.7.17 for each visual receptor that is identified in the preliminary assessment as requiring detailed assessment.

Table 13.23 - Preliminary Assessment Visual Receptors

Visual Receptor	Minimum distance to array area (km)	Preliminary Assessment
Potential for significant effects that require detailed assessment:		
Settlements: there are no predicted significant effects on residents of settlements in the SLVIA Study Area, all of which are either outside the ZTV or are beyond 40 km and have been assessed in the preliminary assessment below to have no potential for significant effects.		
Long distance recreational routes:		
Pembrokeshire Coast Path	35.1	Potential for significant effects on the Pembrokeshire Coast Path that requires detailed assessment, undertaken in Section 13.7.16 and from representative viewpoints on the Pembrokeshire Coast Path in Volume 2 at Viewpoint 1 (Figure 13.22), Viewpoint 2 (Figure 13.23), Viewpoint 5 (Figure 13.26), Viewpoint 6 (Figure 13.27), Viewpoint 7 (Figure 13.28), Viewpoint 8 (Figure 13.29), Viewpoint 9 (Figure 13.30), Viewpoint 10 (Figure 13.31), Viewpoint 12 (Figure 13.33), Viewpoint 13 (Figure 13.34).
Recreational ferry routes:		
Martin's Haven to Skomer Island	34.5	Potential for significant effects on the Martin's Haven to Skomer Island ferry that requires detailed assessment, undertaken in Section 13.7.17.
Main road routes:		
B4327	37.3	Potential for significant effects on closest sections of the B4327, B4320 and B4319 that requires detailed assessment, undertaken in from representative viewpoints provided in Volume 2 at Viewpoint 8 (Figure 13.29) and Viewpoint 14 (Figure 13.34) and in Section 13.7.8 and 13.7.14.
B4320	39.4	
B4319	40.5	
Pembrokeshire beaches:		
Marloes Sands	36.0	Potential for significant effects on closest beaches at Marloes Sands, Westdale Bay, Frainslake Sands and Freshwater West, that requires detailed assessment, undertaken from representative viewpoints provided in Volume 2 at Viewpoint 10 (Figure 13.30) and Viewpoint 12 (Figure 13.32).
Westdale Bay	36.3	
Frainslake Sands	40.3	
Freshwater West	40.4	
National Trust sites:		
Marloes Peninsula	34.8	Potential for significant effects on closest National Trust sites at Marloes Peninsula, Kete, Freshwater West, Treginnis Peninsula and Caerbwdy and Carn Nwchwm
Kete	36.3	

Visual Receptor	Minimum distance to array area (km)	Preliminary Assessment
Freshwater West and Gupton Farm	41.2	that requires detailed assessment, undertaken in from representative viewpoints in Section 13.7 from Volume 2 Viewpoint 1 (Figure 13.22), Viewpoint 3 (Figure 13.24), Viewpoint 5 (Figure 13.26), Viewpoint 10 (Figure 13.31) and night-time views A, B and D.
Treginnis Peninsula	44.7	
Caerbwdy and Carn Nwchwm	47.6	
Wildlife Trust / RSPB Reserves:		
Skokholm Island	30.2	Potential for significant effects on views from closest Wildlife Trust / RSPB reserves at Skokholm Island and Skomer Island that requires detailed assessment, undertaken from representative viewpoints assessed in Section 13.7 from Volume 2 at Viewpoint 4 Skomer Island (Figure 13.25) and Viewpoint 11 Skokholm Island (Figure 13.32).
Skomer Island	32.7	
Ramsey Island	42.7	
Considered in preliminary assessment but found to have no potential for significant effects – scoped out of detailed assessment:		
Settlements:		
St Ishmael's	41.3	These settlements are located at very long distance from Proposed Development (40-50 km) and the majority of settlement is outside ZTV, therefore affording no visibility. Only very limited areas of the settlements are within the ZTV, and these are often restricted to a reduced number of turbines and periods of infrequent excellent visibility conditions required to see the Proposed Development. There is additional intervening screening by the built environment of these settlements or features such as vegetation or, for the larger settlements (within Milford Haven/Pembroke area), large-scale urban and industrial influences are prevailing intervening features in the baseline. The Proposed Development is assessed as resulting in a negligible magnitude of change to the baseline views experienced by residents of these settlements.
Milford Haven	44.7	
Hundleton	47.6	
St David's/Tyddewi	47.8	
Pembroke	48.5	
Stackpole	48.6	
Llanstadwell	48.9	
Nolton Haven/Nolton	49.0	Coastal settlements from St David's Peninsula are the only settlements with direct coastal views out to sea. Views from Nolton are screened by the intervening landform within Nolton Haven. There is no potential for significant effects on views from Nolton Haven due to limited visibility of Proposed Development, consisting of two turbine rotors at long distance, with majority screened by intervening landform, as evident in Viewpoint 2 (Volume 2 Figure 13.22) and due to infrequent periods of excellent visibility conditions that would be required to see the Proposed Development. The Proposed Development is assessed as resulting in a negligible magnitude of

Visual Receptor	Minimum distance to array area (km)	Preliminary Assessment
		change to the baseline views experienced by residents of this Nolton Haven.
Upper Solva	49.7	Upper Solva is set back from the coast by the enclosed Solva Harbour. The majority of the settlement is located outside the SLVIA Study Area, beyond 50 km from the Proposed Development. Limited areas of the southern portion of the settlement fall within the SLVIA Study Area but are located over 49 km distant from the Proposed Development, separated by expansive stretches of offshore waters and the landform of the Marloes Peninsula to the south, where they may only be views of the Proposed Development during infrequent periods of excellent visibility conditions. The Proposed Development is assessed as resulting in a low magnitude of change to the baseline views experienced by residents of Upper Solva.
Long distance recreational routes:		
National Cycle Route 4 (NCR 4)	46.3	NCR 4 is located at very long distance from Proposed Development (over 47 km) and the majority of the route of NCR4 through the SLVIA Study Area is outside the ZTV – 12 km of the 19.6 km section of NCR 4 affords no visibility of the Proposed Development. The remaining sections affording theoretical visibility, east of St David's and between Nolton Haven and Haroldston West, are short, intermittent and at very long distance from the Proposed Development, which may only be visible during infrequent periods of excellent visibility conditions that would be required. The Proposed Development is assessed as resulting in a negligible magnitude of change to the baseline views experienced by cyclists using NCR 4.
Recreational ferry routes:		
St Justinians to Ramsey Island	45.2	The OS mapped route for the St Justinians to Ramsey Island ferry crosses the Ramsey Sound, where views south-west are restricted by the Ramsey Island itself and the headland at Pen Dal-aderyn. The majority of the route is outside the ZTV due to these intervening landforms preventing views of the Proposed Development, with just a short 1 km section of restricted visibility of 1-4 turbines coming out of St Justinian's harbour to part way across the sound. Given the very long distance to the Proposed Development, its small scale, the infrequent periods of excellent visibility conditions that would be required, and restricted visibility by intervening landforms, the magnitude of change to the baseline views experienced by people crossing on the ferry to Ramsey Island are assessed as negligible.

Visual Receptor	Minimum distance to array area (km)	Preliminary Assessment
Main road routes:		
A477	48.8	A477 is located at very long distance from Proposed Development near the edge of the SLVIA Study Area, where views of the Proposed Development may only occur during infrequent periods of excellent visibility, and with the majority of the route being outside the SLVIA Study Area. Only a short 1.9 km section of the road affords theoretical visibility of the Proposed Development, with the majority of the route being outside the ZTV and affording no visibility of the Proposed Development. The Proposed Development is assessed as resulting in a negligible magnitude of change to the baseline views experienced by motorists travelling on the A477.
A487	48.4	A487 is located at very long distance from Proposed Development, where views of the Proposed Development may only occur during infrequent periods of excellent visibility, and with the majority of the route being outside the SLVIA Study Area. There is a short 5 km section of the road that affords theoretical visibility of the Proposed Development between St. David's and Solva, however this section is set back from the coast and affording intermittent sea views when driving the route due to the localised landform and roadside vegetation, and with views being at very long distances of 48-50 km to the Proposed Development. The Proposed Development is assessed as resulting in a low magnitude of change to the baseline views experienced by motorists travelling on the A487.
B4326	44.9	These 'B' road routes are all located at very long distance from the Proposed Development (45-50 km), where views of the Proposed Development may only occur during infrequent periods of excellent visibility and have only very short sections that are within the ZTV, often less than 1 km of the total length of the route and in some cases take a route largely through urban areas (B4322, B4325) such that views are limited by the surrounding built environment. The Proposed Development is assessed as resulting in a negligible magnitude of change to the baseline views experienced by motorists travelling on these roads.
B4325	45.9	
B4341	46.1	
B4583	49.0	
B4322	49.1	
Pembrokeshire beaches:		
Bullslaughter Bay	43.9	Beach is located at very long distance from Proposed Development, where views of the Proposed Development may only occur during infrequent periods of excellent visibility. The bay has primarily a southerly aspect and much of the bay is outside ZTV, therefore affording no

Visual Receptor	Minimum distance to array area (km)	Preliminary Assessment
		visibility or restricted visibility, due to the containment of the steep cliffs that form the bay.
Porthlysgi Bay	45.9	Beach is located at very long distance from Proposed Development, and although it has primarily a south-west aspect, the bay has restricted visibility of the Proposed Development due the intervening screening by offshore islands close to the bay at Carreg yr Esgob and Carreg Fran and due to its distance, views of the Proposed Development may only occur during infrequent periods of excellent visibility.
Caerbwdy Bay	48.3	Beach is located at very long distance from Proposed Development, and although it has primarily a southerly aspect, the bay has restricted visibility of the Proposed Development due the intervening screening by the Penpleidian headland close to the bay. Due to its distance, views of the Proposed Development may only occur during infrequent periods of excellent visibility.
Rickets Head Beach	49.8	Beach is located at very long distance from Proposed Development and has reduced visibility of 1-2 turbines due to the screening by intervening Marloes Peninsula and Skomer Island.
National Trust sites:		
Stackpole	46.1	Stackpole is located at very long distance from the Proposed Development and the majority of the site is outside ZTV due to the contained landform, therefore affording no visibility. Only a very limited area is within the ZTV, and these areas are restricted to a reduced number of turbines.
St David's City Commons	47.4	St David's City Commons and Shop are located at very long distance from the Proposed Development (47-50 km) and although they are largely within the ZTV, due to the distance, their set-back position form the coast, the small scale of the Proposed Development and infrequent excellent visibility conditions required to see the Proposed Development, there is no potential for significant effects. St David's shop is a shop in the city centre and will afford no visibility of the Proposed Development.
St David's Shop	47.7	
St David's Commons	49.3	
Solva	49.1	The majority of the National Trust site at Solva is located outside the SLVIA Study Area, beyond 50 km from the Proposed Development. Limited areas of the southern portion of the site, such as the headland at Dinas Fawr, fall within the SLVIA Study Area, but are located over 49 km distant from the Proposed Development, separated by expansive stretches of offshore waters and the landform of the Marloes Peninsula to the south. Due to the distance of the Proposed Development, its small scale and

Visual Receptor	Minimum distance to array area (km)	Preliminary Assessment
		infrequent excellent visibility conditions required to see the Proposed Development, there is no potential for significant effects.
Llanunwas	49.2	Llanunwas is located on the very edge of the SLVIA Study Area near Solva, where there is restricted visibility due to the screening fforded by intervening nearshore islands and the distant Marloes Peninsula and Skomer Island. Due to the restricted visibility, the distance of the Proposed Development, its small scale and infrequent excellent visibility conditions required to see the Proposed Development, there is no potential for significant effects.
Pointz Castle to Pen-y-Cwm	49.9	Pointz Castle to Pen-y-Cwm is located on the very edge of the SLVIA Study Area, with the majority of this National Trust site falling outside the SLVIA Study Area and occupying an area of coastline where visibility is increasingly restricted at the northern end of Newgale Sands, due to the intervening landform of Marloes Peninsula and Skomer Island, screening views towards the Proposed Development. Due to the restricted visibility, the distance of the Proposed Development, its small scale and infrequent excellent visibility conditions required to see the Proposed Development, there is no potential for significant effects.
Wildlife Trust / RSPB Reserves:		
Grassholm Island	27.2	No potential for significant effects as there is a strict no landing policy therefore no visitors/receptors present on the island.

13.7.1.3 Effects on views are the changes to views experienced by people that result from the introduction of the Proposed Development. The assessment of effects on views includes effects on people at representative viewpoints and on principal visual receptors (i.e. groups of people in settlements, motorists on roads or users of recreational routes).

13.7.1.4 A detailed assessment of the visual effects of the operation and maintenance of the proposed Development from the agreed representative viewpoints is set out in the following assessment. This describes the likely significant effects of the Proposed Development on each representative viewpoint, assessing those that were identified in the preliminary assessment in Table 13.22 as having potential to be significantly affected.

13.7.2 Viewpoint 1 Caerfai Bay

Baseline and sensitivity to change

13.7.2.1 The location and baseline panorama from Viewpoint 1 Caerfai Bay are shown in Volume 2, Figure 13.22a-d. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.2.2 **Value**. Although it is not an OS marked viewpoint, it is a specific viewpoint with facilities for tourist visitors, including a public car park and benches orientated to overlook Caerfai Bay, which aid enjoyment of the view. It is located within the Caer Bwdy and Carn Nwchwm National Trust land on the southern coast of the St David's Peninsula. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour' and 'spectacle of the islands' identified in PCNP special qualities 1 and 3, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks the St David's Peninsula Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape, overlooking the *'tall cliff faces, headlands, and small sandy / shingle beaches, caves and stacks'* that are distinctives on this stretch of coastline along the southern St David's peninsula.

13.7.2.3 **Susceptibility**. The viewpoint is representative of the view experienced by people using the Pembrokeshire Coast Path, who gain dynamic but protracted views along the along the southern coastline of the St David's Peninsula, as well as visitors to Caerfai Bay who may visit specifically to experience the view, visit the beach or stay at the nearby camp site, and whose main attention and interest are likely to be on their surroundings. The viewpoint affords a direct view out to sea from the coastal edge, in which viewers are more liable to be influenced by development in the sea, with the wide view out to sea framed by headlands to the north and south of St Bride's Bay, however the view is focused south-west along the cliff faces, headlands and coastline, which form notable features of interest in the view, and to a lesser degree focused on the open seascape. The offshore site boundary is remote from the viewpoint location, separated by the headland of Marloes Peninsula and open seas. Viewers experience a high level of visual amenity at the location, and there are relatively few visual detractors, including just the local electrical distribution poles, and there are distant onshore WTGs and chimney stacks at the Milford Haven refinery visible on the skyline across St Bride's Bay.

Magnitude of change and significance of effect

13.7.2.4 The predicted view of the Proposed Development from Viewpoint 1 Caerfai Bay is shown in the photomontage in Volume 2, Figure 13.22. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.2.5 The Proposed Development array area will be located at very long distance, between 48.6 km and 56.6 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the far distance on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 15.7% visibility frequency of the WTGs at 45 km and 10.5% at 50 km.

13.7.2.6 Even during these 'maximum' visibility periods, the WTGs will still likely be viewed as being recessive, due to the low contrast and visual acuity of the eye to distinguish shapes and details of WTGs at such distance. During these infrequent periods of excellent visibility, the upper towers and rotors of the WTGs will be visible above the skyline, with the lower parts of the towers and semi-submersible platforms hidden by the intervening horizon.

13.7.2.7 The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will be smaller in vertical scale than many of the other features in the view, including the coastal landforms and islands. The Proposed Development will introduce new offshore WTG elements however, they are not unique to the view as there are distant onshore WTGs and chimney stacks on the skyline across St Bride's Bay.

13.7.2.8 The lateral spread of the Proposed Development WTGs will occupy approximately 8° of the horizontal field of view (HFoV), which is a very narrow portion of the wider 180° sea view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.2.9 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from the mainland coast, headlands and islands by areas of intervening seascape. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the sea are retained and the perceived 'coastal splendour' and 'spectacle of the islands' will not notably change and will continue to be definitive in the high levels of visual amenity experienced.

13.7.2.10 Based on the combination of the high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.3 Viewpoint 3 Marloes Beacon

Baseline and sensitivity to change

13.7.3.1 The location and baseline panorama from Viewpoint 3 Marloes Beacon are shown in Volume 2, Figure 13.24a-e. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a medium-high susceptibility to change, for the reasons set out below.

13.7.3.2 **Value**. Marloes Beacon is a small hill summit at 76 m high with a local prominence and identified by a trig point. Although it is a specific viewpoint identified in OS maps, it is not promoted by information or signage, with access being low key along a short path from a roadside pull-in. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'diversity of landscape' and 'spectacle of the islands' identified in PCNP special qualities 1, 3 and 8, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks the Marloes and Dale Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities. The relatively elevated and slightly inland position on the Marloes Peninsula affords panoramic views that take in a diversity of landscape, including both the rugged coastline, Gateholm, Skokholm and Skomer islands, the seascape of Broad Sound, as well as the defining field patterns and texture of the open landscape, which all contribute to the sense of place.

13.7.3.3 **Susceptibility**. The viewpoint is representative of the view experienced by people that visit to take in the view from Marloes Beacon on a short walk from the pull-in off the minor road between Marloes and Martin's Haven. It is not a destination viewpoint as such, but it does afford people passing by on this road the opportunity to stop and take in the view from an elevated point on the Marloes Peninsula enroute to Martin's Haven. The receptors are likely to experience the view for a short duration, as there are no facilities to aid enjoyment of the view, however their main attention and interest are likely to be on their surroundings. The viewpoint is set back from the coast, further inland on the Marloes Peninsula, which reduces its susceptibility to some degree compared to views from the coastal edge, however the coastal waters of Broad Sound are visible to the west and the islands of Skokholm and Skomer are a particular focus of interest in the view and susceptible to changes in their seascape backdrop. The offshore site boundary is relatively remote from the viewpoint location, partially separated by the headland of St Ann's Head and open seas. Viewers experience a high level of visual amenity at the location, and there are relatively few visual detractors in the view out to sea, however the chimneys and storage tanks of Milford Haven's oil refineries and Pembroke Power Station are visible on the landform skyline to the south, and onshore WTGs are scattered across this landscape.

Magnitude of change and significance of effect

13.7.3.4 The predicted view of the Proposed Development form Viewpoint 3 Marloes Beacon is shown in the photomontage in Volume 2, Figure 13.24f. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.3.5 The Proposed Development array area will be located at long distance, between 37.0 km and 45.5 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 32.4% visibility frequency of the WTGs at 35 km and 15.6% at 45 km.

13.7.3.6 During these infrequent periods of very good and excellent visibility, the towers and rotors of the WTGs will be visible above the skyline, with the lower parts of the towers and semi-submersible platforms hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will not be out of proportion with other vertical elements in the view such as the main landforms, islands, local electrical distribution poles and existing onshore WTGs. The Proposed Development will introduce new offshore WTG elements however, they are not unique to the view as there are distant onshore WTGs and chimney stacks to the south.

13.7.3.7 The lateral spread of the Proposed Development WTGs will occupy approximately 12° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.3.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' in the backdrop to the coastal waters of Broad Sound. The majority of the array area is clearly separated from the mainland coast, headlands and islands by areas of intervening seascape. The northern most WTG will however, be viewed in the backdrop behind Skokholm Island, adding a competing element of focus in the view to the island and through the addition of man-made elements in its seascape context, potentially influencing the perceived remoteness of Skokholm, despite having a form that relates rationally to the exposure of the island.

13.7.3.9 The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the seascape are retained and the perceived 'coastal splendour', 'diversity of landscape' and 'spectacle of the islands' will not notably change and will continue to be definitive in the high levels of visual amenity experienced.

13.7.3.10 Based on the combination of the high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.4 Viewpoint 4 Skomer Island

Baseline and sensitivity to change

13.7.4.1 The location and baseline panorama from Viewpoint 4 Skomer Island are shown in Volume 2, Figure 13.25a-f. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.4.2 **Value**. The viewpoint is located at the trig point on Skomer Island, its highest point, and is accessible from the farm at the centre of the island, which provides both accommodation for researchers and a hub for visitors walking on the main footpath from the landing at North Haven to the west and north side of the island. There are no facilities as such provided at viewpoint to aid the enjoyment of the view, however there are benches and toilets for visitors at the farm nearby. The view itself is not afforded protection in planning policy, however the view is representative of the 'spectacle of the islands' identified in PCNP special quality 8 in particular, as well as the 'remoteness, tranquillity and wildness' identified in PCNP special quality 11. The viewpoint is within the PCNP and overlooks the Marloes and Dale Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The spectacle of Skomer Island contributes greatly to the sense of place, and feeling of remoteness, with their outstanding visual and landscape scenery which are highly valued as attractive coastal wilderness areas, virtually undisturbed and rich in wildlife. Visitor numbers are restricted by the three boat crossings per day from Martin's Haven between April-September and a very popular, however there are no visitors during the remainder of the year, other than the researchers and wardens based on the island.

13.7.4.3 **Susceptibility**. The viewpoint is representative of the view experienced by both the researchers/wardens based on the island and the tourist visitors to Skomer Island. People visit Skomer primarily to see the island's wildlife close-up, particularly the Puffins for which it is well known, but also the Manx Shearwaters, Dolphins, Harbour Porpoises, Atlantic Grey Seal, Razorbills, Gannets and unique Skomer Vole. The view west out to sea from the trig point is somewhat secondary to the wildlife experience on the island itself, however visitor's main attention and interest are certainly on their surroundings, which are unique and convey the sense of remoteness, tranquillity and wildness that can be found on this exposed and isolated island. The viewpoint is representative of the open views experienced by visitors at the trig point, as well as the viewer experienced while walking the trail around the western side of the island between Garland Stone, Pigstone Bay and the South Plateau, where people will gain dynamic but protracted views out to sea. The views over the habitats, wildlife and coastline of Skomer itself at the main focus, which extends over the coastal waters of Broad Sound to Skokholm and along the cliff faces, headlands, caves and stacks of the mainland coast which are of particular focus in the wider panorama. The offshore waters to the west/south-west form the part of the view that is susceptible to changes in the seascape backdrop. Viewers experience a high level of visual amenity at the location and experience qualities of remoteness, wildness and tranquillity, however there are visual detractors in the distance including the chimneys of Milford Haven's oil refineries, Pembroke Power Station and onshore WTGs are visible on the mainland landform skyline to the south.

Magnitude of change and significance of effect

13.7.4.4 The predicted view of the Proposed Development from Viewpoint 4 Skomer Island is shown in the photomontage in Volume 2, Figure 13.25h. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as medium-low, for the reasons set out below.

13.7.4.5 The Proposed Development array area will be located at long distance, between 33.7 km and 42.4 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates 42.8% visibility frequency of the WTGs at 30 km and 23.2% at 40 km.

13.7.4.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will not be out of proportion with other vertical elements in the view such as the main coastal landforms, islands, stacks at Valero oil refinery, Pembroke Power Station and existing onshore WTGs. Although the Proposed Development will introduce new offshore WTG elements however, they are not unique to the view as there are distant onshore WTGs and chimney stacks to the south-east.

13.7.4.7 The lateral spread of the Proposed Development WTGs will occupy approximately 12° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.4.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from Skomer Island and the mainland coast by expansive areas of intervening seascape and offshore waters. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the exhilarating, wide and panoramic views to the sea will be retained. The features that contribute to the perceived 'spectacle of the island', including its cliffs with associated seabirds, dramatic rocks, islets, rough seas and exposure will not be changed as a result of views of the Proposed Development. Although the addition of man-made elements in its wider seascape context may potentially influencing the perceived remoteness of Skomer, the WTGs have a form that relates rationally to the exposure of the island and due to the long-distance, small scale and narrow in lateral extent the perceived remoteness, tranquillity and wildness of the landscape of Skomer in the view will continue to endure in the presence of the distant WTGs.

13.7.4.9 Based on the combination of the high sensitivity of the viewpoint and medium-low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate)**, direct, long-term and reversible.

13.7.5 Viewpoint 5 St Ann's Head

Baseline and sensitivity to change

13.7.5.1 The location and baseline panorama from Viewpoint 5 St Ann's Head are shown in Volume 2, Figure 13.26a-f. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a medium-high susceptibility to change, for the reasons set out below.

13.7.5.2 **Value**. The viewpoint is located at St Ann's Head, on the Pembrokeshire Coast Path, between the lighthouse and the coastguard cottages. It is not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors, however it is located at a viewpoint of interest given it is the southern-most point of St Ann's Head and near the only working mainland lighthouse in operation in Pembrokeshire. It is also accessible from the Kete National Trust land car park to the north. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'diversity of landscape' and 'spectacle of the islands' identified in PCNP special qualities 1, 3 and 8, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks the Marloes and Dale Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The relatively elevated position on the edge of the Peninsula affords panoramic sea views that take in the open seascape to the west/south-west, the islands of Skomer and Skokholm to the north-west, outer Milford Haven and St Ann's Head lighthouse to the south and east, which all contribute to the sense of place.

13.7.5.3 **Susceptibility**. The viewpoint is representative of the view experienced by people using the Pembrokeshire Coast Path at St Ann's Head, who gain dynamic but protracted views along the along the western coastline of St Ann's Head, as well as visitors to St Ann's Head lighthouse who may visit specifically to experience the view from this exposed southern-most point of St Ann's Head. Attention and interest are likely to be on the surrounding seascape. The viewpoint affords a direct view out to sea from the coastal edge, in which viewers are more liable to be influenced by development in the sea, however it is a wide, large-scale and simple view out to sea, where complexity is avoided by the position of islands and headlands to the north and south of the wide open expanse of offshore waters to the west. Attention and interest may also be focused on some of the nearby features such as the lighthouse and coastguard cottages. Viewers experience a relatively high level of visual amenity at the location, however there are a number of visual detractors in the views into Milford Haven, including the chimneys and storage tanks of Milford Haven's oil refineries, Pembroke Power Station and pylons visible either side of the estuary.

Magnitude of change and significance of effect

13.7.5.4 The predicted view of the Proposed Development form Viewpoint 5 St Ann's Head is shown in the photomontage in Volume 2, Figure 13.26h. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.5.5 The Proposed Development array area will be located at long distance, between 35.2 km and 43.3 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 32.4% visibility frequency of the WTGs at 35 km and 23.2% at 40 km.

13.7.5.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will not be out of proportion with other vertical elements in the view such as the main coastal landforms, islands, communications masts, stacks at Valero oil refinery, Pembroke Power Station and electrical pylons. Although the Proposed Development will introduce new offshore WTG elements however, they are not unique to the view as there are onshore WTGs visible to the south-east.

13.7.5.7 The lateral spread of the Proposed Development WTGs will occupy approximately 12° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.5.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from St Ann's Head by expansive areas of intervening seascape and offshore waters. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the sea, along the coastline and to the islands of Skomer and Skokholm will be retained. The features that contribute to the 'coastal splendour', including the dramatic rocky coastline, distinctive focal points and islands, will not be changed as a result of views of the Proposed Development, which will be clearly separated from the coast, headlands and islands by large areas of intervening seascape.

13.7.5.9 Based on the combination of the high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.6 Viewpoint 6 South Hook Fort

Baseline and sensitivity to change

13.7.6.1 The location and baseline panorama from Viewpoint 6 South Hook Fort are shown in Volume 2, Figure 13.27a-e. The sensitivity of the viewpoint is considered to be medium-high, reflecting that the view has medium-high value and the receptors experiencing the view have a medium-high susceptibility to change, for the reasons set out below.

13.7.6.2 **Value**. The viewpoint is located at South Hook Point, on the Pembrokeshire Coast Path, near South Hook Fort. It is not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors, however it is located at a viewpoint of interest given it is strategic position on the northern shore of Milford Haven, near to the South Hook Fort, which built as part of the inner line of defence of the Haven. The view itself is not afforded protection in planning policy, and it is located near the inner edge of the PCNP within Milford Haven where the landscape has been subject to more development influence. Nevertheless, the view is representative of the 'coastal splendour', 'diversity of landscape' and 'space to breathe' identified in PCNP special qualities 1, 3 and 10, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks parts of the Marloes and Dale and South Pembrokeshire Heritage Coasts, including the Angle Peninsula and St Ann's Head, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The diversity of landscape and contrast between the PCNP to the west and the influence of activity by man is tangible and contributes to a strong sense of place. The viewpoint is accessible easily from the nearby settlements at Milford Haven yet provides opportunities for reflection and enjoyment of the views from the Pembrokeshire Coast Path.

13.7.6.3 **Susceptibility**. The viewpoint is representative of the view experienced by people using the Pembrokeshire Coast Path, where there is a relatively short section of visibility at South Hook Point that affords a framed view along the outer Milford Haven between St Ann's Head and the Angle Peninsula to the open seascape beyond. Attention and interest of people walking the path are likely to be on the surrounding seascape, including the features of interest in the nearby waters of the haven such as the Valero oil refinery jetty, Stack Rock and Thorn Island, as well as the more distant landforms across the water. The viewpoint does not afford a direct view out to the open sea, with the view largely being contained within the outer Milford Haven, however the main susceptibility is the potential introduction of elements into the focus of the framed view that is channelled out to sea by St Ann's Head and the Angle Peninsula, and the relationship to focal points such as Stack Rock and Thorn Island. The visual amenity of viewers at this location is influenced by a number of visual detractors, including the nearby Valero oil refinery to the immediate north and its jetty which extends into the waters, and the oil refineries, Pembroke Power Station and pylons visible to the south of Milford Haven from nearby parts of the path.

Magnitude of change and significance of effect

13.7.6.4 The predicted view of the Proposed Development form Viewpoint 6 South Hook Fort is shown in the photomontage in Volume 2, Figure 13.27g. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.6.5 The Proposed Development array area will be located at very long distance, between 41.8 km and 49.8 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 23.2% visibility frequency of the WTGs at 40 km and 10.5% at 50 km.

13.7.6.6 During these infrequent periods of excellent visibility, the towers and rotors of the WTGs will be visible above the skyline, with the lower parts of the towers and semi-submersible platforms hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will not be out of proportion with other vertical elements in the view such as the main landforms, islands and Valero oil refinery jetties. The Proposed Development will introduce new offshore WTG elements into a view where no other WTGs are visible, however these will occur in the context of the Valero oil refinery, its jetty and Pembroke Power Station in the wider view.

13.7.6.7 The lateral spread of the Proposed Development WTGs will occupy approximately 10° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of seascape and coastline forming the outer Milford Haven will remain unaffected.

13.7.6.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' in the backdrop to the mouth of Milford Haven. The Proposed Development be viewed in the focus of the view out to sea, framed by St Ann's Head and the Angle Peninsula, partially enclosing the space between the Angle Peninsula and St Ann's Head. It will also be viewed behind Thorn Island, with the WTGs located in in its seascape backdrop likely to compete with this existing focal point.

13.7.6.9 Although the Proposed Development WTGs will increase the influence of man-made elements in the view, these influences are already tangible and contribute to the diversity evident around Milford Haven. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the perceived coastal splendour will not notably change, and the existing elements will continue to be definitive in the high levels of visual amenity experienced.

13.7.6.10 Based on the combination of the medium-high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.7 Viewpoint 7 West Angle Bay

Baseline and sensitivity to change

13.7.7.1 The location and baseline panorama from Viewpoint 7 West Angle Bay are shown in Volume 2, Figure 13.28a-e. The sensitivity of the viewpoint is considered to be medium-high, reflecting that the view has medium-high value and the receptors experiencing the view have a medium-high susceptibility to change, for the reasons set out below.

13.7.7.2 **Value**. The viewpoint is located on the northern side of West Angle Bay, on the Pembrokeshire Coast Path. It is not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors, however it does have a bench which is placed here to allow walkers to take in the view from the end of the Angle Peninsula. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'diversity of landscape' and 'space to breathe' identified in PCNP special qualities 1, 3 and 10, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks parts of the South Pembrokeshire and Marloes and Dale Heritage Coasts, including the Angle Peninsula and St Ann's Head, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The diversity of landscape is evident, through the contrasts between the coast, its varied landforms and field pattern of the hinterland. The viewpoint is accessible from the car park at the beach at West Angle and provides opportunities for reflection and enjoyment of the views from the Pembrokeshire Coast Path.

13.7.7.3 **Susceptibility**. The viewpoint is representative of the view experienced by people using the Pembrokeshire Coast Path, where there is a relatively short section of visibility at around the northern peninsula of West Angle Bay, which affords a panoramic view over outer Milford Haven and West Angle Bay and is partially framed and channelled out to sea between St Ann's Head and the Angle Peninsula. Attention and interest of people walking the path are likely to be on the surrounding seascape, including the features of interest in the nearby waters, particularly Thorn Island, and landmarks such as St Ann's Head lighthouse. The viewpoint does not afford a direct view out to the open sea, with the view partially contained within the outer Milford Haven, however the main susceptibility is the potential introduction of elements into the focus of the framed view that is channelled out to sea by St Ann's Head and the Angle Peninsula, and the relationship to existing focal points such as Thorn Island. Viewers experience a high level of visual amenity at the location, and there are relatively few visual detractors in the view, however Milford Haven's oil refineries, jetties, urban areas and Pembroke Power Station become visible when moving east along the Pembrokeshire Coast Path, and there are smaller scale detractors such as caravan parks at West Angle, and local electrical distribution poles.

Magnitude of change and significance of effect

13.7.7.4 The predicted view of the Proposed Development form Viewpoint 7 West Angle Bay is shown in the photomontage in Volume 2, Figure 13.28g. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.7.5 The Proposed Development array area will be located at very long distance, between 39.3 km and 47.2 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 23.2% visibility frequency of the WTGs at 40 km and 15.7% at 45 km.

13.7.7.6 During these infrequent periods of excellent visibility, the towers and rotors of the WTGs will be visible above the skyline, with the lower parts of the towers and semi-submersible platforms hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will be smaller in scale than other vertical elements in the view such as the main landforms, islands and local electrical distribution poles. The Proposed Development will introduce new offshore WTG elements into a view where no other WTGs are visible, however these will occur in views where walkers will likely have experienced the context of nearby Milford Haven's oil refineries, jetties and Pembroke Power Station.

13.7.7.7 The lateral spread of the Proposed Development WTGs will occupy approximately 11° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of seascape and coastline forming West Angle Bay and the outer Milford Haven will remain unaffected.

13.7.7.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' in the backdrop to the mouth of Milford Haven. The Proposed Development be viewed in the focus of the view out to sea, framed by St Ann's Head and the Angle Peninsula, partially enclosing the sea skyline space between these landforms. The WTGs will, however, be clearly separated from each headland and will not be seen in the immediate backdrop or focus of any other focal points such as Thorn Island.

13.7.7.9 Although the Proposed Development WTGs will increase the influence of man-made elements in the view, these influences are already tangible and contribute to the diversity evident around West Angle and Milford Haven. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the perceived coastal splendour will not notably change, and the existing elements will continue to be definitive in the high levels of visual amenity experienced.

13.7.7.10 Based on the combination of the medium-high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.8 Viewpoint 8 B4320, near Wogaston

Baseline and sensitivity to change

13.7.8.1 The location and baseline panorama from Viewpoint 8 B4320 near Wogaston are shown in Volume 2, Figure 13.29a-e. The sensitivity of the viewpoint is considered to be medium, reflecting that the view has medium value and the receptors experiencing the view have a medium susceptibility to change, for the reasons set out below.

13.7.8.2 **Value**. The viewpoint is located on the B4320 near Wogastan (Solar Farm) at a localised high point on the road that affords coastal views to the west, as well as views north to Milford Haven. It is not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors, being an incidental view from the B4320 en-route to Angle and West Angle Bay. The view itself is not afforded protection in planning policy, however the view is representative of the 'diversity of landscape' identified in PCNP special quality 3, which is afforded planning policy protection. The viewpoint is located on the inland edge of the PCNP, which implies a higher value to the visible landscape, however the views north take in the oil refineries and urban landscapes around Milford Haven, outside the PCNP. The relatively elevated and slightly inland position affords panoramic views that take in some diversity of landscape, overlooking Castlemartin Corse and the hinterland of Freshwater West towards the sea to the west, and the distinctive agricultural field pattern, texture and settlement pattern of the PCNP coastal hinterland, yet the sea element is simple and does not include any of the rugged coastal landforms or islands associated with other parts of the coast.

13.7.8.3 **Susceptibility**. The viewpoint is representative of the view experienced by motorists using the B4320, and scattered farmsteads in the Wagaston/Wallaston area. It is not a destination viewpoint as such, but it does afford people passing by on this road the opportunity to take in the view towards the sea across Freshwater West. The main receptors are likely to experience the view for a short duration, while driving on the B4320 as there are no facilities to aid enjoyment of the view, and their main attention and interest are less likely to be on their surroundings than other receptors. The viewpoint is set back from the coast, further inland and on the inland edge of the PCNP, which reduces its susceptibility to some degree compared to views from the coastal edge. There are also few focal points of interest in the view and the sea forms a simple seascape backdrop to the agricultural hinterland of the PCNP. The offshore site boundary is relatively remote from the viewpoint location. Although the coastal views across the PCNP afford viewers a high level of visual amenity, there are visual detractors in the wider view, particularly to the north, including Milford Haven's oil refineries, Pembroke Power Station and overhead transmission lines.

Magnitude of change and significance of effect

13.7.8.4 The predicted view of the Proposed Development form Viewpoint 8 B4320, near Wogaston is shown in the photomontage in Volume 2, Figure 13.29g. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low**,** for the reasons set out below.

13.7.8.5 The Proposed Development array area will be located at very long distance, between 43.7 km and 51.0 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate landscape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 23.2% visibility frequency of the WTGs at 40 km and 10.5% at 50 km.

13.7.8.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the landscape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will be of smaller scale than many of the other vertical elements in the view including the local electrical distribution poles, pylons, fence posts and military buildings in the landscape.

13.7.8.7 The lateral spread of the Proposed Development WTGs will occupy approximately 10° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open landscape and sea skyline will remain unaffected.

13.7.8.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' in the backdrop to the hinterland areas of Castlemartin, Freshwater West and in its wider seascape context beyond. The array area is clearly separated from the mainland coast by areas of intervening seascape and there are few focal points, such that it will be viewed in an open, simple and uncomplicated setting. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the seascape are retained and the perceived 'diversity of landscape' will not notably change, with the distinctive pattern and textures of the terrestrial landscape of Castlemartin Corse and Freshwater West continuing to be definitive in the view.

13.7.8.9 Based on the combination of the medium sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.9 Viewpoint 9 Stack Rocks

Baseline and sensitivity to change

13.7.9.1 The location and baseline panorama from Viewpoint 9 Stack Rocks are shown in Volume 2, Figure 13.30a-f. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.9.2 **Value**. The viewpoint is located at Stack Rocks, on the coastline just off the Pembrokeshire Coast Path and the Stack Rocks National Trust car park. Although it is not an OS marked viewpoint, it is a specific viewpoint that people visit particularly to view the Green Bridge of Wales, a natural rock arch, and the bird colonies on Stack Rocks (Elegug Stacks), two detached pillars of limestone. The tops of the stacks and the ledges below are crammed in spring with guillemots and razorbills and draw many visitors to observe and photograph the birds. The viewpoint is accessible from the nearby Stack Rocks National Trust car park, accessed through the nearby artillery range, and via the Pembrokeshire Coast Path. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'spectacle of the islands' and 'remoteness, tranquillity and wildness' identified in PCNP special qualities 1, 8 and 11, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks the South Pembrokeshire Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The spectacle of the Green Bridge and Stack Rocks, including the bird life activities, sounds and smells, contributes greatly to the sense of place. The Green Bridge provides an example of the *'breathtaking landscape along this coast'* (PCNP, 2018) and the elevated cliff-top position is exposed and relatively isolated, affording panoramic sea views that take in the open seascape to the west/south-west and across Stack Rocks along the rugged coastline to Mewsford Point and Saddle Head.

13.7.9.3 **Susceptibility**. The viewpoint is representative of the view experienced by people using the Pembrokeshire Coast Path, who gain dynamic but protracted views along the along the South Pembrokeshire coastline, as well as visitors to Stack Rocks who may visit specifically to experience the view or to see the bird colonies, and whose main attention and interest are likely to be on their surroundings. The viewpoint affords a direct view out to sea from the coastal edge, in which viewers are more liable to be influenced by development in the sea, however it is a wide, large-scale and simple view out to sea, where complexity is avoided and the view is focused east/south-east towards Stack Rocks, along the cliff faces, arches and headlands of the coastline, which form notable features of interest in the view, and to a lesser degree focused on the open seascape to the west/south-west. The offshore site boundary is remote from the viewpoint location, partially separated by the headland of Linney Head and open seas. Viewers experience a high level of visual amenity at the location and there are relatively few visual detractors.

Magnitude of change and significance of effect

13.7.9.4 The predicted view of the Proposed Development form Viewpoint 9 Stack Rocks is shown in the photomontage in Volume 2, Figure 13.30h. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low**,** for the reasons set out below.

13.7.9.5 The Proposed Development array area will be located at long distance, between 42.5 km and 49.4 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 23.2% visibility frequency of the WTGs at 40 km and 10.5% at 50 km.

13.7.9.6 During these periods of excellent visibility, the rotors and towers of the WTGs will be visible above the skyline, however the lower towers and semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will be relatively small in comparison to other vertical elements in the view such as the main coastal cliff landforms, stacks and arches. The Proposed Development will however introduce new offshore WTG elements that are not currently features of the existing view.

13.7.9.7 The lateral spread of the Proposed Development WTGs will occupy approximately 10° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.9.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from Stack Rocks and The Green Bridge, in an oblique direction of the view and separated by expansive areas of intervening seascape and offshore waters. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the sea will be retained and the large majority of seascape remaining unaffected. The features that contribute to the 'coastal splendour' and spectacle of the coastline, particularly the dramatic, steep rocky coastline, Stack Rocks and the Green Bridge, will not be changed as a result of views of the Proposed Development, which will be clearly separated from these features. Although the addition of man-made elements in its wider view may potentially influence the perceived remoteness experienced near Stack Rocks, the WTGs have a form that relates rationally to the exposure of the coastline.

13.7.9.9 Based on the combination of the high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.10 Viewpoint 10 Freshwater West Beach

Baseline and sensitivity to change

13.7.10.1 The location and baseline panorama from Viewpoint 10 Freshwater West Beach are shown in Volume 2, Figure 13.31a-e. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.10.2 **Value**. The viewpoint is located at Freshwater West beach, at an elevated position on the dunes near the Pembrokeshire Coast Path and Gumpton Burrows, Freshwater West car park. It is not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors, however the dunes provide a naturally elevated position from which to take in the view over the beach and there are visitor facilities nearby at the car park. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'space to breathe' and 'remoteness, tranquillity and wildness' identified in PCNP special qualities 1, 10 and 11, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks parts of the South Pembrokeshire Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The view is permeated by the constant presence of the sea and wind, sharpened by the sound of crashing waves, backed by the sandy beach and dunes. These are highly valued by residents and visitors alike, resulting in large numbers of visitors to the beach, particularly during summer, however a sense of remoteness and tranquillity can be found at the exposed and relatively isolated stretches of Freshwater West, evoked by the wind-swept undulating sand dunes.

13.7.10.3 **Susceptibility**. The viewpoint is representative of the view experienced by visitors to the beach, including those experiencing passive beach recreation and active water-sports such as surfing. The viewpoint is visited or used by a large number of people. The viewpoint is also representative of views experienced by walkers on the Pembrokeshire Coast Path, as it passes through the dunes of Freshwater West, where the experience contrasts markedly to the rugged cliff-top coastlines to the north and south. The viewpoint affords a direct view out to sea from the beach/dunes, in which viewers are liable to be influenced by development in the sea, however it is a wide, large-scale and simple view out to sea, in which complexity is avoided and there isn't a specific directional or framed vista. The headland of the Angle Peninsula provides some containment of the wide, open bay to the north. Viewers experience a high level of visual amenity at the location and there are relatively few visual detractors, with the exception of the volume of cars and vans during peak season, which reduce some of the sense of remoteness and tranquillity.

Magnitude of change and significance of effect

13.7.10.4 The predicted view of the Proposed Development form Viewpoint 10 Freshwater West Beach is shown in the photomontage in Volume 2, Figure 13.31g. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.10.5 The Proposed Development array area will be located at long distance, between 40.6 km and 48.1 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 23.2% visibility frequency of the WTGs at 40 km and 10.5% at 50 km.

13.7.10.6 During these periods of excellent visibility, the rotors and upper towers of the WTGs will be visible above the skyline, however the lower towers and semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will be relatively small in comparison to other vertical elements in the view such as the main coastal landforms, dunes and other features at the beach and car park.

13.7.10.7 The lateral spread of the Proposed Development WTGs will occupy approximately 10° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.10.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' the seascape of Freshwater West. The Proposed Development will not be located in a specific directional vista or framed view, instead it will be accommodated within the wide, large-scale, simple view, introducing new, distant offshore WTG elements to the composition of a simply composed view of sand, inter-tidal rocks, sea and sky. It will be clearly separated from the mainland coast by expansive areas of intervening seascape and offshore waters.

13.7.10.9 The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the sea will be retained and the large majority of seascape remains unaffected. The features that contribute to the perceived remoteness, tranquillity and wildness, particularly the constant presence of the sea and wind, crashing waves, beach and dunes, will not be changed as result of views of the Proposed Development, which will relate rationally to the wind-swept character and exposure.

13.7.10.10 Based on the combination of the high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.11 Viewpoint 11 Skokholm Island

Baseline and sensitivity to change

13.7.11.1 The location and baseline panorama from Viewpoint 11 Skokholm Island are shown in Volume 2, Figure 13.32a-d. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.11.2 **Value**. The viewpoint is located on Skokholm Island, near to Skokholm Lighthouse, one. It is accessible via the track which traverses the southern side of the island from the harbour at Hog Bay, past the wildlife observatory to the lighthouse on the most westerly parts of the island. Given its remoteness, there are no facilities as such provided at viewpoint to aid the enjoyment of the view, however there is shelter at the nearby lighthouse. The view itself is not afforded protection in planning policy, however the view is representative of the 'spectacle of the islands' identified in PCNP special quality 8 in particular, as well as the 'remoteness, tranquillity and wildness' identified in PCNP special quality 11. The viewpoint is within the PCNP and overlooks the Marloes and Dale Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The spectacle of Skokholm Island including its unique bird life, activities sounds and smells, contributes greatly to the sense of place. The sense of remoteness on Skokholm is palpable, particularly from its western coastline which is most exposed to the open seas to the west. It is a wild, remote island, which is a valued bird sanctuary, with striking sandstone cliffs, that combine to create a highly valued coastal wilderness, virtually undisturbed and rich in wildlife.

13.7.11.3 **Susceptibility**. The viewpoint is representative of the view experienced by both the researchers/wardens based on the island and the occasional tourist visitors to Skokholm Island. There are no day visitors on Skokholm Island, however visitors can stay on the island in limited numbers for short stays at the farmhouse accommodation. The viewpoint is visited or used by a relatively small number of people, given its remoteness and general lack of access for visitors. People are on Skokholm primarily to see, conserve and research the island's wildlife, particularly in spring and summer when it is colonised by tens of thousands of nesting seabirds returning to their island home. The view west out to sea from the lighthouse is somewhat secondary to the wildlife experience on the island itself, however the wardens and visitor's main attention and interest are certainly on their surroundings, which are unique and convey the sense of remoteness, tranquillity and wildness that can be found on this exposed and isolated island. The viewpoint is representative of the open views experienced at the western side of the Skokholm, where views are contained to this western edge of the elevated plateau that is exposed to the sea. The views over the habitats, wildlife and coastline of Skokholm itself are the main focus, however the expansive offshore waters extending to the west/south-west form the part of the view that is susceptible to changes in the seascape backdrop. Viewers experience a high level of visual amenity at the location and experience qualities of remoteness, wildness and tranquillity, although the exposure of the open seascape relates clearly to the function of the Proposed Development and there are some visual detractors in the views back towards the mainland, including the chimneys of Milford Haven's oil refineries, Pembroke Power Station and onshore WTGs are visible on the mainland landform skyline.

Magnitude of change and significance of effect

13.7.11.4 The predicted view of the Proposed Development form Viewpoint 11 Skokholm Island is shown in the photomontage in Volume 2, Figure 13.32f. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as medium-low, for the reasons set out below.

13.7.11.5 Although Skokholm is the closest viewpoint, the Proposed Development array area will be located at long distance, between 30.3 km and 38.9 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 42.8% visibility frequency of the WTGs at 30 km and 23.2% at 40 km.

13.7.11.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will not be out of proportion with other vertical elements in the view such as the main coastal landforms, islands, Skokholm lighthouse and stacks at Pembroke Power Station and existing onshore WTGs visible on the distant mainland landform skyline. Although the Proposed Development will introduce new offshore WTG elements however, they are not unique to the view as there are distant onshore WTGs visible to the south-east.

13.7.11.7 The lateral spread of the Proposed Development WTGs will occupy approximately 14° of the horizontal field of view (HFoV), which is a relatively narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.11.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from Skokholm Island and the mainland coast by expansive areas of intervening seascape and offshore waters. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the exhilarating, wide and panoramic views to the sea will be retained. The features that contribute to the perceived 'spectacle of the island', including its cliffs with associated seabirds, dramatic rocks, islets, rough seas and exposure will not be changed as a result of views of the Proposed Development. Although the addition of man-made elements in its wider seascape context may potentially influencing the perceived remoteness of Skokholm, the WTGs have a form that relates rationally to the exposure of the island and due to the long-distance, small scale and narrow in lateral extent the perceived remoteness, tranquillity and wildness of the landscape of Skokholm in the view will continue to endure in the presence of the distant WTGs.

13.7.11.9 Based on the combination of the high sensitivity of the viewpoint and medium-low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate)**, direct, long-term and reversible.

13.7.12 Viewpoint 12 Hooper's Point

Baseline and sensitivity to change

13.7.12.1 The location and baseline panorama from Viewpoint 12 Hooper's Point are shown in Volume 2, Figure 13.33a-e. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.12.2 **Value**. The viewpoint is located at Hooper's Point, on the Pembrokeshire Coast Path, to the north of Westdale Bay. It is not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors, however it is located at a point on the coast that provides a particular vantage point of the key features along the Marloes and Dale Heritage Coast, including Marloes Sands, Broad Sound and the main islands of Gateholm, Skomer and Skokholm, and across Westdale Bay towards St Ann's Head to the south. The viewpoint is within the PCNP and overlooks the Marloes and Dale Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'spectacle of the islands' and 'remoteness, tranquillity and wildness' identified in PCNP special qualities 1, 8 and 11, which are afforded planning policy protection. The relatively elevated position on the edge of the Peninsula affords panoramic views of the seascape and its rugged, unspoilt qualities, particularly the islands and steep, jagged rock formations to the north which are evocative, have a strong sense of place and discernible time depth. A sense of remoteness and tranquillity can be found due to the exposure and relatively isolated stretches of coastline, evoked by the windswept, jagged landforms and vast seas.

13.7.12.3 **Susceptibility**. The viewpoint is representative of the view experienced by people walking on the Pembrokeshire Coast Path at Hoopers Point, who gain dynamic but protracted views along the along the western Marloes and Dale coastline. Attention and interest are likely to be on the surrounding seascape, particularly towards Skokholm, Gateholm and Skomer islands and steep jagged rock formations of the coastline. The viewpoint affords a direct view out to sea from the coastal edge, in which viewers are more liable to be influenced by development in the sea. The key susceptibility is the relationship of the islands, particularly Skokholm, with the Proposed Development however, it is a wide, large-scale and a relatively simple view out to sea, where complexity created by islands and landforms is generally contained to the coastal edges, leaving a wide, open expanse of offshore waters to the west. Viewers experience a relatively high level of visual amenity at the location, with relatively few visual detractors, however the chimneys of Valero oil refinery and Pembroke Power Station are visible on the landform to the east.

Magnitude of change and significance of effect

13.7.12.4 The predicted view of the Proposed Development form Viewpoint 12 Hoopers Point is shown in the photomontage in Volume 2, Figure 13.33g. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.12.5 The Proposed Development array area will be located at long distance, between 35.9 km and 44.3 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 32.4% visibility frequency of the WTGs at 35 km and 15.7% at 45 km.

13.7.12.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will not be out of proportion with other vertical elements in the view such as the main coastal landforms, islands, stacks at Valero oil refinery, Pembroke Power Station and local electrical distribution poles.

13.7.12.7 The lateral spread of the Proposed Development WTGs will occupy approximately 11° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.12.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from the mainland coast, Skomer and Grassholm Islands, by expansive areas of intervening seascape and offshore waters. The Proposed Development WTGs will be viewed to the south of Skokholm Island and through the addition of man-made elements in its seascape context, the Proposed Development WTGs may influence the perceived remoteness of Skokholm, as viewed from this section of the Marloes and Dale coast, however they are clearly separated from the island by an area of undeveloped skyline and will have a form that relates rationally to the exposure of the seascape. The perceived remoteness, tranquillity and wildness of the seascape in the view will continue to endure in the presence of the distant WTGs.

13.7.12.9 The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the sea, along the coastline and to the islands of Skomer and Skokholm will be retained, with the vast majority of the seaward panorama remaining unaffected and the features that contribute to the 'coastal splendour', including the dramatic rocky coastline, islands and exposure the wide-open seas will fundamentally continue to define the visual amenity experienced.

13.7.12.10 Based on the combination of the medium-high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.13 Viewpoint 13 Sheep Island

Baseline and sensitivity to change

13.7.13.1 The location and baseline panorama from Viewpoint 13 Sheep Island are shown in Volume 2, Figure 13.34a-e. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.13.2 **Value**. The viewpoint is located on the western extremity of the Angle Peninsula, on the Pembrokeshire Coast Path near Sheep Island. It is not an OS marked viewpoint, nor is it a specific viewpoint with facilities for tourist visitors, however it does allow walkers to take in the view of Sheep Island, from the outer edges of the Angle Peninsula. The viewpoint is within the PCNP and overlooks the Marloes and Dale Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'spectacle of the islands' and 'remoteness, tranquillity and wildness' identified in PCNP special qualities 1, 8 and 11, which are afforded planning policy protection. The relatively elevated position on the edge of the Peninsula affords panoramic views of the seascape at the mouth of Milford Haven, taking in St Ann's Head and to the north and overlooking Sheep Island in the foreground, which is barely separated from the mainland but sundered from it by an unnavigable channel of smashed rocks. The rugged, unspoilt qualities of the island and the adjoining steep, rocky coastline around the Angle Peninsula contribute to the scenic qualities and sense of remoteness, despite the relative proximity of development to the north around Milford Haven.

13.7.13.3 **Susceptibility**. The viewpoint is representative of the view experienced by walkers using the Pembrokeshire Coast Path, where there is visibility around the Angle Peninsula between Rat Island and Freshwater West. Attention and interest of people walking the path are likely to be on the surrounding seascape, including the features of interest in the nearby waters, particularly Sheep Island, and landmarks such as St Ann's Head and Rat Island. The viewpoint affords a direct view out to the open sea, however it is partially contained by the landforms of the Angle Peninsula (Sheep Island) and St Ann's Head, forming the outer Milford Haven, which channel the view west and prevent more distant views along the coastline. The main susceptibility is the potential introduction of elements into the backdrop focus of the view out to sea across Sheep Island, and the relationship to these existing focal points. Viewers experience a high level of visual amenity at the location, and there are relatively few visual detractors in the view, which tend to be smaller scale elements such as masts, although Valero oil refinery and Pembroke Power Station become visible when moving around the headland into West Angle Bay.

Magnitude of change and significance of effect

13.7.13.4 The predicted view of the Proposed Development form Viewpoint 13 Sheep Island is shown in the photomontage in Volume 2, Figure 13.34g. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.13.5 The Proposed Development array area will be located at very long distance, between 38.1 km and 45.9 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 23.2% visibility frequency of the WTGs at 40 km and 15.7% at 45 km.

13.7.13.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will be smaller in scale than other vertical elements in the view such as the main landforms, islands, masts and wooden fence poles. The Proposed Development will introduce new offshore WTG elements into a view where no other WTGs are visible, however these will occur in views where walkers may have experienced the context of nearby Milford Haven's oil refineries, jetties and Pembroke Power Station in views from the path on the northern side of the Angle peninsula.

13.7.13.7 The lateral spread of the Proposed Development WTGs will occupy approximately 11° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of seascape and coastline will remain unaffected.

13.7.13.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' in the backdrop, oblique to the mouth of Milford Haven. The Proposed Development be viewed out to sea between St Ann's Head and Sheep Island on the Angle Peninsula, clearly separated from each headland and will not be seen in the immediate backdrop of these focal points.

13.7.13.9 Although the Proposed Development WTGs will increase the influence of man-made elements in the view, these influences are already tangible in the experience of the Pembrokeshire Coast Path to the north and contribute to the diversity evident around West Angle and Milford Haven. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the perceived coastal splendour will not notably change, and the existing elements will continue to be definitive in the high levels of visual amenity experienced.

13.7.13.10 Based on the combination of the medium-high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.14 Viewpoint 14 Castlemartin Range Trail (Cold Comfort)

Baseline and sensitivity to change

13.7.14.1 The location and baseline panorama from Viewpoint 14 Castlemartin Range Trail are shown in Volume 2, Figure 13.34a-e. The sensitivity of the viewpoint is considered to be medium, reflecting that the view has medium value and the receptors experiencing the view have a medium susceptibility to change, for the reasons set out below.

13.7.14.2 **Value**. The viewpoint is located near Cold Comfort, on the Castlemartin Range Trail, which is the Pembrokeshire Coast Path where it passes through the Castlemartin / Merrion military ranges. The viewpoint is located at the range spectator area on a localised high point which is marked as an OS viewpoint and affords views over the military firing ranges at Castlemartin below, where spectators can observe live firing across the artillery ranges. The foreground landscape is largely occupied by the Ministry of Defence for these purposes yet retains a sense of remoteness due the landcover and inaccessibility of the landscape, apart from sections of the Castlemartin Range Trail / Pembrokeshire Coast Path which pass through the landscape. The view itself is not afforded protection in planning policy, however the view is representative of the 'diversity of landscape' and 'remoteness' identified in PCNP special quality 3 and 11, which is afforded planning policy protection. The viewpoint is located on the inland edge of the PCNP and looks coastward across the PCNP, which implies a higher value to the visible landscape, however the view takes in military land used for the testing of weapons and artillery. The relatively elevated and slightly inland position affords panoramic views that take in some diversity of landscape, overlooking Castlemartin Corse and the hinterland of Freshwater West towards the sea to the west however, the sea element is simple, in the backdrop and does not include any of the rugged coastal landforms or islands associated with other parts of the PCNP.

13.7.14.3 **Susceptibility**. The viewpoint is representative of the view experienced by walkers using the Castlemartin Range Trail / Pembrokeshire Coast Path, and spectator at the range spectator area. It is a viewpoint which attracts visitors mainly for this spectating of military firing and the view to the sea beyond is somewhat incidental to their focus and activity. The attention and interest of spectators are less likely to be on the seascape backdrop compared to the firing and activities they are observing on the range. The viewpoint is set back from the coast, further inland and on the inland edge of the PCNP, which also reduces its susceptibility to some degree compared to views from the coastal edge. There are also few focal points of interest in the view and the sea forms a simple seascape backdrop to the hinterland of the PCNP. The offshore site boundary is relatively remote from the viewpoint location. Although the coastal views across the PCNP afford viewers some diversity and across landscapes with a sense of remoteness, there are visual detractors in the view, including the military activities, structures and firing at closer range to the viewpoint.

Magnitude of change and significance of effect

13.7.14.4 The predicted view of the Proposed Development form Viewpoint 14 Castlemartin Range Trail is shown in the photomontage in Volume 2, Figure 13.35g. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.14.5 The Proposed Development array area will be located at very long distance, between 43.7 km and 50.8 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate landscape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 23.2% visibility frequency of the WTGs at 40 km and 10.5% at 50 km.

13.7.14.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the landscape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will be of smaller scale than many of the other vertical elements in the view including the local electrical distribution poles, pylons, fence posts and military buildings in the landscape.

13.7.14.7 The lateral spread of the Proposed Development WTGs will occupy approximately 10° of the horizontal field of view (HFoV), which is a narrow portion of the wider 360° view panorama, in which the vast majority of open landscape and sea skyline will remain unaffected.

13.7.14.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' in the backdrop to the hinterland areas of the Castlemartin / Merrion military ranges, Freshwater West and in its distant seascape context which is just visible beyond. The array area will be clearly separated from this mainland coast by areas of intervening seascape and there are few focal points, such that it will be viewed in an open, simple and uncomplicated setting. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the long-distance views to the seascape are retained and the perceived 'diversity of landscape' will not notably change, with the distinctive pattern and textures of the terrestrial landscape of Castlemartin military ranges and Freshwater West continuing to be definitive in the view. The perceived sense of remoteness of the Castlemartin / Merion military range landscape, deriving from the rough landcover, relative inaccessibility and exposure, will not be changed as a result of the Proposed Development viewed as a distant element beyond the intervening military landscape in which active military firing takes place.

13.7.14.9 Based on the combination of the medium sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(minor)**, direct, long-term and reversible.

13.7.15 Viewpoint 15 Carn Llidi

Baseline and sensitivity to change

13.7.15.1 The location and baseline panorama from Viewpoint 15 Carn Llidi are shown in Volume 2, Figure 13.35a-d. The sensitivity of the viewpoint is considered to be high, reflecting that the view has high value and the receptors experiencing the view have a high susceptibility to change, for the reasons set out below.

13.7.15.2 **Value**. The viewpoint is located at the top of Carn Llidi (181m AoD), a prominent tor of volcanic rocks at St David's Head. The view from Carn Llidi to Ramsey Island across Whitesands Bay is an iconic PCNP view. Carn Llidi provides an unusually elevated coastal perspective over the PCNP and the relationship of Ramsey Island with St David's Peninula, but also the more distant relationship of Skomer Island with Marloes Peninsula across St Bride's Bay to the south. Although it is not an OS marked viewpoint, it is a specific viewpoint which people climb to the summit to experience the panoramic view. It is located within the St David's Head National Trust land near the north coast of the St David's Peninsula. The view itself is not afforded protection in planning policy, however the view is representative of the 'coastal splendour', 'spectacle of the islands' and 3. 'diversity of landscape' identified in PCNP special qualities 1, 3 and 8, which are afforded planning policy protection. The viewpoint is within the PCNP and overlooks the St David's Peninsula Heritage Coast, which implies a higher value to the visible landscape and has high scenic qualities relating to the content and composition of the visible landscape, overlooking the tall cliffs, small sandy beaches, headlands, islands and seascape that are distinctives on this stretch of coastline, as well as the agricultural field pattern of the hinterland of the PCNP.

13.7.15.3 **Susceptibility**. The viewpoint is representative of the view experienced by people walking to the top of Carn Llidi, who gain dynamic but protracted views while walking up the hill as well as the static, but short-term views gained from the summit itself. Viewers at this location will be there specifically to take in the panoramic view over the landscape, and their main attention and interest are likely to be on their surroundings. The viewpoint affords a direct view out to sea from an elevated position near the coastal edge, in which viewers are more liable to be influenced by development in the sea. The main susceptibility is the potential introduction of elements into the backdrop focus of the view out to sea across Ramsey Island / Ramsey Sound, as well as the more distant Skomer Island, and the relationship to these existing focal points. These features form notable features of interest in the view and viewers are to a lesser degree focused on the open seascape. The offshore site boundary is remote from the viewpoint location, separated by landforms and open seas. Viewers experience a high level of visual amenity at the location, and there are relatively few visual detractors, which include features in the landscape below such as caravan parks, and there are distant views of onshore WTGs and chimney stacks at Valero oil refinery and Pembroke Power Station on the distant skyline to the south across St Bride's Bay.

Magnitude of change and significance of effect

13.7.15.4 The predicted view of the Proposed Development form Viewpoint 15 Carn Llidi is shown in the photomontage in Volume 2, Figure 13.36h. The magnitude of change to the view resulting from the operation and maintenance of the Proposed Development is assessed as low, for the reasons set out below.

13.7.15.5 The Proposed Development array area will be located at long distance, between 50.0 km and 58.7 km offshore from the viewpoint to its closest and most distant points. At such long distance, the Proposed Development WTGs will be in the background on the distant seascape skyline, beyond the immediate seascape context. The Proposed Development WTGs are likely to be intermittently and infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions. Met Office visibility data indicates only 10.5% visibility frequency of the WTGs at 50 km and 4.1% at 60 km.

13.7.15.6 During these periods of very good and excellent visibility, the rotors, towers and lower yellow marked sections of the WTGs will be visible above the skyline, however the semi-submersible platforms will be hidden by the intervening horizon. The vertical height/apparent scale of the Proposed Development WTGs will be relatively small, due to their long distance offshore and the large scale of the seascape in the view. The vertical appearance of the WTGs may contrast with the horizontal emphasis of the sea skyline, but the WTGs will not be out of proportion with other vertical elements in the view such as the main landforms, islands, local electrical distribution poles and existing onshore WTGs. The Proposed Development will introduce new offshore WTG elements however, they are not unique to the view as there are distant onshore WTGs and chimney stacks to the south.

13.7.15.7 The lateral spread of the Proposed Development WTGs will occupy approximately 7° of the horizontal field of view (HFoV), which is a very narrow portion of the wider 360° view panorama, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.7.15.8 The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' in the distant backdrop beyond Whitesands Bay, Ramsey Sound and Ramsey Island. Due to the elevation of the viewpoint and the angle of view from this position, the Proposed Development WTGs will be viewed as being partially behind Ramsey Island, particularly the northern most WTG, adding a competing element of focus in the view to the over island and Ramsey Sound. Through the addition of man-made elements in its distant seascape context, there is potential for the WTGs to influence the perceived remoteness of Ramsey Island, despite having a form that relates rationally to the exposure of the windswept seascape. The array area is however, clearly separated from the headlands and islands by areas of intervening seascape beyond Ramsey Island and the majority of the array area sits on the skyline further to the south of the island.

13.7.15.9 The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic views to the seascape are retained, with the majority of the seascape panorama remaining unaffected. The perceived 'coastal splendour', 'diversity of landscape' and 'spectacle of the islands' will not notably change and the tall cliffs, sandy beaches, headlands, islands and seascape that are distinctive of the St David's Peninsula will continue to define the view from Carn Llidi over this stretch of coastline.

13.7.15.10 Based on the combination of the high sensitivity of the viewpoint and low magnitude of change, the significance of effect arising from the Proposed Development is assessed as not significant **(moderate/minor)**, direct, long-term and reversible.

13.7.16 Pembrokeshire Coast Path

13.7.16.1 A preliminary assessment of the visual effects arising from the operation and maintenance of the Proposed Development on the Pembrokeshire Coast Path is set out in Table 13.24, which is informed by the ZTV analysis of the Pembrokeshire Coast Path presented in Volume 2, Figure 13.18.

Table 13.24 – Preliminary Assessment of Pembrokeshire Coast Path

Section	Length (km)	Minimum distance to array area (km)	Visibility of WTGs	Length of path within ZTV (km)	Preliminary Assessment
3. Manorbier to Stackpole Quay	1.1	49.3	Yes	0.5	No potential for significant effects – scoped out.
4. Stackpole Quay to Stack Rocks	12.0	42.6	Yes	5.6	Potential for significant effects that require further assessment.
5. Stack Rocks to Freshwater West	13.4	41.1	Yes	10.5	Potential for significant effects that require further assessment.
6. Freshwater West to Angle Church	12.7	39.1	Yes	7.4	Potential for significant effects that require further assessment.
7. Angle Church to Power Station	10.5	41.5	No	0.0	No potential for significant effects – scoped out.
8. Power Station to Pembroke	6.8	46.4	No	0.0	No potential for significant effects – scoped out.
9. Pembroke to Cleddau Bridge	3.9	49.4	No	0.0	No potential for significant effects – scoped out.
10. Cleddau Bridge to Gelliswick	11.8	44.3	Yes	1.3	No potential for significant effects – scoped out.
11. Gelliswick to Dale Village	26.1	38.8	Yes	6.2	Potential for significant effects that require further assessment.
12 Dale Village to West Dale Beach	9.9	36.6	Yes	4.7	Potential for significant effects that require further assessment.
13. West Dale Beach to Martin's Haven	6.8	35.8	Yes	6.2	Potential for significant effects that require further assessment.
14. Martin's Haven to St Bride's Beach	6.9	35.9	Yes	0.3	No potential for significant effects – scoped out.
15. St Bride's Beach to Broad Haven	9.8	39.9	Yes	0.1	No potential for significant effects – scoped out.

Section	Length (km)	Minimum distance to array area (km)	Visibility of WTGs	Length of path within ZTV (km)	Preliminary Assessment
16. Broad Haven to Newgale	7.8	47.1	Yes	4.8	Potential for significant effects that require further assessment.
17. Newgale to Solva	1.2	49.7	Yes	0.7	No potential for significant effects – scoped out.
18. Solva to Porthclais	8.5	46.9	Yes	7.2	Potential for significant effects that require further assessment.
19. Porthclais to St Justinians	8.4	44.8	Yes	5.5	Potential for significant effects that require further assessment.
20. St Justinians to Penberry	5.8	46.9	Yes	1.8	No potential for significant effects – scoped out.

13.7.16.2 The preliminary assessment and ZTV analysis of the Pembrokeshire Coast Path presented in Volume 2, Figure 13.18 indicates that there are several sections of the Pembrokeshire Coast Path that will afford either no visibility, or very limited visibility, of the Proposed Development. In particular, this includes Sections 7 – 10 around Milford Haven between Angle, Pembroke and through Milford Haven to Gelliswick, which are contained within the inner areas of Milford Haven where the intervening landforms of the Angle Peninsula and St Ann's Head will screen views out to the open sea and the Proposed Development will result in zero change and not significant effects on the views experienced from the Pembrokeshire Coast Path for approximately 33 km around Milford Haven.

13.7.16.3 The ZTV (Volume 2, Figure 13.18) indicates that the visibility of the Proposed Development will not be a continuous experience from the Pembrokeshire Coast Path but will instead be split into specific sections with more prolonged exposure from the Marloes and Dale coastline to the north of Milford Haven, and from the Castlemartin and Freshwater West coastline to the south.

13.7.16.4 The closest sections of the Pembrokeshire Coast Path are Sections 12 and 13, which follow the coastline between Dale, St Ann's Head and Martin's Haven, along the Marloes and Dale Coast. The ZTV indicates that there will be visibility of the Proposed Development approximately 35 – 37 km offshore almost continuously over a 10.9 km stretch of the Pembrokeshire Coast Path between St Ann's Head and Martin's Haven. This is the closest section of the route with visibility, yet due to a number of factors, particularly the long distance, small-scale and narrow lateral spread of the Proposed Development WTGs, the magnitude of change to views from Section 12 and 13 of the Pembrokeshire Coast Path is assessed as low and the effect not significant **(moderate/minor)**, direct, long-term and reversible. Representative viewpoints are assessed at Viewpoint 5, St Ann's Head (Volume 2 Figure 13.26) and Viewpoint 12 Hoopers Point (Volume 2 Figure 13.33), which are both found assessed as experiencing a low magnitude of change (Section 13.7.5 and 13.7.12) and not significant **(moderate/minor)** effect, despite their high sensitivity.

13.7.16.5 The effects of the Proposed Development on views from the Pembrokeshire Coast Path will be very limited from the northern coastline of the Marloes Peninsula, due the intervening screening of the landform of the peninsula and islands, which largely prevent south-westerly views from this coastline. The Proposed Development will result in zero change and not significant effects on the views experienced from Sections 14 and 15 of the Pembrokeshire Coast Path for approximately 16.7 km between Martin's Haven and Broad Haven. Again, the lack of visibility from these sections indicates that the Proposed Development will not be seen continuously from the Pembrokeshire Coast Path, as it will not be visible from long stretches such as these, where the views are focused in other directions due to the nature of the coastal landform.

13.7.16.6 Further north, views from the Pembrokeshire Coast Path will also be very restricted from Section 16 and 17 between Broad Haven, Newgale and Solva, as illustrated in Viewpoint 2 St Brides Bay, Nolton Haven (Volume 2 Figure 13.23), where the magnitude of change to views from the Pembrokeshire Coast Path is assessed as negligible and the effect not significant **(minor)**, direct, long-term and reversible over this 9 km section of the path.

13.7.16.7 Views will be similarly restricted from Section 20 between St Justinians and Penberry, where visibility of the Proposed Development is almost entirely avoided due to the containment provided by the intervening landforms of Ramsey Island and Whitesands Bay, and the array area is located over 46 km away, where the magnitude of change to views from the Pembrokeshire Coast Path is assessed as negligible and the effect not significant **(minor)**, direct, long-term and reversible over this 5.8 km section of the path.

13.7.16.8 In the northern part of the SLVIA study, views of the Proposed Development will be largely concentrated to Sections 18 and 19 the Pembrokeshire Coast Path along the southern coast of the St David's Peninsula, between Solva, Porthclais and Porthathlod (near Ramsey Island). Due to a number of factors, particularly the very long distance (over 45 km), small-scale and narrow lateral spread of the Proposed Development WTGs, the magnitude of change to views from Section 18 and 19 of the Pembrokeshire Coast Path is assessed as negligible and the effect not significant **(minor)**, direct, long-term and reversible. Representative viewpoints are assessed at Viewpoint 1, Caerfai Bay (Volume 2 Figure 13.22), which was assessed as experiencing a negligible magnitude of change (Section 13.7.2), and therefore a not significant (minor) effect, despite its high sensitivity.

13.7.16.9 The other key sections of the Pembrokeshire Coast Path with prolonged exposure to the Proposed Development in offshore views are Section 6 between West Angle and Freshwater West, and parts of Section 5 between Freshwater West and Stack Rocks. These sections of the Pembrokeshire Coast Path are located at slightly longer range than the Marloes and Dale coast, between 38 – 42 km from the Proposed Development.

13.7.16.10 Section 6 of the Pembrokeshire Coast Path largely follows the coastal cliff tops and affords continuous offshore views, apart from the section through West Angle Bay. From the northern part of the route, around the West Angle peninsular (Viewpoint 7) to Sheep Island (Viewpoint 13), it affords views across the mouth of Milford Haven to the distinctive coastal headlands and islands (such as Thorn Island, Rat Island and Sheep Island) whereas to the south views become more expansive from the cliff tops and open out to the offshore waters to the south-west. Due to a number of factors, particularly the long distance (over 38 km), small-scale and narrow lateral spread of the Proposed Development WTGs, the magnitude of change to views from the 7.4 km stretch of Section 6 with visibility of the Proposed Development is assessed as low and the effect not significant **(moderate/minor)**, direct, long-term and reversible. Representative viewpoints are assessed at Viewpoint 7, West Angle Bay (Volume 2 Figure 13.28) and Viewpoint 13, Sheep Island, which were assessed as experiencing a low magnitude of change (Section 13.7.7 and 13.7.13), and therefore a not significant **(moderate/minor)** effect, despite their high sensitivity.

13.7.16.11 Section 5 of the Pembrokeshire Coast Path passes along the Freshwater West beach/dunes, before extending inland along Castlemartin Corse and across the Castlemartin military range, before returning to the coast at Stack Rocks. The magnitude of change to views from Section 5 of the Pembrokeshire Coast Path is assessed as low from Freshwater West and the effect not significant **(moderate/minor)**, direct, long-term and reversible and reducing with distance further inland along the path, where the route crosses the Castlemartin range and views of the sea and the Proposed Development become more diminished, intermittent, further restricted by intervening vegetation and influenced by the live firing military ranges at close proximity. Representative viewpoints are assessed at Viewpoint 10, Freshwater West (Volume 2 Figure 13.31) and Viewpoint 14, Castlemartin Range Trail (Volume 2 Figure 13.35), which were assessed as experiencing a low and negligible magnitude of change respectively (Section 13.7.10 and 13.7.14), and therefore a not significant effect**,** despite their high sensitivity.

13.7.16.12 Section 4 of the Pembrokeshire Coast Path extends between Stack Rocks and Stackpole Quay, with visibility of the Proposed Development contained to the 5.6 km section between St Govan's Head and Stack Rocks. Over this section, the coastline is south facing, however the cliffs are elevated and there is potential for views west towards the Proposed Development in the backdrop to some of dramatic coastal landforms (arches/stacks), but at very long range of 42 – 47 km. Due to a number of factors, particularly the long distance, small-scale and narrow lateral spread of the Proposed Development WTGs, the magnitude of change to views from the 5.6 km stretch of Section 4 with visibility of the Proposed Development is assessed as low and the effect not significant **(moderate/minor)**, direct, long-term and reversible. Representative viewpoints are assessed at Viewpoint 9, Stack Rocks (Volume 2 Figure 13.30), which is assessed as experiencing a low magnitude of change (Section 13.7.9), and therefore a not significant **(moderate/minor)** effect, despite its high sensitivity.

13.7.16.13 In summary, the Pembrokeshire coastline is a linear feature and users of the Pembrokeshire Coast Path who follow the coastline are dynamic along this a linear feature and are likely to be subject to the impacts of the Proposed Development in a more continuous manner than individual viewpoints or receptors. The assessment of the Pembrokeshire Coast Path has identified that two key stretches of the path will be subject to greatest levels of effect over the most continuous sections at closest range, these being Sections 12 and 13, between Dale, St Ann's Head and Martin's Haven, and Sections 5 and 6 between Stack Rocks, Freshwater West and West Angle Bay. There are stretches of these sections where the coast path might disappear behind coastal vegetation and dunes, particularly between Feeshwater West and the Castlemartin ranges. In all cases, the magnitude of change arising from the Proposed Development has been found to be low over these sections of the Pembrokeshire Coast Path, and negligible from some areas through Castlemartin, and the effects not significant, despite the relative continuity over the 7.4 km stretch of Section 6 with visibility and the 2 km stretch through the Freshwater West area of Section 5.

13.7.16.14 In overall terms, the assessment indicates that the visibility of the Proposed Development will not be a continuous experience from the Pembrokeshire Coast Path, as there are many and long sections that afford little or no visibility, such as around Milford Haven, St Bride's Bay and St David's Head, where the magnitude of change arising is assessed as zero, and that more continuous sections with visibility will be limited to certain sections either side of Milford Haven, from the Marloes and Dale coastline to the north and from the Castlemartin and Freshwater West coastline to the south, where the magnitude of change resulting from the Proposed Development is still assessed as low and the effect not significant, due to factors such as its long distance offshore, small-scale of the WTGs and narrow lateral spread, such that the panoramic sea views remain largely unaffected and the special qualities experienced from the path will continue to define its visual experience.

13.7.17 Martin's Haven to Skomer Island Ferry

13.7.17.1 The ZTV presented in Volume 2, Figure 13.17 shows the OS marked route of the Martin's Haven to Skomer Island Ferry relative to the ZTV. It illustrates that the boat takes a route north out of Martin's Haven, before heading directly west to North Haven at Skomer Island, following a relatively sheltered route to the north of Wooltack Point, Midland Isle, The Neck and Skomer. Field survey work undertaken as part of the SLVIA confirmed that this is route taken by the boat to Skomer Island and that the landforms of these peninsulas and islands effectively screens the majority of views to the south and south-west, towards Broad Sound, and to the west open sea and offshore waters, in which the Proposed Development is located. The ZTV (Volume 2, Figure 13.17) indicates that almost all of the OS marked ferry route is outside the ZTV and will afford no visibility of the Proposed Development, due to these intervening landforms blocking views towards the array area.

13.7.17.2 Field survey assessment work undertaken on the boat to Skomer Island confirmed that these large scale landforms will prevent views of the Proposed Development from most of the route to Skomer, with visibility limited to just two short sections where the boat passes between Wooltack Point and Midland Isle, and a shorter section viewed between Midland Island and the Neck, as indicated by the visibility splays on the ZTV (Volume 2, Figure 13.17). These sections of the route are only a few hundred metres in length, have limited visibility of a reduced number of WTGs (generally 1-2 or 3-4 WTGs), viewed through the gaps between the islands at very long distance of approximately 35.5 km from the ferry route. The duration of effect is short and intermittent, with the majority of the route affording no visibility. Due to a number of factors, particularly the long distance, limited amount of WTGs visible, their small-scale and narrow lateral spread, experienced over a short and intermittent duration, the magnitude of change to views from the Martin's Haven to Skomer Island Ferry is assessed as low and the effect not significant (**moderate/minor**), direct, long-term and reversible.

13.7.18 Night-time Visual Effects

Introduction

13.7.18.1 This section provides an assessment of the visual effects arising from the visible lighting requirements (aviation and marine navigational) of the Proposed Development. The inter-related effects of aviation lighting with other environmental aspects, such as ornithology and aviation matters, are assessed in Chapter 17: Aviation and Radar.

13.7.18.2 Civil Aviation Authority (CAA) guidance requires that 'en-route obstacles' at or above 150 m above ground level are lit with visible lighting to assist their detection by aircraft. As such, there is potential that parts of the Proposed Development may be visible at night. A description of the proposed lighting is found within Chapter 4: Proposed Development Description. The effect of the Proposed Development at night would result primarily from visible medium intensity (2,000 candela) red coloured aviation light fittings located on the nacelles of the peripheral WTGs.

13.7.18.3 This visual assessment of WTG lighting is supported by plan figures (Volume 2, Figure 13.10 and 13.20) and night-time photomontage visualisations from four viewpoints in Volume 2 Figures 13.37 to 13.40.

Regulations and Guidance

13.7.18.4 In the UK, the International Civil Aviation Organization (ICAO) requirements for lighting WTGs are implemented through CAA publication CAP 764: Policy and Guidelines on Wind Turbines (CAA, 2016), and CAP 393: Air Navigation Order 2016 (CAA, 2016).

13.7.18.5 The proposed WTGs, at a maximum of 270 m to blade tip, would require lighting under Article 222 of the Air Navigation Order (ANO, 2016). This requires medium intensity 'steady' red aviation lights (emitting 2,000 candela) to be fitted at nacelle level. In addition, the CAA requires low intensity lights to be fitted at the intermediate level on the WTG tower (CAA, 2017).

13.7.18.6 For 2,000 candela medium intensity steady or fixed red lights, ICAO indicates a requirement for no lighting to be switched on until 'Night' has been reached, as measured at 50 cd/m^2 or darker. CAA have confirmed that UK policy broadly aligns with the International standards, including insofar as the point at which lights must be switched on at 'Night' rather than 'Twilight'.

13.7.18.7 ICAO, 2018 (Table 6.3, page 6-5) also identifies minimum requirements that WTGs have 2,000cd minimum average intensity at 0 to +3 ° from horizontal. This focusses the 2,000cd lighting in the horizontal plane between 0 to +3° above horizontal and allows for a reduced intensity of the light from above +3° and from below the horizontal plane.

13.7.18.8 CAP 393 (CAA, 2016) also allows for 2,000 cd aviation lights to be dimmed to 10% of their intensity (200 cd) where visibility conditions permit, when visibility from every WTG within the array area is >5 km. Visibility conditions are measured using a visibility sensor, to allow the aviation lights to dimmed automatically to respond to prevailing meteorological conditions. 2,000 cd lights will therefore only be experienced in visibility of <5 km; and their intensity would be dimmed to 200 cd in visibility of >5 km.

13.7.18.9 GLVIA3 (Landscape Institute, 2013) recommends that 'the visual effects assessment will need to include qualitative assessments of the effects of the predicted light levels on night-time visibility' and that '*reference should be made to appropriate guidance, such as that provided by the Institution of Lighting Professionals (ILP, 2011)'.*

13.7.18.10 Guidance produced by the Institute of Lighting Professionals (ILP, 2011) is useful in setting out some key terminology that is used in this visual assessment of WTG lighting:

- *'Obtrusive Light - whether it keeps you awake through a bedroom window or impedes your view of the night sky, is a form of pollution, which may also be a nuisance in law and which can be substantially reduced without detriment to the lighting task.*
- *Skyglow – the brightening of the night sky;*
- *Glare – the uncomfortable brightness of a light source when viewed against a darker background; and*

- *Light Intrusion – the spilling of light beyond the boundary of the property or area being lit, are all forms of obtrusive light which may cause nuisance to others'.*

Planning Policy

13.7.18.11 Relevant planning policy with regards to night-time visual effects is identified in Table 13.4 contained in the PCNP LDP (2020), Policy 9 Light Pollution:

'*Proposals that are likely to result in a significant level of external artificial lighting being emitted shall include a full lighting scheme and will be permitted:*

a) where the lighting proposed relates to its purpose; and,

b) where there is no unacceptable adverse effect on the character of the area, local residents, vehicle users, pedestrians, biodiversity and the visibility of the night sky.

Wherever possible opportunities to mitigate potential cumulative impacts on the night sky should be explored'.

13.7.18.12 The policy is intended to conserve the '*relatively minimal impact'* of lighting on the night sky of the PCNP. Policy 9 applies across the PCNP which covers all of the coastline within the SLVIA Study Area with the exception of inner Milford Haven. The lighting on the Proposed Development is not located within the PCNP, being a minimum distance of 35.0 km outside the mainland coast of the PCNP. Although the visible lighting of the Proposed Development is outside the PCNP, Policy 9 aims to conserve and enhance all areas of intrinsic dark sky within the PCNP. The visual impact of the lighting on the Proposed Development is therefore assessed, since the aviation lighting may be visible in the seascape outside the PCNP (from locations within the PCNP), in order that the proposals take due consideration of the overall visual impact that the lighting will have on the landscape, in line with policy requirements.

13.7.18.13 The Background Paper: Special Qualities of PCNP report (PCNPA, 2018) describes the night skies as part of the special quality of 'Remoteness, Tranquillity and Wildness' in the PCNP. Part of the '*special appreciation'* of the PCNP includes the '*big skies of the evening and the radiance of the stars on a clear night'* and *'the lack of light pollution of the night sky'*.

13.7.18.14 The PCNP also promotes eight 'dark sky discovery sites', as locations to find the PCNP's darkest skies, which offer specific points to view the night sky. Three of these dark sky discovery sites are within the SLVIA Study Area (Volume 2, Figure 13.10) at Martin's Haven (National Trust Car Park), Kete (National Trust Car Park) and Broadhaven South (Car Park).

13.7.18.15 The visual effect of the Proposed Development on visual receptors, views from dark sky discovery sites and appreciation of the night skies of the PCNP is considered further as follows.

Assessment Methodology

13.7.18.16 The assessment of night-time visual effects is based on the description of proposed WTG lighting set out in the project design envelope in 13.6.1 and the ICAO/CAA regulations and standards described above.

13.7.18.17 The effect of the visible lights will be dependent on a range of factors, including the intensity of lights used, the clarity of atmospheric visibility and the degree of negative/ positive vertical angle of view from the light to the receptor. In compliance with EIA regulations, the likely significant effects of a 'worst-case' scenario for WTG lighting are assessed and illustrated in this visual assessment.

13.7.18.18 A worst-case approach is applied to the assessment that considers the potential effects of medium-intensity 2,000 cd lights in clear visibility. It should be noted however, that medium intensity lights are only likely to be operated at their maximum 2,000 cd during periods of poor visibility. A further assessment of the likely residual effects is therefore made factoring in embedded mitigation, i.e. that the 2,000cd aviation lights will be dimmed to 10% of their value (200 cd) if meteorological conditions permit (when visibility is greater than 5 km).

13.7.18.19 It should be noted that the WTGs would also include infra-red lighting on the WTG hubs, which would not be visible to the human eye. Details of the lighting would be agreed with the MoD. The focus of the night-time visual assessment in this assessment is on the visible lighting requirements of the Proposed Development.

13.7.18.20 The study area for the visual assessment of WTG lighting is shown in Volume 2, Figure 13.10 and is coincident with the 50 km SLVIA Study Area, however is particularly focused on the closest areas of the Marloes and Dale coastline and Angle Peninsula, within approximately 40 km.

13.7.18.21 The assessment of the lighting of the Proposed Development is intended to determine the likely effects on the visual resource i.e. it is an assessment of the visual effects of aviation lighting on views experienced by people at night. The assessment of WTG lighting does not consider effects of aviation lighting on landscape or seascape character (i.e. landscape or seascape effects).

13.7.18.22 ICAO indicates a requirement for no lighting to be switched on until 'Night' has been reached, as measured at 50 cd/m^2 or darker. It does not require 2,000 candela medium intensity to be on during 'twilight', when landscape character may be discerned. The aviation and marine navigational lights may be seen for a short time during the twilight period when some recognition of landscape features/ profiles/ shapes and patterns may be possible. It is considered however, that level of recognition does not amount to an ability to appreciate in any detail landscape character differences and subtleties, nor does it provide sufficient natural light conditions to undertake a landscape character assessment.

13.7.18.23 The proposed aviation lighting will not have significant effects on the perception of landscape or seascape character, which is not readily perceived at night in darkness, particularly in rural areas. The matter of visible aviation and marine navigation lighting assessment is wholly a visual concern and the assessment presented focusses on that premise.

Significance criteria for night-time effects

13.7.18.24 The nature of the daytime and night-time effects from visible aviation and marine navigation lighting are clearly very different, in that during day light hours visibility of moving WTG rotors gives rise to effects that are very different to the pinpoint effects of lighting at night. It is considered therefore, that the same criteria should not be used to assess these differences in daytime and night-time effect.

13.7.18.25 In relation to the sensitivity of visual receptors, this is defined through the application of professional judgement in relation to the interaction between the 'value' of the view experienced by the visual receptor and the 'susceptibility' of the visual receptor (or 'viewer', not the view) to the particular form of change likely to result from the Proposed Development.

13.7.18.26 The factors weighed in reaching a decision on 'value' of the view are not all applicable at night-time, in the same way they may be during the day. It is not appropriate, for example, to attribute value to views at night when the detail of the view, or of elements that add value to it within a landscape, cannot readily be discerned. Furthermore, the popularity of a viewpoint during the day may be completely different to its use at night. Value factors assessed for day-time viewpoints may therefore be of less relevance to the value judgement for night-time viewpoints, which is factored into the following assessments.

13.7.18.27 In reaching a view on the significance of the likely visual effects from the visible aviation lighting, it is relevant to consider what parts of the landscape - where darkness qualities are well displayed - are likely to be affected by visibility of the aviation lights and, in turn, to understand what people might be doing in these areas at night to be susceptible to visibility of aviation lights. Descriptions of 'susceptibility' provided for daytime viewpoints and receptors in Section 13.7.2 to 13.7.17 are considered appropriate for the purposes of establishing receptor sensitivity at night-time, however the susceptibility of people experiencing night-time views will depend on the degree to which their perception is affected by existing baseline lighting. In brightly lit areas, or when travelling on roads from where sequential experience of lighting may be experienced, the susceptibility of receptors is likely to be lower than from within areas where the baseline contains no or limited existing lighting.

13.7.18.28 In relation to the other key component in determining significance of effect, the magnitude of change, reference to 'loss of important features' and 'composition of the view' are not readily discernible or relevant at night and, on this basis, a distinct set of criteria to explain the magnitude of change at night, as a consequence of the appearance of aviation lights, is set out in Table 13.25 below.

Table 13.25 – Magnitude of change criteria for night-time visual effects

Level of magnitude	Definition of magnitude
High	Addition of aviation and marine navigation lighting results in large scale of change/ large intrusion to the existing night-time baseline conditions/ darkness in the view, due to a full and/ or close range view of visible aviation lighting and/ or a high degree of contrast/ low degree of integration with level of baseline lighting in the view. Results in obtrusive light which compromises or diminishes the view of the night sky.
Medium	Addition of aviation lighting results in moderate scale of change/ moderate intrusion to the existing night-time baseline conditions/ darkness in the view, due to partial and/ or middle distance view of visible aviation lighting and/ or moderate level of contrast/ integration with level of baseline lighting in the view. Results in light that may partially compromise or diminish the view of the night sky, but which is not considered obtrusive.
Low	Addition of aviation and marine navigation lighting results in small scale of change/ minor intrusion to the existing night-time baseline conditions/ darkness in the view, due to limited and/ or distant view of aviation lighting and/ or low degree of contrast/ high degree of integration with level of baseline lighting in the view. Results in light that does not compromise or diminish the view of the night sky, nor is it considered obtrusive.

Level of magnitude	Definition of magnitude
Negligible	Addition of aviation and marine navigation lighting results in a largely indiscernible change/ negligible intrusion to the existing night-time baseline conditions/ darkness in the view, due to glimpsed view of lighting and/ or slight degree of contrast/ very high degree of integration with level of baseline lighting in the view. Results in light that does not compromise or diminish the view of the night sky, nor is it considered obtrusive.

13.7.18.29 The significance of effects of aviation and marine navigation lighting is assessed through a combination of the sensitivity of the visual receptor and the magnitude of change that would result from the visible aviation lighting, taking into account the considerations described above, and informed by the matrix in Table 13.9, which gives an understanding of the threshold at which significant effects may arise.

13.7.18.30 A significant effect occurs where the aviation and marine navigation lighting would provide a defining influence on a view or visual receptor. A not significant effect would occur where the effect of the aviation and marine navigation lighting is not material, and the baseline characteristics of the view or visual receptor continue to provide the definitive influence. In this instance the aviation lighting may have an influence, but this influence would not be definitive.

13.7.18.31 In determining significance, particular attention is paid to the potential for 'Obtrusive Light' i.e. whether the lighting impedes a particular view of the night sky; creates sky glow, glare or light intrusion (ILP, 2011) in a prominent, incongruous or intrusive way.

Visual representations

13.7.18.32 A ZTV map has been produced to show the areas from which the medium-intensity aviation lights may be seen (Volume 2, Figure 13.20). This ZTV can be used to identify where the aviation lights may theoretically be visible and how many lights may be theoretically visible from different locations. The ZTV illustrates the 'bare ground' situation and does not take into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility. It also does not indicate the decrease in visibility of the lights that occurs with increased distance. The nature of what is visible from 5 km away would differ markedly from what is visible from 15 km or 30 km away, although both are indicated on the Nacelle Light ZTV as having the same level of visibility in terms of number of aviation lights visible.

13.7.18.33 Night-time baseline view panoramas and photomontage visualisations showing medium-intensity nacelle mounted aviation lighting are presented from four viewpoints:

- Viewpoint A Martin's Haven (Volume 2, Figure 13.37a-f);
- Viewpoint B Kete National Trust Car Park (Volume 2, Figure 13.38a-f);
- Viewpoint C Freshwater West Beach (Volume 2, Figure 13.39a-f); and
- Viewpoint D Marloes National Trust Car Park (Volume 2, Figure 13.40a-c).

13.7.18.34 The night-time photography has therefore been captured in low light conditions, after the end of civil twilight, when 'night' has been reached and when other artificial lighting, such as streetlights, car headlamps and lights on buildings are on, to show how the aviation lighting would look compared to the existing baseline at such times.

13.7.18.35 Although aviation lighting manufacturers must meet the minimum requirements, their products may vary in relation to recommended limits set out in ICAO standards, which makes it difficult producing accurate visualisations as the lighting characteristics of different light fittings, of the same intensity, may vary outside the minimum requirements stipulated by ICAO. The night-time photomontages shown in these figures have been produced to show 2,000 cd lighting, to inform the assessment of worst-case effects assessed and are likely to over-represent the visibility of aviation warning lighting experienced in reality, as they are likely to operate at reduced intensity (200 cd) in clear visibility conditions.

Aviation Lighting Zone of Theoretical Visibility (ZTV)

13.7.18.36 Visual effects of the aviation lighting will only occur where their introduction influences the visual amenity and views experienced by people in the area. The geographic areas where these visual effects may occur is defined by the ZTV shown in Volume 2, Figure 13.20. The nacelle aviation light ZTV can be used to identify where the aviation lights may theoretically be visible and how many lights may be visible from different locations. The ZTV is based on the nacelle mounted position of the aviation lights, at 149 m hub height, on each of the WTGs. The base mapping has been darkened to give an indication of those areas that will not be affected by visibility of the aviation lighting.

13.7.18.37 The ZTV has been calculated using digital terrain data, which does not account for the screening effects of vegetation or built form. It also does not indicate the decrease in visibility of WTG aviation lights that occurs with increased distance from the array area or atmospheric visibility due to the weather conditions. The aviation lighting ZTV therefore shows a worst-case and is likely to overstate the actual visibility of the Proposed Development, which would be further screened by vegetation or built form and visibility of the lights reduced by prevailing atmospheric conditions.

13.7.18.38 The ZTV (Volume 2, Figure 13.20) shows that the WTG aviation lights will not be visible from large geographic areas shown in ‘dark grey’ in the mapping with no ZTV colouring, where the terrain prevents views of the WTG aviation lights. Notably, these areas where the WTG aviation lights will not be visible include:

- The seascape and Pembrokeshire coastline to the north and east of St. David’s Head, extending outside the SLVIA Study Area;
- Much of the seascape between St David’s Head and Ramsey Island, including Whitesands Bay, much of the Ramsey Sound and the north side of Ramsey Island;
- The inner and southern parts of the seascape of St Bride’s Bay and its coastline between Newgale Sands, and the northern Marloes coastline;
- Parts of the Broad Sound where views are screened by the landform of Skokholm Island;
- Areas of Outer Milford Haven along the inland side of the coastline where the intervening landforms at St Ann’s Head prevents views of the WTG aviation lights;
- Large areas of Inner Milford Haven, between Milford Haven itself, Pembroke Dock, Pembroke, the Pembroke River and Angle/Angle Bay; and
- The seascape and coastline to the east of St Govan’s Head, extending to Stackpole, Stackpole Quay and Freshwater East.

13.7.18.39 The ZTV (Volume 2, Figure 13.20) shows that the main areas of higher theoretical visibility of the WTG aviation lights will be from the open seas within the SLVIA Study Area, the offshore and inshore waters to the south and west of the Pembrokeshire coast and the adjacent south-western facing coastlines of the PCNP, including:

- the coastal waters and south-western coastal edges of the seascape around Skokholm and Gateholm islands, at distances of approximately 30.3 km from Skokholm;
- the coastal waters and south-western coastal edges of Skomer Island, at distances of approximately 33.7 km from Skomer;
- the coastal parts of the Marloes and Dale area between Marloes peninsula, Marloes Sands, West Dale Bay and St Ann's Head at distances of approximately 35.2 km-from St Ann's Head;
- parts of Outer Milford Haven, between St Ann's Head on the north side and West Angle Bay and Sheep Island on the southern side, at distances of approximately 39.3 km from West Angle Bay;
- The coastline and coastal waters between Sheep Island and Freshwater West, at distances of approximately 40.6 km from Freshwater West;
- The coastal waters and south-western coastline of the Castlemartin area (between Castlemartin, Stack Rocks and St Govan's Head), at distances of approximately 39 km from Linney Head and 42.5 km from Stack Rocks;
- The coastal waters and southern facing coastline of St David's peninsula, Ramsey Island and the northern parts of St Brides Bay, at distances of 47.8 km from Caerfai Bay and 43.5 km from Ramsey Island; and
- Scattered elevated inland areas at 40-50 km to the north and south of Milford Haven outside the PCNP.

13.7.18.40 The assessment of effects of aviation lighting on users of the PCNP is informed by the nacelle light ZTV (Volume 2, Figure 13.20) and an understanding of the nature of the likely effects of the proposed lighting, gained from observing windfarm aviation lighting at operational windfarms. The ZTV and wirelines of the Proposed Development have been used to review the visibility of lighting from viewing locations within the PCNP and consider the potential effects.

13.7.18.41 The PCNP attracts people wishing to appreciate the night-time sky with an absence of night-time light pollution. As described in the baseline in Section 13.5.2, the PCNP promotes eight 'dark sky discovery sites', as locations to find the PCNP's darkest skies, which offer specific points to view the night sky. These viewpoints have been considered in the visual assessment due to their potential sensitivity as viewing sites that people visit with the express intention of viewing the night sky. Three of these dark sky discovery sites are within the SLVIA Study Area (Volume 2, Figure 13.10) at Martin's Haven (National Trust Car Park), Kete (National Trust Car Park) and Broadhaven South (Car Park).

13.7.18.42 The intervisibility of these dark sky discovery sites within the nacelle mounted aviation lighting of the Proposed Development is shown in Volume 2, Figure 13.20. Martin's Haven National Trust car park has no visibility of the Proposed Development, as it is outside the ZTV, however there are views from the nearby lookout station on the path from the car part towards Wooltack Point, therefore a night-time viewpoint has been included at this location at Viewpoint A, Martin's Haven (Volume 2, Figure 13.36). Kete National Trust car park is within the ZTV and a representative night-time viewpoint has been included at Viewpoint B Kete (Volume 2, Figure 13.37). The baseline night-time views and sensitivity to change from these locations are described in the following viewpoint assessment. Two further night-time viewpoints at Freshwater West (Viewpoint C) and Marloes National Trust Car Park (Viewpoint D), which are not dark sky discovery sites, are also considered in the following night-time viewpoint assessment.

Viewpoint A Martin's Haven, National Trust

Baseline and sensitivity to change

13.7.18.43 The location and existing night-time view from Viewpoint A Martin's Haven, National Trust is shown in Volume 2, Figure 13.37a-d. The viewpoint is actually located at the lookout station above Martin's Haven, which can be accessed from a walled entrance to The Deer Park, close to the National Trust car park at Martin's Haven. The elevated position affords view towards Skomer Island, that are not possible from the car park itself. The viewpoint looks west to the dark, jagged outline of Skomer Island and Midland Isle, and outlying rocky coast, across the channel of Jack Sound; while also affording a wide, open views south over Broad Sound to the dark, low-lying profike of Skokholm Island, and north across St Bride's Bay to the St David's Peninsula.

13.7.18.44 There is minimal existing lighting in the view across the seascape, with the overall impression being the night-time view of a dark seascape and dark skies above, with only occasional point features of light, including from Skokholm lighthouse, cardinal marks and transient lights on boats and tankers visible in the view out to sea. Other lights are visible in the view inland, including from scattered dwellings and several red aviation lights can be seen on stacks at Valero oil refinery and Pembroke Power Station to the east. Due to the elevated position and relatively remote location on a headland, skies are very dark, with little in the way of local light pollution, although sometimes nearby ships can be a source. Fundamentally it is a view that has a relatively low level of lighting in the existing seascape in the baseline, with no urban lighting visible and relative continuity between the dark seascape below and dark skies above, where it is possible to appreciate qualities of the radiance of the stars on a clear night and lack of light pollution of the night sky.

13.7.18.45 The sensitivity of the viewpoint at night is considered to be high, reflecting that the view has high value at night-time and the receptors experiencing the view have a high susceptibility to change. The viewpoint is located within the PCNP which has specific planning policies to conserve its intrinsic dark sky and there is a societal value placed on the experience of dark skies from the PCNP. The nearby National Trust car park at Martin's Haven is a dark sky discovery site, which is considered to have higher sensitivity to the potential effects of the aviation lights than other areas of the PCNP, as it is specifically promoted by the PCNP to encourage visitors to this site with the express intention of viewing the night sky and this experience could be affected. The viewpoint itself is not located at the car park, as the car park affords no views of the Proposed Development and has instead the viewpoint has been sited at the lookout station above Martin's Haven, on the walk out to Wooltack Point. This location at the lookout station along a steep path is less accessible to people at night, who are more likely to view the night sky from the National Trust car park. The viewpoint is unrestricted out to sea overlooking the relatively dark seascape context of the maritime coast of the PCNP and does not take in any intervening urban lighting. This general lack of readily discernible light sources in the view towards the site, other than the Skokholm lighthouse and transient lights on boats, increases the susceptibility to further lighting, and the ability of receptors to perceive the intensity of lights out to sea against a relatively dark background.

Magnitude of change and significance of effect

13.7.18.46 The predicted view of the aviation lights at 2,000cd is shown in the photomontage in Volume 2, Figure 13.37f. The marine navigation lighting at platform level of all WTGs will not be visible due to their position behind the intervening horizon.

13.7.18.47 Aviation lighting at the nacelle height of the WTGs of the Proposed Development is predicted to be visible in the view at night only in very good and excellent visibility conditions, with the closest WTG aviation light located 36.5 km from the viewpoint. The viewpoint is located at long distance from the potential source of light within the array area, which reduces the magnitude of change as viewers are unlikely to perceive the aviation lights to any degree of intensity at such long range.

13.7.18.48 The aviation lighting of the Proposed Development WTGs will introduce distant point sources of red light into the distance above the sea skyline, in very good and excellent visibility conditions, adding to the visual influence of offshore lighting in the existing view of the sea at night. The WTG aviation lights will be viewed in the backdrop context to the dark outline of Skokholm Island, adding to the visible red light of the Skokholm lighthouse in this part of the view. The aviation lights will partially interrupt the continuity between the dark sea below and the dark skies above, however the spread of WTG lights will occur over a narrow portion of the wide-open view.

13.7.18.49 The aviation lights will be viewed low to the horizon and do not extend high into the sky, thus limiting the amount of the night-sky that is impeded and having negligible influence on the view of stars in the night-sky above the viewer. The dark skies and stars will continue to be visible, unimpeded and appreciated in the skies above the viewer. The aviation lights are not expected to result in obtrusive light that impedes the wider expanse of night sky, which can be experienced readily above the aviation lights, nor result in brightening of the night sky (skyglow) or glare on to the sea surface and would not be of detriment to the overall experience of the dark night skies in this view.

13.7.18.50 A result of these factors, the magnitude of change on the night-time view as a result of the WTG aviation lights operating at 2,000cd is assessed as low and when combined with the high sensitivity of the viewpoint, this results in a not significant, direct, long-term and reversible **(moderate/minor)** visual effect. The effect of the WTG aviation lights is considered not significant on balance, because they do not compromise or diminish the view of the night sky or the dark seascape of the PCNP.

13.7.18.51 The operation of aviation lights at the lower intensity of 200 cd when visibility from every WTG is >5 km will provide further mitigation and reduction in the perceived intensity of the visible lighting.

Viewpoint B Kete National Trust Car Park

Baseline and sensitivity to change

13.7.18.52 The location and existing night-time view from Kete National Trust Car Park is shown in Volume 2, Figure 13.38a-d. The viewpoint is located at Kate National Trust Car Park, which can be accessed from the minor road out of Dale to St Ann's Head. The viewpoint is sited within the car park, which is easily accessible and popular with visitors coming to view the sunset over the coastline, as it has good visibility in all directions, especially to the west and south-west out to sea, which suffer less from the diffuse light pollution of built-up areas to the east around Milford Haven. The most dramatic portion of the view is to the north-west across Broad Sound to SKokholm, Skomer Island and the Marloes Peninsula.

13.7.18.53 There is minimal existing lighting in the view across the seascape, with the overall impression being the night-time view of a dark seascape and dark skies above, with only occasional point features of light, including St Ann's lighthouse to the south, Skokholm lighthouse, cardinal marks and transient lights on boats and tankers visible in the view out to sea. Other lights are visible in the view inland, including from scattered dwellings and several red aviation lights can be seen on stacks at Valero oil refinery and Pembroke Power Station to the east. Fundamentally it is a view that has a relatively low level of lighting in the existing seascape in the baseline, with no urban lighting visible and relative continuity between the dark seascape below and dark skies above, where it is possible to appreciate qualities of the radiance of the stars on a clear night and lack of light pollution of the night sky.

13.7.18.54 The sensitivity of the viewpoint at night is considered to be high, reflecting that the view has high value at night-time and the receptors experiencing the view have a high susceptibility to change. The viewpoint is located within the PCNP which has specific planning policies to conserve its intrinsic dark sky and there is a societal value placed on the experience of dark skies from the PCNP. The National Trust car park is a dark sky discovery site, which is considered to have higher sensitivity to the potential effects of the aviation lights than other areas of the PCNP, as it is specifically promoted by the PCNP to encourage visitors to this site with the express intention of viewing the night sky and this experience could be affected. The viewpoint is unrestricted out to sea overlooking the relatively dark seascape context of the maritime coast of the PCNP and does not take in any intervening urban lighting. This general lack of readily discernible light sources in the view towards the site, other than the Skokholm lighthouse and transient lights on boats, increases the susceptibility to further lighting, and the ability of receptors to perceive the intensity of lights out to sea against a relatively dark background.

Magnitude of change and significance of effect

13.7.18.55 The predicted view of the aviation lights at 2,000cd is shown in the photomontage in Volume 2, Figure 13.38f.

13.7.18.56 Aviation lighting at the nacelle height of the WTGs of the Proposed Development is predicted to be visible in the view at night only in very good and excellent visibility conditions, with the closest WTG aviation light located 36.6 km from the viewpoint. The viewpoint is located at long distance from the potential source of light within the array area, which reduces the magnitude of change as viewers are unlikely to perceive the aviation lights to any degree of intensity at such long range.

13.7.18.57 The aviation lighting of the Proposed Development WTGs will introduce distant point sources of red light into the distance above the sea skyline, in very good and excellent visibility conditions, adding to the visual influence of offshore lighting in the existing view of the sea at night. The WTG aviation lights will be viewed outside the main focus of interest in the view, adding visible red lights in a relatively simply composed section of open seascape to the south-west, which does not interfere with the focal points such as Skokholm, Skomer and the Marloes Peninsula. The aviation lights will partially interrupt the continuity between the dark sea below and the dark skies above, however the spread of WTG lights will occur over a narrow portion of the wide-open view.

13.7.18.58 The aviation lights will be viewed low to the horizon and do not extend high into the sky, thus limiting the amount of the night-sky that is impeded and having negligible influence on the view of stars in the night-sky above the viewer. The dark skies and stars will continue to be visible, unimpeded and appreciated in the skies above the viewer. The aviation lights are not expected to result in obtrusive light that impedes the wider expanse of night sky, which can be experienced readily above the aviation lights, nor result in brightening of the night sky (skyglow) or glare on to the sea surface and would not be of detriment to the overall experience of the dark night skies in this view.

13.7.18.59 A result of these factors, the magnitude of change on the night-time view as a result of the WTG aviation lights operating at 2,000cd is assessed as low and when combined with the high sensitivity of the viewpoint, this results in a not significant, direct, long-term and reversible **(moderate/minor)** visual effect. The effect of the WTG aviation lights is considered not significant on balance, because they do not compromise or diminish the view of the night sky or the dark seascape of the PCNP.

13.7.18.60 The operation of aviation lights at the lower intensity of 200cd when visibility from every WTG is >5 km will provide further mitigation and reduction in the perceived intensity of the visible lighting.

Viewpoint C Freshwater West Beach

Baseline and sensitivity to change

13.7.18.61 The location and existing night-time view from Freshwater West Beach is shown in Volume 2, Figure 13.39a-d. The viewpoint is located at Freshwater West beach, at an elevated position on the dunes near the Pembrokeshire Coast Path and Gumpton Burrows, Freshwater West car park (as per day-time Viewpoint 10). The view is a wide, large-scale and simple view out to sea, permeated by the constant presence of the sea, wind and crashing waves, backed by the sandy beach and dunes, where the experience contrasts with the rugged cliff-top coastlines visible to the north.

13.7.18.62 There is minimal existing lighting in the view across the seascape, with the overall impression being the night-time view of a dark seascape and dark skies above, with only occasional point features of light, including St Ann's lighthouse to the north, cardinal marks and transient lights on boats and tankers visible in the view out to sea. Fundamentally it is a view that has a relatively low level of lighting in the existing seascape in the baseline, with no urban lighting visible and relative continuity between the dark seascape below and dark skies above, where it is possible to appreciate qualities of the radiance of the stars on a clear night and lack of light pollution of the night sky.

13.7.18.63 The sensitivity of the viewpoint at night is considered to be medium-high, reflecting that the view has medium value at night-time and the receptors experiencing the view have a high susceptibility to change. The viewpoint is located within the PCNP which has specific planning policies to conserve its intrinsic dark sky and there is a societal value placed on the experience of dark skies from the PCNP. Freshwater West is not, however, a dark sky discovery site, therefore it is not specifically promoted for viewing the night sky, therefore night-time views are likely to be experienced by people staying at the beach after sunset, when the popularity of the viewpoint is much reduced at night. The detail of the elements in the view that add value during the day are not readily discernible at night. The viewpoint is unrestricted out to sea overlooking the relatively dark seascape context of the maritime coast of the PCNP and does not take in any intervening urban lighting. This general lack of readily discernible light sources in the view towards the site, other than the St Ann's lighthouse and transient lights on boats, increases the susceptibility to further lighting, and the ability of receptors to perceive the intensity of lights out to sea against a relatively dark background.

Magnitude of change and significance of effect

13.7.18.64 The predicted view of the aviation lights at 2,000 cd is shown in the photomontage in Volume 2, Figure 13.39f.

13.7.18.65 Aviation lighting at the nacelle height of the WTGs of the Proposed Development is predicted to be visible in the view at night only in excellent visibility conditions, with the closest WTG aviation light located 41.5 km from the viewpoint. The viewpoint is located at very long distance from the potential source of light within the array area, which reduces the magnitude of change as viewers are unlikely to perceive the aviation lights to any degree of intensity at such long range.

13.7.18.66 The aviation lighting of the Proposed Development WTGs will introduce distant point sources of red light into the distance above the sea skyline, in excellent visibility conditions, adding to the visual influence of offshore lighting in the existing view of the sea at night. The WTG aviation lights will be viewed outside the main focus of interest in the view adding visible red lights in a relatively simply composed section of open seascape to the south-west, which does not interfere with the focal points such as the coastline to the north. The aviation lights will partially interrupt the continuity between the dark sea below and the dark skies above, however the spread of WTG lights will occur over a narrow portion of the wide-open view.

13.7.18.67 The aviation lights will be viewed low to the horizon and do not extend high into the sky, thus limiting the amount of the night-sky that is impeded and having negligible influence on the view of stars in the night-sky above the viewer. The dark skies and stars will continue to be visible, unimpeded and appreciated in the skies above the viewer. The aviation lights are not expected to result in obtrusive light that impedes the wider expanse of night sky, which can be experienced readily above the aviation lights, nor result in brightening of the night sky (skyglow) or glare on to the sea surface and would not be of detriment to the overall experience of the dark night skies in this view.

13.7.18.68 A result of these factors, the magnitude of change on the night-time view as a result of the WTG aviation lights operating at 2,000cd is assessed as low and when combined with the medium-high sensitivity of the viewpoint, this results in a not significant, direct, long-term and reversible **(moderate/minor)** visual effect. The effect of the WTG aviation lights is considered not significant on balance, because they do not compromise or diminish the view of the night sky or the dark seascape of the PCNP.

13.7.18.69 The operation of aviation lights at the lower intensity of 200 cd when visibility from every WTG is >5 km will provide further mitigation and reduction in the perceived intensity of the visible lighting.

Viewpoint D Marloes National Trust Car Park

Baseline and sensitivity to change

13.7.18.70 The location and existing night-time view from Marloes National Trust Car Park is shown in Volume 2, Figure 13.39a-c. The viewpoint is located at the car park at Marloes Sands and Mere, which is a birdwatching hotpot and point of access to the beach at Marloes Sands. The existing view is open to the south over Marloes Sands along the coastline to Hooper's Point and St Ann's Head, however it is more enclosed to the south-west/west by intervening coastal landforms, which prevent views of the sea in this direction.

13.7.18.71 There is minimal existing lighting in the view across the seascape, with the overall impression being the night-time view of a dark landscape and dark skies above, with only occasional point features of light, including transient lights on boats and tankers visible in the view out to sea. Other lights are visible in the view inland, including from scattered dwellings and several red aviation lights can be seen on stacks at Valero oil refinery and Pembroke Power Station to the east. Fundamentally it is a view that has a relatively low level of lighting in the existing seascape in the baseline, with no urban lighting visible and relative continuity between the dark seascape below and dark skies above, where it is possible to appreciate qualities of the radiance of the stars on a clear night and lack of light pollution of the night sky.

13.7.18.72 The sensitivity of the viewpoint at night is considered to be medium, reflecting that the view has medium value at night-time and the receptors experiencing the view have a medium susceptibility to change. The viewpoint is located within the PCNP which has specific planning policies to conserve its intrinsic dark sky and there is a societal value placed on the experience of dark skies from the PCNP. Marloes National Trust Car Park is not, however, a dark sky discovery site, therefore it is not specifically promoted for viewing the night sky, therefore night-time views are unlikely to be experienced by the main users visiting Marloes Mere, when the popularity of the viewpoint is much reduced at night. The detail of the elements in the view that add value during the day are not readily discernible at night. The view is restricted out to sea to the south-west and is relatively contained in this direction by the intervening coastal landforms, which reduces its susceptibility to changes in the seascape, only opening out to the seascape to the south across Marloes Sands.

Magnitude of change and significance of effect

13.7.18.73 The predicted view of the aviation lights at 2,000 cd is shown in the wireline in Volume 2, Figure 13.40c. The majority of the Proposed Development WTGs will be screened by the intervening coastal landforms between the viewpoint and the sea and therefore the majority of the WTG aviation lights will not be visible at night. One of the Proposed Development WTGs will be theoretically visible to the south of this intervening landform, however there are foreground features, including farm outbuildings and localised landforms, which provide further screening and will limit the view of this individual WTG aviation light. A result of these factors, the magnitude of change to the night-time view as a result of the aviation lights operating at 2,000 cd is assessed as negligible and when combined with the medium sensitivity of the viewpoint, this results in a not significant, direct, long-term and reversible **(minor)** visual effect. The effect of the WTG aviation lights is considered not significant on balance, because they do not compromise or diminish the view of the night sky or the dark seascape of the PCNP.

13.7.18.74 The operation of aviation lights at the lower intensity of 200 cd when visibility from every WTG is >5 km will provide further mitigation and reduction in the perceived intensity of the visible lighting.

13.8 Potential Seascape Effects

13.8.1 Preliminary Assessment

13.8.1.1 A preliminary assessment of the effects of the operation and maintenance of the Proposed Development on the seascape character receptors (SCAs) within the PCNP area of the SLVIA Study Area is presented in Table 13.26 with reference to the ZTV analysis in Volume 2 Figure 13.14 and Figure 13.15a-b. A detailed assessment follows in Sections 13.8.2 to 13.8.6 for each SCA within the PCNP that is identified in the preliminary assessment as requiring detailed assessment.

Table 13.26 - Preliminary Assessment Seascape Character

Seascape Receptor	Minimum distance to array area (km)	Preliminary Assessment
Potential for significant effects that require detailed assessment:		
SCA 25 Skomer Island and Marloes Peninsula	32.4	Potential for long-term, reversible impacts on perceived seascape character of these SCAs, arising as a result of the construction, operation and maintenance, and decommissioning of the Proposed Development, which may be visible from these SCAs (during very good and excellent visibility conditions) and may therefore alter their perceived character. Potential impacts require further assessment, undertaken in Sections 13.8.2 to 13.8.6.
SCA 26 Skokholm and Gateholm coastal waters	29.7	
SCA 31 Outer Milford Haven	34.6	
SCA 34 Freshwater West	37.0	
SCA 35 Castlemartin coastal waters	35.9	
Considered in preliminary assessment but found to have no potential for significant effects – scoped out of detailed assessment:		
SCA 13 Penbwchdy to Penllechwen	49.8	These SCAs are located largely outside the SLVIA Study Area, with only very small areas of these SCAs (less than 2 km^2) being located on very edge of the SLVIA Study Area and at very long distances and with minimal areas of the SCA being with the ZTV. No potential for their baseline seascape character to be significantly affected.
SCA 15 St Davids Head	49.0	
SCA 37 Freshwater East and Manorbier	49.9	
SCA 16 Whitesands Bay	46.9	These SCAs are located at very long distance from the Proposed Development and there are minimal areas of

Seascape Receptor	Minimum distance to array area (km)	Preliminary Assessment
SCA 17 Ramsey Sound	43.9	these SCAs within the ZTV (only 1-2 km^2 in each SCA), with the majority of the land area of these SCAs falling outside the ZTV. No potential for their baseline seascape character to be significantly affected.
SCA 22 St Brides Bay coastal waters south - Borough Head	41.3	
SCA 14 Western sand and gravel bars	27.8	SCA is located at long distance from Proposed Development and is entirely offshore, such that its characteristic sub-sea offshore bars of gravelly sand are not readily perceived from the Pembrokeshire Coast and will not be changed by the Proposed Development. The SCAs open, vast, simple and unified sea qualities will not be changed by the Proposed Development 27.8 km outside the SCA and its sense of openness, remoteness and exposure will remain.
SCA 21 St Brides Bay coastal waters east	42.7	SCA is located at very long distance from the Proposed Development and the majority of its coastline between Little Haven and Nolton Haven falls outside the ZTV, or to the north at Newgale Sands, falls outside the SLVIA Study Area and has restricted visibility of 1-2 or 3-4 WTGs. The St Brides Bay coastline is west facing and although there are wide views across the bay, the cliffs, headlands (Marloes) and islands (Skomer) to the south contains views towards the Proposed Development, which is evident in the restricted visibility shown in the ZTV. The SCAs key characteristics, including its long sandy beaches, exposure, visitor activities and long views across St Bride's Bay, will not be significantly affected by the Proposed Development.
SCA 23 St Brides Bay south coastal waters - The Nab Head	36.9	SCA is located at long distance from the Proposed Development and all of its coastline areas fall outside the ZTV. The cliffs, headlands (Marloes Peninsula) and Islands (Skomer) to the west and south will largely prevent views of the Proposed Development, which is evident in the restricted visibility shown in the ZTV, with the exception of the more elevated inland plateau of the SCA. The SCAs key characteristics, including its jagged sandstone cliffs, coastal path along the cliff edge and open views out to sea and west to Skomer Island, will not be significantly affected by the Proposed Development, and its sense of remoteness will remain.
SCA 24 St Brides Bay	32.8	SCA is located at long distance from the Proposed Development and the majority of its area either falls outside the ZTV or has restricted visibility of 1-2 WTGs. The cliffs, headlands (Marloes Peninsula) and Islands (Skomer) to the south will largely prevent views of the Proposed Development, which is evident in the restricted visibility shown in the ZTV, with the exception of the most

Seascape Receptor	Minimum distance to array area (km)	Preliminary Assessment
		offshore waters of the SCA. The SCAs key characteristics, including its seabed of muddy sand, it's open, vast, simple and unified sea qualities with the presence of commercial shipping, will not be significantly affected by the Proposed Development, and its sense of openness, remoteness and exposure derived from the natural forces of the sea will remain.
SCA 28 West Open Sea	14.1	SCA is located at mid-range from Proposed Development and is entirely offshore at relative distance from the coast, such that some its characteristics are not readily perceived from the Pembrokeshire Coast and its sub-sea characteristics such as its sandy gravel seabed and numerous wrecks are not apparent at all and will not be changed by the Proposed Development. The Proposed Development may be viewed in the distant backdrop beyond the SCA in long distance views from St David's and Marloes Peninsulas. The SCAs key characteristics, including its open, vast, simple and unified sea qualities with the presence of commercial shipping and fishing, will not be significantly affected by the Proposed Development over 14 km outside the SCA, and its sense of openness, remoteness and exposure derived from the natural forces of the sea will remain.
SCA 29 Southern Inshore Waters	29.6	SCA is located at long-range from the Proposed Development and is entirely offshore at relative distance. Some its characteristics are not readily perceived from the Pembrokeshire Coast and its sub-sea characteristics such as its sandy gravelly seabed and shallower waters are not apparent at all and will not be changed by the Proposed Development. The Proposed Development may be viewed in the distant backdrop beyond the SCA in long distance views from the Skomer, Marloes, Freshwater West and Castlemartin coasts, however these effects are assessed on the relevant SCAs covering these coastlines (SCA 25, 26, 31, 34 and 35). The SCAs fundamental characteristics and qualities, defined by the natural forces of water and wind, including its open, vast, simple and unified marine character, will not be significantly affected by the Proposed Development over 29.6 km outside the SCA.
SCA 30 Southern Offshore Waters	2.2	The SCA is located entirely offshore at long distance from the Pembrokeshire coast, consisting of a very large area of sea, used for fishing, ferries and commercial shipping. It is rarely visited by people, therefore changes to is setting will rarely be perceived, and its characteristics are not readily perceived form the Pembrokeshire Coast. Its sub-sea characteristics such as deep water, gravelly sand seabed and numerous wrecks are not apparent at all and will not be changed by the Proposed Development. The Proposed Development may be viewed in the distant backdrop beyond the SCA in long distance views from the

Seascape Receptor	Minimum distance to array area (km)	Preliminary Assessment
		Skomer, Marloes, Freshwater West and Castlemartin coasts, however these effects are assessed on the relevant SCAs covering these coastlines (SCA 25, 26, 31, 34 and 35). The SCAs fundamental characteristics and qualities, defined by the natural forces of water and wind, including its open, vast, simple and unified marine character, will not be significantly affected by the Proposed Development outside the SCA.
SCA 32 Inner Milford Haven	39.7	SCA is located at long distance from the Proposed Development and the majority of its area falls outside the ZTV, with only a very limited geographic area of visibility, often from urban areas of Milford Haven where there is additional intervening screening by the built environment or vegetation within the settlement. The baseline characteristics are heavily influenced by the busy commercial shipping channel with tanker terminals, ferry terminals and visually dominant refineries with gas/oil storage and Pembroke Power Station, forming prevailing intervening features in the baseline. Although there are long views down the main channel and framed views from inlets and bays, the ZTV shows that views of the Proposed Development are prevented by Angle Peninsula and St Ann's Head. The SCAs key characteristics will not be significantly affected by the Proposed Development.
SCA 36 Stackpole Coastal Waters	44.4	SCA is located at long distance from the Proposed Development and is south-east facing, with almost all of its coastline areas fall outside the ZTV, with the exception of small areas of restricted visibility at Stackpole Head. The cliffs, headlands (St Govan's Head) and islands to the west will largely prevent views of the Proposed Development, which is evident in the restricted visibility shown in the ZTV. The SCAs key characteristics, including its steep limestone cliffs, coves and beaches, relationship between Broad Haven and Bosherton lakes, and its combination of wide open views out to sea and channelled views from Broad Haven, will not be significantly affected by the Proposed Development.
SCA 44 Western offshore - very deep water	14.3	SCA is located at mid-range from Proposed Development and is entirely offshore at very long distance from the coast, such that some its characteristics are not readily perceived from the Pembrokeshire Coast and its sub-sea characteristics such as its deep water, gravelly seabed and wrecks are not apparent at all and will not be changed by the Proposed Development. From the coast, the SCA will form part of the wider seascape context, with the Proposed Development viewed on the sea skyline at relative distance to the south of the SCA and will not appear within the backdrop of the SCA. The SCAs key characteristics, including its open, vast, simple and unified sea qualities with the presence of commercial shipping

Seascape Receptor	Minimum distance to array area (km)	Preliminary Assessment
		and fishing, will not be significantly affected by the Proposed Development over 14 km outside the SCA, and its sense of openness, remoteness and exposure derived from the natural forces of the sea will remain.

13.8.2 SCA 25 Skomer Island and Marloes Peninsula

Baseline and sensitivity to change

13.8.2.1 SCA 25 consists of the seascape of Skomer Island, which lies lie a short distance off the mainland coast west of Marloes, and its associated islets and the domed Marloes peninsula, with its jagged cliffs and rocky shores, stacks, arches and caves (Volume 2, Figure 13.5b). The sensitivity of SCA 25 is considered to be high, reflecting that the SCA has high value, and its perceived character has high susceptibility to changes that will occur as a result of the Proposed Development, for the reasons set out below.

13.8.2.2 **Value**. The SCA forms a key part of the coastal landscape of the PCNP and its associative seascape setting, as well as the Marloes and Dale Heritage Coast. The islands and seas also have nature conservation and geological importance. Skomer is a NNR, SPA, SSSI, an important bird area and the waters lie within Pembrokeshire Marine SAC. This area lies within the Skomer Island Landscape of Outstanding Historic Interest and there are numerous Scheduled Ancient Monuments (SAMs). These landscape designations indicate a high relative value attached to the SCA by society, on account of its landscape qualities.

13.8.2.3 Skomer Island and the Marloes peninsula are part of a volcanic geology with dramatic exposed rock formations and high cliffs, contrasting with a bleak and exposed plateau landscape. The sea is highly disturbed and exposed with tidal rips, rocks and other hazards, and is highly biodiverse. The high proportion of coastal views, including those out to the islands of Skomer and Skokholm, and extensive sea views from Skomer Island, contribute to the sense of place and distinctiveness, enhanced by strong sea smells and wind exposure, with crashing noise of waves in rough seas. Skomer is dominated by its dramatic sea cliffs, with associated sea birds, rocky shores, disturbed water and inland plateau. Marloes peninsula features attractive open rolling farmland contrasting with more sheltered wooded valleys. The cliffs and rock shores, islets and rocks of the Marloes coastline and Skomer Island are dramatic, jagged and angular. The SCA has a highly exposed and wild character, with a high degree of naturalness, remoteness and tranquillity along the coast and the islands, however tranquillity can be reduced in summer.

13.8.2.4 The SCA has a strong historic character, with diverse history and a strong sense of space and escape. Skomer Island shows human activity in a closed microcosm, with extensive, well-preserved, relict remains of prehistoric settlements, field systems and recent farming activity. The SCA contributes significantly towards leisure and recreational services in the form of wildlife watching, walking and beaches. The Pembrokeshire Coast Path affords the main route to experience the mainland coastline of the SCA. Marloes Sands is a popular beach and Marloes Peninsula is part of the National Trust site. Motor and sailing cruisers come out from Milford Haven to Skomer Island and the island is popular with tourists who take the boat from Martin's Haven. Uniquely, Skomer Island has a multitude of outstanding values recorded across all five evaluated LANDMAP landscape aspects, while the Marloes Peninsula also has outstanding visual and sensory.

13.8.2.5 **Susceptibility**: Skomer Island and the end of the Marloes peninsula have a highly exposed character and very large scale, resulting in openness and exposure to changes in the seascape. There is a relatively strong association between the SCA and the open seas and offshore waters to the west and south-west, with Skomer forming some of the most westerly land in the SLVIA Study Area exposed to the open seas. The simple, uncluttered sea skyline in the backdrop to Skomer Island and the Marloes Peninsula is visually relatively undisturbed by permanent features, making the SCA susceptible to changes in its seascape backdrop, yet the large scale and simplicity of offshore views moderate susceptibility.

13.8.2.6 The Marloes coast is an open coastline and the peninsula hinterland is smooth and bleak with no trees and low hedgerows or walls. The interior plateaus of both Skomer and the Marloes Peninsula are a little more sheltered from the coastal exposure, where views of the offshore waters to the west are more restricted. The landforms of the elevated coastal cliffs and islands also provide some visual enclosure and screening, particularly from the northern coasts of the Marloes peninsula and Skomer Island. The experience is dominated by exposure to wind, which would be conveyed by the form and function of the Proposed Development. Parts of the SCA are remote and relatively unspoilt with a wild character. Tranquillity and remoteness can be reduced in summer due to visitor levels, congestion, car parking and established recreational uses. Ferries, oil tankers and other freight ships passing in and out of Milford Haven, or anchored at St Brides Bay, can be viewed outside the SCA and also reduce perceived remoteness. There are already glimpses of onshore WTGs near Milford Haven, Valero oil refinery and Pembroke Power Station from various vantage points on both Skomer Island and the Marloes Peninsula.

13.8.2.7 The SCA is only susceptible to changes in perceived character/perceptual qualities because of the potential introduction of the Proposed Development in the setting of the SCA, in panoramic sea views experienced from the open and exposed areas of the SCA. Although the relatively unspoilt island character is susceptible to changes arising from the introduction of modern artefacts, Skomer Island and Marloes peninsula have a strong inherent character, such that its fundamental physical, geological, cultural and natural heritage aspects are not liable to changes arising from the Proposed Development outside the SCA at distance in the offshore waters.

Magnitude of change and significance of effect

13.8.2.8 The closest part of the array area is located approximately 32.4 km outside SCA 25, therefore the Proposed Development will occur in its wider seascape setting and result in no direct changes to the physical characteristics of the SCA. There will also be zero change to many of the main characteristics of the SCA, including its fundamental character as a volcanic rocky island and peninsula, its geology and rock formations, turbulent seas, land use and landscape pattern, all of which will remain unaffected and continue to define the distinct character. There will also be zero changes to the sub-sea characteristics that are not part of the perceived character and zero change to the sensory experience of strong sea smells, wind exposure and crashing noise of waves in rough seas. Fundamentally, these stimuli would continue to be experienced regardless of the presence of the Proposed Development.

13.8.2.9 The operation and maintenance of the Proposed Development may only result in changes to the visual aspects of its perceived seascape character, as apparent to people in views from parts of the SCA with visibility of the WTGs. The ZTV (Volume 2 Figure 13.15) shows that there will be limited or no visibility of the Proposed Development from the northern portion of the SCA, including the northern part of Skomer, the northern Marloes coastline and the nearshore waters along these coasts, due to the intervening landform screening provided by Skomer, the Neck, Midland Isle and the end of the Marloes Peninsula. There will be zero change to perceived characteristics of these northern parts of the SCA which are outside the ZTV. Parts of the Marloes coastline and nearshore seas also have restricted visibility (of 1-2 or 3-4 blade tips) of the Proposed Development due to the intervening screening provided by Skokholm Island, which contains views out to sea from the Marloes coastline between Martin's Haven and Gateholm Island.

13.8.2.10 The main geographic area of the SCA that is within the ZTV, from which changes may occur, will be from the southern and western side of Skomer (Viewpoint 4) and its elevated central plateau, the Neck, Midland Isle, parts of Jack Sound/Broad Sound near these islands, and parts of the Marloes peninsula near Martin's Haven, Marloes Sands and the elevated inland ground of the peninsula (Viewpoint 3). From these geographic areas of the SCA with visibility, the operation and maintenance of the Proposed Development may result in changes to specific aesthetic/perceptual aspects of its seascape character, including its perceived remoteness, tranquillity and wildness.

13.8.2.11 The 'exhilarating, wide and panoramic views' out to sea from the SCA and the 'views to the sea and islands from the peninsula' will be partially changed through the introduction of WTGs on the sea skyline outside the SCA, however the addition of the Proposed Development will not change the 'exhilarating' nature of these views, which stems from the exposure, drama of the landforms and turbulent seas. There will be a partial loss of open seascape occupied by the WTGs and a change in the seascape composition, through the addition of elements into the simple sea/sky composition and forming a further focal point, however the WTGs will be located 32.4 km from the SCA (at its closest point) and therefore occupy a small portion of the views and relatively small-scale within the large scale, open, expansive and simple seascape, which moderates the magnitude of change. The WTGs will occur in the seascape setting as 'horizon development' to a large open seascape, rather than being viewed 'within' the seascape of this SCA, clearly separated from Skomer Island and the Marloes coast by expansive areas of intervening seascape and offshore waters. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the exhilarating, wide and panoramic views to the sea will be retained.

13.8.2.12 The Proposed Development may be perceived as contrasting with the 'highly exposed and wild character' of the SCA through the introduction of man-made elements into the environment, however it may also be perceived as relating legibly to the coastal exposure and inclement conditions that define this wildness associated with the coast. The wildness experienced along the coast is often most readily experienced where the seas are whipped by westerly winds that challenge the land, where the bleakness of the sea, its dynamism and coastal exposure are readily evident. The Proposed Development readily relates to and conveys in its aesthetic and kinetic form, these wildness attributes of the coast. Its distant location in the wider seascape context outside this SCA results in less contrasts and influence on relative wildness attributes in this context. Although it may compete with the sense of openness and exposure, adding a perceived limit to part of the offshore view, the fundamental sense of openness, exposure, and relative wildness would not be lost.

13.8.2.13 The Proposed Development has potential to influence the 'high degree of naturalness, remoteness and tranquillity' along the coast and the islands, including its 'remote and unspoilt' character. Inland areas of the Marloes Peninsula are subject to greater human influences, in the form of farmland, settlement and National Trust facilities. The sense of remoteness within the SCA occurs primarily from Skomer Island and parts of the Marloes coastline. Skomer Island is largely inaccessible other than to the wardens and day visitors on the boat from Martin's Haven, under controlled access and has a prevailing feeling of remoteness, given that it is cut off from the mainland. The Marloes coastline is only accessible via the Pembrokeshire Coast Path. The addition of fixed man-made structures in the seascape setting of the SCA may potentially influence the perceived remoteness by reducing the sense of having a relative lack of human influence, however the degree of change is moderated by its distant location well outside the immediate seascape context of Skomer and Marloes, and by the presence of a number of other man-made elements that are visible from the SCA, and already influence its perceived remoteness, including commercial shipping, ferries, Valero oild refinery, Pembroke Power Station and onshore WTGs on the mainland coast.

13.8.2.14 The effect of the Proposed Development may occur on the visual aspects of tranquillity, relating to what is seen by people and whether its visible elements detract from the perception of such tranquillity (rather than on the aural aspects of tranquillity, which will not be changed). Many of the visual aspects of tranquillity relate to the perception of natural landscapes, such as trees, woodland, streams, rivers, lakes and geological features. The Proposed Development will have no effect on these tranquillity indicators and may only influence the perception of 'the sea' and the perceived tranquillity it provides in the experience of Skomer Island and the Marloes peninsula. The seas in this area are highly disturbed and exposed with tidal rips and rocks and other hazards, which would not be considered tranquil in the majority of conditions. Simply seeing the WTGs on the sea horizon outside the SCA would not be sufficient to negate opportunities to experience tranquillity. All other visual aspects of tranquillity of the natural environment which contribute to the experiences of tranquillity within the SCA would continue to prevail and moderate the influence of the WTGs, which would often be viewed in the context of exposed and wild, rather than tranquil, seas.

13.8.2.15 On balance, and considering all these factors, the magnitude of change to the perceived character of SCA 25 Skomer Island and Marloes Peninsula, resulting from the Proposed Development is assessed as medium-low; and the effect is assessed as not significant **(moderate)**, indirect, long-term and reversible. The Proposed Development will result in no significant residual effects to the perceived seascape character of SCA 25. The fundamental sense of place and distinctiveness of Skomer Island and the Marloes Peninsula, including its remoteness, tranquillity, and wildness, will prevail regardless of the potential addition of the Proposed Development.

13.8.3 SCA 26 Skokholm and Gateholm coastal waters

Baseline and sensitivity to change

13.8.3.1 SCA 26 consists of the island of Skokholm, the coastal island of Gateholm, and the south-west facing, rocky, indented eroding coast and western half of the Dale peninsula (Volume 2, Figure 13.5b). The sensitivity of SCA 26 is considered to be high, reflecting that the SCA has high value, and its perceived character has high susceptibility to changes that will occur as a result of the Proposed Development, for the reasons set out below.

13.8.3.2 **Value**: The SCA forms a key part of the coastal landscape of the PCNP and its associative seascape setting, as well as the Marloes and Dale Heritage Coast. The islands and seas also have nature conservation and geological importance. Skomer is a NNR, SPA, SSSI, an important bird area and the waters lie within Pembrokeshire Marine SAC. There are numerous Scheduled Ancient Monuments (SAMs). These landscape designations indicate a high relative value attached to the SCA by society, on account of its landscape qualities.

13.8.3.3 The mainland coast is a very gently undulating plateau, rising to 70 m AOD, contained by high red sandstone cliffs to 50 m. Gateholm has craggy cliffs and rough grazing. Skokholm is flat topped generally around 40-45 m AoD, and the near vertical bedding of sandstone produces distinctive high cliffs and rock formations with cliffs, with rough and jagged rocky exposures and foreshores. Semi-natural vegetation is found on the edges of cliffs, headlands and islands. The sea has strong tidal streams and races and is often subject to strong ocean swell particularly around St Ann's Head. The Dale peninsula is an exposed plateau headland with both pasture and arable with rectilinear field pattern. The lighthouses on Skokholm and St Ann's Head contribute to the sense of place.

13.8.3.4 The area is open and exposed and there are wide and panoramic views from many locations such as Little Castle Point and St Ann's Head on the mainland. Skokholm Island is an isolated, wild and highly exposed island in open waters. The cliffs and rock shores, islets and rocks are dramatic, red and layered. Skokholm Island is further offshore, more remote and, consequently, does not attract as much marine traffic as its neighbour Skomer Island. The red sandstone cliffs dominate the west facing mainland coast with its exposed character and the crashing noise of waves. There is a high degree of naturalness, remoteness and tranquillity in many sea edges and the islands, although ships entering Milford Haven to the south and east are apparent.

13.8.3.5 The Norse name for the island indicates its Viking links. Skokholm Island shows traces of at least two periods of settlement, likely from the Medieval period and from the 18th century. The sea is heavily used by sailing cruising boats and day trippers, with some sea angling and diving and occasional wildlife trips to Skokholm. The Pembrokeshire Coast Path runs around the mainland cliff edge. On Skokholm Island there is a small inlet to receive visitors who can stay on the island controlled by the local Wildlife Trust. The area contributes significantly towards leisure and recreational services in the form of wildlife watching and marine recreation, to natural heritage in the form of the unspoilt coast, marine reserve, geological and nature conservation importance, and culturally in respect of the diverse history, sense of space and interaction with wild landscapes and seascapes. Uniquely, Skokholm Island has a multitude of outstanding values recorded across all five evaluated LANDMAP landscape aspects, while the Marloes coastline also has outstanding visual and sensory.

13.8.3.6 **Susceptibility**: Skokholm Island and the Dale peninsula have a highly exposed character and very large scale, resulting in openness and exposure to changes in the seascape. There is a relatively strong association between the SCA and the open seas and offshore waters to the west and south-west, with Skokholm forming some of the most westerly land in the SLVIA Study Area exposed to the open seas. The simple, uncluttered sea skyline in the backdrop to Skokholm Island and the Dale Peninsula is visually relatively undisturbed by permanent features, making the SCA susceptible to changes in its seascape backdrop, yet the large scale and simplicity of offshore views moderate susceptibility.

13.8.3.7 The mainland coast between Hoopers Point and St Ann's Head is an open coastline and is smooth and bleak with trees limited to valleys. The interior plateaus of both Skokholm and the Dale Peninsula are a little more sheltered from the coastal exposure, where views of the offshore waters to the west are more restricted, but otherwise the coastal edges are visually exposed to potential changes in the open seas. Skokholm, Gateholm and Skomer islands and steep jagged rock formations of the coastline are often the focal features, as are the habitats, wildlife and coastline of Skokholm, however the expansive offshore waters have susceptibility to changes in the seascape backdrop.

13.8.3.8 The key susceptibility is the relationship of the islands, particularly Skokholm, with the Proposed Development, which form focal points when viewed from the seascape and mainland coastline, however, it is a wide, large-scale and open seascape, where complexity created by islands and landforms is generally contained to the coastal edges, leaving a wide, open expanse of offshore waters to the west.

13.8.3.9 The experience is dominated by exposure to sea smells and wind exposure in most places, which would be conveyed by the form and function of the Proposed Development. Parts of the SCA are remote and relatively unspoilt with a wild character, however the mainland coast has more intense agricultural uses in places, and visitor facilities which detract from the perceived remoteness. Tranquillity and remoteness can be reduced in summer due to visitor levels, car parking and established recreational uses. Passing ferries to Ireland from Pembroke Dock are visible as are oil tankers and other freight ships for the terminals and the power station in Milford Haven, viewed outside the SCA and also reduce perceived remoteness. Skokholm's Trinity House Lighthouse and the lighthouse at St Ann's Head form key landmark features.

13.8.3.10 The SCA is only susceptible to changes in perceived character/perceptual qualities because of the potential introduction of the Proposed Development in the setting of the SCA in panoramic sea views experienced from the open and exposed areas of the SCA. Although the relatively unspoilt island character is susceptible to changes arising from the introduction of modern artefacts, Skokholm Island and Dale peninsula have a strong inherent character, such that their fundamental physical, geological, cultural and natural heritage aspects are not liable to changes arising from the Proposed Development outside the SCA at distance in the offshore waters.

Magnitude of change and significance of effect

13.8.3.11 The closest part of the array area is located approximately 29.7 km outside SCA 26, therefore the Proposed Development will occur in its wider seascape setting and result in no direct changes to the physical characteristics of the SCA. There will also be zero change to many of the main characteristics of the SCA, including the fundamental character of the rocky islands of Skokholm and Gateholm, the indented sandstone cliff coastline, turbulent seas, land use and landscape pattern, all of which will remain unaffected and continue to define the distinct character. There will also be zero changes to the sub-sea characteristics that are not part of the perceived character and zero change to the sensory experience of strong sea smells, wind exposure and crashing noise of waves in rough seas. Fundamentally, these stimuli would continue to be experienced regardless of the presence of the Proposed Development.

13.8.3.12 The operation and maintenance of the Proposed Development may only result in changes to the visual aspects of its perceived seascape character, as apparent to people in views from parts of the SCA with visibility of the WTGs. The ZTV (Volume 2 Figure 13.15) shows that there will be limited or no visibility of the Proposed Development from the northern part of Skokholm, Broad Sound on the leeward side of Skokholm and occasional indented parts of the mainland coast, due to the intervening landform screening. There will be zero change to perceived characteristics of these parts of the SCA which are outside the ZTV. Parts of Broad Sound also have restricted visibility (of 1-2 or 3-4 blade tips) of the Proposed Development due to the intervening screening provided by Skokholm Island, which contains views out to sea from part of the sound.

13.8.3.13 The main geographic area of the SCA that is within the ZTV, from which changes may occur, will be from the southern and western side of Skokholm (Viewpoint 11), the majority of Broad Sound between Skokholm and St Ann's Head, and parts of the Dale peninsula between Hooper's Point (Viewpoint 12) and St Ann's Head (Viewpoint 5). From these geographic areas of the SCA with visibility, the operation and maintenance of the Proposed Development may result in changes to specific aesthetic/perceptual aspects of its seascape character, including its perceived remoteness, tranquillity and wildness.

13.8.3.14 The 'wide and panoramic views' out to sea from the SCA and the 'views to focal points and islands' including 'the mainland and Skomer to the north', will be partially changed through the introduction of WTGs on the sea skyline outside the SCA, however the Proposed Development will occupy a narrow portion of the HFoV, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected.

13.8.3.15 There will be a partial loss of open seascape occupied by the WTGs and a change in the seascape composition, through the addition of elements into the simple sea/sky composition and forming a further focal point, however the WTGs will be located 29.7 km from the SCA (at its closest point), and 35.9 km from the mainland (Hooper's Point) and therefore occupy a small portion of the views and relatively small-scale within the large scale, open, expansive and simple seascape, which moderates the magnitude of change. The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from the mainland coast, Skomer, Skokholm and Grassholm Islands, by expansive areas of intervening seascape and offshore waters. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the wide and panoramic views to the sea will be retained and existing focal points such as the island and headlands are not undermined.

13.8.3.16 The Proposed Development may be perceived as contrasting with the 'isolated, wild and highly exposed' character of the SCA through the introduction of man-made elements into the environment, however it may also be perceived as relating legibly to the coastal exposure and inclement conditions that define this wildness associated with the coast. The wildness and exposure experienced along the coast is often most readily experienced where the seas are swelled by westerly winds, where the strength of the sea, its dynamism and coastal exposure are readily evident. The Proposed Development readily relates to and conveys in its aesthetic and kinetic form, these wildness attributes of the coast. Its distant location in the wider seascape context outside this SCA results in less contrasts and influence on the sense of isolation and relative wildness in this context. Although it may compete with the sense of openness and exposure, adding a perceived limit to part of the offshore view, the fundamental sense of isolation, exposure, and relative wildness would not be lost.

13.8.3.17 The Proposed Development has potential to influence the 'high degree of naturalness, remoteness and tranquillity' along the coast and the islands, including the 'remote island of Skokholm'. The inland areas of the Dale Peninsula are subject to greater human influences, in the form of farmland, settlement, lighthouses and National Trust facilities. The sense of remoteness within the SCA occurs primarily from Skokholm and Gatesholm Island and the western seaward edges of the Dale Peninsula. Skokholm Island is largely inaccessible other than to the wardens and occasional visitors and has a prevailing feeling of remoteness, given that it is cut off from the mainland. The Dale Peninsula is accessible at Westdale Bay, along the Pembrokeshire Coast Path, and at Kete National Trust land. The addition of fixed man-made structures in the seascape setting of the SCA may potentially influence the perceived remoteness by reducing the sense of having a relative lack of human influence, however the degree of change is moderated by its distant location well outside the immediate seascape context of the SCA, and by the presence of a number of other man-made elements that are visible from the SCA, and already influence is perceived remoteness, including commercial shipping, ferries, Valero oil refinery, Pembroke Power Station and onshore WTGs on the mainland coast.

13.8.3.18 The Proposed Development will have no effect on the main tranquillity indicators relating to the perception of natural landscape and may only influence the perception of 'the sea' and the perceived tranquillity it provides in the experience of Skokholm and Grassholm Islands and the Dale peninsula. The seas in this area are highly exposed to strong ocean swells, disturbed water and tidal races, which would not be considered tranquil in the majority of conditions. Simply seeing the WTGs on the sea horizon outside the SCA would not be sufficient to negate opportunities to experience tranquillity. All other visual aspects of tranquillity of the natural environment which contribute to the experiences of tranquillity within the SCA would continue to prevail and moderate the influence of the WTGs, which would often be viewed in the context of exposed and wild, rather than tranquil, seas.

13.8.3.19 On balance, and considering all these factors, the magnitude of change to the perceived character of SCA 26 Skokholm and Gateholm coastal waters, resulting from the Proposed Development is assessed as medium-low; and the effect is assessed as not significant **(moderate)**, indirect, long-term and reversible. The Proposed Development will result in no significant residual effects to the perceived seascape character of SCA 26. The fundamental sense of place and distinctiveness of Skokholm Island, Grassholm Island and the Dale Peninsula, including its remoteness, tranquillity, and wildness, will prevail regardless of the potential addition of the Proposed Development.

13.8.4 SCA 31 Outer Milford Haven

Baseline and sensitivity to change

13.8.4.1 SCA 31 forms the outer part of Milford Haven, which is a large sheltered drowned ria, where the mouth of the sound has an exposed open sea aspect (Volume 2, Figure 13.5b). The sensitivity of SCA 31 is considered to be medium-high, reflecting that the SCA has high value, and its perceived character has medium susceptibility to changes that will occur as a result of the Proposed Development, for the reasons set out below.

13.8.4.2 **Value**: The SCA forms part of the coastal landscape of the PCNP and its associative seascape setting, as well as the Marloes and Dale and South Pembrokeshire Heritage Coast. The waters form part of the Pembrokeshire Marine SAC. The coast to the west forms part of the Dale and South Marloes Coast SSSI, the northern coast, estuaries and wetlands form part of the Milford Haven Waterway SSSI and the south-east is part of the Angle Peninsula Coast SSSI. The area is a particularly rich area in terms of historic seascape character and there are numerous Scheduled Ancient Monuments (SAMs). These landscape designations indicate a relatively high value attached to the SCA by society, on account of its landscape qualities.

13.8.4.3 Milford Haven is a classic example of a ria (coastal inlet formed by drowning of a river valley). Red cliffs bound the wide mouth to the Haven to both west (St Ann's Head) and east (East Blockhouse Point; Rat Island and Sheep Island). Fallen rocks fringe the coasts, with the western headland and northern side of the Haven indented by shallow bays. West Angle Bay is deeply incised. The rough and rugged textures of red sandstone cliff edges, contrast with the open rolling arable and pastoral plateau and gentle rolling hills. Rolling inland landcover comprises open arable and pasture with low hedgebanks, with deciduous woodland in incised valleys. There is a strong sense of place at Dale village, and the military history and strategic importance of the Haven and forts is tangible, which contributes to a strong sense of place. It is a busy natural harbour mouth with large vessels including tankers and ferries using the waters.

13.8.4.4 There is a strong contrast between this partially rural, natural and tranquil area with the inner harbours dominated by large scale energy and port facilities, settlement and associated lighting, which limit the perceived wildness and remoteness. There are modern, traditional and medieval settlements, and historical military features and associations including forts, indicating its strategic value. The area is popular for recreation and sailing, especially around Dale. The Pembrokeshire Coast Path runs around the entire sea edge. The area contributes significantly towards leisure and recreational services in the form of marine recreation and beaches, to natural heritage in the form of the rugged cliffs and bays, creeks and marshes. The cultural associations are very strong with the old villages and field patterns and association with military history and naval shipping, and the area continues to be an important focus of energy-related industry and commercial shipping activity.

13.8.4.5 The SCA has a range of values recorded across the evaluated LANDMAP landscape aspect areas, varying between the Angle Peninsula, the Dale Peninsula and the Herbrandston Fringe. The Angle and Dale Peninsulas have both moderate and outstanding visual and sensory, and outstanding historic and cultural aspects, whereas the Herbrandston area on the fringes of the refineries of inner Milford Haven has low visual and sensory values.

13.8.4.6 **Susceptibility**: The seascape is generally of large-scale, however there are contrasts between the larger scale more open, exposed seascape at the mouth of Milford Haven compared to smaller scale, more contained areas further into the haven. There are also large-scale structures at the LNG terminal, refinery and associated infrastructure at Pembroke Power Station to the east of the SCA which influence its setting. There are contrasts in scale and exposure between the open and exposed sea corridor at the mouth of the Haven with more contained and sheltered bays, with their channelled views. West Angle and Dale bays are sheltered and have limited exposure to the potential changes arising from the Proposed Development, whereas the mouth of the Haven is more exposed to the open seas.

13.8.4.7 The sea area is busy with ferry and commercial shipping, with the refinery and other energy and port infrastructure. The SCA is influenced by a number of detractors, including the nearby oil refineries and its jetties which extend into the waters, and the large-scale industrial influence of Valero oil refinery, Pembroke Power Station and pylons to the south of Milford Haven. Views vary from open framed views out to sea past the headlands of St Ann's and Rat Island, with lighthouse and masts breaking the skyline, to areas such as Dale where contained views are set against distant view of refineries. Sometimes ships, including ferries, provide a seaborne focus.

13.8.4.8 Many vantage points do not afford a direct view out to the open sea, with views largely being contained within the outer Milford Haven, by the landforms of the Dale and Angle Peninsula, which reduces the association of the seascape with the open seas and the potential changes. The main susceptibility is the potential introduction of elements into the focus of framed views that are channelled out to sea between St Ann's Head and the Angle Peninsula, and the relationship to focal points such as Stack Rock and Thorn Island.

13.8.4.9 A number of factors reduce the susceptibility of the SCA to change, including commercial shipping and adjacent refinery and other industrial and urban land uses, the contained ria which is enclosed by surrounding hills and plateau and limits the associations with the open seas, and the levels of lighting associated with settlement, shipping and industry. The SCA is only susceptible to changes in perceived character/perceptual qualities because of the potential introduction of the Proposed Development in the setting of the SCA in sea views experienced from the more open and exposed areas of the SCA at the outer edges of Milford Haven, including from St Ann's Head and the Angle Peninsula. The seascape has a strong inherent character, and has been changed by the introduction of large-scale, modern industrial and military uses, which reduces its susceptibility to changes arising from the Proposed Development outside the SCA at distance in the offshore waters.

Magnitude of change and significance of effect

13.8.4.10 The closest part of the array area is located approximately 34.6 km outside SCA 31, therefore the Proposed Development will occur in its wider seascape setting and result in no direct changes to the physical characteristics of the SCA. There will also be zero change to many of the main characteristics of the SCA, including the fundamental character of the sheltered drowned ria, its red sandstone cliffs, sheltered bays, busy seas and its land use and landscape pattern, all of which will remain unaffected and continue to define the distinct character. There will also be zero changes to the sub-sea characteristics that are not part of the perceived character and zero change to the sensory experience of the sea, wind and noise of the seas. Fundamentally, these stimuli would continue to be experienced regardless of the presence of the Proposed Development.

13.8.4.11 The operation and maintenance of the Proposed Development may only result in changes to the visual aspects of its perceived seascape character, as apparent to people in views from parts of the SCA with visibility of the WTGs. The ZTV (Volume 2 Figure 13.15) shows that there will be limited or no visibility of the Proposed Development from the majority of the terrestrial areas of the SCA, including the eastern side of the Dale Peninsula, the northern side of the haven between Dale and Hebrandston, and the majority of West Angle Bay, due to the intervening screening provided by the landforms of the Dale and Angle Peninsulas, which enclose the haven and restrict views out to the open seas. There will be zero change to perceived characteristics of these parts of the SCA which are outside the ZTV. Much of the SCAs seas also have restricted visibility (of 1-2 or 3-4 blade tips) due to the enclosure provided by the headlands of the haven.

13.8.4.12 The main geographic area of the SCA that is within the ZTV, from which changes may occur, will be from St Ann's Head (Viewpoint 5), South Hook Point (Viewpoint 6) and from the end of the Angle peninsula, on the north side of West Angle Bay (Viewpoint 7) and to its south between Rat Island and Sheep Island (Viewpoint 13). From these geographic areas of the SCA with visibility, the operation and maintenance of the Proposed Development may result in changes to specific aesthetic/perceptual aspects of its seascape character.

13.8.4.13 There are contrast in scale and exposure between the open and exposed sea corridor at the mouth of the Haven with more contained and sheltered bays within the haven. The 'wide views' out to sea from the mouth of the haven and the 'channelled and framed views out to sea' past the headlands of St Ann's Head and Rat Island, will be partially changed through the introduction of WTGs on the sea skyline outside the SCA. In the wide views out to sea from the mouth of the haven, such as from St Ann's head (Viewpoint 5) and Sheep Island (Viewpoint 13), the Proposed Development will occupy a narrow portion of the HFoV, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected. There will be a partial loss of open seascape occupied by the WTGs and a change in the seascape composition, through the addition of elements into the simple sea/sky composition and forming a further focal point, however the WTGs will be located over 35 – 40 km from these areas of the SCA and therefore have a relatively small-scale and occupy a small portion of the views within the large scale, open, expansive and simple seascape, which moderates the magnitude of change. The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, oblique to the mouth of Milford Haven and clearly separated from the headlands, by expansive areas of intervening seascape and offshore waters.

13.8.4.14 In the channelled and framed views out to sea, such as from South Hook Fort (Viewpoint 6) and West Angle Bay (Viewpoint 7), the Proposed Development will influence the character in channelled views out to sea, framed by St Ann's Head and the Angle Peninsula, partially enclosing the space between the headlands in the seascape backdrop and competing with existing focal points that define its distinctiveness. The Proposed Development will, however, occur in the context of the oil refineries, jetties, power station and busy harbour with large vessels, tankers and ferries using the waters. Although the Proposed Development WTGs will increase the influence of man-made elements perceived from the SCA, development influences are already tangible in the experience of the SCA and contribute to the diversity of character evident around Milford Haven. The Proposed Development is rarely visible from the enclosed bays within the Haven and will not change the perception of shelter and safety experienced from within these bays, such as West Angle and Dale, which on some occasions are already set against distant views of oil refineries. The Proposed Development is likely to influence the contrast between the more rural outer areas of Milford Haven with the Inner harbours, dominated by large scale energy and port facilities and urban development.

13.8.4.15 On balance, and considering all these factors, the magnitude of change to the perceived character of SCA 31 Outer Milford Haven, resulting from the Proposed Development is assessed as low; and the effect is assessed as not significant **(moderate/minor)**, indirect, long-term and reversible. The Proposed Development will result in no significant residual effects to the perceived seascape character of SCA 31. The fundamental sense of place and distinctiveness of Milford Haven will prevail regardless of the potential addition of the Proposed Development.

13.8.5 SCA 34 Freshwater West

Baseline and sensitivity to change

13.8.5.1 SCA 34 consists of the large, exposed south and west facing coast and sandy beach at Freshwater West, backed by dunes and enclosed by the limestone cliffs at Linney Head and low jagged sandstone cliffs of the Angle peninsula (Volume 2, Figure 13.5b). The sensitivity of SCA 34 is considered to be high, reflecting that the SCA has high value, and its perceived character has medium-high susceptibility to changes that will occur as a result of the Proposed Development, for the reasons set out below.

13.8.5.2 **Value**: The SCA forms part of the coastal landscape of the PCNP and its associative seascape setting, as well as the South Pembrokeshire Heritage Coast. The waters form part of the Pembrokeshire Marine SAC. The coast forms part of the Angle Peninsula Coast SSSI. There are several scheduled monuments and a tract of National Trust land on part of Broomhill Burrows. These landscape designations indicate a relatively high value attached to the SCA by society, on account of its landscape qualities.

13.8.5.3 The headland from Sheep Island around west-facing Freshwater West Bay towards Linney Head is predominantly in red sandstones that form irregular, steep cliffs with fallen rocks at the back of beaches. Extensive dune fields lie behind the bays (Broomhill Burrows, Gupton Burrows), incised by a river valley. Intertidal areas are dominated by sand in the core of the bay. Distinctive gently undulating open area dominated by sand dunes which are rare in the PCNP, backed by marshy fields at the western end of Castlemartin Corse, with associated coastal areas of fixed sand dunes, low sea cliffs and bays. This is an exposed south and west facing seascape feeling large scale with the wide, low sweep of the bay and extensive beaches, large waves and strong winds and currents. This gives a feeling of wildness. The relatively smooth texture of the beaches contrast with the jagged and angular form of the cliffs and the wave cut platform. When the wind creates a strong surf there is a powerful auditory and sensory effect. There is a sense of remoteness and tranquillity in the landscape is marred by noises from the firing ranges, with its accompanying sense of threat, and road traffic and visitor access.

13.8.5.4 This area includes the medieval field system which extends over the Angle peninsula and there are several forts and enclosures which are scheduled monuments. Motor and sail cruising takes place although navigation is dangerous close inshore due to firing range at Castlemartin MOD establishment. Surfing, windsurfing and kayaking are popular off Freshwater West beach, and the wide beach is popular with general beach activities. Cliff top walking around the rugged coastline is popular along the Coast Path although restrictions exist around Castlemartin MOD range. Freshwater West has moderate, high and outstanding visual and sensory LANDMAP values varying different aspect areas and high to outstanding historic and cultural heritage. The SCA contributes significantly towards leisure and recreational services in the form of beach activities and walking, to natural heritage, sense of spaciousness and connection with nature at the wide beaches, sea edge and surf, and remoteness in dunes.

13.8.5.5 **Susceptibility**: The SCA is large-scale with a wide, low sweeping bay and extensive beaches. Views are wide and partially framed by the north and east edges of the bay, but with long views to St Ann's Head and beyond to Skokhlom. There are strong contrasts in context between the sand dunes, the exposed beach of Freshwater West and the rugged cliff-top coastlines to the north of the SCA. The beach and cliffs afford direct views out to the sea skyline which are liable to be influenced by development in the sea, however it is a wide, large-scale and simple seascape, in which complexity is avoided and there is no specific directional or framed vista. The headland of the Angle Peninsula provides some containment of the wide, open bay to the north. Views are large-scale and simply composed with layers of sand, inter-tidal rocks, sea and sky.

13.8.5.6 The dunes have a unique quality of containment at a micro scale with sheltering dips and pockets, including some sections of the road, set against the open views and exposure on higher ground and dune tops. There is a highly exposed feel to this landscape with a constant awareness of the wind and the sea, sharpened by the sound of crashing of waves along the beach. The experience is dominated by exposure to sea smells and wind exposure in most places, which would be conveyed by the form and function of the Proposed Development. There is a sense of remoteness within the sand dunes due to their containment of the space within, and a sense of remoteness/wildness evoked by the wind-swept landscape, however this is much reduced during summer with high visitor numbers at the beach, car/van parking and facilities such as food trucks. Castlemartin firing ranges and the tops of high stacks at the Valero oil refinery intrude above the horizon to the north-east from certain vantage points.

13.8.5.7 A number of factors reduce the susceptibility of the SCA to change, including the MOD firing ranges nearby, the presence of established recreational use and large boat anchorages, and the large scale and simplicity of the seascape. The SCA is only susceptible to changes in perceived character/perceptual qualities because of the potential introduction of the Proposed Development in the setting of the SCA in panoramic sea views, experienced from the open and exposed areas of the SCA. Although the relatively open, exposed and remote character is susceptible to changes arising from the introduction of modern artefacts, Freshwater West has a strong inherent character, such that its fundamental physical, geological, cultural and natural heritage aspects are not liable to changes arising from the Proposed Development outside the SCA at distance in the offshore waters.

Magnitude of change and significance of effect

13.8.5.8 The closest part of the array area is located approximately 37.0 km outside SCA 34, therefore the Proposed Development will occur in its wider seascape setting and result in no direct changes to the physical characteristics of the SCA. There will also be zero change to many of the main characteristics of the SCA, including the fundamental character of the low jagged cliffs of the Angle Peninusla, the physical character of the beach and dunes at Freshwater West, and the land use and landscape pattern, all of which will remain unaffected and continue to define the distinct character. There will also be zero changes to the sub-sea characteristics that are not part of the perceived character and zero change to the sensory experience of wind exposure, large waves, and crashing noise of waves during big swells. Fundamentally, these stimuli would continue to be experienced regardless of the presence of the Proposed Development.

13.8.5.9 The operation and maintenance of the Proposed Development may only result in changes to the visual aspects of the perceived seascape character, as apparent to people in views from parts of the SCA with visibility of the WTGs. The ZTV (Volume 2 Figure 13.15) shows that there will be visibility of the Proposed Development from the majority of the SCA, with restricted visibility only occurring at a local level from within the dune systems at Broomhill and Gupton Burrows, behind Freshwater West beach, and from occasional areas of the enclosed cliff top landforms. There will be zero change to perceived characteristics of these parts of the SCA which are outside the ZTV.

13.8.5.10 The main geographic area of the SCA that is within the ZTV, from which changes may occur, will be from the tops of the sandstone cliffs between Sheep Island and Gravel Bay (Viewpoint 13), from Freshwater West beach (Viewpoint 10), and the majority of the nearshore waters of the SCA off this coastline. From these geographic areas of the SCA with visibility, the operation and maintenance of the Proposed Development may result in changes to specific aesthetic/perceptual aspects of its seascape character, including its perceived exposure, sense of spaciousness and wildness at the sea edge. The Proposed Development will not change the perceived remoteness within the dunes that occurs at a micro-level, as views out to the sea are restricted and contained with the dunes, providing the sense of remoteness from the surrounding landscape.

13.8.5.11 The 'wide and partially framed views' to the north and east edges of the bay, will be partially changed through the introduction of WTGs on the sea skyline outside the SCA, however the Proposed Development will occupy a narrow portion of the HFoV, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected. There will be a partial loss of open seascape occupied by the WTGs and a change through the addition of elements into the simple sea/sky composition, however the WTGs will be located over 37.0 km from the SCA (at its closest point) and will therefore appear relatively small in scale and occupy a small HFoV within the large scale, open, expansive and simple seascape, which moderates the magnitude of change. The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from the mainland coast by expansive areas of intervening seascape and the long views to St Ann's Head and beyond to Skokholm will be retained.

13.8.5.12 Through the introduction of man-made elements into the distant seascape setting, the Proposed Development may be perceived as contrasting with the 'feeling of wildness' and 'exposure and sense of spaciousness' created at the sea edges and cliff tops of the SCA, by the extensive beaches, large waves, strong winds and jagged, angular cliffs. It may also be perceived, however, as relating legibly to the coastal exposure and inclement conditions that define this sense of wildness associated with the coast. The Proposed Development readily relates to and conveys in its aesthetic and kinetic form, the exposure of the seascape. Its distant location in the wider seascape context outside this SCA results in less contrasts and influence on the sense of spaciousness and relative wildness in this context. Although it may compete with the sense of openness and exposure, adding a perceived limit to part of the offshore view, the fundamental sense of spaciousness, exposure and feeling of wildness would not be lost. All other visual aspects of tranquillity of the natural environment relating to the beach, cliffs and waves which contribute to the experiences of tranquillity within the SCA would continue to prevail and moderate the influence of the WTGs. The sense of remoteness and tranquillity in the landscape is also marred by noises from the nearby firing ranges, and the busy road traffic and visitor access, particularly during summer.

13.8.5.13 On balance, and considering all these factors, the magnitude of change to the perceived character of SCA 34 Freshwater West, resulting from the Proposed Development is assessed as low; and the effect is assessed as not significant **(moderate/minor)**, indirect, long-term and reversible. The Proposed Development will result in no significant residual effects to the perceived seascape character of SCA 34. The fundamental sense of place and distinctiveness of Freshwater West will prevail regardless of the potential addition of the Proposed Development.

13.8.6 SCA 35 Castlemartin coastal waters

Baseline and sensitivity to change

13.8.6.1 SCA 35 consists of the rugged, exposed Castlemartin coast of vertical limestone cliffs with shallow coastal waters, where the land area and sea are used as a military practice firing range (Volume 2, Figure 13.5b). The sensitivity of SCA 35 is considered to be medium-high, reflecting that the SCA has high value, and its perceived character has medium susceptibility to changes that will occur as a result of the Proposed Development, for the reasons set out below.

13.8.6.2 **Value**: The SCA forms part of the coastal landscape of the PCNP and its associative seascape setting, as well as the South Pembrokeshire Heritage Coast. The waters form part of the Pembrokeshire Marine SAC. The coastal edge itself is covered by the Limestone Coast of South-West Wales SAC, the Castlemartin Coast SPA and Castlemartin Cliffs and Dunes SSSI. There are several scheduled monuments. These landscape designations indicate a relatively high value attached to the SCA by society, on account of its landscape qualities.

13.8.6.3 The SCA coast is formed by a broad expanse of rolling lowland with associated coastal cliffs. The rough texture of the cliffs contrasts with the undulating grassland and semi-natural vegetation of the plateau. Rocky headlands (40-50 m high) are formed in east-west striking Carboniferous Limestone, with steep to vertical cliffs and a south facing, moderately straight rugged coast in well-bedded limestones indented by small coves. There are some dramatic erosional features, such as caves, arches and sea stacks, notably at Elegug Stacks, which underline the outstanding geological landscape value. The seas are exposed to high wind and wave stress and the tidal stream can be strong, with rough waters off Crow Rock.

13.8.6.4 Remote, dark, wild coast and tranquil when military range not functioning. There is an exhilaration and sense of danger at cliff edge especially when sea is crashing against rocks and stacks and a feeling of wildness. Remote, wild, exposed coastline. The periodic noise of heavy gunfire is discordant and intrusive.

13.8.6.5 The seascape indicates historic links between early Christianity and the sea, but which is also a landscape of military defence, from the promontory forts of the Iron Age to modern times. Later defensive purposes are evident in the Castlemartin military range. Access to the Pembrokeshire Coast Path and navigation is limited by military activity. Sailing and leisure boating from Milford Haven may pass by when military operations allow. Kayaking is found around all of this coast.

13.8.6.6 Castlemartin has moderate and outstanding visual and sensory LANDMAP values varying between different aspect areas and high to outstanding historic and cultural heritage. The area contributes towards leisure and recreational services in the form of the coast path, to natural heritage in the form of the dramatic cliffs and nature conservation interest in the coast, sea and firing ranges, to the sense of remoteness and exposed sea views to south.

13.8.6.7 **Susceptibility**: This is a large scale, simple and unified landscape, with an elevated landform that affords extensive views of the open sea and along the coast, mainly experienced from the Pembrokeshire Coast Path between Elugug Stacks to Govan Head, as the military use restricts access around Linney Head. The coast is in military use at the Castlemartin firing range, with rural uses to the east and no settlement. Sustained views of the sea occur from the Pembrokeshire Coast Path especially around St Govan's Head, the nearby chapel and from the Elegug Stacks, where there are panoramic views from St Govans Head and very wide sea views from other areas. The southerly orientation of this section of the coastline tends to focus views out to sea to the south, away from the Proposed Development. Long views south are available on a clear day to Lundy Island and the North Devon coast.

13.8.6.8 The coast is highly exposed to south and westerly winds, and the landscape of the hinterland is somewhat bleak and featureless. Due to the openness and lack of enclosure, the coastal character is liable to changes occurring out to sea, however beyond the dramatic coastal edge, it is a wide, large-scale and simple seascape, where complexity is avoided. The offshore site boundary is oblique to the accessible parts of the coastline and remote from the SCA, separated by the headland of Linney Head and open seas. The periodic noise of heavy gunfire is discordant and intrusive but when absent, it feels like a remote, wild and tranquil area of the PCNP. Oil tankers and other freight ships destined for the jetties, terminals and power station in Milford Haven may be visible passing offshore to the west.

13.8.6.9 A number of factors reduce the susceptibility of the SCA to change, particularly the presence of the MOD firing ranges with the SCA, the use of the seascape for military firing, lack of access to the coastline around Linney Head, and the large-scale, simplicity of the coastal waters and south facing orientation of the coast which reduces its association with the Proposed Development. The SCA is only susceptible to changes in perceived character/perceptual qualities because of the potential introduction of the Proposed Development in the setting of the SCA in panoramic sea views, experienced from the open and exposed areas of the SCA. Although the relatively open, exposed and remote character is susceptible to changes arising from the introduction of modern artefacts, Castlemartin has a strong inherent character, such that its fundamental physical, geological, cultural and natural heritage aspects are not liable to changes arising from the Proposed Development outside the SCA at distance in the offshore waters.

Magnitude of change and significance of effect

13.8.6.10 The closest part of the array area is located approximately 35.9 km outside SCA 35, therefore the Proposed Development will occur in its wider seascape setting and result in no direct changes to the physical characteristics of the SCA. There will also be zero change to many of the main characteristics of the SCA, including the fundamental character of the vertical limestone cliffs, arches and stacks, the physical character, land use and landscape pattern, all of which will remain unaffected and continue to define the distinct character. There will also be zero changes to the sub-sea characteristics that are not part of the perceived character and zero change to the sensory experience of the treacherous waters, exposure to south and westerly winds, crashing waves and sense of danger at the cliff edge. Fundamentally, these stimuli would continue to be experienced regardless of the presence of the Proposed Development.

13.8.6.11 The operation and maintenance of the Proposed Development may only result in changes to the visual aspects of the perceived seascape character, as apparent to people in views from parts of the SCA with visibility of the WTGs. The ZTV (Volume 2 Figure 13.15) shows that there will be visibility of the Proposed Development from the majority of the SCA, with restricted visibility only occurring at a local level from within the dune systems at Brownside Burrows and Linney Burrows, behind Frainslake Sands, and from occasional areas of the enclosed cliff top landforms. There will be zero change to perceived characteristics of these parts of the SCA which are outside the ZTV. Although areas of the SCA between Elegug Stacks, Linney Head and Frainslake Sands are within the ZTV, they are within the Castlemartin military firing range, out of bounds to the general public, and there will be no receptors (people) present to experience potential changes in the perceived character of that part of the SCA.

13.8.6.12 The main geographic area of the SCA that is within the ZTV, from which changes may occur, will be from the tops of the limestone cliffs between Elegug Stacks (Viewpoint 9) and St Govan's Head and the nearshore waters of the SCA off this coastline. From these geographic areas of the SCA with visibility, the operation and maintenance of the Proposed Development may result in changes to specific aesthetic/perceptual aspects of its seascape character, including its perceived exposure, feeling of wildness and remoteness.

13.8.6.13 The 'panoramic views' from Govan Head and 'very wide sea views' from other areas, between Govan Head and Elegug Stacks, along the Pembrokeshire Coast Path, will be partially changed through the introduction of WTGs on the sea skyline outside the SCA in the backdrop to the west, oblique to the main orientation of the south facing coast. Southerly views across the arches, stacks out to sea and long views to Lundy Island and Devon, on clear days, will not be affected as the Proposed Development is located outside this field of view, to the west. There will be a slight change through the addition of elements into the simple sea/sky composition, in westerly views along the cliffs, however the WTGs will be located over 42.5 km from Elegug Stacks and will therefore appear relatively small in scale and occupy a small HFoV within the large scale, open, expansive and simple seascape, which moderates the magnitude of change. The Proposed Development will also a narrow portion of the HFoV, in which the vast majority of open sea skyline and coastline will be retained and remain unaffected. The Proposed Development WTGs will be seen on and beyond the horizon, viewed as a 'horizon development' to a large open seascape, rather than being viewed 'within' its seascape, clearly separated from the mainland coast by expansive areas of intervening seascape and the panoramic views from Govan Head and St Govan's Chapel will be retained.

13.8.6.14 Through the introduction of man-made elements into the distant seascape setting, the Proposed Development may be perceived as contrasting with the 'feeling of wildness' and 'exposure' created at the sea edges and cliff tops of the SCA, by the vertical limestone cliffs, arches and stacks, treacherous waters and south-westerly winds. It may also be perceived, however, as relating legibly to the coastal exposure and inclement conditions that define this sense of wildness associated with the coast. The Proposed Development readily relates to and conveys in its aesthetic and kinetic form, the exposure of the seascape. Its distant location in the wider seascape context outside this SCA results in less contrast and influence on the sense of exposure and relative wildness in this context, such that the fundamental sense of exposure and feeling of wildness would not be lost. The sense of remoteness and tranquillity in the landscape is also marred by the periodic noise of heavy gunfire from the Castlemartin military firing range within the SCA, which is discordant and intrusive when active.

13.8.6.15 The addition of fixed man-made structures in the seascape setting of the SCA may potentially influence the perceived remoteness by reducing the sense of having a relative lack of human influence, however the degree of change is moderated by its distant location outside and oblique to the immediate seascape context of Castlemartin, and by the presence of other man-made elements and influences, particularly the military firing range. Much of the land area of SCA and its coastal exclusion zone, are used for the testing and firing of military weapons.

13.8.6.16 On balance, and considering all these factors, the magnitude of change to the perceived character of SCA 35 Castlemartin Coastal Waters, resulting from the Proposed Development is assessed as low; and the effect is assessed as not significant **(moderate/minor)**, indirect, long-term and reversible. The Proposed Development will result in no significant residual effects to the perceived seascape character of SCA 35. The fundamental sense of place and distinctiveness of Castlemartin will prevail regardless of the potential addition of the Proposed Development.

13.8.7 Pembrokeshire Coast National Park – Special Qualities

13.8.7.1 An assessment of the magnitude of change and residual effects arising from the operation and maintenance of the Proposed Development on the defined special qualities of the PCNP is set out in respect of each special quality that has potential to be affected, as identified in Table 13.18. This assessment of special qualities is informed by the preceding assessments of representative viewpoints and visual receptors (in Section 13.7.2 to 13.7.17) and SCAs within the PCNP (in Section 13.8.2 to 13.8.6). In these sections, the effects on special qualities evident from representative viewpoints are assessed, as well as the residual effects on the perceived qualities of each SCA within the PCNP. The following assessment of special qualities supplements those undertaken in the preceding viewpoint and seascape character assessments, directly addressing the defined special qualities in the citation for each special quality set out in the Background Paper: Special Qualities of PCNP (PCNPA, 2019).

13.8.7.2 The effects of the Proposed Development on the St David's, Marloes and Dale and South Pembrokeshire Heritage Coasts are considered as integral to the assessment of the PCNP set out this assessment of special qualities and for each SCA in Section 13.8.2 to 13.8.6.

13.8.7.3 The assessment of SCAs has highlighted that in general the value of the PCNP is high (recognised through its designation as a National Park) and the sensitivity to changes arising from the Proposed Development is generally high**,** but occasionally medium-high, on account of some variations in susceptibility of different SCAs within the PCNP to the specific nature of changes associated with the Proposed Development. These assessments of seascape sensitivity (described in Sections 13.8.2 to 13.8.6) are factored into the following assessments of each PCNP special quality.

<u>Special Quality 1 - Coastal Splendour</u>

13.8.7.4 Special Quality 1 'Coastal Splendour' is described in Table 13.18. Essentially, this special quality relates to the splendour of the PCNP coastline, its dramatic scenery, and rugged, unspoilt beauty, which provide a scenic quality that was recognised in its designation as a National Park.

13.8.7.5 The northern parts of the PCNP (Dinas Head / Fishguard Bay / Newport Bay) are located outside the SLVIA Study Area, where there will be zero change to the coastal splendour and its special qualities will not be affected by the Proposed Development.

13.8.7.6 The 'western stretches' and 'southern coast' of the PCNP are the relevant sections of coastline within the SLVIA Study Area. The western stretches of the PCNP consist of the area between St David's Peninsula, St Brides Bay and Marloes and Dale (SCA 15 to SCA 26). The southern coast consists of the South Pembrokeshire coast between the Angle Peninsula, Freshwater West, Castlemartin and St Govan's Head (SCA 31, SCA 34 and SCA 35).

13.8.7.7 Taking the western stretches of the PCNP first. The operation and maintenance of the Proposed Development will result in zero change and not significant effects on the 'constant presence of the sea' and the 'constant awareness of the wind and sea'. This presence of sea and wind will remain constant, regardless of the presence of the Proposed Development. Similarly, the Proposed Development will not affect the 'sound of crashing waves' along the coastline when south westerlies reach sufficient strength.

13.8.7.8 The Proposed Development will, however, result in some changes to the views of the sea (or the 'sight of the sea') and the constancy of these views of the sea and potentially the Proposed Development from this western coastline of the PCNP, is the key issue. The assessments of the relevant SCAs within the western stretches of the PCNP, between St David's Peninsula, St Brides Bay and Marloes and Dale (SCA 15 to SCA 26) (Section 13.8.1 to 13.8.6) and the assessment of the Pembrokeshire Coast Path (Section 13.7.16) indicate that the effect of the Proposed Development will not be constant. There will be limited or no visibility from a number of SCAs along the western coastline, including around St David's Head (SCA 15, SCA 16 and SCA17) and St Brides Bay (SCA 21 and SCA 23), which may afford constant view of the sea, but will not afford views of the Proposed Development, due to the orientation of the coastline and the presence of intervening landforms. The visibility of the Proposed Development will not be a continuous experience from the Pembrokeshire Coast Path, as there are many and long sections that afford little or no visibility of the Proposed Development, even though they may afford more constant views of the sea. More continuous sections with visibility will be limited to the south facing St David's coastline (SCA 20), at very long range (45 - 50 km), and the coastlines of Skomer and the Marloes and Dale Peninsulas (SCA 25 and SCA 26) at long range (32 – 35 km).

13.8.7.9 The viewpoint assessments undertaken in Section 13.7 from representative locations of these with parts of the western coastline of the PCNP views of the Proposed Development, indicate that the features that contribute to the 'coastal splendour', including the dramatic rocky coastline, distinctive focal points and islands, will not be significantly affected as a result of views of the Proposed Development, which will be clearly separated from the coast, headlands and islands by large areas of intervening seascape. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the panoramic and wide-open views to the sea are retained and the perceived 'coastal splendour' will not notably change and will continue to be definitive the visual amenity experienced.

13.8.7.10 Considering the South Pembrokeshire coast, the Proposed Development will not result in any direct changes to the geology of the 'sheer cliffs punctuated by sheltered coves, stacks, arches, swallow holes and blow holes, etched out of the cliff face' that underpins its special qualities. The Proposed Development will however result in some changes to the perceived character of the 'breathtaking landscape along this coast' that results in the special qualities of coastal splendour.

13.8.7.11 From the Angle Peninsula, the Proposed Development will influence the character in channelled views out to sea, framed between St Ann's Head and the Angle Peninsula, competing with existing focal points and influencing the contrast between the more rural outer areas of Milford Haven with the Inner harbours, dominated by large scale energy and port facilities and urban development. From Freshwater West, the wide and partially framed views to the north and east edges of the bay, will be partially changed through the addition of elements into the simple sea/sky composition, clearly separated from the mainland coast by expansive areas of intervening seascape and the long views to St Ann's Head and beyond to Skokholm will be retained. From Castlemartin, the very wide sea views between Govan Head and Elegug Stacks will be partially changed through the introduction of WTGs on the sea skyline outside the SCA in the backdrop to the west, oblique to the main orientation of the south facing coast. Southerly views across the cliffs, arches, stacks out to sea (the 'breathtaking landscape' and long views to Lundy Island and Devon, on clear days, will not be affected as the Proposed Development is located outside this field of view, to the west.

13.8.7.12 In respect of all areas of this South Pembrokeshire coast, the Proposed Development is located at long or very long distance from the 'breathtaking landscape along this coast', resulting in no direct effects to the coast, with only indirect changes to the perceived seascape setting of the coast, through the addition of horizon development on the sea skyline, being relatively small in scale and occupying a small HFoV within the large scale, open, expansive and simple seascape, which moderates the magnitude of change on the 'coastal splendour' experienced.

13.8.7.13 On balance, factoring in all of these considerations and the geographic areas affected, the effect of the Proposed Development on the 'coastal splendour' special quality of the PCNP displayed through the 'constant sight of the sea' and 'breathtaking landscape' is assessed as low magnitude and not significant **(moderate/minor)**. The 'coastal splendour' will fundamentally remain present and continue to be experienced in the context of the Proposed Development. The Proposed Development would therefore not adversely affect the 'Coastal Splendour' of the PCNP.

Special Quality 3 - Diversity of Landscape

13.8.7.14 Special Quality 3 'Diversity of Landscape' is described in Table 13.18. Essentially, this special quality relates to the diversity between the 'coastal nature of much of the National Park' and the 'rural National Park', in which the 'varied landforms' are 'overlaid by millennia of activity by man' and 'impart a rich texture to the open landscape' and consist of 'farmland landscape and traditional built forms', which 'contribute strongly to the sense of place'.

13.8.7.15 The Proposed Development will not result in any direct changes to the landforms or land use that underpins its special qualities and creates its diversity of landscapes. There will also be no direct changes to the diversity of landscapes of the PCNP, expressed through its hedgebanks, field pattern, small woodlands and built forms, which will all fundamentally remain definitive to its character and diversity, regardless of the presence of the Proposed Development. The physical features of the PCNP's diverse landscapes will not be changed, however there may be changes to specific aesthetic/perceptual aspects of the 'coastal nature' of the PCNP evident in views offshore. These are visual qualities, relating to the diversity in views (visual diversity), and are not related to 'landscape fabric' of the PCNP. The special qualities which relate to the identified residual effects are those where the indicator relates to, or is supported by, an aspect concerning the visual contribution made by seascape to the diversity of the PCNP.

13.8.7.16 Residual effects on such visual diversity tend to be concentrated only in areas where the diversity of landscape is appreciated, from viewpoints where both the 'rural National Park' and the 'coastal National Park' can be seen, in juxtaposition. This often excludes seascapes at the immediate coastal edge, which afford direct views from the coastline to the open sea, in which the rural National Park further inland from the coast, is often not apparent. The viewpoint assessment in Section 13.7 has highlighted views such as Marloes Beacon (Viewpoint 3), B4320 near Wogaston (Viewpoint 8), Castlemartin Trail (Viewpoint 14) and Carn Llidi (Viewpoint 15), as more elevated slightly inland views where the diversity of landscape of the PCNP is particularly evident in views over both the surrounding rural farmland, the coast and wider seascape.

13.8.7.17 The pattern and diversity of the PCNP landscape experienced in such views would not change, however the Proposed Development will add an additional element in the wider seascape setting of the coastal PCNP. Although the introduction of modern, man-made artefacts could be construed as being contrary to the rural farmland, traditional buildings and pattern of the onshore landscape, it could also be perceived as adding to the diversity of the setting, forming a contemporary response to modern energy needs within the wider activities of man that have influence the landscape over time. The Proposed Development form an extension of an existing WTG influence, since there are a number of onshore WTGs visible from the park, along with other energy generation and transmission infrastructure around Milford Haven, that are already present in the landscape, rather than an entirely new influence.

13.8.7.18 On balance, factoring in these considerations and the geographic areas affected, the effect of the Proposed Development on the 'diversity of landscape' of the PCNP is assessed as low magnitude and not significant **(moderate/minor)**. The 'diversity landscape' will fundamentally remain present and continue to be experienced in the context of the Proposed Development. The Proposed Development would therefore not adversely affect the 'diversity of landscape' of the PCNP but instead is likely to further the diversity of influences and elements, in the setting of the PCNP.

Special Quality 8 - Islands

13.8.7.19 Special Quality 8 'Islands' is described in Table 13.18. Essentially, this special quality relates to the 'spectacle of the islands' off the PCNP coast (Skomer, Skokholm, Gatesholm and Ramsey Islands in the SLVIA Study Area), arising due to their dramatic volcanic geology, the success of the islands breeding bird colonies, their historical and archaeological significance, and the resulting 'sense of place, and feeling of remoteness', with 'outstanding visual and landscape scenery'.

13.8.7.20 The Proposed Development will not result in any direct changes to dramatic sea cliffs, with associated sea birds, rocky shores, disturbed water and land users of the inland plateau that underpins the special qualities of the islands. There will also no direct changes to the physical landscapes of the islands, which will fundamentally remain definitive to its character and spectacle, regardless of the presence of the Proposed Development. The physical features of the islands will not be changed, however there may be changes to specific aesthetic/perceptual aspects of the seascape setting of the islands and their scenery, evident in both views of the islands from the mainland coast, and views from the islands to the open seas and offshore waters. These are visual qualities, relating to the visual scenery, and the resulting perceptions of sense of place.

13.8.7.21 The viewpoint assessment in Section 13.7 has identified and assessed in detail, several viewpoints that are representative of parts of the PCNP coast that afford views of the spectacle of the islands and their scenery looking out to the islands from the mainland coast. These include views from the St David's Peninsula (Viewpoint 15, Carn Llidi), the Marloes Peninsula (Viewpoint 3, Marloes Beacon and Viewpoint 12, Hooper's Point), Dale Peninsula (Viewpoint 5, St Ann's Head), the Angle Peninsula (Viewpoint 13, Sheep Island), and the South Pembrokeshire Castlemartin coastline (Viewpoint 9, Stack Rocks). The islands form a particular focus of interest and 'spectacle' in these offshore views.

13.8.7.22 There will be some changes to the composition of the seascape arising in these views from the mainland to the islands, as a result of the Proposed Development. In views from limited parts of the Marloes Peninsula, such as Viewpoint 3 (Marloes Beacon) the northern most parts of the array area will be viewed in the backdrop behind Skokholm Island, adding a competing element of focus in the view to the island and through the addition of man-made elements in its seascape context, potentially influencing the perceived remoteness of Skokholm, despite having a form that relates rationally to the exposure of the island. This particular 'backdropping' effect is only partial, and is not typical of the other views offshore to the islands from the other geographic areas, in which the Proposed Development will not be seen in the backdrop of the islands as array area is clearly separated from the islands by areas of intervening seascape and offshore waters (such as in Viewpoint 5, 12 and 13).

13.8.7.23 The viewpoint assessment in Section 13.7 has also identified and assessed in detail, views from the islands of Skomer (Viewpoint 4) and Skokholm (Viewpoint 11) to the open seas and offshore waters. The features that contribute to the perceived 'spectacle of the islands' in views from Skomer and Skokholm, including the high cliffs with associated seabirds, dramatic rocks, islets, rough seas and exposure will not be changed as a result of views of the Proposed Development. Although the addition of man-made elements in its wider seascape context may potentially influencing the perceived remoteness of the islands, the WTGs have a form that relates rationally to the exposure of the islands and due to the long-distance, small scale and narrow in lateral extent the sense of place and feeling of remoteness of the islands will continue to endure in the presence of the distant WTGs.

13.8.7.24 On balance, factoring in these considerations and the geographic areas affected, the effect of the Proposed Development on the 'spectacle of the islands' of the PCNP is assessed as low magnitude and not significant **(moderate/minor)**. The spectacle of islands, their sense of place and feeling of remoteness will fundamentally remain present and continue to be experienced in the context of the Proposed Development. The Proposed Development would therefore not adversely affect the outstanding visual and landscape scenery of the islands of the PCNP. The panoramic views of the seascape from the coast and islands, its rugged, unspoilt qualities, islands and steep, jagged rock formations will remain evocative, with a strong sense of place and discernible time depth.

Special Quality 10 - Space to Breathe

13.8.7.25 Special Quality 10 'Space to Breathe' is described in Table 13.18. Essentially, this special quality relates to the opportunities to access the 'clean environment', with 'relatively undeveloped areas', to experience 'a sense of exhilaration and liberty, or moments for quiet reflection or enjoyment of the stunning views'. These opportunities are noted as being possible, even though the nearest settlements are relatively close.

13.8.7.26 The Proposed Development will result in zero change to the clean environment, the sense of exhilaration and liberty, or moments for quiet reflection available within the PCNP that are identified as forming the basis of this special quality. It will also result in zero changes to opportunities to access the PCNP from nearby settlements. The operation and maintenance of the Proposed Development may only result in changes to the perceived character of 'relatively undeveloped areas', as a result of changes to the 'enjoyment of stunning views' experienced from certain seascapes of the PCNP, that are both relatively undeveloped and within the Proposed Development's ZTV.

13.8.7.27 The effects of the Proposed Development on views from the PCNP has been assessed in detail in Section 13.7, which has found that the Proposed Development will result in changes of no greater than low magnitude on views from the PCNP. The Proposed Development WTGs are sufficiently distant, small scale and narrow in lateral extent, that the wide, open views of the sea are retained and remain largely undeveloped, such that people's enjoyment of the stunning views will continue regardless of the presence of the Proposed Development.

13.8.7.28 Through the introduction of man-made elements into the distant seascape setting, the Proposed Development may be perceived as contrasting with the 'sense of spaciousness' created at the sea edges and cliff tops of the PCNP, and by the extensive beaches, large waves, strong winds and jagged, angular cliffs. The distant location in the wider seascape context, as 'horizon development' outside the immediate seascape setting of the PCNP, results in less contrasts and influence on the sense of spaciousness. Although it may compete with the sense of space in views, adding a perceived limit to part of the offshore view, the fundamental sense of spaciousness would not be lost.

13.8.7.29 On balance, factoring in these considerations, the effect of the Proposed Development on the 'space to breathe' of the PCNP, particularly its 'relatively undeveloped areas' and 'enjoyment of stunning views', is assessed as low magnitude and not significant **(moderate/minor)**. The 'space to breathe' will fundamentally remain present and continue to be experienced in the context of the Proposed Development. The Proposed Development would therefore not adversely affect the 'space to breathe' qualities of the PCNP.

Special Quality 11 - Remoteness, Tranquillity and Wildness

13.8.7.30 Special Quality 11 'Remoteness, Tranquillity and Wildness' is described in Table 13.18. The defined special quality (PCNPA, 2019) refers specifically to the 'sense of remoteness and tranquillity can be found at the exposed and relatively isolated stretches of Freshwater West, evoked by the wind swept undulating sand dunes' (SCA 34), however it is evident from the assessment of SCAs in Section 13.8.2 - 13.8.6 that this remoteness and tranquillity is also present from other stretches of the PCNP coastline, including the Skomer and Marloes Peninsula (SCA 25), Skokholm and Gateholm Coastal Waters (SCA 26) and Castlemartin (SCA 35).

13.8.7.31 The assessments of effects on the perceived remoteness, tranquillity, and wildness of these SCAs has found that the Proposed Development may be perceived as contrasting with the perceived wildness of parts of these seascapes of the PCNP, through the introduction of man-made elements into the environment, however it may also be perceived as relating legibly to the coastal exposure and inclement conditions that define this wildness associated with the coast. The wildness experienced along the coast is often most readily experienced where the seas are whipped by westerly winds that challenge the land, where the bleakness of the sea, its dynamism and coastal exposure are readily evident. The Proposed Development readily relates to and conveys in its aesthetic and kinetic form, these wildness attributes of the coast. Its distant location in the wider seascape context outside this SCA also results in less contrasts and influence on relative wildness attributes and the fundamental sense of relative wildness would not be lost in the presence of the Proposed Development.

13.8.7.32 The Proposed Development also has potential to influence the perceived remoteness along the coast and the islands, including its 'remote and unspoilt' character. Inland areas of the PCNP away from the immediate coastal are subject to greater human influences, in the form of farmland, settlement and visitor facilities. The sense of remoteness occurs primarily from the islands and parts of the Marloes, Freshwater West and Castlemartin coastlines. The islands have pervading feeling of remoteness, given that they are largely cut off from the mainland. Parts of the Marloes, Freshwater West and Castlemartin coastlines are only accessible via the Pembrokeshire Coast Path. The addition of fixed man-made structures in the wider seascape setting of these areas of the PCNP may potentially influence the perceived remoteness by reducing the sense of having a relative lack of human influence, however the degree of change is moderated by its distant location well outside the immediate seascape context, and by the presence of a number of other man-made elements that are visible from the PCNP coastline, and already influence is perceived remoteness, including commercial shipping, ferries, Pembroke Power Station, oil refineries and onshore WTGs on the mainland coast.

13.8.7.33 The Proposed Development may also affect the visual aspects of tranquillity, relating to what is seen by people and whether its visible elements detract from the perception of such tranquillity (rather than on the aural aspects of tranquillity, which will not be changed). Many of the visual aspects of tranquillity relate to the perception of natural landscapes, such as trees, woodland, streams, rivers, lakes and geological features. The Proposed Development will have no effect on these tranquillity indicators and may only influence the perception of 'the sea' and the perceived tranquillity it provides in the experience of the PCNP coastline. The seas in this area are highly disturbed and exposed with tidal rips and rocks and other hazards, which would not be considered tranquil in the majority of conditions. Simply seeing the WTGs on the sea horizon outside the PCNP would not be sufficient to negate opportunities to experience tranquillity. All other visual aspects of tranquillity of the natural environment which contribute to the experiences of tranquillity within the PCNP would continue to prevail and moderate the influence of the WTGs, which would often be viewed in the context of exposed and wild, rather than tranquil, seas.

13.8.7.34 On balance, factoring in these considerations and the geographic areas affected, the effect of the Proposed Development on the perceived remoteness, tranquillity and wildness of the PCNP is assessed as low magnitude and not significant **(moderate/minor)**. The remoteness, tranquillity and wildness will fundamentally remain present and continue to be experienced in the context of the Proposed Development. The Proposed Development would therefore not adversely affect the remoteness, tranquillity and wildness of the PCNP.

Night-time special qualities

13.8.7.35 Part of the appreciation of the PCNP defined in Special Quality 11 is the ability to experience the *'big skies of the evening and the radiance of the stars on a clear night'.* The Background Paper: Special Qualities of PCNP report (PCNPA, 2018) identifies that *'Part of the special appreciation of the National Park is the ability to absorb not only the tranquillity and sense of calm during the day, but the big skies of the evening and the radiance of the stars on a clear night. Areas with substantial night-time light pollution within the National Park, are centred upon the main settlements of Tenby and Saundersfoot and St Davids, although moderate night-time light pollution is identified for the southern slopes of the Preseli Hills and the hinterland for Tenby and Saundersfoot. One particularly unique aspect is the lack of light pollution of the night sky. It is wonderful to get such a clear view of the "greatest show on earth", this may be another aspect of the Park which is worth promoting'.*

13.8.7.36 The WTG aviation lights are not located within the PCNP. The mainland coast of the PCNP is located 35.0 km from the array area at its closest point. The WTG aviation lights are however likely to be visible offshore from viewpoints in the PCNP at long range, during periods of very good and excellent visibility, and therefore have the potential to affect the experience of dark skies qualities in views from the PCNP.

13.8.7.37 As shown in the WTG aviation lighting ZTV (Volume 2, Figure 13.20), there will be no visibility of the WTG aviation lights from the large majority of the area of the PCNP to people viewing the night sky. The aviation lighting would also not be seen by people viewing the night sky from six of its eight dark skies discovery sites (Poppit Sands, Garn Fawr, Sychpant, Newgale Beach, Broadhaven and Skrinkle Haven) as they are outside the ZTV.

13.8.7.38 The principal area of the PCNP where the appreciation of the qualities of the night-time skies may be affected by the WTG aviation lighting occurs where there is visibility along the closest mainland coast of Marloes and Dale coast, between Martin's Haven (Viewpoint A) and St Ann's Head (Viewpoint B) at distances of approximately 35 km to 37 km from the array area; and from the South Pembrokeshire coast between West Angle Bay and Freshwater West (Viewpoint C) at distances between 37 km to 41 km from the array area.

13.8.7.39 Changes to the appreciation of dark night skies could therefore occur principally in long distance views from these closest coastlines of PCNP, which allow long range views to the seascape to the south-west where the WTG aviation lighting may be visible under certain atmospheric conditions. Assessments undertaken from its dark sky discovery sites at Martin's Haven (Viewpoint A) and Kete (Viewpoint B) in Section 13.7.18 indicate that the WTG aviation lighting will introduce further lighting in the relatively dark seascape however, the lights will be viewed at long distances offshore, which reduces the magnitude of change as viewers are unlikely to perceive the aviation or marine navigation lights to any degree of intensity at such long range. The WTG aviation lights also occur in the context of other point sources of light in the seascape, such as St Ann's Lighthouse, Skokholm lighthouse, cardinal buoys and vessels in the waters.

13.8.7.40 In views from this section of the PCNP coastline, the aviation lights will be visible low to the horizon and do not extend high into the sky, thus limiting the amount of the night-sky that is impeded and having limited influence on the big skies of the evening, which will continue to extend overhead without influence of WTG aviation lights. The aviation lights will not result in obtrusive light that impedes the wider expanse of night sky, which will continue to be experienced readily above the WTG aviation lights, nor result in brightening of the night sky (skyglow) or glare on to the sea surface and would therefore not be of detriment to the radiance of stars on clear night, or the overall experience of the night skies qualities in views from the PCNP. The effect of the WTG aviation lighting on the appreciation of dark skies aspect of special quality 11, particularly its big skies of the evening and radiance of the stars on a clear night*, is assessed as* low magnitude and not significant **(moderate/minor)**. The lack of light pollution of the night sky above the PCNP will remain despite the distant presence of the WTG aviation lighting in views from parts of the PCNP coastline.

Special Quality 12 - Diversity and Combination of Special Qualities

13.8.7.41 Special Quality 12 'Diversity and Combination of Special Qualities' is described in Table 13.18. It is not an individual special quality but is referred to as 'the combination of special qualities' and 'the variety and distribution' of special qualities 'within a relatively small area' of the PCNP helping to 'create its uniqueness'.

13.8.7.42 The assessment has identified that the Proposed Development will result in zero change and no effects on many of the PCNPs special qualities, including its diverse geology (2), distinctive settlement pattern (4) and access to the PCNP (9). A number of special qualities are also scoped out of the SLVIA but considered in other aspects of the EIA, including: Rich Archaeology (5) and Cultural Heritage (6) (considered in Chapter 23: Onshore Archaeology); and Richness of Habitats and Biodiversity (7) (considered in Chapter 9, 11 and 12 of the ES).

13.8.7.43 Those special qualities that are assessed in more detail above regarding 'coastal splendour', 'diversity of landscape', 'islands', 'space to breathe' and 'remoteness, tranquillity and wildness' have been assessed as being subject to low levels of change and not significant effects as a result of the Proposed Development. The visual aspects of the perceived qualities of the PCNP have been assessed, as they convey the 'sights of the sea' qualities referred to in Special Quality 12 and have been found to be of low magnitude and not significant. Other qualities referred to as contributing to the diversity and combination of special qualities, including the 'sounds of the sea, the rolling landscapes, wooded valleys and upland plateaus of the PCNP' and the 'distinctive combination of colour, contrast and change' will not be affected by the Proposed Development.

13.8.7.44 The potential impacts on the special qualities for which the PCNP has been designated have been taken into consideration and adverse impacts on the designated landscape of the PCNP have been avoided. The sense of remoteness and tranquillity will not be lost, the pattern and diversity of the landscape will remain, and significant effects on undeveloped coastline are avoided due to the distance of the Proposed Development outside the PCNP. The Proposed Development will not adversely affect seascape character, landscape character, quality or diversity, including the special qualities of the PCNP.

13.9 Potential Landscape Effects

13.9.1 Preliminary Assessment

13.9.1.1 A preliminary assessment of the effects of the operation and maintenance of the Proposed Development on the LCAs in the SLVIA Study Area is presented in Table 13.27 with reference to the ZTV analysis in Volume 2 Figure 13.15a-b.

Table 13.27 - Preliminary Assessment Landscape Character

LCA	Minimum distance to array area (km)	Preliminary Assessment
Considered in preliminary assessment but found to have no potential for significant effects – scoped out of detailed assessment:		
LCA 4 Manorbier / Freshwater East	47.5	LCA is located at very long distance, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The LCA forms a tract of rolling lowland on the southern edge of the Study Area between Stackpole and Tenby (LCA 4). Most of land area of LCAs is located outside the SLVIA Study Area. Within the fringes of the SLVIA Study Area, there

LCA	Minimum distance to array area (km)	Preliminary Assessment
		are limited areas of the LCA within the ZTV (less than 1.5 km^2), with the majority of the land area falling outside the ZTV. The LCA had a southerly aspect over the bays of Stackpole Quay, Freshwater East and Manorbier Bay. The cliffs and headlands (Stackpole Head and St Govan's Head) to the west will largely prevent views of the Proposed Development, which is evident in the restricted visibility shown in the ZTV, other than from occasional areas of higher ground further inland. There is no potential for the perceived landscape characteristics of the LCA to be significantly affected by the Proposed Development.
LCA 5 Stackpole	46.1	LCA is located at very long distance from the Proposed Development and is formed by a wooded branched low river valley (LCA 5) near St Govan's Head, within which there is almost entirely no visibility of the Proposed Development due to the contained landform, other than a small area of theoretical visibility near Stackpole (0.29 km^2). There is no potential for the perceived landscape characteristics of this LCA (including its naturalistic wooded valleys, range of habitats, historical / archaeological assets and its beaches) to be significantly affected by the Proposed Development.
LCA 6 Castlemartin / Merrion Ranges	40.5	LCA is located at very long distance, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The LCA forms an exposed broad expanse of rolling lowland, with the adjacent associated coastal cliffs falling within SCA 35. The area is largely occupied by the Ministry of Defence for national defence purposes for both live fire and dry military training. The majority of the LCA falls outside the ZTV, with only a limited proportion of its area having visibility and with these areas being focused to the west of the LCA that is used for military purposes and is largely inaccessible, apart from a short section of the B4319 that crosses the LCA and affords views over the artillery ranges to the open sea beyond. Given the existing land uses, the restricted areas of visibility and distance to the Proposed Development, there is no potential for the perceived landscape characteristics of the LCA to be significantly affected by the Proposed Development. Effects on the adjacent associated coastal landscape are assessed as part of SCA 35 in Section 13.8.6.
LCA 8 Freshwater West / Brownslade Burrows	41.1	LCA is located at very long distance, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The LCA forms an area of rolling lowland with associated coastal areas of fixed sand dunes, low sea cliffs and bays, however the majority of these coastal areas fall within and are assessed as part of SCA 34 and SCA 35. The remaining area of LCA 8 comprises Castlemartin Corse, a

LCA	Minimum distance to array area (km)	Preliminary Assessment
		marshy low-lying valley inland of the dunes, from where there is no visibility of the Proposed Development due to the intervening coastal dunes and sea cliffs. There is very limited area of the LCA within the ZTV (less than 0.07 km^2), which is the higher ground to the north of the Castlemartin Corse, with the majority of the land area falling outside the ZTV. There is no potential for the perceived landscape characteristics of the LCA to be significantly affected by the Proposed Development. Effects on the adjacent associated coastal landscape are assessed as part of SCA 34 and SCA 35 in Section 13.8.5 and 13.8.6.
LCA 9 Marloes	38.3	LCA is located at long distance, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The LCA forms the large broad promontory of the Marloes Peninsular, comprising the rolling lowlands set back from the associated coastal areas of sea cliffs and islands (within SCA 25), St. Ann's Head (SCA 26) and Milford Haven (SCA 26). The remaining area of LCA 9 outside these SCAs comprises a large tract of open rolling agricultural farmland, with scattered villages and farmsteads, forming the coastal hinterland of this large headland. The majority of its area falls outside the ZTV, with the exception of the more elevated plateau to the north of the LCA, which has theoretical visibility at distances over 40 km, but has more association with the coast to the north due to its views over St Bride's Bay. There is no potential for the perceived landscape characteristics of the LCA to be significantly affected by the Proposed Development. Effects on the adjacent associated coastal landscape are assessed as part of SCA 34 and SCA 35 in Section 13.8.5 and 13.8.6.
LCA 11 Herbrandston Refinery Fringe	43.0	LCA is located at very long distance from the Proposed Development, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The majority of its area falls outside the ZTV, with only a limited geographic area of visibility. The ZTV shows that views of the Proposed Development are largely prevented by the Angle Peninsula and St Ann's Head. Views are also often from urban fringe areas where there is additional intervening screening by the built environment and from locations where the existing character is heavily influenced by adjacent industrial sites, oil refineries and pylons, which form prevailing features in the baseline. There is no potential for the perceived landscape characteristics of this LCA to be significantly affected by the Proposed Development.

LCA	Minimum distance to array area (km)	Preliminary Assessment
LCA 12 St Brides Bay	42.7	LCA is located at very long distance from the Proposed Development, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The landscape is primarily west facing over St Bride's Bay and although there are broad views across the bay, the cliffs, headlands (Marloes) and islands (Skomer) to the south contains views towards the Proposed Development, which is evident in the restricted visibility shown in the ZTV. The majority of its areas falls outside the ZTV, with the exception of the more elevated inland plateau of the LCA. There is no potential for the perceived landscape characteristics of the LCA, including its strong visual relationship to coast, the broad views across St Bride's Bay and along the coastline, its exposure and presence of the sea, to be significantly affected by the Proposed Development.
LCA 15 Dowrog & Tretio Commons	49.2	These LCAs are located at very long distance from the Proposed Development on St David's Peninsula, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. Most of land area of these LCAs is located outside the SLVIA Study Area. Within the fringes of the SLVIA Study Area, there are minimal areas of these LCAs within the ZTV (less than 0.5 km^2 in LCAs 15, 16 and 17), with the majority of the land area of these LCAs falling outside the ZTV. There is no potential for the perceived landscape characteristics of these LCAs to be significantly affected by the Proposed Development.
LCA 16 Carn Llidi	49.4	
LCA 17 St David's	47.0	
LCA 18 St Davids Headland	47.1	
cLCA7 Pelcomb and Simpsons Cross	45.7	These LCAs are all located at very long distance from the Proposed Development, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The majority of their area falls outside the ZTV, with only a limited geographic area of visibility. They are also essentially inland landscapes near Haverfordwest and north of Milford Haven, that have limited visual relationship with the sea and derive their key characteristics from the agricultural, rolling landscape, wooded valleys, rough grazing and scattered settlement, with only limited glimpses of the coast to the west. Views south are also influenced by refineries, existing onshore WTGs and pylons. Johnston (LCA 9) in particular, hosts both commercial and industrial/business uses. There is no potential for the perceived landscape characteristics of these LCAs to be significantly affected by the Proposed Development.
cLCA9 Johnston Lowlands	47.2	
cLCA10 The Haven North	44.3	These LCAs are all located at very long distance from the Proposed Development, where views of the Proposed

LCA	Minimum distance to array area (km)	Preliminary Assessment
cLCA22 Milford Haven	45.6	Development may only occur during infrequent periods of excellent visibility at such long range. The majority of their area falls outside the ZTV, with only a limited geographic area of visibility. The ZTV shows that views of the Proposed Development are largely prevented by the Angle Peninsula and St Ann's Head. Views are also often from urban or industrial areas, which defines these LCAs, where there is additional intervening screening by the built environment, and from locations where the existing character is heavily influenced by industrial sites, oil refineries, pylons and urban development, which form prevailing features in the baseline. There is no potential for the perceived landscape characteristics of these LCAs to be significantly affected by the Proposed Development.
cLCA23 Southern Haven Industrial Fringe	43.9	
cLCA 25 Hundleton and Lamphey	43.1	LCA is located at long distance, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The LCA forms rolling lowland mosaic to the south of Milford Haven, with scattered small scale rural settlement. The majority of its area falls outside the ZTV, with only a limited geographic area of visibility from limited areas of higher ground. The LCA is largely an inland landscape that has limited visual relationship with the sea to the west. It derives its key characteristics from the farmland landscape of small fields, low escarpment ridges, minor roads and isolated farmsteads, with only limited glimpses of the coast to the west. Views north are also influenced by adjacent industrial landscapes at Pembroke, including oil refineries, Pembroke Power Station and pylons. There is no potential for the perceived landscape characteristics of these LCAs to be significantly affected by the Proposed Development. Effects on the adjacent associated coastal landscape to the north are assessed as part of SCA 32 Inner Milford Haven.

13.9.1.2 A preliminary assessment of the effects of the operation and maintenance of the Proposed Development on the landscape designations in the SLVIA Study Area is presented in Table 13.28 with reference to the ZTV analysis in Volume 2 Figure 13.15a-b.

Table 13.28 - Preliminary Assessment Landscape Designations

Landscape Designation	Minimum distance to array area (km)	Preliminary Assessment
Potential for significant effects that require detailed assessment:		
PCNP	32.3	Potential for long-term, reversible impacts on perceived seascape character of the PCNP and its associated heritage coasts (Marloes and Dale, South Pembrokeshire and St. David's Peninsula), arising as a result of the construction, operation and maintenance, and decommissioning of the Proposed Development, which may be visible from the coastal landscapes of the PCNP (during very good and excellent visibility conditions) and may therefore alter their perceived character. Potential impacts require further assessment, undertaken for SCAs within PCNP in Sections 13.8.2 to 13.8.6 and special qualities of PCNP in Section 13.8.7.
Marloes and Dale Heritage Coast	29.6	
South Pembrokeshire Heritage Coast	37.7	
St. David's Peninsula Heritage Coast	40.7	
Considered in preliminary assessment but found to have no potential for significant effects – scoped out of detailed assessment:		
St Brides Bay Heritage Coast	46.5	Heritage Coast is located at very long distance from the Proposed Development and the majority of its coastline between Broad Haven and Nolton Haven falls outside the ZTV, or to the north at Newgale Sands, falls outside the SLVIA Study Area and has restricted visibility of 1-2 or 3-4 WTGs. The St Brides Bay coastline is west facing and although there are wide views across the bay, the cliffs, headlands (Marloes) and islands (Skomer) to the south contains views towards the Proposed Development, which is evident in the restricted visibility shown in the ZTV. The key characteristics of the Heritage Coast, including its long sandy beaches, exposure, visitor activities and long views across St Bride's Bay, will not be significantly affected by the Proposed Development.
Orielton Historic Park and Garden	46.2	Orielton is an early-19th century parkland with mansion house, gardens and plantation woodlands. It is located at very long distance from the Proposed Development and falls almost entirely outside the ZTV due to the contained landform, with the exception of a small area of theoretical visibility of the Proposed Development on its more elevated southern edge. There is no potential for the perceived landscape characteristics of this historic park and garden to be significantly affected by the Proposed Development.
Stackpole Court Historic Park and Garden	46.5	Stackpole Court was a fortified medieval house, now demolished, with outbuildings now used by the National Trust for offices and is part of the National Trust's Stackpole Estate. The Historic Park and Garden is located at very long distance from the Proposed Development and is contained by a wooded, branched, low river valley, within which there is almost entirely no visibility of the

Landscape Designation	Minimum distance to array area (km)	Preliminary Assessment
		Proposed Development due to the contained landform, other than a small area of theoretical visibility near Stackpole. There is no potential for the perceived landscape characteristics of this Historic Park and Garden (including its naturalistic wooded valleys, range of habitats, historical / archaeological assets) to be significantly affected by the Proposed Development.
Warpole Court Historic Park and Garden	47.6	Warpole Court house dates from 1865, with walled and formal gardens, and the site is now in use as a hotel. Although the Historic Park and Garden is within the ZTV, the grounds are contained by a large area of woodland on its southern side, which provide shelter, prevent views of the sea and the Proposed Development. There is no potential for the perceived landscape characteristics of this Historic Park and Garden to be significantly affected by the Proposed Development.

13.9.2 Landscape Character Effects

13.9.2.1 The preliminary assessment of LCAs in Table 13.27 and landscape designations in Table 13.28 identifies that there are no landscape character receptors that are likely to be significantly affected by the Proposed Development outside those landscapes already considered within the SCAs in Section 13.8.

13.9.2.2 As described in Section 13.5.4, the effect of the Proposed Development on landscape character is considered on LCAs outside and inland of SCAs (Volume 2, Figure 13.5b), where the land is, by definition, unlikely to have a strong visual relationship with the sea/tidal waters. SCAs already include and define the characteristics of land which has a strong visual relationship with the sea/tidal waters and coastal landscapes and are assessed in Section 13.8.

13.9.2.3 LCAs that fall outside the defined SCAs, as assessed in Table 13.27 are considered unlikely to experience significant effects because the Proposed Development is located at long distance offshore, and these are landscapes that do not have a strong visual relationship with the sea, where its character is fundamentally defined by other landscape based, terrestrial characteristics. These LCAs generally consist of the inland parts of the SLVIA Study Area near St David's in the north; the Pelcomb/Simpson's Cross and Johnston Lowlands between Milford Haven and Haverfordwest; and the Hundleton and Lamphey area to the south of Pembroke.

13.9.2.4 These LCAs are all located at very long distance from the Proposed Development, where views of the Proposed Development may only occur during infrequent periods of excellent visibility at such long range. The majority of their area falls outside the ZTV, with only a limited geographic areas visibility. They are also essentially inland landscapes, that have limited visual relationship with the sea and derive their key characteristics from the agricultural, rolling landscape, wooded valleys, rough grazing and scattered settlement, with only limited glimpses of the coast to the west. Views are also often influenced by oil refineries, existing onshore WTGs and pylons, commercial and industrial/business uses. There is no potential for the perceived landscape characteristics of these LCAs set out in the preliminary assessment in Table 13.27 to be significantly affected by the Proposed Development.

13.9.2.5 The Proposed Development will also have no significant effects on perceived landscape characteristics of Registered Parks and Gardens (RPGs) within the SLVIA Study Area, due to the long distances (over 46 km) of these RPGs, the limited visibility of the Proposed Development and the visual enclosure provided by the landforms and woodlands of these RPGs.

13.9.2.6 In summary, adverse effects on landscape character have been avoided through the appropriate siting of the Proposed Development at long distance offshore.

13.10 Additional Mitigation

13.10.1.1 The SLVIA has identified that the Proposed Development will result in no significant seascape, landscape or visual effects, therefore additional mitigation is not required.

13.11 Inter-Related Effects

13.11.1 Introduction

13.11.1.1 The assessment of impacts arising from construction, operation and decommissioning of the Project indicates that impacts on receptors addressed in different aspects of the Project may potentially further contribute to the impacts assessed on seascape, landscape and visual receptors and vice versa.

13.11.1.2 Inter-relationships are considered to be the impacts and associated effects of different aspects of the Project on the same receptor. In the SLVIA, these inter-related effects are considered to be receptor led effects, where specific receptors may be affected by both the construction and operation of the offshore infrastructure (including array area, offshore platforms, offshore cable corridor) and the construction and operation of the onshore infrastructure (i.e. onshore substation, onshore cable corridor and landfall location). There is potential for effects to interact, spatially and temporally, to create inter-related effects on a receptor.

13.11.1.3 The SLVIA presented in this chapter and Chapter 21: Landscape and Visual Impacts assessment together provide an assessment of the whole Project effects i.e. of both the construction and operation of the offshore elements and the onshore infrastructure.

13.11.1.4 An assessment of inter-related effects has also been undertaken in the sections below to assess any areas where the construction and operation of the offshore elements and the construction and operation of the onshore infrastructure combine, or inter-relate, to have an effect. For example, visibility of the Proposed Development WTGs and the onshore substation or landfall, from a particular viewpoint or landscape designation, may interact to produce a different, or greater effect on a receptor than when the effects are considered in isolation. Receptor-led effects might be short-term, temporary or transient effects, or incorporate longer term effects.

13.11.2 Construction phase inter-related seascape and visual effects

13.11.2.1 The majority of SCAs in the SLVIA Study Area will not experience inter-related effects, since they have either no visibility, or very limited/distant visibility, of either the construction of the onshore infrastructure or the construction of the offshore elements of the Proposed Development, and therefore have limited potential for inter-related (or combined) effects to occur. Inter-related effects will only occur on those SCAs near the landfall, where the construction of the onshore infrastructure will occur in areas that may also be susceptible to changes resulting from views of the construction of the offshore infrastructure.

13.11.2.2 Based on the assessments undertaken in Section 13.8 and Chapter 21: Landscape and Visual Impacts, it is assessed that only SCA 31 Outer Milford Haven and Viewpoint 5 (St Ann's Head) and Viewpoint 7 (West Angle Bay) have potential to have inter-related effects arising, through the potential change in views and perceived character resulting from views of the construction of the Proposed Development and onshore infrastructure at the landfall in West Angle Bay. These effects are contained within limited geographic areas of SCA 31, on the north side of West Angle Bay near Thorn Island (Viewpoint 7), the south side of West Angle Bay near Rat Island, and potentially in the panoramic views from St Ann's Head (Viewpoint 5).

13.11.2.3 These inter-related effects are assessed as most likely to occur in this localised area of SCA 31 within the PCNP within close proximity to the landfall, where the character is assessed as likely to experience not significant inter-related effects during the construction of the landfall and onshore cable route together with the construction of the offshore elements of the Proposed Development, over a short-term period when their construction periods overlap.

13.11.3 Operational and maintenance phase inter-related seascape and visual effects

13.11.3.1 Based on the assessments undertaken in in Section 13.8 and Chapter 21: Landscape and Visual Impacts, due to the geographic separation of the offshore elements of the Proposed Development and the onshore substation, the assessment identifies no significant inter-related seascape and visual effects resulting from the operation of the Proposed Development and the onshore substation. Inter-related effects are assessed as likely to occur from a localised area of cLCA25 Hundleton and Lamphey on the inland edge of the PCNP, where there is an elevated area affording views west to the Proposed Development and north-east towards the onshore substation, as illustrated in Viewpoint 8 B4320 near Wagaston.

13.11.3.2 The Proposed Development is assessed as resulting in a low magnitude of change and not significant (moderate/minor) effect from Viewpoint 8 B4320 near Wagaston. Although the onshore substation will be partially visible in the view north-east, it will largely be screened behind Wallaston Farm and the intervening landform, and seen in the context of the overhead transmission lines and Power Station to the north, therefore the unlikely to combine to greater effects than assessed for the Proposed Development alone (in Section 13.7.8), or the onshore substation alone in Chapter 21: Landscape and Visual Impacts.

13.11.4 Summary of inter-related effects

13.11.4.1 The construction programming would mean there would likely be some degree of separation between the construction of the onshore infrastructure and construction of the offshore elements of the Proposed Development. The period over which inter-related effects on visual amenity and seascape character occur during construction is therefore limited to the short-term with inter-related effects being temporary, and becoming not significant during the operational phase, when the landfall and onshore cable route will have a negligible change to visual amenity and seascape character.

13.11.4.2 Adverse inter-related effects on the visual amenity and seascape character of the PCNP during construction, operation and maintenance, and decommissioning, have been avoided through the appropriate siting of the Proposed Development at long distance offshore, which results in low levels of change and not significant effects, and the siting of the operational onshore substation infrastructure outside the PCNP, such that the potential for inter-related effects is localised and of low magnitude, with limited potential for inter-related effects to be greater than effects assessed for the Proposed Development and onshore infrastructure alone.

13.12 Cumulative Effects Assessment

13.12.1 Preliminary Assessment

13.12.1.1 A Cumulative Effects Assessment (CEA) has been made based on existing and proposed developments in the SLVIA Study Area (Volume 2, Figure 13.21). The overall approach to the CEA is described in Chapter 30: Cumulative Effects. Cumulative effects are defined as those effects on a receptor that may arise when the development is considered together with other reasonably foreseeable projects.

13.12.1.2 Cumulative effects refer to effects upon receptors arising from the Proposed Development, when considered alongside other proposed developments and activities and any other reasonably foreseeable project(s) proposals. GLVIA3 (Landscape Institute and IEMA, 2013, p120) defines cumulative landscape and visual effects as those that *'result from additional changes to the landscape and visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future'.*

13.12.1.3 A comprehensive 'long list' of projects has been compiled with potential for cumulative impact interactions. The following projects listed in Table 13.29 are identified from the long-list within the SLVIA Study Area (Zone of Influence) (Volume 2, Figure 13.21) that may have potential to contribute to cumulative impacts with the Proposed Development that are of relevance for the assessment of cumulative seascape, landscape and visual impacts. A preliminary assessment of each project within the SLVIA Study Area is provided in Table 13.29 to identify the potential for cumulative interaction and whether the project will be scoped in or scoped out of the cumulative SLVIA of the Proposed Development.

Table 13.29 - Preliminary Assessment of Other Projects for CEA

Project	Distance to Array Area	Preliminary Assessment
Consented		
META East Pickard Bay Wave and Floating Wind Test Site (component testing for floating offshore foundations)	37 km	**Scope in**. Likely to be limited potential for cumulative effects to occur during operation due to limited intervisibility of wave/floating platform devices in nearshore coastal waters off Freshwater West coastline (SCA 34). Effects are unlikely to be significant due to limited amount of floating offshore devices visible above water (platform only, not complete floating WTGs) and long distance from Proposed Development. Scoped into assessment to address NRW request for further information to understand if effects are likely to be significant. Narrative assessment included in Section 13.12.2, with visualisations provided from Viewpoint 5 St Ann's Head (Volume 2 Figure 13.26), Viewpoint 10 Freshwater West (Volume 2 Figure 13.31) and Viewpoint 13 Sheep Island (Volume 2 Figure 13.34), showing site boundary. Insufficient information to provide photo-realistic visualisations of floating foundations.
META Dale Roads Wave energy convertor test site	39.6 km	**Scope in**. Likely to be limited potential for cumulative effects to occur during operation, due to limited intervisibility of wave/floating wind test devices in Milford Haven (SCA 31). Effects are unlikely to be significant due to limited amount of floating offshore devices visible above water (no complete floating WTGs), long distance from Proposed Development and location within Milford Haven. Scoped into assessment to address NRW request for further information to understand if effects are likely to be significant. Narrative assessment included in Section 13.12.2, with two visualisations from Viewpoint 5 St Ann's Head (Volume 2 Figure 13.26), Viewpoint 6 South Hook Fort (Volume 2 Figure 13.27) and Viewpoint 7 West Angle Bay (Volume 2 Figure 13.28), showing site boundary. Insufficient information to provide photo-realistic visualisations of floating foundations.
META Warrior Way Tidal energy test site	51.7 km	**Scope out**. Limited offshore effect interaction, due to the nature of the tidal test devices, the location of project within the Inner Milford Haven, limited intervisibility and its location at long distance from the Proposed Development outside SLVIA Study Area.
Bombora Wave Energy – mWave Wave energy convertor (floating platform for single wind and wave platform)	40 km	**Scope out**. Located approximately 1 km from Freshwater West beach, however this development has a 6-12 months operational period, after which it will be removed. No potential for cumulative effect interaction during construction due to no temporal overlap of construction phases i.e. Bombora is due to be installed, tested and removed before the Proposed Development construction and operational phases.

Project	Distance to Array Area	Preliminary Assessment
Application stage		
Greenlink Interconnector Sub-sea Interconnector	17.8 km	**Scope out**. No potential for cumulative effect interaction during construction as there is no temporal overlap of construction phases (i.e. Greenlink construction will be completed before Erebus construction phase). No potential for cumulative effect interaction during operational phase (sub-sea interconnector).
Pembroke Dock Slipway Creation of a multiuse slipway	48.5 km	**Scope out**. Limited offshore effect interaction, due to location of project within Inner Milford Haven, long distance from Proposed Development and the type of project (a slipway) which has limited potential for cumulative effects with Proposed Development.
Milford Haven Port Authority (MHPA) Maintenance dredging	43.5 km	**Scope out**. Limited offshore effect interaction, due to its location within the inner Milford Haven, it's long distance from the Proposed Development and the type of project (dredging) which has limited potential for cumulative effects with Proposed Development.
Rhoscrowther Wind Farm	43.7 km	**Scope in**. Scope project in to SLVIA as an application stage project, consisting of 3 turbines at 135m tip height as shown in Site Plan (Figure 1.1) of planning application documents available on project website at www.rhoscrowtherwindfarm.co.uk. Rhoscrowther Wind Farm is shown in the cumulative wirelines in Volume 2 Figures 13.22 – 13.40 in views that it is visible. High level cumulative assessment undertaken in Section 13.12.3 below, which reports the additional cumulative effects of Erebus, in this 'application stage scenario' with Rhoscrowther Wind Farm.
Scoping stage		
Pembrokeshire Wave Demonstration Zone (PDZ) Wave demonstration zone, with potential for three wave energy arrays of up to 30MW.	20.8 km	**Scope out**. The potential cumulative impacts of the Pembrokeshire Demonstration Zone (PDZ) have not been considered at the time of writing due to the lack of detail with which to assess the effects of the proposed project. An EIA Scoping Report was produced and issued to NRW in 2018 for a proposed wave/floating wind project however based on discussions with Celtic Sea Power (the 3rd party agents for the PDZ) and recent public presentations by members of Celtic Sea Power, it is understood the PDZ will be repurposed as an offshore electrical hub. In the absence of an updated EIA Scoping Report and insufficient project information to allow the effects to be reasonably understood and a cumulative assessment undertaken, it has been omitted from this assessment. As set out in PINS Guidance Note 17: Cumulative Effects Assessment, the Project proposed an assessment cut-off date of 1 October 2021 to allow the finalisation of the EIA and HRA assessments, even if project information came

Project	Distance to Array Area	Preliminary Assessment
		forward between the cut-off date and submission. This was agreed with NRW Marine Licensing, noting that in the absence of S.36/Marine Licence guidance the Project was drawing upon the best available advice. It is understood that should sufficient detail of this project come forward following submission, the Project may be requested to provide additional information during the determination period.
Project Valorous Floating offshore wind farm of between 18-31 WTGs of up to 270m tip height.	3.3 km	**Scope in**. Potential for cumulative effects to occur due to proximity of Project Valorous to the Proposed Development and its intervisibility in views from the PCNP, however the Valorous project is at Scoping stage. Scope project in to SLVIA, with further information and high-level assessment included in SLVIA chapter. Valorous scoping layout and WTG dimensions are shown in the cumulative wirelines in Volume 2 Figures 13.22 – 13.40. High level cumulative assessment in Section 13.12.4 reports on the total cumulative effect of Project Erebus plus Project Valorous, focusing on the additional cumulative effect that may arise as a result of Project Valorous. The assessment is high level and can be extended as more information comes forward, in the Project Valorous ES, as suggested by NRW. Although a Scoping Report has been submitted, which provides some information about the offshore elements of Project Valorous, these are not currently 'well-defined' or of 'sufficient detail' to make a full assessment. There are uncertainties still present, in particular, no lease agreement is in place yet, geophysical and geotechnical studies are not complete so the location of WTGs within the Valorous array area is not decided at this time and the dimension of the WTGs are not confirmed (due to no engagement at this stage with procurement). Cumulative assessment and wirelines are based on the maximum WTG dimensions (270m blade tip/240m rotor diameter) and the 20 x WTG layout presented in Table 4.1 and Table 4.2 of the Project Valorous Scoping Report.

13.12.1.4 Based on the preliminary assessment provided in Table 13.28, it is considered that the Proposed Development has potential for significant cumulative seascape, landscape and visual effects with two consented projects – META East Pickard Bay and META Dale Roads; one application stage project – Rhoscrowther Wind Farm; and one scoping stage project – Project Valorous. The cumulative assessment which follows reports on the likely significant cumulative effects of the Proposed Development in relation to each of these scenarios in Sections 13.12.2, 13.12.3 and 13.12.4.

13.12.2 Consented Scenario - META East Pickard Bay and META Dale Roads

Introduction

13.12.2.1 META Dale Roads is a wave test site for wave energy converter (WEC) device testing. META East Pickard Bay is both a test site for both WEC device testing and component testing for floating offshore wind technology. It does not offer testing for complete floating WTGs, only components such as floating foundations. Deployment of devices and recovery will be dictated by client bookings, therefore the appearance and form of devices within the boundaries of these sites is currently unknown. As a worst-case, it is assumed that sea-surface WEC devices would be tested at META Dale Roads and that both sea-surface WEC devices and semi-submersible floating WTG foundations would be tested at META East Pickard Bay. It is understood that the construction will take place in summer 2022 for a maximum duration of 18 months including removal. The cumulative effects of the Proposed Development are therefore only likely to occur over the short-term.

13.12.2.2 The META East Pickard Bay and META Dale Roads projects are located within or adjacent to the Milford Haven Waterway as shown in Volume 2 Figure 13.21. Their site boundaries are shown in the viewpoint wireline visualisations where visible, in Volume 2 Figures 13.26, 13.27, 13.28, 13.31 and 13.34.

13.12.2.3 The preliminary assessment has identified that there is potential for further change to the landscape and visual baseline as a result of the consented META East Pickard Bay and META Dale Roads projects being built. The 'consented scenario' assesses the additional effects of the Proposed Development in addition to these consented projects that may soon be present in the seascape. This scenario assumes that the consented projects have become part of a theoretical baseline situation. The assessment seeks to establish whether the addition of the Proposed Development with the consented projects results in new, different or additional effects, over and above those that were assessed in Section 13.7 (Visual Effects), 13.8 (Seascape Effects) and 13.9 (Landscape Effects).

13.12.2.4 The effects identified are considered as being likely to arise, on the assumption that the projects have received planning consent and are likely to be built and become operational, however it is the case that some consented projects may not ultimately built in the form that they are consented, or may not be built at all, introducing some uncertainty that consented scenario effects may not arise in full.

Cumulative Visual Effects (Consented Scenario)

13.12.2.5 An assessment of the potential cumulative effects of the Proposed Development with the META East Pickard Bay and META Dale Roads projects on representative viewpoints in the SLVIA Study Area is presented in Table 13.30.

Table 13.30 - Cumulative Assessment Representative Viewpoints (Consented Scenario)

No	Viewpoint	Cumulative Assessment
1	**Caerfai Bay** Figure 13.22	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in

No	Viewpoint	Cumulative Assessment
	Distance to Array Area: 47.85 km	conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
2	**St Brides Bay, Nolton Haven** Figure 13.23 Distance to Array Area: 49.19 km	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
3	**Marloes Beacon** Figure 13.24 Distance to Array Area: 36.99 km	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
4	**Skomer Island** Figure 13.25 Distance to Array Area: 33.74 km Distance to META East	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
5	**St Ann's Head** Figure 13.26e Distance to Array Area: 35.18 km Distance to META East Pickard Bay: 4.0 km Distance to META Dale Roads: 4.5 km	META Dale Roads will not be visible due to screening by intervening landform on St Ann's Head. The WEC/floating wind test devices within the META East Pickard Bay site are likely to be partially visible in the view south, between and behind St Ann's Lighthouse and cottages, however it is largely screened by these foreground elements that interrupt the view in this direction. The additional cumulative magnitude of change to the view caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
6	**South Hook Fort** Figure 13.27c-d Distance to Array Area: 41.84 km Distance to META East Pickard Bay: 4.9 km Distance to META Dale Roads: 2.5 km	META East Pickard Bay will not be visible, due to screening by the intervening landform of the Angle Peninsula. The WEC devices within the META Dale Roads site are only likely to be partially visible in the view west/north-west, in Lindsway Bay, as they will be partially screened by Great Castle Head. Some of the META Dale Roads WECs will be seen within the waters of Milford Haven, having cumulative visual associations with the Proposed Development as offshore elements, increasing the influence of offshore renewables in the view, however both developments appear as relatively small-scale elements in the wider panoramic view and have relatively low levels of visual impact. The META Dale Roads WECs will occupy a low-lying position on the sea surface, with small vertical scale and has a close association with other energy/infrastructure elements within Milford Haven, in a contained portion of the view, with the site partially screened by Great Castle Head. The Proposed Development will be viewed in this broad westerly direction, contributing to

No	Viewpoint	Cumulative Assessment
		increasing the influence of development in the seascape context, however it is located out to sea beyond Milford Haven, at very long distance from the viewpoint and META Dale Roads, appearing small in scale in the backdrop and would therefore be less apparent as an addition to the cumulative situation. The additional cumulative magnitude of change to the view caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
7	**West Angle Bay** Figure 13.28d Distance to Array Area: 39.25 km Distance to META East Pickard Bay: 2.7 km Distance to META Dale Roads: 2.3 km	META East Pickard Bay will not be visible, due to screening by the intervening landform of the Angle Peninsula. The WEC devices within the META Dale Roads site are only likely to be partially visible in the view north, in Lindsway Bay, as they will be partially screened by the headland. Some of the META Dale Roads WECs will be seen within the waters of Milford Haven, having cumulative visual associations with the Proposed Development as offshore elements, increasing the influence of offshore renewables in the view, however both developments appear as relatively small-scale elements in the wider panoramic view and have relatively low levels of visual impact. The META Dale Roads WECs will occupy a low-lying position on the sea surface, with small vertical scale and has a close association with other energy/infrastructure elements within Milford Haven, in a contained portion of the view, with the site partially screened by the headland. The Proposed Development will be viewed to the south-west, in a different direction of view, contributing to increasing the influence of development in the seascape context, however it is located out to sea beyond Milford Haven, at very long distance from the viewpoint and META Dale Roads, appearing small in scale in the backdrop and would therefore be less apparent as an addition to the cumulative situation. The additional cumulative magnitude of change to the view caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
8	**B4320, near Wogaston** Figure 13.29c Distance to Array Area: 43.67 km Distance to META East Pickard Bay: 4.4 km Distance to META Dale Roads: 9.2 km	META Dale Roads will not be visible, due to screening by the intervening landform. The WEC/floating platform devices within the META East Pickard Bay site are only likely to be partially visible in the view north, as the majority of the site is screened by intervening elements in the view and only the WEC/floating platform devices located in a small part of the western edge of the META East Pickard Bay site may be just visible in the sea. The Proposed Development will be viewed in a similar direction, further to the south-west, therefore having some cumulative visual associations, however both developments appear as relatively small-scale elements in the wider panoramic view and have relatively low levels of visual impact. The META East Pickard Bay WEC/floating platforms will occupy a low-lying position on the sea surface,

No	Viewpoint	Cumulative Assessment
		with small vertical scale, much of which will be screened by foreground elements, while the Proposed Development will be viewed out to sea, at very long distance from the viewpoint, appearing small in scale in the backdrop and would therefore be less apparent as an addition to the cumulative situation. The additional cumulative magnitude of change to the view caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is assessed as negligible and the cumulative effect not significant **(minor)**.
9	**Stack Rocks** Figure 13.30 Distance to Array Area: 42.51 km	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
10	**Freshwater West Beach** Figure 13.31c Distance to Array Area: 40.61 km Distance to META East Pickard Bay: 1.4 km Distance to META Dale Roads: 7.4 km	META Dale Roads will not be visible, due to screening by the intervening landform of the Angle Peninsula. The WEC/floating platform devices within the META East Pickard Bay sites are likely to be visible in the view north-west, in the nearshore waters off the southern coastline of the Angle Peninsula. The WECs are likely to occupy a low-lying position on the sea surface, with small vertical scale, however floating platform (wind) devices are likely to be more visible above the water in views from Freshwater West beach, with the dramatic coastline around East Pickard Bay forming a backdrop. The Proposed Development will be visible to south-west, separated from the META East Pickard Bay site but being broadly in the same westerly viewing direction, contributing to increasing the influence of offshore renewable energy development in the seascape context to Freshwater West in combination with Freshwater West, however the Proposed Development is located out to sea at very long distance from the viewpoint, appearing small in scale in the backdrop and would therefore be less apparent as an addition to the cumulative situation. The additional cumulative magnitude of change to the view caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is assessed as medium-low and the cumulative effect not significant **(moderate)**.
11	**Skokholm Island** Figure 13.32 Distance to Array Area: 30.35	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
12	**Hooper's Point** Figure 13.33	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in

No	Viewpoint	Cumulative Assessment
	Distance to Array Area: 35.89	conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
13	**Sheep Island** Figure 13.34b-c Distance to Array Area: 38.07 Distance to META East Pickard Bay: 1.1 km Distance to META Dale Roads: 3.8 km	META Dale Roads will not be visible, due to screening by the intervening landform of the Angle Peninsula. The WEC/floating platform devices within the META East Pickard Bay sites are likely to be partially visible at close range in the view south and west, in the nearshore waters off the coastline beyond Sheep Island. The WECs are likely to occupy a low-lying position on the sea surface, with small vertical scale, however floating platform (wind) devices are likely to be more visible in the water between dips in the landform of Sheep Island. The Proposed Development will be visible to south-west, separated from the META East Pickard Bay site but being broadly in the same south-westerly viewing direction, contributing to increasing the influence of offshore renewable energy development in the seascape context, however the Proposed Development is located out to sea at long distance from the viewpoint, appearing small in scale in the backdrop and would therefore be less apparent as an addition to the cumulative situation. The additional cumulative magnitude of change to the view caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
14	**Castlemartin Range Trail (Cold Comfort)** Figure 13.35 Distance to Array Area: 43.75	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.
15	**Carn Llidi** Figure 13.36 Distance to Array Area: 50.01	META East Pickard Bay and META Dale Roads will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with these projects, is assessed as **zero** and the cumulative effect not significant.

Cumulative Seascape Effects (Consented Scenario)

13.12.2.6 The potential for cumulative effects on seascape character arising in the consented scenario is informed by the assessments undertaken in the cumulative visual assessment above and the seascape effects assessment in Section 13.8. META East Pickard Bay is located within SCA 34 Freshwater West and META Dale Roads is located within SCA 31 Outer Milford Haven. Due to the localised visibility of WEC and floating platform devices within these two test sites, it is considered that the potential for additional significant cumulative effects on seascape character will be relatively local to the test sites and requires further assessment for these two SCTs within which the META East Pickard Bay and META Dale Roads projects are located. Both META Dale Roads and META East Pickard Bay are also located within the nearshore seascape setting of the PCNP, therefore the potential for cumulative effects with the Proposed Development in the character and qualities of the PCNP requires further assessment. The cumulative effect of the Proposed Development on these SCAs and the PCNP in the consented scenario is assessed in turn as follows. In the consented scenario, the cumulative effect of the Proposed Development on all other SCAs is assessed as not significant.

13.12.2.7 The 'project alone' effect of the Proposed Development on the seascape character of SCA 31 is assessed in section 13.8.4 and SCA 34 is assessed in section 13.8.5. The following cumulative assessment considers how the Proposed Development may result in additional cumulative seascape effects over and above those already identified, in conjunction with META East Pickard Bay and META Dale Roads, such as through potential design discordance or the proliferation of multiple developments affecting particular characteristics or new geographic areas, and ultimately if character changes occur as a result of multiple developments becoming a prevailing characteristic of the seascape.

SCA 31 Outer Milford Haven

Cumulative magnitude of change and significance of effect

13.12.2.8 There will be zero cumulative change to many of the main characteristics of SCA 31, including the fundamental character of the sheltered drowned ria, its red sandstone cliffs, sheltered bays, busy seas and its land use and landscape pattern, all of which will remain unaffected and will continue to define the distinct character. The operation and maintenance of the Proposed Development may only result in cumulative changes to the visual aspects of its perceived seascape character, as apparent to people in views from parts of the SCA with cumulative visibility of the Proposed Development with META East Pickard Bay and/or META Dale Roads.

13.12.2.9 The ZTV (Volume 2, Figure 13.15) shows that there will be limited or no visibility of the Proposed Development from the majority of the terrestrial areas of the SCA, however cumulative changes may occur from St Ann's Head (Viewpoint 5), South Hook Point (Viewpoint 6) and from the end of the Angle peninsula, on the north side of West Angle Bay (Viewpoint 7) and to its south between Rat Island and Sheep Island (Viewpoint 13). From these limited geographic areas of the SCA, the Proposed Development may be visible in combination with META East Pickard Bay and/or META Dale Roads, resulting in cumulative effects on specific aesthetic/perceptual aspects of seascape character on localised areas of the Outer Milford Haven.

13.12.2.10 META East Pickard Bay and META Dale Roads will result in some increase in the influence of man-made elements perceived from the SCA, however this will occur in the context of the oil refineries, jetties, power station and busy harbour with large vessels, tankers and ferries using the waters, which are already tangible in the experience of the SCA. The addition of offshore renewable energy devices in the nearshore waters would contribute further to the diversity of character and elements evident around Milford Haven. The Proposed Development WTGs are likely to compliment the offshore energy influences and would not be discordant with the energy influences in the consented baseline of the SCA. The META East Pickard Bay will have less influence as it is located largely outside SCA 31, further south along the coast into SCA 34, and is only viewed from the headlands around St Ann's Head and limited parts of the Angle Peninsula. META Dale Roads is located within Milford Haven and viewed from the coastline and enclosed bays within the Haven and may influence the perceived character locally particularly around Lindsway Bay/Great Castle Head.

13.12.2.11 The Proposed Development will result in some increase in the cumulative influence of offshore renewables as elements in the setting of the SCA, however its influence is added out to sea beyond Milford Haven, at very long distance, appearing small in scale in the backdrop of views out to sea. It is rarely visible from the enclosed bays within the Haven. It will therefore have a geographically contained and remote association with the consented developments and will be less apparent as an addition to the cumulative situation and context of the SCA.

13.12.2.12 The Proposed Development contributes to expanding the effect of the energy development influences of Milord Haven further out to the offshore waters beyond the haven itself. The array of WTGs will form a separate isolated offshore wind farm feature from the consented META East Pickard Bay and META Dale Roads, occurring in the wider setting, and is too infrequent and of insufficient influence to be perceived as a characteristic of the SCA – which is much more influenced by the oil refineries, jetties, and elements in the haven.

13.12.2.13 The Proposed Development will add a relatively small scale, single offshore wind farm element, perceived as a new or 'one-off' feature or landmark within the wider seascape setting of the SCA and would not combine with the consented developments to change the overall existing seascape character. The patterns and components of the consented baseline of the SCA will continue to be definitive. The Proposed Development will not result in the SCA becoming defined by the presence of offshore wind farms/renewable energy developments.

13.12.2.14 The additional cumulative magnitude of change to SCA 31 caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is therefore assessed as low and the cumulative effect not significant (**moderate/minor**).

SCA 34 Freshwater West

Cumulative magnitude of change and significance of effect

13.12.2.15 There will be zero cumulative change to many of the main characteristics of the SCA, including the fundamental character of the low jagged cliffs of the Angle Peninusla, the physical character of the beach and dunes at Freshwater West, and the land use and landscape pattern, all of which will remain unaffected in the consented scenario and will continue to define the distinct character. The operation and maintenance of the Proposed Development may only result in cumulative changes to the visual aspects of its perceived seascape character, as apparent to people in views from parts of the SCA with cumulative visibility of the Proposed Development.

13.12.2.16 META Dale Roads will not be visible from SCA 34, due to screening by the intervening landform of the Angle Peninsula. Cumulative effects on SCA 34 will therefore only occur due to visibility of the Proposed Development with META East Pickard Bay, which is located within SCA 34. The WEC/floating platform devices within the META East Pickard Bay sites are likely to be visible in views from the Pembrokeshire Coast Path at close range off this southern Angle coastline and from Freshwater West, in the nearshore waters off the coast. The WECs are likely to occupy a low-lying position on the sea surface, with small vertical scale, however the floating platform (wind) devices are likely to be more visible above the water, contrasting with the dramatic coastline around East Pickard Bay. The other energy development influences that prevail in SCA 31 are not part of the perceived character of SCA 34, therefore the introduction of the WEC/floating platform devices of META East Pickard Bay introduce a new offshore renewable energy influence in the waters of the nearshore seascape and is likely to have greater contrast with the baseline characteristics of this SCA.

13.12.2.17 The Proposed Development will result in some increase in the cumulative influence of offshore renewables as elements in the setting of the SCA, in combination with META East Pickard Bay, however its influence is added out to sea in the offshore waters outside the SCA, at very long distance, appearing small in scale in the backdrop of views out to sea. It will therefore have a remote association with the consented META East Pickard Bay development and will be less apparent as an addition to the cumulative situation and context of the SCA. The Proposed Development WTGs are likely to compliment the offshore energy influence that will be established in the consented scenario, by the introduction of META East Pickard Bay, and would not be discordant with these visual influences.

13.12.2.18 The Proposed Development contributes to expanding the effect of the energy development influences further out to the offshore waters. The array of WTGs will form a separate isolated offshore wind farm feature from the consented META East Pickard Bay, occurring in the wider setting, and is too infrequent and of insufficient influence to be perceived as a characteristic of the SCA. The Proposed Development will add a relatively small scale, single offshore wind farm element, perceived as a new or 'one-off' feature or landmark within the wider seascape setting of the SCA and would not combine with META East Pickard Bay to change the overall existing seascape character. The patterns and components of the consented baseline of the SCA will continue to be definitive. The Proposed Development will not result in the SCA becoming defined by the presence of offshore wind farms/renewable energy developments.

13.12.2.19 The additional cumulative magnitude of change to SCA 34 caused by the Proposed Development in the consented scenario, over and above the effect of Project Erebus alone, is therefore assessed as medium-low and the cumulative effect not significant **(moderate/minor)**.

Pembrokeshire Coast National Park – Special Qualities

13.12.2.20 The potential for cumulative effects on the defined special qualities of the PCNP in the consented scenario is informed by the assessments undertaken in the cumulative visual and cumulative seascape assessments above and the special qualities assessment in Section 13.8.7. An assessment of the potential cumulative effects of the Proposed Development with the consented META East Pickard Bay and META Dale Roads on the Special Qualities of the PCNP is presented in Table 13.31. The six special qualities that were assessed in detail in the project alone assessment for Project Erebus in section 13.8.7 are assessed further in this cumulative assessment, with all other Special Qualities scoped out of further assessment for the reasons set out in the preliminary assessment in Table 13.18.

13.12.2.21 Although located in the nearshore waters off the PCNP coastline, the WEC/floating platform devices within the META East Pickard Bay and META Dale Roads will not be visible from the majority of the PCNP, and cumulative effects on special qualities of the PCNP would be limited to localised areas in close proximity to these sites, within Milford Haven and Freshwater West, parts of which are already characterised by views of energy generation developments, including nearby oil refineries, jetties and onshore WTGs. Although the Proposed Development will contribute to increasing the influence of development in the seascape context, it is located at long distance from this coastline and the META East Pickard Bay and Dale Roads sites, reducing the potential for cumulative changes to special qualities, where cumulative effects on special qualities of the PCNP would be very limited in extent and are found to be of low magnitude and not significant **(moderate/minor)** in the assessments undertaken in Table 13.31.

Table 13.31 - Cumulative Assessment of PCNP Special Qualities (Consented Scenario)

Special Quality	Cumulative Assessment
1. Coastal Splendour	The Proposed Development will have no cumulative impact on the coastal splendour of the majority of the PCNP as META East Pickard Bay and META Dale Roads are not visible from the majority of the PCNP coastline and cumulative effects are localised to the areas around the Outer Milford Haven and Freshwater West. The areas around Outer Milford Haven that will be affected cumulatively, tend to have reduced coastal splendour qualities compared to other areas of the PCNP, as they are more influenced by existing large-scale energy, infrastructure, and urban areas in the baseline. The Proposed Development will relate rationally to these existing energy generation influences, and in association with META East Pickard Bay and META Dale Roads, will contributing to increasing the influence of development in the seascape context, however it is located at long distance out to sea beyond Milford Haven, appearing small in scale in the backdrop and would therefore result in relatively low levels of cumulative change to the coastal splendour qualities experienced. The additional cumulative change resulting from the Proposed Development in the consented scenario on the 'coastal splendour' of the PCNP, displayed through the 'constant sight of the sea' and 'breathtaking landscape', is assessed as low and the cumulative effect not significant **(moderate/minor)**. The 'coastal splendour' will fundamentally remain present and continue to be experienced in the context of the Proposed Development and the consented META East Pickard Bay and META Dale Roads projects.
3. Diversity of Landscape	The Proposed Development will have no cumulative impact on the landscape diversity of the majority of the PCNP as META East Pickard Bay and META Dale Roads are not visible from the majority of the PCNP coastline and cumulative effects are localised to the areas around the Outer Milford Haven and Freshwater West. The area around Outer Milford Haven that will be affected cumulatively, is a diverse landscape that is already subject to a diversity of built development influences, including onshore WTGs, oil refineries, jetties and large-scale shipping. The Proposed Development, in addition to the META East Pickard Bay and META Dale Roads projects, will have a close association with the existing energy generation influences and further the diversity of influences and elements in the setting of this part of the PCNP. The additional cumulative change resulting from the Proposed Development in the consented scenario on the 'diversity of landscape' of the PCNP is assessed as low magnitude and not significant **(moderate/minor)**.

Special Quality	Cumulative Assessment
	The 'diversity of landscape' will fundamentally remain present and continue to be experienced in the context of the Proposed Development and the consented META East Pickard Bay and META Dale Roads projects.
8. Islands	The additional cumulative change resulting from the Proposed Development in the consented scenario on the 'spectacle of the islands' of the PCNP is assessed as low magnitude and not significant **(moderate/minor)**. META Dale Roads is not visible from Skomer and Skokholm Islands, and META East Pickard Bay is located at long distance from both islands, beyond St Ann's Head and Sheep Island, therefore the is limited potential for cumulative effects in the experience of the islands. The spectacle of islands, their sense of place and feeling of remoteness will fundamentally remain present and continue to be experienced in the context of the Proposed Development and the consented META East Pickard Bay and META Dale Roads projects. The panoramic views of the seascape from the coast and islands, its rugged, unspoilt qualities, islands and steep, jagged rock formations will remain evocative, with a strong sense of place and discernible time depth.
10. Space to Breathe	The Proposed Development will have no cumulative impact on the 'space to breathe' qualities of the majority of the PCNP as META East Pickard Bay and META Dale Roads are not visible from the majority of the PCNP coastline and cumulative effects are localised to the areas around the Outer Milford Haven and Freshwater West. The around Outer Milford Haven that will be affected cumulatively, is relatively close to centres of population and will continue to afford opportunities for space to access the countryside and enjoy views. The additional cumulative change resulting from the Proposed Development in the consented scenario on the 'space to breathe' of the PCNP, particularly its 'relatively undeveloped areas' and 'enjoyment of stunning views', is assessed as low magnitude and not significant **(moderate/minor)**. The opportunities to experience 'relatively undeveloped areas' without cumulative effects arising from the Proposed Development and META East Pickard Bay and Dale Roads will continue to be available around Milford Haven and across the wider PCNP.
11. Remoteness, Tranquillity and Wildness	The Proposed Development will have no cumulative impact on the remoteness, tranquillity and wildness of the majority of the PCNP as META East Pickard Bay and META Dale Roads are not visible from the majority of the PCNP coastline and cumulative effects are localised to the areas around the Outer Milford Haven and Freshwater West. The area around Outer Milford Haven that will be affected cumulatively tend to have reduced coastal remoteness, tranquillity and wildness qualities compared to other areas of the PCNP, as they are more influenced by existing large-scale energy, infrastructure, shipping and urban areas in the baseline. The Proposed Development, in addition to META East Pickard Bay and META Dale Roads, will also relate legibly to the coastal exposure and inclement conditions that define aspects of wildness associated with the coast. The additional cumulative change resulting from the Proposed Development in the consented scenario on the perceived remoteness, tranquillity and wildness of the PCNP, is assessed as low magnitude and not significant **(moderate/minor)**. The remoteness, tranquillity and wildness will fundamentally remain present and continue to be experienced in the context of the Proposed Development and the consented META East Pickard Bay and META Dale Roads projects.

Special Quality	Cumulative Assessment
12. Diversity and Combination of Special Qualities	The special qualities that are assessed above regarding 'coastal splendour', 'diversity of landscape', 'islands', 'space to breathe' and 'remoteness, tranquillity and wildness' have been assessed as being subject to low levels of cumulative change and not significant cumulative effects as a result of the Proposed Development and the consented META East Pickard Bay and META Dale Roads projects. The visual aspects of the perceived qualities of the PCNP have been assessed, as they convey the 'sights of the sea' qualities referred to in Special Quality 12 and have also been found to be of low magnitude and not significant. Other qualities referred to as contributing to the diversity and combination of special qualities, including the 'sounds of the sea, the rolling landscapes, wooded valleys and upland plateaus of the PCNP' and the 'distinctive combination of colour, contrast and change' will not be affected cumulatively by the Proposed Development and the consented META East Pickard Bay and META Dale Roads projects. Overall, the additional cumulative change resulting from the Proposed Development in the consented scenario on the diversity and combination of special qualities of the PCNP, is assessed as low magnitude and not significant **(moderate/minor)**.

13.12.3 Application Stage Scenario – Rhoscrowther Wind Farm

Introduction

13.12.3.1 Rhoscrowther Wind Farm is located on land south of the Valero Refinery near the village of Rhoscrowther as shown in Volume 2 Figure 13.21 and is shown in the viewpoint wireline visualisations where visible, in Volume 2 Figures 13.22 – 13.40.

13.12.3.2 Rhoscrowther Wind Farm will consist of three WTGs up to 135m to tip height, with associated infrastructure including approximately 1.3 km of new access tracks, transformers, control building and substation. Each WTG will have a generating capacity up to 4.3MW. A five WTG wind farm was previously proposed on this site. This application was refused, appealed and considered at public inquiries in 2015 and 2017.

13.12.3.3 The preliminary assessment has identified that there is potential for further change to the landscape and visual baseline as a result of the application stage Rhoscrowther Wind Farm in the event that it is consented and built. The 'application stage scenario' assesses the additional effects of the Proposed Development in addition to Rhoscrowther Wind Farm, which may become present in the landscape. This scenario assumes that Rhoscrowther Wind Farm has become part of a theoretical baseline situation. The assessment seeks to establish whether the addition of the Proposed Development with Rhoscrowther Wind Farm results in new, different or additional effects, over and above those that were assessed in Section 13.7 (Visual Effects), 13.8 (Seascape Effects) and 13.9 (Landscape Effects).

13.12.3.4 The effects identified in the application stage scenario are considered as being less likely to arise than the consented scenario, as it is possible that application stage projects will not gain consent or become operational, which reduces the likelihood of application stage scenario effects arising in full.

Cumulative Visual Effects (Application Stage Scenario)

13.12.3.5 An assessment of the potential cumulative effects of the Proposed Development with Rhoscrowther Wind Farm on representative viewpoints in the SLVIA Study Area is presented in Table 13.32.

Table 13.32 - Cumulative Assessment Representative Viewpoints (Application Stage Scenario)

No	Viewpoint Data	Cumulative Assessment
1	**Caerfai Bay** Figure 13.22b Distance to Array Area: 47.85 km Distance to Rhoscrowther Wind Farm: 26.7 km	The blade tips of Rhoscrowther Wind Farm will be visible at long distance (26.7 km) on the landform skyline to the south-east. The Proposed Development will be viewed in a different direction of view to the south-west out to sea. Blade tips would be seen behind and in conjunction with the distant chimneys/stacks of the Valero oil refinery and there would be a close visual association, resulting in a very small increase in the amount of visible infrastructure within a very narrow portion of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as negligible and the cumulative effect not significant **(minor)**.
2	**St Brides Bay, Nolton Haven** Figure 13.23 Distance to Array Area: 49.19 km Distance to Rhoscrowther Wind Farm: 17.2 km	Rhoscrowther Wind Farm will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with Rhoscrowther, is assessed as **zero** and the cumulative effect not significant.
3	**Marloes Beacon** Figure 13.24b Distance to Array Area: 36.99 km Distance to Rhoscrowther Wind Farm: 13.9 km	The three Rhoscrowther Wind Farm WTGs will be visible at mid-range (13.9 km) across Milford Haven to the south-east. The Proposed Development will be viewed in a different direction of view to the south-west out to sea. The Rhoscrowther WTGs would be seen adjacent to and in conjunction with the chimneys/stacks of the Valero oil refinery and there would be a close visual association, resulting in a small increase in the amount of visible infrastructure within a very narrow portion of the view. They will also be viewed in the context of the operational Wear Point, Castle Pill Farm and Scoveston Park WTGs in this part of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
4	**Skomer Island** Figure 13.25c Distance to Array Area: 33.74 km	The three Rhoscrowther Wind Farm WTGs will be visible at long distance (19.6 km) along the mainland coast to the south-east. The Proposed Development will be viewed in a different direction of view to the south-west out to sea. The Rhoscrowther WTGs would be seen adjacent to and in conjunction with the chimneys/stacks of the Valero oil refinery and there would be a close visual association,

No	Viewpoint Data	Cumulative Assessment
	Distance to Rhoscrowther Wind Farm: 19.6 km	resulting in a small increase in the amount of visible infrastructure within a very narrow portion of the view. They will also be viewed in the context of the operational Wear Point, Castle Pill Farm and Scoveston Park WTGs in this part of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
5	**St Ann's Head** Figure 13.26e Distance to Array Area: 35.18 km Distance to Rhoscrowther Wind Farm: 10.3 km	The three Rhoscrowther Wind Farm WTGs will be visible at mid-range (10.3 km) in the view inland across Milford Haven to the east. The Proposed Development will be viewed in the opposite viewing direction to the south-west out to sea. The Rhoscrowther WTGs would be seen adjacent to and in conjunction with the chimneys/stacks of the Valero oil refinery and there would be a close visual association, resulting in a small increase in the amount of visible infrastructure within a narrow portion of the view. They will also be viewed in the context of the operational Wear Point, Castle Pill Farm and Scoveston Park WTGs in this part of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
6	**South Hook Fort** Figure 13.27 Distance to Array Area: 41.84 km Distance to Rhoscrowther Wind Farm: 5.1 km	Rhoscrowther Wind Farm will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with Rhoscrowther, is assessed as **zero** and the cumulative effect not significant.
7	**West Angle Bay** Figure 13.28 Distance to Array Area: 39.25 km Distance to Rhoscrowther Wind Farm: 6.1 km	Rhoscrowther Wind Farm will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with Rhoscrowther, is assessed as **zero** and the cumulative effect not significant.
8	**B4320, near Wogaston** Figure 13.29d Distance to Array Area: 43.67 km Distance to Rhoscrowther Wind Farm: 1.2 km	Although foreground screening blocks the view from this location, moving slightly north along path, the three Rhoscrowther Wind Farm WTGs will become visible in view north, at close range (1.2 km). The Rhoscrowther WTGs would be viewed to the fore and in conjunction with the large-scale chimneys/stacks of the Valero oil refinery. Although appearing large in scale, the Rhoscrowther WTGs will form a close and complementary arrangement of energy developments, both functionally and visually, resulting in a moderate increase in the amount of visible infrastructure within the portion of the view that is already heavily influenced by the refinery, Wagaston solar farm and the operational Wear Point, Castle Pill

No	Viewpoint Data	Cumulative Assessment
		Farm and Scoveston Park WTGs. The Proposed Development will be viewed in a different direction to the west out to sea across Castlemartin and has little association with this industrial landscape and elements to the north because of its distance offshore and position in a different part of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as medium-low and the cumulative effect not significant **(moderate/minor)**.
9	**Stack Rocks** Figure 13.30e Distance to Array Area: 42.51 Distance to Rhoscrowther Wind Farm: 6.9 km	The three Rhoscrowther Wind Farm WTGs will be visible at mid-range (6.9 km) in the view north across Castlemartin ranges. The Proposed Development will be viewed in a different direction to the west out to sea. The Rhoscrowther WTGs would be seen adjacent to and in conjunction with the chimneys/stacks of the Valero oil refinery and there would be a close visual association, resulting in a small increase in the amount of visible infrastructure within a narrow portion of the view. They will also be viewed in the context of the operational Wear Point, Castle Pill Farm and Scoveston Park WTGs in this part of the view, across the Castlemartin range. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
10	**Freshwater West Beach** Figure 13.31d Distance to Array Area: 40.61 km Distance to Rhoscrowther Wind Farm: 3.3 km	The blade tips of the three Rhoscrowther Wind Farm WTGs will be visible at relatively close range (3.3 km) in the view north-east across the intervening sand dunes that enclose the inland side of Freshwater West beach. The Proposed Development will be viewed in the opposite viewing direction to the west out to sea. The Rhoscrowther WTGs would not be seen with other visible infrastructure or operational WTGs, which are not visible, and would introduce new visual movement and an intermittent effect, through their rotating blades being over the intervening dunes. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
11	**Skokholm Island** Figure 13.32b Distance to Array Area: 30.35 Distance to Rhoscrowther Wind Farm: 18.0 km	The three Rhoscrowther Wind Farm WTGs will be visible at long distance (18.0 km) along the mainland coast to the south-east. The Proposed Development will be viewed in a different direction of view to the south-west out to sea. The Rhoscrowther WTGs would be seen adjacent to and in conjunction with the chimneys/stacks of the Valero oil refinery and there would be a close visual association, resulting in a small increase in the amount of visible infrastructure within a very narrow portion of the view. They will also be viewed in the context of the operational Wear Point, Castle Pill Farm and Scoveston Park WTGs in this part of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.

No	Viewpoint Data	Cumulative Assessment
12	**Hooper's Point** Figure 13.33b Distance to Array Area: 35.89 Distance to Rhoscrowther Wind Farm: 12.7 km	The three Rhoscrowther Wind Farm WTGs will be visible at mid-range (12.7 km) across Milford Haven on the skyline to the east. The Proposed Development will be viewed in the opposite direction of view to the south-west out to sea. The Rhoscrowther WTGs would be seen adjacent to and in conjunction with the chimneys/stacks of the Valero oil refinery and there would be a close visual association, resulting in a small increase in the amount of visible infrastructure within a very narrow portion of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
13	**Sheep Island** Figure 13.34 Distance to Array Area: 38.07 Distance to Rhoscrowther Wind Farm: 6.3 km	Rhoscrowther Wind Farm will not be visible, therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with Rhoscrowther, is assessed as **zero** and the cumulative effect not significant.
14	**Castlemartin Range Trail (Cold Comfort)** Figure 13.35d Distance to Array Area: 43.75 Distance to Rhoscrowther Wind Farm: 3.8 km	Rhoscrowther Wind Farm will not be visible therefore the additional cumulative magnitude change to the view caused by the Proposed Development in conjunction with Rhoscrowther, is assessed as **zero** and the cumulative effect not significant.
15	**Carn Llidi** Figure 13.36b Distance to Array Area: 50.01 Distance to Rhoscrowther Wind Farm: 30.9 km	The blade tips of Rhoscrowther Wind Farm will be visible at long distance (30.9 km) on the landform skyline to the south-east. The Proposed Development will be viewed in a different direction of view to the south-west out to sea. Blade tips would be seen behind and in conjunction with the distant chimneys/stacks of the Valero oil refinery and there would be a close visual association, resulting in a very small increase in the amount of visible infrastructure within a very narrow portion of the view. The additional cumulative magnitude of change to the view caused by the Proposed Development in conjunction with Rhoscrowther, over and above the effect of Project Erebus alone, is assessed as negligible and the cumulative effect not significant **(minor)**.

Cumulative Seascape Effects (Application Stage Scenario)

13.12.3.6 The potential for cumulative effects on seascape character arising in the application stage scenario is informed by the assessments undertaken in the cumulative visual assessment above and the seascape effects assessment in Section 13.8. Rhoscrowther Wind Farm is located on the edge of SCA 32 Inner Milford Haven. It is considered that the potential for additional significant cumulative effects on seascape character in the application stage scenario requires further assessment for the SCAs which cover the seascape of Milford Haven, SCA31 Outer Milford Haven and SCA 32 Inner Milford Haven, where there may be cumulative visibility of the Proposed Development and Rhoscrowther Wind Farm. The cumulative effect of the Proposed Development on these SCAs in the application stage scenario is assessed in turn as follows. In the application stage scenario, the cumulative effect of the Proposed Development on all other SCAs is assessed as not significant.

SCA 31: Outer Milford Haven

Cumulative magnitude of change and significance of effect

13.12.3.7 The Rhoscrowther Cumulative ZTV in Volume 2, Figure 13.21b shows that there will be very limited geographic areas of SCA 31 with combined theoretical visibility of Rhoscrowther and the Proposed Development, and therefore limited areas where cumulative changes may occur. Rhoscrowther Wind Farm will not be visible from many of the areas that have project alone visibility of the Proposed Development, for example, it will not be visible from South Hook Point (Viewpoint 6), West Angle Bay (Viewpoint 7) or the coast near Sheep Island (Viewpoint 13). Due to the indented form of the coastline and enclosure by bays and headlands, there are relatively few geographic areas of the SCA that afford views of both the Proposed Development out to sea to the west, and inland to Rhoscrowther in the opposite direction to the east across Inner Milford Haven.

13.12.3.8 Cumulative changes to the perceived character of SCA 31 are focused on the limited geographic areas where these successive views occur, such as elevated areas on St Ann's Head (such as Viewpoint 5) and parts of the Angle Peninsula, where the three Rhoscrowther WTGs will be visible at mid-range in views inland to the east and the Proposed Development is seen in the opposite viewing direction out to sea. In these views, the Rhoscrowther WTGs would be seen adjacent to and in conjunction with the other vertical structures, particularly the chimneys/stacks of the Valero oil refinery and there would be a close association. The operational Wear Point, Castle Pill Farm and Scoveston Park WTGs also influence the setting of the SCA in these inland views, where onshore WTGs contribute to the clutter of elements on the inland skyline.

13.12.3.9 The Proposed Development will result in some increase in the influence of man-made elements perceived from the SCA, however this will occur in the context of numerous energy development influences that already form key characteristics of the seascape character of Milford Haven. The Proposed Development WTGs would not be discordant with the energy influences present in the application stage baseline of the SCA. The Proposed Development will result in some increase in the cumulative influence of offshore renewables as elements in the setting of the SCA, however its influence is added out to sea beyond Milford Haven, at very long distance, appearing small in scale in the backdrop of views out to sea. It will have a geographically contained and remote association with the Rhoscrowther Wind Farm and will be less apparent as an addition to the cumulative situation and context of the SCA.

13.12.3.10 The array of WTGs will form a separate isolated offshore wind farm feature, occurring in the wider setting, and is too infrequent and of insufficient influence to be perceived as a characteristic of the SCA, which is more influenced by onshore WTGs, oil refineries, jetties and built development in the haven. The Proposed Development will add a relatively small scale, single offshore wind farm element, perceived as an extension of the existing wind farm influence within the wider seascape setting of the SCA and would not combine with other wind farm developments to change the overall existing seascape character. The patterns and components of the consented baseline of the SCA will continue to be definitive. The Proposed Development will not result in the SCA becoming defined by the presence of offshore wind farms/renewable energy developments.

13.12.3.11 The additional cumulative magnitude of change to SCA 31 caused by the Proposed Development in the application stage scenario, is therefore assessed as low and the cumulative effect not significant **(moderate/minor)**.

SCA 32: Inner Milford Haven

Cumulative magnitude of change and significance of effect

13.12.3.12 The Rhoscrowther Cumulative ZTV in Volume 2, Figure 13.21b shows that there will be very limited geographic areas of SCA 32 with combined theoretical visibility of Rhoscrowther and the Proposed Development, and therefore very limited areas where cumulative changes may occur. The majority of the SCA has visibility of Rhoscrowther Wind Farm alone, but not the Proposed Development, due to the intervening screening of headlands and peninsulas which enclose views to the sea from the Inner Milford Haven. Only occasional areas of combined theoretical visibility are shown in the ZTV, but these are from urban areas, where visibility will be restricted and there is no potential for the character of the urban landscape to be changed significantly by the Proposed Development.

13.12.3.13 Rhoscrowther Wind Farm would be visible in an open rural location, on the southern edge of SCA 32, adjacent to the Valero oil refinery, with other large industrial installations and wind farms to the north and northeast. Due to the location of Rhoscrowther Wind Farm adjacent to the Valero oil refinery, there would be a close and complementary arrangement of these two energy developments, both functionally (clean energy contrasting with very large fossil fuel production) and visually, as closely associated but discrete vertical elements. In all views from the SCA, Rhoscrowther Wind Farm would be seen in conjunction with the tall chimneys and stacks on the oil refinery site.

13.12.3.14 Due to the very limited visibility of the Proposed Development and the existing context of the Rhoscrowther Wind Farm site next to the Valero oil refinery, the additional cumulative magnitude of change to SCA 32 caused by the Proposed Development in the application stage scenario, is assessed as negligible and the cumulative effect not significant **(minor)**.

Pembrokeshire Coast National Park

Cumulative magnitude of change and significance of effect

13.12.3.15 The potential for cumulative effects on the defined special qualities of the PCNP in the application stage scenario is informed by the assessments undertaken in the cumulative visual and cumulative seascape assessments above and the special qualities assessment in Section 13.8.7. An assessment of the potential cumulative effects of the Proposed Development with the application stage Rhoscrowther Wind Farm on the Special Qualities of the PCNP is presented in Table 13.33. The six special qualities that were assessed in detail in the project alone assessment for Project Erebus in section 13.8.7 are assessed further in this cumulative assessment, with all other Special Qualities scoped out of further assessment for the reasons set out in the preliminary assessment in Table 13.18.

13.12.3.16 Although located close to the PCNP, Rhoscrowther Wind Farm would not be visible from the majority of the PCNP, and cumulative effects on special qualities of the PCNP would be limited to a small area to the west and south-west of the site, which is already characterised by views of the nearby Valero oil refinery. Rhoscrowther Wind Farm is located within an area designated for energy development, adjacent to an oil refinery and Project Erebus is located at long distance offshore, where cumulative effects on special qualities of the PCNP would be very limited in extent and are found to be of low magnitude and not significant **(moderate/minor)** in the assessments undertaken in Table 13.33.

Table 13.33 - Cumulative Assessment of PCNP Special Qualities (Application Stage Scenario)

Special Quality	Cumulative Assessment
1. Coastal Splendour	Cumulative effects of the Proposed Development and Rhoscrowther Wind Farm on the coastal splendour of the PCNP will be localised to areas around Outer Milford Haven, where Rhoscrowther Wind Farm will be most visible. The Proposed Development is likely to result in a slightly increased cumulative effect where successive views occur offshore and inland to Rhoscrowther Wind Farm from elevated areas on St Ann's Head and the Angle Peninsula, however Rhoscrowther WTGs would be seen in conjunction with the large-scale chimneys/stacks of the Valero oil refinery and there would be a close association to these existing energy developments and clutter of operational onshore WTGs. Factoring in the relatively limited additional influence of Rhoscrowther Wind Farm, the very long distance of the Proposed Development out to sea in the opposite direction, which appears small in scale in the seascape backdrop experienced from localised geographic areas at Milford Haven, the additional cumulative magnitude of change to the coastal splendour of the PCNP caused by the Proposed Development in the application stage scenario, is assessed as low and the cumulative effect not significant **(moderate/minor)**.
3. Diversity of Landscape	Cumulative effects of the Proposed Development and Rhoscrowther Wind Farm on the landscape diversity of the PCNP will be localised to areas around Outer Milford Haven, where

Special Quality	Cumulative Assessment
	Rhoscrowther Wind Farm will be most visible. The area around Outer Milford Haven that will be affected cumulatively, is a diverse landscape that is already subject to a diversity of built development influences, including onshore WTGs, oil refineries, jetties, and large-scale shipping. The Proposed Development, in addition to Rhoscrowther Wind Farm, will have a close association with the existing energy generation influences, resulting in some increase in the influence of man-made elements perceived from this part of the PCNP, but contributes to the diversity of influences and elements in the setting of this part of the PCNP. The additional cumulative change resulting from the Proposed Development in the consented scenario on the 'diversity of landscape' of the PCNP is assessed as low magnitude and not significant **(moderate/minor)**. The 'diversity of landscape' will fundamentally remain present and continue to be experienced in the context of the Proposed Development and Rhoscrowther Wind Farm.
8. Islands	Rhoscrowther Wind Farm will have very limited influence on the spectacle of the islands experienced from Skomer and Skokholm, given it is located at long distance from both islands, and would be seen in conjunction with the chimneys/stacks of the Valero oil refinery and clutter of operational onshore WTGs on the mainland. The Proposed Development may contribute to some increase in the cumulative development context in the seascape setting of the islands, however it is located at very long distance offshore, is relatively small in scale and is located in the opposite direction to Rhoscrowther Wind Farm, which limits is contribution to the cumulative effects experienced from the islands. The spectacle of islands, their sense of place and feeling of remoteness will fundamentally remain present and continue to be experienced in the context of the Proposed Development and Rhoscrowther Wind Farm. The panoramic views of the seascape from the coast and islands, its rugged, unspoilt qualities, islands and steep, jagged rock formations will remain evocative, with a strong sense of place and discernible time depth. The additional cumulative change resulting from the Proposed Development in the application stage scenario on the 'spectacle of the islands' of the PCNP is assessed as low magnitude and not significant **(moderate/minor)**.
10. Space to Breathe	The Proposed Development will have no cumulative impact on the 'space to breathe' qualities of the majority of the PCNP where Rhoscrowther Wind Farm or the Proposed Development are not visible. Cumulative effects are likely to be localised to the areas around the Outer Milford Haven, where the cumulative visibility of both projects will be concentrated. The around Outer Milford Haven that will be affected cumulatively is relatively close to centres of population and will continue to afford opportunities for space to access the coast and enjoy views, with 'space to breathe', with the addition of the Proposed Development and Rhoscrowther Wind Farm. The additional cumulative change resulting from the Proposed Development in the application stage scenario on the 'space to breathe' of the PCNP, particularly its 'relatively undeveloped areas' and 'enjoyment of stunning views', is assessed as low magnitude and not significant **(moderate/minor)**.

Special Quality	Cumulative Assessment
	The opportunities to experience 'relatively undeveloped areas' without cumulative effects arising from the Proposed Development and Rhoscrowther Wind Farm will continue to be available around Milford Haven and across the wider PCNP.
11. Remoteness, Tranquillity and Wildness	The Proposed Development will have no cumulative impact on the remoteness, tranquillity and wildness for the parts of the PCNP where Rhoscrowther Wind Farm is not visible. Cumulative effects are likely to be localised to the areas around the Outer Milford Haven, where the cumulative visibility of both projects will be concentrated. The area around Outer Milford Haven that will be affected cumulatively tend to have reduced coastal remoteness, tranquillity and wildness qualities compared to other areas of the PCNP, as they are more influenced by existing large-scale energy, infrastructure, shipping and urban areas in the baseline. The Proposed Development, in addition to Rhoscrowther Wind Farm, will have a close association with the existing energy generation influences, resulting in some increase in the influence of man-made elements and therefore a potential reduction in the perceived remoteness, but will also relate legibly to the coastal exposure and inclement conditions that define aspects of wildness associated with the coast. The additional cumulative change resulting from the Proposed Development in the consented scenario on the perceived remoteness, tranquillity and wildness of the PCNP, is assessed as low magnitude and not significant **(moderate/minor)**. The remoteness, tranquillity and wildness will fundamentally remain present and continue to be experienced in the context of the Proposed Development and Rhoscrowther Wind Farm.
12. Diversity and Combination of Special Qualities	The special qualities that are assessed above regarding 'coastal splendour', 'diversity of landscape', 'islands', 'space to breathe' and 'remoteness, tranquillity and wildness' have been assessed as being subject to low levels of cumulative change and not significant cumulative effects as a result of the Proposed Development and Rhoscrowther Wind Farm. The visual aspects of the perceived qualities of the PCNP have been assessed, as they convey the 'sights of the sea' qualities referred to in Special Quality 12 and have also been found to be of low magnitude and effects not significant. Other qualities referred to as contributing to the diversity and combination of special qualities, including the 'sounds of the sea, the rolling landscapes, wooded valleys and upland plateaus of the PCNP' and the 'distinctive combination of colour, contrast and change' will not be affected cumulatively by the Proposed Development and Rhoscrowther Wind Farm. Overall, the additional cumulative change resulting from the Proposed Development in the application stage scenario on the diversity and combination of special qualities of the PCNP, is assessed as low magnitude and not significant **(moderate/minor)**.

13.12.4 Scoping Stage Scenario – Project Valorous

Introduction

13.12.4.1 Cumulative SLVIA generally follows an approach whereby scoping stage sites are not considered in the cumulative effect assessment. This is in line with best practice in cumulative SLVIA and based on guidance, including 'Assessing the Cumulative Impact of Onshore Wind Energy Developments' (NatureScot, 2012), which states that -

'An assessment of cumulative impacts associated with a specific development proposal should encompass the effects of the proposal in combination with:

- *existing development, either built or under construction;*
- *approved development, awaiting implementation; and*
- *proposals awaiting determination within the planning process with design information in the public domain. Proposals and design information may be deemed to be in the public domain once an application has been lodged, and the decision-making authority has formally registered the application'.*

13.12.4.2 Although this guidance generally recommends cumulative assessment goes only as far as assessing projects where an application has been lodged, it does however, also state that *'occasionally it may be appropriate to include proposals which are in the early stages of development in an assessment, particularly where clusters of development or "hotspots" emerge. However, a degree of pragmatism is required to enable proposals to progress to determination'.*

13.12.4.3 GLVIA3 (Landscape Institute, 2013) also supports the approach of assessing projects with planning consent and those that are subject of a valid planning application, stating (7.14) that *'schemes that are at the pre-planning or scoping stage are not generally considered in the assessment of cumulative effects because of uncertainty about what will actually occur, that is, is not 'reasonably foreseeable'.*

13.12.4.4 GLVIA3 does however note, that '*there may be occasions where such schemes may be included in the assessment if the competent authority or consultation bodies consider this to be necessary. Such a request should only be made if absolutely necessary to make a realistic assessment of potential cumulative effects'.*

13.12.4.5 Consultations with stakeholders have taken place on the EIA approach to the cumulative assessment and NRW have provided advice, including feedback on the projects that may have cumulative seascape, landscape and visual effects (Table 13.4). Generally, *'NRW advise that projects which have not yet been applied for should not be included, unless the project is well defined and there are solid reasons for believing that it will be taken forward'*. The key issue, therefore, in terms of the inclusion of scoping stage sites in the cumulative SLVIA, is the degree to which they are 'well-defined' to the point that they can be assessed, and how likely the project is to be taken forward.

13.12.4.6 With respect to Project Valorous, although the Scoping Report provides a project description, which includes information on the assumed number of WTGs and their height in an indicative site array, these are not currently 'well-defined' or of 'sufficient detail' to make a full assessment. There are too many uncertainties still present. No lease agreement is in place yet, geophysical and geotechnical studies are not complete so the location of WTGs within the Valorous array area is not fully defined at this time and finally the dimension of the WTGs are not confirmed (due to no engagement at this stage with procurement).

13.12.4.7 Although there appears to be insufficient detail to be able to assess the cumulative effects of Project Valorous in this SLVIA, NRW have advised that *'given that this project appears highly likely to come forward and is being proposed by the same developer'*…. '*information required to carry out a cumulative assessment can be made available to allow this to be carried out'*, suggesting that *'a worst-case scenario of turbine height and layout could potentially be used and potentially some viewpoints could be assessed with photomontages included'*, while accepting that *'cumulative assessments may also be extended as detailed information on new proposals come forward'.*

13.12.4.8 As set out in Table 13.29, and in order to address advice provided by NRW, the scoping stage Project Valorous has therefore been scoped in to the SLVIA, with further information and high-level assessment set out, based on the maximum WTG dimensions (270m blade tip/240m rotor diameter) and the 20 WTG 'scoping layout' presented in the Project Valorous Scoping Report.

13.12.4.9 The assessment reports on the total cumulative effect of Project Erebus and Project Valorous, focusing on the additional cumulative effect that may arise because of Project Valorous. This 'scoping stage' scenario assumes that as the demonstration project that is being developed first, Project Erebus has become part of a theoretical baseline situation, and that the cumulative effects may arise because of Project Valorous, since there is no possibility that Project Valorous will precede Project Erebus. The assessment seeks to establish whether the addition of Project Valorous results in new, different or additional effects, over and above those that were assessed in Section 13.7 (Visual Effects), 13.8 (Seascape Effects) and 13.9 (Landscape Effects) for Project Erebus alone. The assessments are high level and can be extended and assessed with greater confidence as more information comes forward in the Project Valorous application and its ES.

13.12.4.10 The effects identified in this scoping stage scenario are considered as being less likely to arise than the application stage and consented scenarios, as it is possible that scoping stage projects will not ultimately be developed in the form set out at Scoping, or may not gain consent or become operational, which reduces the likelihood of application stage scenario effects arising in full.

13.12.4.11 The location of Project Valorous is shown in Volume 2, Figure 13.21, approximately 47 km southwest of the Pembrokeshire coastline, in an outline area of interest of approximately 155 km^2. The final offshore array area boundary and coordinates are still to be determined following award of an option agreement from The Crown Estate (TCE). Project Valorous consists of between 18 and 31 WTGs, with associated floating semi-submersible platforms and a single offshore substation. The Project Valorous scoping layout (20 x 270m blade tip height WTGs) is assumed to be the worse-case for the assessment and is shown in the wireline visualisations, where visible, in Volume 2, Figure 13.22 – 13.40.

Cumulative Visual Effects (Scoping Stage Scenario)

13.12.4.12 An initial assessment of the potential cumulative effects of the Proposed Development with Project Valorous on representative viewpoints in the SLVIA Study Area is presented in Table 13.34.

Table 13.34 – Initial Cumulative Assessment Representative Viewpoints (Scoping Stage Scenario)

No	Viewpoint Data	Cumulative Assessment
1	**Caerfai Bay** Figure 13.22c Distance to Array Area: 47.85 km Distance to Project Valorous: 59.9 km	Project Valorous will be located at very long distance, 59.9 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they will not be seen. The Project Valorous WTGs will be located largely behind the Project Erebus WTGs at greater distance, with just their rotors/blades theoretically visible above the skyline. Due to these factors, Project Valorous will result in a negligible additional effect, such that the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as low and the total cumulative effect not significant **(moderate/minor)** (which is the same as assessed for Project Erebus alone).
2	**St Brides Bay, Nolton Haven** Figure 13.23c Distance to Array Area: 49.19 km Distance to Project Valorous: 61.3 km	Only the extremity of the blade tips of two Project Valorous WTGs will be theoretically visible, located at very long distance, 61.3 km offshore from the viewpoint to the closest part of its array area. The majority of the Project Valorous WTGs will not be visible due to the intervening screening by the Marloes Peninsula. Project Valorous will result in zero additional effect, such that the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as negligible and the total cumulative effect not significant **(moderate/minor)** (which is the same as assessed for Project Erebus alone).
3	**Marloes Beacon** Figure 13.24c Distance to Array Area: 36.99 km Distance to Project Valorous: 49.0 km	Project Valorous will be located at very long distance, 49.0 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also extend the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
4	**Skomer Island** Figure 13.25d	Project Valorous will be located at very long distance, 45.9 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with

No	Viewpoint Data	Cumulative Assessment
	Distance to Array Area: 33.74 km Distance to Project Valorous: 45.9 km	the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also slightly extend the lateral spread of the combined array to the south resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as medium-low and the total cumulative effect not significant **(moderate)** (which is the same as assessed for Project Erebus alone).
5	**St Ann's Head** Figure 13.26c Distance to Array Area: 35.18 km Distance to Project Valorous: 46.6 km	Project Valorous will be located at very long distance, 46.6 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also extend the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
6	**South Hook Fort** Figure 13.27c Distance to Array Area: 41.84 km Distance to Project Valorous: 53.0 km	Project Valorous will be located at very long distance, 53.0 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located largely behind the Project Erebus WTGs at greater distance, but also slightly extend the lateral spread of the combined array to the south resulting in a perceived connection with the headland of the Angle Peninsula, however much of Project Valorous will be screened by this intervening landform. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
7	**West Angle Bay** Figure 13.28c	Project Valorous will be located at very long distance, 50.4 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of

No	Viewpoint Data	Cumulative Assessment
	Distance to Array Area: 39.25 km Distance to Project Valorous: 50.4 km	prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located largely behind the Project Erebus WTGs at greater distance, but also slightly extend the lateral spread of the combined array to the south resulting in a perceived connection with the headland, however part of Project Valorous will be screened by this intervening landform. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
8	**B4320, near Wogaston** Figure 13.29c Distance to Array Area: 43.67 km Distance to Project Valorous: 52.4 km	Project Valorous will be located at very long distance, 52.4 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also extend the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
9	**Stack Rocks** Figure 13.30d Distance to Array Area: 42.51 Distance to Project Valorous: 49.3 km	Project Valorous will be located at very long distance, 49.3 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but mainly results in an extension to the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
10	**Freshwater West Beach** Figure 13.31b Distance to Array Area: 40.61 km	Project Valorous will be located at very long distance, 49.8 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind

No	Viewpoint Data	Cumulative Assessment
	Distance to Project Valorous: 49.8 km	the Project Erebus WTGs at greater distance, but also extend the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Only the rotors and blades of the Project Valorous WTGs will be visible above the skyline, rather than the WTG towers, which reduces its effect, appearing more distant and clearly beyond the horizon. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
11	**Skokholm Island** Figure 13.32d Distance to Array Area: 30.35 Distance to Project Valorous: 42.5 km	Project Valorous will be located at very long distance, 45.2 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also slightly extend the lateral spread of the combined array to the south resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as medium-low and the total cumulative effect not significant **(moderate)** (which is the same as assessed for Project Erebus alone).
12	**Hooper's Point** Figure 13.33c Distance to Array Area: 35.89 Distance to Project Valorous: 47.8 km	Project Valorous will be located at very long distance, 47.8 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also extend the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
13	**Sheep Island** Figure 13.34c	Project Valorous will be located at very long distance, 48.9 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of

No	Viewpoint Data	Cumulative Assessment
	Distance to Array Area: 38.07 Distance to Project Valorous: 48.9 km	prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also extend the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
14	**Castlemartin Range Trail (Cold Comfort)** Figure 13.35c Distance to Array Area: 43.75 Distance to Project Valorous: 51.5 km	Project Valorous will be located at very long distance, 51.5 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they are unlikely to be seen. The Project Valorous WTGs will be located partially behind the Project Erebus WTGs at greater distance, but also extend the lateral spread of the combined array to the south, resulting in a wider portion of developed skyline and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as rising to medium-low and the total cumulative effect not significant **(moderate)**.
15	**Carn Llidi** Figure 13.36c Distance to Array Area: 50.01 Distance to Project Valorous: 61.9 km	Project Valorous will be located at very long distance, 61.9 km offshore from the viewpoint to the closest part of its array area. At such long distance, the Project Valorous WTGs will be infrequently visible, having low contrast with the sky at such long-range and during the majority of prevailing visibility conditions they will not be seen. The Project Valorous WTGs will be located largely behind the Project Erebus WTGs at greater distance, potentially increasing the perceived depth and density of WTGs within the combined array. Due to these factors, Project Valorous will result in a negligible additional effect, such that the total cumulative magnitude of change to the view resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as low and the total cumulative effect not significant **(moderate/minor)** (which is the same as assessed for Project Erebus alone).

Cumulative Seascape Effects (Scoping Stage Scenario)

13.12.4.13 The potential for cumulative effects on seascape character arising in the scoping stage scenario is informed by the assessments undertaken in the cumulative visual assessment above and the seascape effects assessment in Section 13.8. Project Valorous is located 42.5 km south-west of the closest land at Skokholm Island and approximately 46.5 km from the mainland Pembrokeshire coastline at St Ann's Head. The potential for Project Valorous to have significant cumulative effects on seascape character perceived by people from the coastline is therefore considerably reduced by its very long distance offshore and its remote association with the seascape character experienced along the Pembrokeshire coastline.

13.12.4.14 An initial assessment of the potential cumulative seascape effects of the Proposed Development with Project Valorous on the seascape character of SCAs is presented in Table 13.35. The five SCAs that were assessed in detail in the project alone assessment for Project Erebus in section 13.8.2 to 13.8.6 are assessed further in this cumulative assessment, with all other SCA scoped out of further assessment for the reasons set out in the preliminary assessment in Table 13.26. In the scoping stage scenario, the cumulative effect of the Proposed Development with Project Valorous on the perceived character of all other SCAs in the SLVIA study area is assessed as not significant.

Table 13.35 – Initial Cumulative Assessment Seascape Character (Scoping Stage Scenario)

SCA	Distance to array area (km)	Distance to Project Valorous (km)	Cumulative Assessment
SCA 25 Skomer Island and Marloes Peninsula	32.4 km	46.6 km	Project Valorous WTGs will be infrequently visible at very long distance, located partially behind the Project Erebus WTGs, but also slightly extending the lateral spread of the combined array to the south and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the perceived character of the SCA 25 resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as medium-low and the total cumulative effect not significant **(moderate)**.
SCA 26 Skokholm and Gateholm coastal waters	29.7 km	43.6 km	Project Valorous WTGs will be infrequently visible at very long distance, located partially behind the Project Erebus WTGs, but also slightly extending the lateral spread of the combined array to the south and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the perceived character of the SCA 26 resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as medium-low and the total cumulative effect not significant **(moderate)**.

SCA	Distance to array area (km)	Distance to Project Valorous (km)	Cumulative Assessment
SCA 31 Outer Milford Haven	34.6 km	46.4 km	Project Valorous WTGs will be infrequently visible at very long distance, located partially behind the Project Erebus WTGs, but also slightly extending the lateral spread of the combined array to the south and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the perceived character of the SCA 31 resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as medium-low and the total cumulative effect not significant **(moderate)**.
SCA 34 Freshwater West	37.0 km	48.0 km	Project Valorous WTGs will be infrequently visible at very long distance, located partially behind the Project Erebus WTGs, but also slightly extending the lateral spread of the combined array to the south and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the perceived character of the SCA 34 resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as medium-low and the total cumulative effect not significant **(moderate)**.
SCA 35 Castlemartin coastal waters	35.9 km	46.2 km	Project Valorous WTGs will be infrequently visible at very long distance, located partially behind the Project Erebus WTGs, but also slightly extending the lateral spread of the combined array to the south and increasing the depth of WTGs extending offshore. Due to these factors, the total cumulative magnitude of change to the perceived character of the SCA 35 resulting from the Proposed Development and Project Valorous together, in the scoping stage scenario, is assessed as medium-low and the total cumulative effect not significant **(moderate)**.

13.12.4.15 The potential for cumulative effects on the defined special qualities of the PCNP in the scoping stage scenario is informed by the assessments undertaken in the cumulative visual and cumulative seascape assessments above and the special qualities assessment in Section 13.8.7.

13.12.4.16 Project Valorous is located 42.5 km south-west of the closest land of the PCNP at Skokholm Island and approximately 46.5 km from the mainland PCNP coastline at St Ann's Head. It is also located largely behind the Proposed Development, with the Project Valorous WTGs appearing smaller in scale, often with the just the rotors/upper towers theoretically visible above the horizon, which would be infrequently visible in the prevailing weather conditions due to the distances involved. The potential for Project Valorous to have significant cumulative effects on the PCNP's special qualities perceived by people from the coastline is therefore considerably reduced by its very long distance offshore and its remote association with the qualities experienced along the PCNP coastline. The addition of Project Valorous has been found to extend the lateral spread of the combined WTG array southwards, to occupy a wider horizontal extent of the offshore views, particularly in views from the Marloes Peninsula and South Pembrokeshire coastline, as well as increasing the overall density and depth of WTGs extending offshore. Due to these factors, the in-combination (total) cumulative effect of Project Valorous and Project Erebus on the six relevant PCNPs special qualities (1, 3, 8, 10, 11 and 12) is assessed as increasing to medium-low magnitude and not significant **(moderate)**. In all cases, the coastal splendour (1), landscape diversity (3), spectacle of the islands (8), space to breathe (10) and remoteness, tranquillity and wildness (11) qualities of the PCNP will fundamentally remain present and continue to be experienced in the context of the Proposed Development and Project Valorous.

13.13 Transboundary

13.13.1.1 Transboundary effects arise when impacts from a development within one European Economic Area (EEA) states affects the environment of another EEA state(s).

13.13.1.2 The array area is located approximately 89.6 km from the coastline of the nearest EU member state (Republic of Ireland). The ZTV in Volume 2, Figure 13.11a shows that there is no theoretical visibility of the offshore elements of the Proposed Development beyond approximately 70 km due to the effects of earth curvature, which would effectively 'hide' the WTGs behind the horizon at this distance.

13.13.1.3 Transboundary effects have therefore been scoped out of the SLVIA, since there is no potential for significant effects at such long distance; the coastline of other EU member states is outside the SLVIA Study Area and would have no visibility of the construction and operation of the Proposed Development.

13.14 Summary

13.14.1.1 The SLVIA identifies and assesses the significance of changes resulting from the construction, operation and decommissioning of the Proposed Development. This is carried out in relation to both the seascape character and landscape character as environmental resources in their own right, and on people's views and visual amenity.

13.14.1.2 The seascape, landscape and visual effects of the Proposed Development are summarised in Table 13.36 and cumulative effects are summarised in Table 13.37.

Table 13.36 – Summary of Effects

Description of Effect	Significance of Potential Effect (assuming standard mitigation implemented)		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Construction					
The residual effects arising as a result of the construction of the Proposed Development are assessed as being of the same magnitude and significance on all seascape, landscape and visual receptors as those arising due to their operation and maintenance, as summarised below and assessed in Section 13.7 - 13.9, with the residual effects being short-term and temporary, occurring during the length of the construction phase and differing in nature from the operational effects mainly due the influence of the various construction vessels in the seascape, including cable laying vessels closer to shore within the export cable array area corridor, during the construction phase that will not be present or result in effects during the operational phase.					
Operation					
Visual effects					
Viewpoint 1 Caerfai Bay	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 2 St Brides Bay, Nolton Haven	Negligible magnitude, not significant (minor)	Adverse	No additional measures	Negligible magnitude, not significant (minor)	Adverse
Viewpoint 3 Marloes Beacon	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 4 Skomer Island	Medium-low magnitude, not significant (moderate)	Adverse	No additional measures	Medium-low magnitude, not significant (moderate)	Adverse
Viewpoint 5 St Ann's Head	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse

Description of Effect	Significance of Potential Effect (assuming standard mitigation implemented)		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Viewpoint 6 South Hook Fort	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 7 West Angle Bay	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 8 B4320, near Wogaston	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 9 Stack Rocks	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 10 Freshwater West Beach	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 11 Skokholm Island	Medium-low magnitude, not significant (moderate)	Adverse	No additional measures	Medium-low magnitude, not significant (moderate)	Adverse
Viewpoint 12 Hooper's Point	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 13 Sheep Island	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 14 Castlemartin Range Trail (Cold Comfort)	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint 15 Carn Llidi	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse

Description of Effect	Significance of Potential Effect (assuming standard mitigation implemented)		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
Viewpoint A Martin's Haven	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint B Kete National Trust (Car Park)	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint C Freshwater West Beach	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Viewpoint D Marloes National Trust (Car Park)	Negligible magnitude, not significant (minor)	Adverse	No additional measures	Negligible magnitude, not significant (minor)	Adverse
Pembrokeshire Coast Path Sections 4, 5, 6, 12, 13	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Pembrokeshire Coast Path Sections 16, 17, 18, 19, 20	Negligible magnitude, not significant (moderate/minor)	Adverse	No additional measures	Negligible magnitude, not significant (moderate/minor)	Adverse
Pembrokeshire Coast Path Section 3, 7, 8, 9, 10, 14, 15, 17, 20	Zero change, not significant	Neutral	No additional measures	Zero change, not significant	Neutral
Martin's Haven to Skomer Island Ferry	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Effects on all other visual receptors considered in the preliminary assessment in Table 13.23 were found to be not significant and scoped out of detailed assessment.					
Seascape effects					

Description of Effect	Significance of Potential Effect (assuming standard mitigation implemented)		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
SCA 25 Skomer Island and Marloes Peninsula	Medium-low magnitude, not significant (moderate)	Adverse	No additional measures	Medium-low magnitude, not significant (moderate)	Adverse
SCA 26 Skokholm and Gateholm coastal waters	Medium-low magnitude, not significant (moderate)	Adverse	No additional measures	Medium-low magnitude, not significant (moderate)	Adverse
SCA 31 Outer Milford Haven	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
SCA 34 Freshwater West	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
SCA 35 Castlemartin coastal waters	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Effects on all other seascape character receptors considered in the preliminary assessment in Table 13.26 were found to be not significant and scoped out of detailed assessment.					
PCNPA Special Qualities					
1. Coastal Splendour	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
3. Diversity of Landscape	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
8. Islands	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse

Description of Effect	Significance of Potential Effect (assuming standard mitigation implemented)		Additional Mitigation Measure	Significance of Residual Effect	
	Significance	Beneficial/ Adverse		Significance	Beneficial/ Adverse
10. Space to Breathe	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
11. Remoteness, Tranquillity and Wildness	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
12. Diversity and Combination of Special Qualities	Low magnitude, not significant (moderate/minor)	Adverse	No additional measures	Low magnitude, not significant (moderate/minor)	Adverse
Effects on all other PCNP special qualities considered in the preliminary assessment in Table 13.18 were found to be not significant and scoped out of detailed assessment.					
Decommissioning					
The residual effects arising as a result of the decommissioning of the Proposed Development are assessed as being of the same magnitude and significance on all seascape, landscape and visual receptors as those arising due to their operation and maintenance, as summarised below and assessed in Section 13.7 - 13.9, with the residual effects being short-term and temporary, occurring during the length of the decommissioning phase and differing in nature from the operational effects mainly due the influence of the various construction vessels in the seascape during the decommissioning phase that will not be present or result in effects during the operational phase.					

Table 13.37 – Summary of Cumulative Effects

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	**Beneficial/ Adverse**
Consented Scenario				
Cumulative visual effects				
Viewpoint 1, 2, 3, 4, 9, 11, 12, 14, 15	Potential cumulative visual effects on visual amenity	META East Pickard Bay META Dale Roads	Zero cumulative change, not significant cumulative effect	Neutral
Viewpoint 5, 6, 7, 10, 13	Potential cumulative visual effects on visual amenity	META East Pickard Bay META Dale Roads	Low cumulative magnitude, not significant (moderate/minor)	Adverse
Viewpoint 8	Potential cumulative visual effects on visual amenity	META East Pickard Bay META Dale Roads	Negligible cumulative magnitude, not significant (minor)	Adverse
Cumulative seascape effects				
SCA 31 Outer Milford Haven	Potential cumulative effect on seascape character	META East Pickard Bay META Dale Roads	Low cumulative magnitude, not significant (moderate/minor)	Adverse
SCA 34 Freshwater West	Potential cumulative effect on seascape character	META East Pickard Bay META Dale Roads	Medium-low cumulative magnitude, not significant (moderate)	Adverse
PCNP Special Qualities 1, 3, 8, 10, 11, 12	Potential cumulative effect on special qualities of PCNP	META East Pickard Bay META Dale Roads	Low cumulative magnitude, not significant (moderate/minor)	Adverse

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	**Beneficial/ Adverse**
Effects on all other seascape character receptors and PCNP special qualities considered in the consented scenario cumulative assessment were found to be not significant and scoped out of detailed assessment.				
Application Stage Scenario				
Cumulative visual effects				
Viewpoint 1, 15	Potential cumulative visual effects on visual amenity	Rhoscrowther Wind Farm	Negligible cumulative magnitude, not significant (minor)	Adverse
Viewpoint 2, 6, 7, 13, 14	Potential cumulative visual effects on visual amenity	Rhoscrowther Wind Farm	Zero cumulative change, not significant cumulative effect	Neutral
Viewpoint 3, 4, 5, 8, 9, 10, 11, 12	Potential cumulative visual effects on visual amenity	Rhoscrowther Wind Farm	Low cumulative magnitude, not significant (moderate/minor)	Adverse
Cumulative seascape effects				
SCA 31 Outer Milford Haven	Potential cumulative effect on seascape character	Rhoscrowther Wind Farm	Low cumulative magnitude, not significant (moderate/minor)	Adverse
SCA 32 Inner Milford Haven	Potential cumulative effect on seascape character	Rhoscrowther Wind Farm	Negligible cumulative magnitude, not significant (minor)	Adverse
PCNP Special Qualities 1, 3, 8, 10, 11, 12	Potential cumulative effect on special qualities of PCNP	META East Pickard Bay META Dale Roads	Low cumulative magnitude, not significant (moderate/minor)	Adverse

Receptor	Effect	Cumulative Developments	Significance of Cumulative Effect	
			Significance	**Beneficial/ Adverse**
Effects on all other seascape character receptors and PCNP special qualities considered in the application stage scenario cumulative assessment were found to be not significant and scoped out of detailed assessment.				
Scoping Stage Scenario				
Cumulative visual effects				
Viewpoint 1, 15	Potential cumulative visual effects on visual amenity	Project Valorous	Low cumulative magnitude, not significant (moderate/minor)	Adverse
Viewpoint 2	Potential cumulative visual effects on visual amenity	Project Valorous	Negligible cumulative magnitude, not significant (minor)	Adverse
Viewpoint 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	Potential cumulative visual effects on visual amenity	Project Valorous	Medium-low cumulative magnitude, not significant (moderate)	Adverse
Cumulative seascape effects				
SCA 25, 26, 31, 34, 35	Potential cumulative effect on seascape character	Project Valorous	Medium-low cumulative magnitude, not significant (moderate)	Adverse
PCNP Special Qualities 1, 3, 8, 10, 11, 12	Potential cumulative effect on special qualities of PCNP	Project Valorous	Medium-low cumulative magnitude, not significant (moderate)	Adverse

13.15 References

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