Partners in UK offshore wind

MORGAN OFFSHORE WIND PROJECT

Preliminary Environmental Information Report

Volume 2, chapter 15: Seascape, landscape and visual resources

Image of an offshore wind farm

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FINAL

Partners in UK offshore wind

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Glossary

Term	Meaning
Access Land	Land designated as open access as defined in the Countryside and Rights of Way Act 2000 (the CRoW Act)
Characteristics	Elements, or combinations of elements, which make a contribution to distinctive landscape character.
Designated landscapes	Areas of landscape identified as being of importance at international, national or local levels, either defined by statute or identified in development plans or other documents.
Effect	Best practice guidance defines effect as the change resulting from an impact (which is defined as "*the action being taken*") (e.g. the effect erecting a building/structure of removing a tree on seascape/landscape character or views/visual amenity). (GLVIA3, pages 8-9)
Elements/components	Individual parts of a thing (e.g. different elements of a landscape which make up the whole, such as, for example, trees, hedges and buildings).
Feature	Prominent elements in the landscape, such as tree clumps, church towers or wooded skylines.
Green infrastructure	Networks of green spaces and watercourses and water bodies that connect rural areas, villages, towns and cities.
Heritage	The historic environment and especially valued assets and qualities, such as historic buildings and cultural traditions.
Impact	Best practice guidance defines impact as "*the action being taken*" (as opposed to the change resulting from the action) (e.g. a tree being removed or building/structure being erected). (GLVIA3, pages 8-9)
Key characteristics	Elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
Landform	The shape and form of the land surface which has resulted from combinations of geology, geomorphology, slope, elevation and physical processes.
Landscape	An area, as perceived by people, the character of which is a result of the action and interaction of natural and/or human factors.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Landscape Character Areas	These are single unique areas which are the discrete geographical areas of a particular landscape type.
Landscape Character Assessment	The process of identifying and describing variation in the character of the landscape and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscape distinctive. The process results in the production of a Landscape Character Assessment.
Landscape Character Type	These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation, historical land use, and settlement pattern.
Landscape effects	Effects on the landscape as a resource in its own right.
Landscape quality (condition)	A measure of physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements.
Landscape receptors	Defined aspects of the landscape resource that have the potential to be affected by the proposal.
Landscape value	The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons
Photomontage	A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs of the existing landscape.
Representative viewpoint	A viewpoint location that is chosen to represent a number of publicly accessible views
Seascape	The visual and physical conjunction of land and sea which combines maritime, coast and hinterland character.
Special Qualities	A term usually used in relation to National Parks or Areas of Outstanding Natural Beauty. It is given to those qualities for which the area is designated.
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.
Townscape	The character and composition of the built environment including the buildings and the relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.
Tranquillity	A state of calm and quietude associated with peace, considered to be a significant feature in the landscape.
Visual amenity	The overall pleasantness of the views people enjoy in their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.
Visual effects	Effects on specific views and on general visual amenity experienced by people.
Visual receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
Visualisation	A computer simulation, photomontage or other technique illustrating the predicted appearance of a proposed development.
Zone of Theoretical Visibility	A map, usually digitally produced, showing areas of land within which, a development is theoretically visible.

Acronyms

Acronym	Description
AfL	Agreement for Lease
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
CC	County Council
CEA	Cumulative Effect Assessment
DCO	Development Consent Order
EIA	Environmental Impact Assessment
GLVIA3	Guidelines for Landscape and Visual Impact Assessment: Third Edition
IoM	Isle of Man
LAT	Lowest Astronomical Tide
LCA	Landscape Character Area
LCT	Landscape Character Type
LPA	Local Planning Authority
MCA	Marine Character Area
MDS	Maximum Design Scenario
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMO	Marine Management Organisation
NCR	National Cycle Route
NE	Natural England
NCA	National Character Area
NP	National Park
NPA	National Park Authority
NPS	National Policy Statement
NRW	Natural Resources Wales
NSIP	Nationally Significant Infrastructure Project
OWT	Offshore wind turbine
PDE	Project Design Envelope
PEIR	Preliminary Environmental Impact Assessment
PROW	Public Right of Way
SCA	Seascape Character Area
SLA	Sensitive Landscape Area
SLVIA	Seascape and Landscape Visual Impact Assessment
SPG	Supplementary Planning Guidance
SSZ	Seascape Sensitivity Zone
WHS	World Heritage Site
WTG	Wind turbine generator
ZTV	Zone of Theoretical Visibility

Units

Unit	Description
%	percentage
km	kilometres
m	metres
km^2	square kilometres
m^2	square metres
nm	nautical miles
cd	candelas
°	degrees

15 Seascape, Landscape and Visual Resources

15.1 Introduction

15.1.1 Overview

15.1.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents the assessment of the potential impact of the Morgan Offshore Wind Project Generation Assets (hereafter referred to as the Morgan Generation Assets) on seascape, landscape and visual resources, comprising a Seascape Landscape and Visual Impact Assessment (SLVIA). Specifically, this chapter considers the potential impact of the Morgan Generation Assets during the construction, operations and maintenance, and decommissioning phases.

15.1.1.2 This chapter also draws upon information contained within the following documents:

- Volume 4, annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR
- Volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR
- Volume 4, annex 15.3: Visual baseline technical report of the PEIR
- Volume 4, annex 15.4: Seascape, landscape and visual resources impact assessment methodology

15.1.2 Purpose of chapter

15.1.2.1 The primary purpose of the PEIR is outlined in volume 1, chapter 1: Introduction of the PEIR. In summary, the primary purpose of an Environmental Statement is to support the Development Consent Order (DCO) application for Morgan Generation Assets under the Planning Act 2008 (the 2008 Act). The PEIR constitutes the Preliminary Environmental Information for Morgan Generation Assets and sets out the findings of the Environmental Impact Assessment (EIA) to date to support the pre-application consultation activities required under the 2008 Act. The EIA will be finalised following completion of pre-application consultation and the Environmental Statement will accompany the application to the Secretary of State for Development Consent.

15.1.2.2 In particular, this PEIR chapter:

- Presents the existing environmental baseline established from desk studies, site-specific surveys and consultation
- Identifies any assumptions and limitations encountered in compiling the environmental information
- Presents the potential environmental effects on seascape, landscape and visual resources arising from the Morgan Generation Assets, based on the information gathered and the analysis and assessments undertaken
- Highlights any necessary monitoring and/or mitigation measures which could prevent, minimise, reduce or offset the possible environmental effects of the Morgan Generation Assets on seascape, landscape and visual resources.

15.1.3 Study area

15.1.3.1 The SLVIA study area for the Morgan Generation Assets is a 50km radius from the Morgan Array Area (Figure 15.1).

15.1.3.2 The above SLVIA study area extent is formulated in accordance with relevant best practice guidance, in particular Guidelines for Landscape and Visual Impact Assessment: Third Edition, 2013, Landscape Institute and Institute of Environmental Management and Assessment (GLVIA3). The study area has been discussed with the relevant authorities/consultees where possible (see section 15.3). The SLVIA has taken the approach, as set out in the Guidelines for Landscape and Visual Impact Assessment: Third Edition (GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment, 2013) paragraph 1.17 – *"the emphasis is on the identification of likely significant environmental effects"*. It is judged that, due to distance, there is no potential for significant effects beyond 50km, the study area need not extend any further.

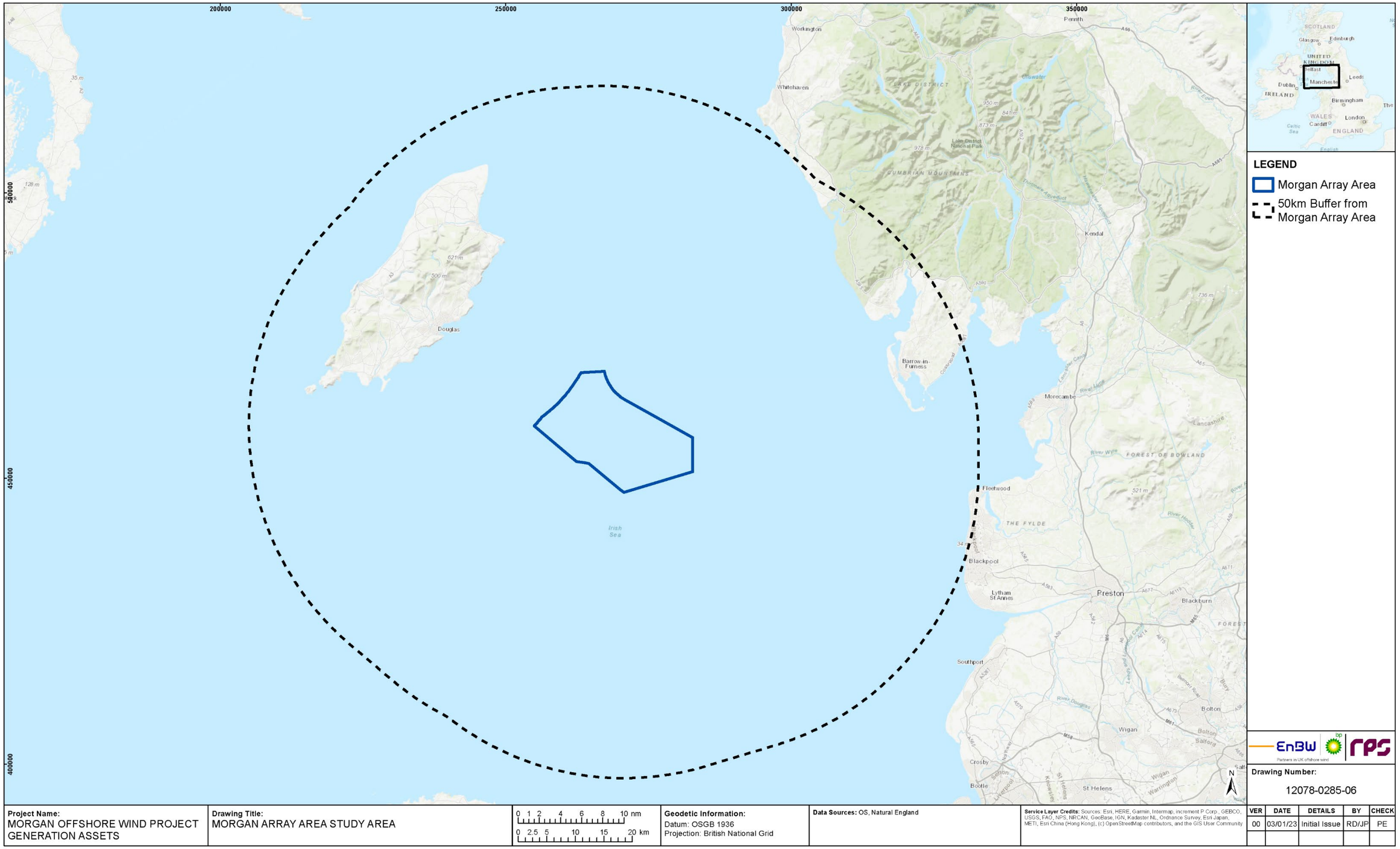


Figure 15.1: Morgan Generation Assets SLVIA study area.

15.2 Policy context

15.2.1.1 The policy context for the Morgan Generation Assets is set out in volume 1, chapter 2: Policy and legislation of the PEIR. Specific policy relevant to seascape, landscape and visual resources is set out in volume 4, annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR, a short summary of which is provided here.

15.2.2 Legislation

15.2.2.1 National government policy and underpinning legislation is summarised in Table 15.1 below together with how and where it has been considered in the SLVIA of Morgan Generation Assets.

Table 15.1: Summary of national government legislation and policy relevant to seascape, landscape and visual resources.

Summary of national legislation/policy	How and where considered in this PEIR chapter
Primary Legislation	
National Parks and Access to the Countryside Act 1949	The effect on Lake District National Park and English Lake District World Heritage Site (WHS) – assessed in this PEIR chapter, at section 15.8.4.
Environment Act 1995	The effect on Lake District National Park special qualities and landscape character and criteria of the English Lake District WHS – assessed in section 15.8.4 and summarised in Table 15.22.
Countryside and Rights of Way Act 2000 (CRoW Act)	The effect on land within the SLVIA study area designated as access land/open country – addressed in the impact assessment of this PEIR chapter, at section 15.8.4.
The Marine and Coastal Access Act 2009	The effect on land adjacent to the coast within the SLVIA study area – addressed in the impact assessment of this PEIR chapter, at section 15.8.6.
National Policy	
National Planning Policy Framework (NPPF)	Reviewed in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
UK Marine Policy Statement (MPS) (2011)	Reviewed in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Isle of Man Government – Area Plan for the East 2020 (Adopted December 2020)	Reviewed in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.

15.2.3 National Policy Statements

15.2.3.1 Planning policy on renewable energy infrastructure is presented in volume 1, chapter 2: Legislation and planning policy context of the PEIR.

15.2.3.2 Planning policy on offshore renewable energy Nationally Significant Infrastructure Projects (NSIPs), specifically in relation to seascape, landscape, and visual resources, is contained in the Overarching National Policy Statement (NPS) for Energy (EN-1; DECC, 2011a) and the NPS for Renewable Energy Infrastructure (EN-3, DECC, 2011b).

15.2.3.3 Table 15.2 refers to the current NPSs, specifically NPS EN-1 and NPS EN-3. If the NPSs are updated prior to the application for Development Consent, the revised NPSs will be fully considered in relation to SLVIA within the Environmental Statement.

15.2.3.4 NPS EN-1 and NPS EN-3 include guidance on what matters are to be considered in the assessment. These are summarised in Table 15.2, below. Table 15.3 highlights several factors relating to the determination of an application and in relation to mitigation.

Table 15.2: Summary of the NPS EN-1 and NPS EN-3 provisions relevant to seascape, landscape and visual resources.

Summary of NPS EN-1 and EN-3 provision	How and where considered in this PEIR chapter
Summary of NPS EN-1 policy	
The assessment should make reference to existing landscape character assessments and related studies (NPS EN-1, paragraph 5.9.5).	The existing seascape and landscape character and assessments are described (Reviewed in PEIR volume 4, annex 15.2: Seascape, landscape character baseline technical report).
The assessment should make reference to relevant planning policies based on these assessments (NPS EN-1, paragraph 5.9.5).	Relevant planning policy used to inform the assessment are outlined in annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR and national policy summarised in this PEIR chapter, at Table 15.1.
The assessment should include the effects on seascape and landscape character and individual landscape elements during construction and operation (NPS EN-1, paragraph 5.9.6).	Assessment of effects on the seascape and landscape elements are assessed in this PEIR chapter, at section 15.8.
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. This should include light pollution effects, including on local amenity, and nature conservation (NPS EN-1, paragraph 5.9.7).	Assessments of effects on visual resources are assessed in this PEIR chapter, at section 15.8. The details of the lighting during construction, operations and maintenance and decommissioning are not certain at this stage, but assumptions have been made, based on experience of similar projects and good working practice during the construction, operations and maintenance and decommissioning phases.
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 seascape and landscape. The aim is to minimise harm to the seascape and landscape,	Details of the designed-in mitigation measures adopted as part of the project for the Morgan Generation Assets are summarised in this PEIR chapter, at Table 15.1. Given the dynamic nature of the majority of the visual receptors and the location of the project offshore, no additional measures are proposed specifically in relation

Summary of NPS EN-1 and EN-3 provision	How and where considered in this PEIR chapter
providing reasonable mitigation where possible and appropriate (NPS EN-1, paragraph 5.9.8).	to the location or arrangement of the wind turbines for SLVIA.
The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the Secretary of State in deciding on applications for development consent in these areas. Nevertheless, the Secretary of State may grant development consent in these areas in exceptional circumstances (NPS EN-1, paragraphs 5.9.9 and 5.9.10).	The Morgan Generation Assets are not located within any designated landscapes. A Zone of Theoretical Visibility (ZTV) exercise has been undertaken for the highest element of the offshore infrastructure, the wind turbines. The ZTV is presented in Figure 15.3. They will be visible from the Lake District National Park and the English Lake District WHS.
The Secretary of State should ensure that any projects consented in these designated areas should be carried out to high environmental standards, including through the application of appropriate requirements where necessary (NPS EN-1, paragraph 5.9.11).	
When considering the effects of projects outside nationally designated areas which may have impacts within them, the aim should be to not compromise the purpose of a nationally designated area (NPS EN-1, paragraph 5.9.12).	
The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent (NPS EN-1, paragraph 5.9.13).	Noted.
The scale of nationally significant infrastructure projects will mean that they will often be visible within many miles of the site of the proposed infrastructure. The decision maker should judge whether any adverse impact on the landscape/seascape would be so damaging that it is not offset by the benefits (including need) of the project (NPS EN-1, paragraph 5.9.15).	The effects of the project on seascape and visual resources are assessed in this PEIR chapter, at section 15.8.
In reaching a judgement, the decision maker should consider whether any adverse impact is temporary, such as during construction and/or whether any adverse impact on the landscape/seascape will be capable of being reversed in a timescale that the decision maker considers reasonable (NPS EN-1, paragraph 5.9.16).	The effects of the temporary and permanent elements of the project on the seascape are assessed in this PEIR chapter, at section 15.8.2.
The decision maker should consider whether the project has been designed carefully to minimise harm to the seascape/landscape, including by reasonable mitigation (NPS EN-1, paragraph 5.9.17).	Given the dynamic nature of the majority of the visual receptors and the location of the project offshore, no additional measures are proposed specifically in relation to the location or arrangement of the wind turbines.
The decision maker will have to judge whether the visual effects on sensitive receptors, outweigh the benefits of the project (NPS EN-1, paragraph 5.9.18).	The effects of the temporary and permanent elements of the project on the visual resources are assessed in this PEIR chapter, at section 15.8.
Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design may result in a significant operational constraint and reduction in function – for example the electricity generation output (NPS EN-1, paragraph 5.9.21).	Given the dynamic nature of the majority of the visual receptors and the location of the project offshore, no additional measures are proposed specifically in relation to the location or arrangement of the wind turbines. Measures adopted as part of the project are discussed in Table 15.19 of this PEIR chapter.
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 (NPS EN-1, paragraph 5.9.22).	
It may be appropriate to undertake landscaping off site (NPS EN-1, paragraph 5.9.23).	
Summary of NPS EN-3 policy	
Projects visible from the shore will be required to undertake a SLVIA that is in proportion to the scale of the project (NPS EN-3, paragraph 2.6.202).	The wind turbines in the Morgan Array Area will be visible from the shore. The assessment of the effects of the Morgan Generation Assets has been prepared in line with GLVIA3.
Where necessary, assessment of the seascape should include assessment of limit of visual perception from coast; how people perceive and interact with the seascape; and individual characteristics of the coast's ability to absorb the development (NPS EN-3, paragraph 2.6.203).	The wind turbines in the Morgan Array Area will be visible from the shore from some locations. The acuity of the human eye will play a part in reducing the perceived visibility, as set out in *Guide to Best Practice in Seascape Assessment* (INTERREG Report No. 5) (Countryside Council for Wales, Brady Shipman Martin and University College Dublin, 2001), as will the weather atmospheric conditions (see volume 4, annex 15.4 Seascape, landscape and visual resources impact assessment methodology of the PEIR). The assessment of the effects of the Morgan Generation Assets has been prepared in line with GLVIA3, assuming the clearest visibility.
Photomontages are likely to be required as part of the SLVIA with viewpoints to be selected in consultation with statutory consultees at EIA scoping stage (paragraph 2.6.204 of NPS EN-3).	Wirelines have been undertaken for the PEIR. Photomontages will be undertaken for the ES, with any additional photography that has been taken.
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 SLVIA (paragraph 2.6.205 of NPS EN-3).	The SLVIA has been assessed based on the methodology set out in GLVIA3, and other guidance published since 2001 onwards.
Where appropriate, cumulative SLVIA is to be undertaken in accordance with section 4.2 of NPS EN-1 (paragraph 2.6.206 of NPS EN-3).	A Cumulative Effects Assessment (CEA) has been undertaken and is presented in section 15.11.

Table 15.3: Summary of NPS EN-1 and NPS EN-3 policy on decision making relevant to seascape, landscape and visual resources.

Summary of NPS EN-1 and EN-3 provision	How and where considered in the PEIR
The Secretary of State should assess the proposal in accordance with section 5.9 of NPS EN-1 (paragraph 2.6.207 of NPS EN-3).	The assessment of the Morgan Generation Assets has considered the likely significance of effects, considering each phase of the development process. The likely significance of effects has informed the design development of the scheme and is outlined in this
Where a proposed wind farm is within sight of the coast, there may be adverse effects. The Secretary of State should not refuse to grant a consent for a development	

Summary of NPS EN-1 and EN-3 provision	How and where considered in the PEIR
solely on the ground of an adverse effect on the seascape or visual amenity unless: 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 (paragraph 2.6.208 of NPS EN-3).	chapter (refer to Table 15.22 for the summary of potential environmental effects).
Where adverse effects are anticipated either during the construction or operational phases, the Secretary of State should take into account the extent to which the effects are temporary or reversible (paragraph 2.6.209 of NPS EN-3).	
Neither the design nor scale of individual wind turbines can be changed without significantly affecting the electricity generating output of the wind turbines. Therefore, the Secretary of State should expect it to be unlikely that mitigation in the form of reduction in scale will be feasible. However, the layout of the wind turbines should be designed appropriately to minimise harm, taking into account other constraints such as ecological effects, safety reasons or engineering and design parameters (paragraph 2.6.210 of NPS EN-3).	Given the dynamic nature of the majority of the visual receptors and the location of the project offshore, no additional measures are proposed specifically in relation to the location or arrangement of the wind turbines.

15.2.4 National Planning Policy Framework (England)

15.2.4.1 The Morgan Generation Assets study area includes areas of the English mainland. The National Planning Policy Framework (July 2021) (NPPF) provides overarching advice regarding development. The aim of achieving sustainable development is the main theme of the NPPF. Those sections of particular relevance to seascape, landscape and visual resources are set out in Table 15.4, below.

Table 15.4: English National Planning Policy Framework.

Policy	How and where considered in the PEIR
National Planning Policy Framework	
Paragraph 11, objective i) permission should be granted unless areas of particular importance are not protected. Footnote 7 lists areas of particular importance for landscape these include National Parks and Areas of Outstanding Natural Beauty.	The Special Qualities of the Lake District National Park and the themes and criteria of the English Lake District WHS are described in volume 4, annex 15.2: Seascape and Landscape Character Baseline Technical Report of the PEIR. The effects on the Special Qualities are assessed in this chapter at section 15.8.4.
Paragraph 32 The NPPF acknowledges that any development will have an impact on character and potentially on views.	Noted. Potential impacts on seascape and marine character areas, landscape character areas and potential impacts on views are considered within the assessments in section 15.8 and cumulative effects assessment in section 15.11.
Paragraph 155 encourages the supply of renewable and low carbon energy and heat, plans should: provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts).	The Morgan Generation Assets project is a renewable energy project. Cumulative effects are considered in section 15.11.
Paragraph 174 requires that planning policies and decisions should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes (in a manner commensurate with their statutory status or identified quality in the development plan); recognising the intrinsic character and beauty of the countryside and maintaining the character of the undeveloped coast.	The Special Qualities of the Lake District National Park and the themes and criteria of The English Lake District WHS are described in volume 4, annex 15.2: Seascape and Landscape Character Baseline Technical Report of the PEIR. The effects on the Special Qualities are assessed in this chapter at section 15.8.4.
Paragraph 176 requires that great weight should be given to conserving and enhancing landscape and scenic beauty in Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The NPPF adds that the scale and extent of development within such areas should be limited. Other than for developments in the public interest, major development in such areas should be refused (paragraph 177).	While not located in a nationally designated landscape, the Morgan wind turbine array will be visible from the National Park. The Special Qualities of the Lake District National Park and the themes and criteria of The English Lake District WHS are described in volume 4, annex 15.2: Seascape and Landscape Character Baseline Technical Report of the PEIR. The effects on the Special Qualities are assessed in this chapter at section 15.8.4.

15.2.5 UK Marine Policy Statement, North West Inshore and North West Offshore Marine Plan and Welsh National Marine Plan

15.2.5.1 The assessment of potential changes to seascape, landscape and visual resources has also been made with consideration to the specific policies set out in the UK Marine Policy Statement (MMO, 2011) and the North West Inshore and North West Offshore Marine Plan (MMO, 2021). Key provisions are set out in Table 15.5 these have been addressed within the assessment.

Table 15.5: UK Marine Policy Statement, North West Inshore and North West Offshore Marine Plan and Welsh Marine Plan policies of relevance to seascape, landscape and visual resources.

Policy	How and where considered in the PEIR
UK Marine Policy Statement	
The effects of activities and developments in the marine and coastal area on the landscape, including seascape, will vary on a case-by-case basis according to the type of activity, its location and its setting. There is no legal definition for seascape in the UK, but the European Landscape Convention (ELC) defines landscape *as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors"*. In the context of this document, 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 (paragraph 2.6.5.1).	The chapter considers both offshore and onshore seascape and landscape and visual resources and receptors, as defined both in the ELC and in Guide to Best Practice in Seascape Assessment (Hill et al, 2001, INTERREG Report No. 5).
When developing Marine Plans, marine plan authorities should consider at a strategic level visual, cultural, historical and archaeological impacts not just for those coastal areas that are particularly important for seascape, but for all coastal areas, liaising with terrestrial planning authorities as necessary. In addition, any wider social and economic impacts of a development or activity on coastal landscapes and seascapes should be considered (paragraph 2.6.5).	Seascape landscape and visual resources and receptors are considered within this chapter. Historic seascape and the setting of historic assets are considered in volume 2, chapter 13: Marine archaeology of the PEIR. The socio-economic effects of the Morgan Generation assets are considered in volume 2, chapter 18: Socio-economics of the PEIR.
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 (paragraph 2.6.5.3).	Where available published seascape and landscape assessments have been used. Where not available, such as the outer Isle of Man territorial waters, baseline information from other chapters in the PEIR has been used to characterise the seascape and establish seascape sensitivity.

Policy	How and where considered in the PEIR
North West Inshore and North West Offshore Marine Plan	
NW-SCP-1 Proposals should ensure they are compatible with their surroundings and should not have a significant adverse impact on the character and visual resource of the seascape and landscape of the area. The location, scale and design of proposals should take account of the character, quality and distinctiveness of the seascape and landscape. Proposals that may have a significant adverse impact on the seascape and landscape of the area should demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate adverse impacts If it is not possible to mitigate the public benefits for proceeding with the proposal must outweigh significant adverse impacts to the seascape and landscape of the area. Proposals within or relatively close to nationally designated areas should have regard to the specific statutory purposes of the designated area. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks and Areas of Outstanding Natural Beauty	The assessment of effects is considered at section 15.8 of this chapter. Measures adopted as part of the Morgan Generation Assets are described in Table 15.19. The Morgan Generation Assets will be visible from the Lake District National Park and The English Lake District WHS in clear weather. The effects on the Lake District National Park and The English Lake District WHS are assessed in section 15.8.4.
NW-TR-1 Proposals that promote or facilitate sustainable tourism and recreation activities, or that create appropriate opportunities to expand or diversify the current use of facilities, should be supported. Proposals that may have significant adverse impacts on tourism and recreation activities must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate - adverse impacts so they are no longer significant.	The approach for assessing the effects on tourism and recreation are presented in volume 2, chapter 18: Socio-economics of the PEIR.
NW-CE-1 Proposals which may have adverse cumulative effects with other existing, authorised, or reasonably foreseeable proposals must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate -adverse cumulative and/or in-combination effects so they are no longer significant	A Cumulative Effects Assessment (CEA) has been undertaken and is presented in this PEIR chapter at sections 15.9 and 15.10 and summarised in Table 15.29.

Policy	How and where considered in the PEIR
NW-CBC-1 Proposals must consider cross-border impacts throughout the lifetime of the proposed activity. Proposals that impact upon one or more marine plan areas or terrestrial environments must show evidence of the relevant public authorities (including other countries) being consulted and responses considered.	Cross-border/Trans-boundary issues are considered in section 15.12 of this chapter. For the Morgan Generation Assets, this consists of the different landmasses framing this part of the Irish Sea, namely the Isle of Man, Wales and England, as well as the territorial waters that lie within the SLVIA study area.
Welsh National Marine Plan 2015-2021 (2019)	
SOC_06: Designated landscapes 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.	The nationally designated landscapes in Wales fall beyond the study area of Morgan wind turbine array. It may be possible on those days with the clearest visibility to see the wind turbine array from the higher land in Wales, but the effects would not be significant, due to distance.
SOC_07: Seascapes 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.	The assessment of the Morgan Generation Assets on seascape, landscape and visual resources and receptors is considered in section 15.8. There are limited opportunities for mitigating seascape or visual effects for such a project. However, Table 15.19 details those that are proposed.

Policy	How and where considered in the PEIR
GOV_01: Cumulative effects 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.	Cumulative effects are considered in sections 15.9 and 15.11.
GOV_02: Cross-border and plan compatibility Relevant public authorities, in making their decisions, should have regard to: • any applicable policy in a relevant marine plan • any applicable policy in relevant terrestrial development plans or related documents • the Natural Resources Policy • any relevant local well-being plan(s) (including the local well-being assessment) • evidence in any relevant Area Statement(s) produced by Natural Resources Wales (NRW).	Cross-border/Trans-boundary issues are considered in section 15.12 of this chapter. For the Morgan Generation Assets, these consists of the different landmasses framing this part of the Irish Sea, namely the Isle of Man, Wales and England, as well as the territorial waters that lie within the SLVIA study area
ELC_01a: Low carbon energy (supporting) wind Proposals for offshore wind energy generation will be supported where they contribute to the objectives of this plan. Proposals should comply with the relevant general policies and sector safeguarding policies of this plan and any other relevant considerations. Proposals for wind >350MW will be considered by UK Government in accordance with relevant national policy. In determining an NSIP for a wind proposal, the decision maker will have regard to this plan. Any determination in relation to energy developments of any scale will be taken in accordance with this plan alongside any other relevant considerations.	The Morgan Generation Assets project is an offshore wind project, albeit in English rather than Welsh territorial waters.

Policy	How and where considered in the PEIR
ELC_01b: Low carbon energy (supporting) wind In order to understand future opportunities for offshore wind development, including floating technologies, this plan supports strategic planning for the sector. Relevant public authorities and the sector are encouraged, in liaison with other interested parties, to collaborate to understand opportunities for the sustainable use of wind energy resources including identification of: • natural resources that provide potential opportunity for future use • evidence to de-risk consenting for the sector • opportunities to define and, once in place, further develop and refine Strategic Resource Areas for offshore wind energy resource safeguarding in order to support the sustainable development of the sector through marine planning. Relevant public authorities should make appropriate evidence available to support planning and decision making in order to support the sustainable development of the sector through marine planning, where it is appropriate to do so.	The Morgan Generation Assets project is an offshore wind project, albeit in English rather than Welsh territorial waters.

15.2.6 Local Planning Policies (onshore)

15.2.6.1 The assessment of potential changes to seascape, landscape and visual resources has also been made with consideration to the specific policies set out in annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR. Key provisions are set out in Table 15.6 along with details as to how these have been addressed within the assessment.

Table 15.6: Local Planning Policy of relevant to seascape, landscape and visual resources.

Policy	Key provisions	How and where considered in the PEIR
The Island Development Plan – The Isle of Man Strategic Plan 2016 – Towards a Sustainable Island (Adopted April 2016)	Environment Policy 2 Environment Policy 40	Consideration of the project in relation to the policies are at section 15.8.4 Reviewed in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Isle of Man Area Plan for the East 2020 (Adopted December 2020)	Landscape Proposal 1 Landscape Proposal 5 – Laxey Landscape Proposal 6 – Douglas Head Landscape Proposal 8 - Douglas Bay Landscape Proposal 9 – Clay Head	Consideration of the project in relation to the policies are presented in section 15.8.4 and set out in full in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Lake District National Park Authority – Lake District National Park Local Plan 2020-2035 (Adopted May 2021)	The Local Plan sets out the strategic Vision and Objectives: The Special Qualities are summarised in Table 1 of the Local Plan. Relevant Planning Policies: • 01: National and International Significance of the Lake District • 05: Protecting the Spectacular Landscape • 11: West Distinctive Area • 20: Renewable and Low-carbon Energy • 26: Major Development.	The strategic vision and the special qualities of the Lake District National Park are considered in section 15.8.4. The objectives, vision, special qualities and planning policy is set out in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Lake District National Park Partnership The Partnership's Plan – The Management Plan for The English Lake District (2015-2020) (A National Park and Proposed World Heritage Site) (2015)	Strategy SL1 – A world-class living cultural landscape Strategy SL2 – Sustained distinctive and well maintained built and historic environment Strategy SL8 – The continuation of the Lake District Strategy PE6 – Major industries and provision of infrastructure outside the Lake District Strategy VE1 – Opportunity for experiences in a unique landscape Strategy VC7 – Access to high quality amenity and recreation green spaces, public rights of way, and facilities	Consideration of the project in relation to the policies are at section 15.8.4. Reviewed in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Barrow in Furness Borough Local Plan 1996-2006 (saved)	Part 2: Landscape Conservation Part 4: Urban Design and Visual Amenity Part 5: Other Environmental Considerations	Consideration of the project in relation to the policies are presented in section 15.8.4 and set out in full in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.

Policy	Key provisions	How and where considered in the PEIR
Blackpool Local Plan Part 1: Core Strategy 2012-2027 (Adopted January 2016)	Blackpool LP Part 1 Policy CS8: Heritage CS10: Sustainable Design and Renewable and Low Carbon Energy	Consideration of the project in relation to the policies are presented in section 15.8.4 and set out in full in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Blackpool Local Plan Part 2: Site Allocations and Development Management Policies (Publication Version January 2021) (Proposed to take it to full Council in February 2023	BLP Part 2: Policy DM19: Strategic Views Policy DM21: Landscaping Policy DM27: Conservation Areas Policy DM32: Wind Energy Policy DM33: Coast and Foreshore	Consideration of the project in relation to the policies are presented in section 15.8.4 and set out in full in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Copeland Local Plan 2013-2028 Core Strategy and Development Management Policies DPD (Adopted December 2013)	Policy ST1 Strategic Development Principles Policy ER2 Planning for the Renewable Energy Sector Policy ER3 The support Infrastructure for the Energy Coast Policy ENV2 Coastal Management Policy ENV5 Protecting and Enhancing the Borough's Landscapes Strategic Policy N4PU Marine Planning	Consideration of the project in relation to the policies are presented in section 15.8.4 and set out in full in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
South Lakeland Local Plan – Development Management Policies (adopted 2019) (for South Lakeland District outside the national parks)	DM1 General requirements for all developments DM21 Renewable Energy and Low Carbon Energy Development	Consideration of the project in relation to the policies are presented in section 15.8.4 and set out in full in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.
Wyre Local Plan	EP12 – Renewable Energy	Consideration of the project in relation to the policies are presented in section 15.8.4 and set out in full in volume 4 annex 15.1: Seascape, landscape and visual resources legislation and planning policy context of the PEIR.

15.3 Consultation

15.3.1.1 A summary of the key issues raised during consultation activities undertaken to date specific to seascape, landscape and visual resources is presented in Table 15.7 below, together with how these issues have been considered in the production of this PEIR chapter. Key information to inform the SLVIA methodology has been provided to relevant authorities/consultees for comment. Feedback on the candidate representative viewpoints was requested from the following stakeholders with responses received from stakeholders listed in Table 15.7:

- Natural England
- Natural Resources Wales
- Eyri National Park
- Anglesey County Council
- Clwydian Range and Dee Valley AONB
- Conwy County Borough Council
- Denbighshire County Council
- Gwynedd Council
- West Lancashire Borough Council
- Preston City Council
- Chorley Council
- Lancashire County Council
- Sefton Council
- Fylde Borough Council
- Blackpool City Council
- Lake District National Park
- Isle of Man Government

15.3.1.2 As set out in section 15.16 of this PEIR chapter, following consultation on the PEIR, additional photography will be undertaken, including re-taking photography that was undertaken in sub-optimal atmospheric conditions/time of day and completing the night-time photography.

Table 15.7: Summary of key consultation issues raised during consultation activities undertaken for the Morgan Generation Assets relevant to seascape, landscape and visual resources.

Date	Consultee and type of response	Issues raised/Consultee response	Response to issue raised and/or were considered in this chapter
February 2022	bp to Natural England – email communication	Requesting discussion with Natural England on the viewpoints for the landscape photography. NE responded by stating that they would provide feedback at the PEIR stage.	The Representative Viewpoints selected for assessment of the Morgan generation Assets are assessed in section 15.8. The photography and full descriptions of the existing views and those receptors that might experience the views are set out in volume 4, annex 15.3: Visual baseline technical report of the PEIR.
July 2022	The Planning Inspectorate – Scoping Opinion	Impacts from all project phases on seascape and landscape character and visual resources beyond the study area. The Inspectorate acknowledges the intention to establish a Zone of Theoretical Visibility (ZTV) to underpin the assessment, and provided that the ZTV is robust agrees that no significant effects are likely to occur beyond it. The ES should demonstrate how the ZTV has been established, including the outcomes of consultation. The Applicant should seek to agree the extent of the ZTV with relevant consultation bodies.	The SLVIA study area was identified to stakeholders in the request for feedback on the representative viewpoints (February 2022). During the SLVIA Workshop in September 2022 (see below) stakeholders were asked to comment on the SLVIA study area. The Applicant did not receive any specific comments on the extent of the SLVIA study area, therefore the Applicant intends to use the statutory consultation to agree that the study area for the SLVIA assessment is appropriate.
July 2022	Response to Scoping - Natural England	Requested that the study area for the Morgan Generation Assets extends to a 60km buffer around the Morgan Generation Assets array area, based on the proposed wind turbine height for the Morgan OWF and the elevated viewpoints onshore. Where applicable, once the location of the generation assets has been determined, Natural England should also be consulted to determine representative viewpoints.	Natural England responded at the Morgan Generation Assets scoping stage, on the extent of the study area, and requested a 60 km buffer. The SLVIA has taken the approach, as set out in the Guidelines for Landscape and Visual Impact Assessment: Third Edition (GLVIA3) (Landscape Institute and Institute of Environmental Management and Assessment, 2013) paragraph 1.17 – *"the emphasis is on the identification of likely significant environmental effects"*. It is judged that, due to distance, there is no potential for significant effects beyond 50km, the study area need not extend any further. The 50 km study area has been confirmed with other national organisations as sufficient to capture potential significant effects, including those from nationally designated mountainous landscapes.
July 2022	Response to Scoping - Natural England	Natural England would wish to see details of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area. The EIA should include assessments of visual effects on the surrounding area, landscape and seascape together with any physical effects of the development, such as changes in topography.	Landscape and marine character areas are presented within section 15.4 and detailed within volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR. The assessment of visual effects is presented within section 15.8.
July 2022	Response to Scoping - Natural England	Natural England supports the publication Guidelines for Landscape and Visual Impact Assessment, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition). The methodology set out is almost universally used for landscape and visual impact assessment. For National Parks and Areas of Outstanding Natural Beauty (AONBs), we advise that the assessment also includes effects on the 'special qualities' of the designated landscape, as set out in the statutory management plan for the area. These identify the particular landscape and related characteristics which underpin the natural beauty of the area and its designation status.	This SLVIA has followed the guidance set out within Guidelines for Landscape and Visual Impact Assessment: Third Edition, 2013, Landscape Institute and Institute of Environmental Management and Assessment (GLVIA3). The assessment methodology is presented within section 15.5 and detailed within volume 4, annex 15.4: Seascape, Landscape and Visual Impact Assessment Methodology.
July 2022	Response to Scoping - Natural England	In order to foster high quality development that respects, maintains, or enhances, local landscape / seascape character and distinctiveness, Natural England encourages all new development to consider the character and distinctiveness of the area, with the siting and design of the proposed development reflecting local design characteristics and, wherever possible, using local materials. The EIA process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.	Noted. Further detail will be presented within the Environmental Statement.

Date	Consultee and type of response	Issues raised/Consultee response	Response to issue raised and/or were considered in this chapter
July 2022	Response to Scoping - Natural England	The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.	Noted. The cumulative effects assessment is presented within section 15.9.
July 2022	Response to Scoping - Natural England	The assessment should refer to the relevant National Character Areas which can be found on our website. Links for Landscape / Seascape Character Assessment at a local level are also available on the same page. https://data.gov.uk/dataset/3fed3362-2279-4645-8aaf-c6b431c94485/mmo1037-marine-character- areas. gov.uk/government/publications/seascape-assessments-for-north-east-north-west- south-east-south-west-marine-plan-areas-mmo1134	Noted. These are referred to within the assessment and detailed within volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR.
July 2022	Response to Scoping - Natural England	Alongside national policy you should also apply landscape policies set out in your development plan, or appropriate saved policies.	Noted. All relevant policies are presented within section 15.2 and detailed within volume 4, annex 15.1: Seascape, Landscape and Visual Resources Legislation and Planning Policy Context of the PEIR.
July 2022	Response to Scoping - Natural England	Where available, a local Landscape Character Assessment can also be a helpful guide to the landscape's sensitivity to this type of development and its capacity to accommodate the proposed development.	Noted. The Isle of Man Landscape Character Assessment has been used to inform the assessment of effects on seascape, landscape and visual resources and receptors. The SLVIA study area includes part of north west England, at this distance the local landscape character areas will not be significantly affected and so National Character Areas were used. The special qualities of the Lake District National Park and the potential impacts on the themes and criteria of the English Lake District WHS have also been assessed.
November 2022	Morgan Generation Assets SLVIA Workshop RPS invited the following statutory consultees to an online SLVIA workshop to consult on two wind turbine array layout options: • Natural England* • Isle of Man Government (Emma Rowan, Abigail Morgan and Peter Duncan) • Lake District National Park Authority (remit includes The English Lake District World Heritage Site) * • Barrow in Furness Borough Council* • Fylde Borough Council* • Chorley Council* • West Lancashire Council • Preston City Council • Sefton Council * stakeholder invited but no representatives attended.	Requested feedback on which of the two layout options presented (by means of wireline visualisations from four key viewpoints) were likely to give rise to worst case seascape, landscape and visual impacts taking existing operational wind farms and future cumulative schemes into account.	The Applicant did not receive any specific comments on the extent of the SLVIA study area, therefore the Applicant intends to use the statutory consultation to agree that the study area for the SLVIA assessment is appropriate. Stakeholders did not respond on the worst case scenarios during the meeting. The Applicant provided a follow-up slide pack to stakeholders. No specific comments had been received from stakeholders and the Applicant intends to use the scenario with the tallest wind turbine. The effects of the tallest turbines on both seascape landscape character and views and visual amenity are assessed in section 15.8 The photography and full descriptions of the existing views and those receptors that might experience the views are set out in volume 4, annex 15.3: Visual baseline technical report of the PEIR.

15.4 Baseline environment

15.4.1 Methodology to inform baseline

15.4.1.1 This section deals with the seascape, landscape and visual resources baseline of the Morgan Generation Assets, the separate aspects of which are described in detail in the following separate technical reports:

- Volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR
- Volume 4, annex 15.3: Visual baseline technical report of the PEIR.

15.4.1.2 In summary, the seascape, landscape, and visual baseline environments were assessed by means of desk study and fieldwork, informed by consultation with the relevant authorities and stakeholders. This process, the activities involved, and the consultees engaged, are recorded in this section by providing information regarding:

- Baseline studies and surveys undertaken in relation to the Morgan Generation Assets
- Any difficulties (e.g. technical deficiencies or limitations in available data) encountered in compiling the required information
- Agreement on methodology reached through consultations or otherwise, including where deviations from standard methods had been agreed.

15.4.1.3 A record and summary description of these desk study and fieldwork activities is provided in volume 4, annex 15.2: Seascape and landscape character baseline technical report and volume 4, annex 15.3: Visual baseline technical report of the PEIR.

15.4.2 Desktop study

15.4.2.1 Information on the seascape, landscape and visual baseline environment within the SLVIA study area was collected through a detailed desktop review of existing studies and datasets. These are summarised at Table 15.8 below.

Table 15.8: Summary of key desktop reports.

Title	Source	Year	Author
National Character Area Profile	Natural England https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles	Various (2012 to 2014)	Natural England
An assessment of the sensitivity and capacity of the Scottish seascape in relation to windfarms SNH Commissioned Report No. 103	Scottish Natural Heritage	2005	Scott, K.E., Anderson, C., Dunsford, H., Benson, J.F. and MacFarlane, R.
Marine Plan Areas in England	Marine Management Organisation	2014	Marine Management Organisation
Welsh National Marine Plan	Welsh Government	2019	Welsh Government
National Seascape Assessment for Wales	Natural Resources Wales	2015	Land Use Consultants
Seascape and visual sensitivity to offshore wind farms in Wales: Strategic assessment and guidance – Stage 3, Report No. 331	Natural Resources Wales	2019	White, S. Michaels, S. King, H.
Isle of Man Landscape Character Assessment	Isle of Man Government	2008	Chris Blandford Associates
Seascape Character Assessment for the North West Inshore and North West Offshore Marine Plan Areas	Marine Management Organisation	2018	Land Use Consultants

15.4.3 Identification of designated sites

15.4.3.1 All internationally and nationally designated landscape areas within the SLVIA study area that could be affected by the construction, operations and maintenance and maintenance, and decommissioning phases of the Morgan Generation Assets were identified and considered for assessment using the six-step process described below:

- Step 1: All designated landscape/seascape areas of international and national importance within the SLVIA study area were identified using several sources. These sources included Natural Resource Wales, Isle of Man Government and Natural England environmental datasets in Table 15.8, above. The designated landscapes are illustrated in volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR
- Step 2: Information was compiled on the relevant qualifying interests for each of the areas, such as their reasons for designation and/or special landscape/seascape qualities
- Step 3: Using the above information and expert judgement, designated landscape/seascape areas were included for further consideration if:
  - A designated area directly overlapped with the SLVIA study area
  - A designated area was located within the ZTV of the Morgan Generation Assets
- Step 4: All statutory designated landscape/seascape areas of international and national importance within the SLVIA study area overlapping with the ZTV of the Morgan Generation Assets were carried forward for consideration in the SLVIA
- Step 5: Non statutory and local landscape/seascape designations lying within the SLVIA study area overlapping with the ZTV of the Morgan Generation Assets were carried forward for consideration in the SLVIA
- Step 6: Non statutory and local landscape/seascape designations outwith the Morgan Array Area were scoped out of the SLVIA.

15.4.4 Site specific surveys

15.4.4.1 To inform the PEIR, site-specific surveys were undertaken in relation to the photography and assessment of the representative viewpoints agreed with statutory consultees (see Figure 15.3 for further details). In addition, extensive fieldwork was carried out during preparation of the SLVIA to support the seascape, landscape and visual resources baseline and impact assessments.

15.4.4.2 A summary of the site-specific surveys undertaken is provided in Table 15.9.

15.4.4.3 Further surveys are planned which will include retaking photographs where the conditions were sub-optimal, due to weather conditions that were not forecast, or the time of day the photograph was taken. The night-time photography will also be completed. Further photographic surveys will also include any additional representative viewpoints that are requested by consultees post-PEIR and, if considered necessary, to identify potential significant effects. This further work is identified in section 15.16.

Table 15.9 Summary of site-specific survey data.

Title	Extent of survey	Overview of survey	Date	Reference to further information
SLVIA Photography	Isle of Man and Irish Sea (and Penwortham converter station study area – 21 March 2022)	Offshore (and onshore) candidate viewpoint photography, see PEIR volume 4, annex 15.3, appendix A: Baseline photography	22 to 24 March 2022	NA
SLVIA Photography	Isle of Man and Irish Sea	Offshore candidate viewpoint photography, see PEIR volume 4, annex 15.3, appendix A: Baseline photography	19 to 22 July 2022	NA
SLVIA Photography	Northwest England	Offshore candidate viewpoint photography, see PEIR volume 4, annex 15.3, appendix A: Baseline photography	07 September 2022	N/A
SLVIA Photography	Northwest England	Offshore candidate viewpoint photography, see PEIR volume 4, annex 15.3, appendix A: Baseline photography	15 to 17 September 2022	NA

15.4.5 Baseline environment

15.4.5.1 The SLVIA baseline environment comprises two distinct but connected aspects, described in the following separate technical reports:

- Volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR. This presents the seascape and landscape character baseline, including special qualities of nationally designated landscapes
- Volume 4, annex 15.3: Visual baseline technical report of the PEIR. This presents the visual baseline for the SLVIA assessment
- Summaries of the baseline seascape/landscape and visual environments of the SLVIA study area are provided below. This section should be read in conjunction with the above technical reports.

Seascape and landscape character baseline

15.4.5.2 With respect to Morgan Generation Assets Maximum Design Scenario (MDS), national landscape character areas, national marine character areas and relevant regional seascape character areas within the SLVIA study area with the potential to be affected by the Morgan Generation Assets have been identified.

15.4.5.3 The seascape/landscape characteristics with potential to be affected have been identified and described in section 15.3 of volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR. Extracts of published assessments reproduced in this appendix provide further detail on seascape/marine and landscape characteristics for relevant character areas. The appendix also includes information on the relevant statutory landscape designations including the special qualities that underpin their designated status as nationally important landscapes.

15.4.5.4 Where no published seascape character assessment coverage is available for the SLVIA study area, as is the case with some areas of the Isle of Man's territorial waters, appropriate marine character areas defined and described by RPS, in accordance with relevant best practice guidance, are included in the baseline assessment.

15.4.5.5 Character areas within the SLVIA study with little or no overlap with the ZTV of Morgan Generation Assets and/or which are likely to experience negligible or no change due to Morgan Generation Assets MDS, have been scoped out of the assessment.

15.4.5.6 Table 15.10 below lists the seascape and landscape character areas scoped into the SLVIA. Designated areas of landscape and seascape are covered in the next section below.

Table 15.10: Seascape/landscape character areas assessed in the SLVIA.

Character area ref.	Title	Administrative Level	Jurisdiction	Source
Wales National Marine Character Areas				
MCA 04	North Wales Open Waters	National	Wales – Anglesey/Conwy	Welsh National Marine Plan (Welsh Government, 2019)
MCA 05	North West Anglesey Open Waters	National	Wales – Anglesey	
Wales Seascape Sensitivity Zones				
SSZ 1	North East Wales Inshore	National	Wales – Conwy/Denbighshire/ Flintshire	Seascape and visual sensitivity to offshore wind farms in Wales, strategic assessment and guidance: Stage 3 – Seascape and visual sensitivity assessment for offshore wind farms (White Consultants (for NRW, 2020)
SSZ 2	North East Wales Offshore	National	Wales	
SSZ 3	North Wales and North Anglesey Inshore	National	Wales – Anglesey/Conwy	
SSZ 4	North Wales and North Anglesey Offshore	National	Wales	
SSZ 5	North Wales and Anglesey Outer Offshore	National	Wales	
England Marine Character Areas				
MCA 31	St Bees to Haverigg Coastal Waters	National	England	North West Inshore and North West Offshore Marine Plan (MMO, 2021)
MCA 32	Walney Coastal Waters and Duddon Estuary	National	England	
MCA 33	Morecombe Bay	National	England	
MCA 34	Blackpool Coastal Waters and Ribble Estuary	National	England	
MCA 35	Inner Liverpool Bay	National	England	
MCA 37	Irish Sea North (England)	National	England	
MCA 38	Irish Sea South (England)	National	England	
Isle of Man Seascape/Marine Character Areas (RPS defined)				
MCA A	Dreswick Point to Maughold Head	National/Local	Isle of Man	PEIR volume 4, annex 15.2: Seascape and landscape character baseline technical report (RPS, 2023)
MCA B	Maughold Head to Point of Ayre	National/Local	Isle of Man	
MCA C	Point of Ayre to Contrary Head	National/Local	Isle of Man	
MCA D	Contrary Head to Bradda Head	National/Local	Isle of Man	

Character area ref.	Title	Administrative Level	Jurisdiction	Source
MCA E	Bradda Head to Dreswick Point	National/Local	Isle of Man	
England National Character Areas				
NCA 7	West Cumbria Coastal Plain	National	England – Lancashire	National Character Area Profiles (Natural England, 2014)
NCA 8	Cumbria High Fells	National	England – Lancashire	
NCA 19	South Cumbria Low Fells	National	England – Lancashire	
NCA 20	Morecombe Bay Limestones	National	England – Lancashire	
NCA 32	Lancashire and Amounderness	National	England – Lancashire	
Isle of Man Landscape Character Types				
LCT A	Uplands	National/Local	Isle of Man	Isle of Man Landscape Character Assessment (Chris Blandford Associates, for the Isle of Man Government, 2008)
LCT B	Narrow Upland Glens	National/Local	Isle of Man	
LCT C	Broad Valley Lowland	National/Local	Isle of Man	
LCT D	Incised Slopes	National/Local	Isle of Man	
LCT E	Rugged Coast	National/Local	Isle of Man	
LCT F	Undulating Lowland Plain	National/Local	Isle of Man	
LCT G	Smooth Coastal Strip	National/Local	Isle of Man	
LCT H	Coastal Cliffs	National/Local	Isle of Man	
LCT J	Islands	National/Local	Isle of Man	
LCT U	Urban	National/Local	Isle of Man	

15.4.5.7 Regarding seasonal and medium to long-term temporal landscape/seascape character change, these issues are intrinsic to SLVIA and are considered as part of both the baseline and the impact assessment stages. A summary of the issues involved follows:

- Seasonal temporal change: seasonal variations in vegetation cover, colour and texture alter the character of landscapes, particularly the difference between winter and summer deciduous vegetation. Diurnal and seasonal variations in tidal regimes and sea state, in particular the intertidal zone. Also, diurnal, and seasonal variations in weather and natural lighting
- Medium and long-term temporal change: landscape and seascape character inevitably change over time (i.e., years/decades). Change may result in new landscape patterns, or reversion to former ones. For example: deforestation, afforestation, urbanisation, land/farm management, farming techniques, natural resource exploitation (onshore and offshore), government legislation/policy/funding (e.g., agriculture and forestry/woodland grants), planning and environmental policy (e.g., landscape designations), and other land use initiatives (e.g., rewilding).

Visual Baseline

15.4.5.8 The visual baseline assessment involved a desktop exercise and consultation process to identify appropriate visual receptors and representative viewpoints within the SLVIA study area and falling within the ZTV of the Morgan Generation Assets.

15.4.5.9 The representative viewpoints were selected to represent a broad range of locations and sensitive visual receptors across the SLVIA study area. Fieldwork was undertaken to verify the visual receptors and representative viewpoint locations and photography captured. Following further consultations, the number of representative viewpoints was increased.

15.4.5.10 The following sensitive visual receptor categories are also considered in the SLVIA (volume 4, annex 15.3: Visual baseline technical report of the PEIR, Figure 15.1):

- National trails (e.g., Millennium Way, Isle of Man and England Coast Path)
- Access land/open country (or public access equivalent)
- National Cycle Routes (NCR)
- Key coastal settlement seafront/shoreline (e.g., Douglas promenade and Blackpool promenade/piers)
- Key coastal roads (e.g., A2, Isle of Man)
- Key coastal railways (e.g., Snaefell Mountain Railway, Isle of Man)
- Key ferry route (e.g., Liverpool to Douglas).

15.4.5.11 Regarding the representative viewpoints, Table 15.11 presents the list of agreed candidate representative viewpoints and corresponding sensitive visual receptors.

Table 15.11: Candidate representative viewpoints included in the SLVIA.

Representative viewpoint reference	Location	Receptor type	Receptor category
Representative viewpoint 14	Cistercian Way, Walney Island, Cumbria	Walkers using Cistercian Way	Long distance path
Representative viewpoint 15	Blackpool North Pier, Lancashire	Visitors to public pier	Settlement seafront
Representative viewpoint 16	Cumbria Coastal Way, Gutterby Banks/Townend Bank, Cumbria	Walkers using Cumbria Coastal Way (England Coast Path)	Long distance path
Representative viewpoint 17	Kinmont Buck Barrow, Cumbria	Walkers using Access Land	Access land (or public access equivalent)

Representative viewpoint reference	Location	Receptor type	Receptor category
Representative viewpoint 18	Herring Tower trig point, Langness Peninsula, Isle of Man	Walkers on ProW at local landmark	Access land (or public access equivalent)
Representative viewpoint 19	Panoramic viewpoint at arch southwest of Douglas Head, Isle of Man	Visitors to the binocular viewpoint, walkers and vehicle users. People using the Raad ny Foillan Coastal Path.	Access land (or public access equivalent)
Representative viewpoint 20	Snaefell, summit station trig point, Isle of Man	Walkers on ProW at local landmark	Access land (or public access equivalent)
Representative viewpoint 21	Liverpool to Dublin Ferry	Passengers on ferry	Key ferry route (public transport)
Representative viewpoint 22	Liverpool to Douglas Ferry	Passengers on ferry	Key ferry route (public transport)
Representative viewpoint 23	Heysham to Douglas Ferry	Passengers on ferry	Key ferry route (public transport)
Representative viewpoint 42	Maughold Head/Maughold Brooghs, Isle of Man	Walkers at Maughold Head fort monument. People using the Raad ny Foillan Coastal Path.	Access land (or public access equivalent)
Representative viewpoint 43	Car park/seafront at Old Laxey, Isle of Man	Walkers using pavement at entrance to the beach. People using the Raad ny Foillan Coastal Path.	Settlement seafront
Representative viewpoint 44	Slieau Ruycairn/trig point, Isle of Man	Walkers at cairn/trig point	Access land (or public access equivalent)
Representative viewpoint 45	South Barrule cairn/trig point, Isle of Man	Walkers at cairn/trig point	Access land (or public access equivalent)
Representative viewpoint 46	TSS Mona's Queen III anchor memorial at Port St. Mary Point, Isle of Man	Walkers on the heritage trail and at the memorial. People using the Raad ny Foillan Coastal Path.	Settlement seafront
Representative viewpoint 49	Douglas promenade, Isle of Man	Visitors using promenade/seafront. People using the Raad ny Foillan Coastal Path.	Settlement seafront
Representative viewpoint 50	Coast path at the Chasms/Sugarloaf, Isle of Man	Walkers using the Raad Ny Foillan Coastal Path	Long distance path

15.4.5.12 Regarding seasonal and medium to long-term temporal visual change and the SLVIA, the issues are broadly the same as those presented above for seascape/landscape character. Of additional importance is the following.

- Seasonal temporal change: the difference between winter and summer deciduous vegetation cover is a key factor to consider when assessing the potential impact of development on views and visual amenity. Diurnal and seasonal variations in weather, light intensity, natural lighting, and visibility also influence views and visual amenity. Visibility is recorded by the Meteorological Office – historic 'viewing distance' data for the SLVIA study area is reproduced in volume 4, annex 15.1: Methodology, Appendix B, sets out Meteorological Office data relevant to the Morgan Array Area. Visibility is given for increasing distances for every month of the year for the last 10 years. The distances given in the assessment of the Morgan Generation Assets relate to these tables and the Meteorological Office, definitions:
  - Very Poor – visibility less than 1km metres
  - Poor – visibility between 1km to 4km
  - Moderate – visibility between 4km and 10km
  - Good – visibility between 10km to 20km
  - Very Good – visibility between 20km and 40km
  - Excellent – visibility over 40km.
- Medium and long-term temporal change: the forces driving longer-term landscape/seascape character change (i.e., years/decades) described previously also influence views and visual amenity.

15.4.6 Designated sites

15.4.6.1 Internationally and nationally designated areas of landscape/seascape identified for the inclusion in the seascape, landscape and visual resources chapter are listed below in Table 15.12.

Table 15.12: Designated sites and relevant qualifying interests for the SLVIA.

Designated site	Closest distance to the Morgan Array Area (km)	Relevant qualifying interest
Lake District National Park	Approximately 38km at its closest point.	Two special qualities: • The high fells • Mosaic of lakes, tarns, rivers and coast • Opportunities for quiet enjoyment.
The English Lake District World Heritage Site	Approximately 38km at its closest point	The case for Outstanding Universal Value for The English Lake District is based on a combination of attributes falling under three intertwining and interdependent themes: 1. A landscape of exceptional beauty, shaped by persistent and distinctive agro-pastoral traditions which give it special character 2. A landscape which has inspired artistic and literary movements and generated ideas about landscapes that have had global influence and left their physical mark 3. A landscape which has been the catalyst for key developments in the national and international protection of landscapes.

15.4.6.2 Locally designated landscapes, such as Special Landscape Areas (SLA) Areas of Great Landscape Value (AGLV) and Areas of High Landscape Value and Scenic Significance (AHLV) within the study area are not mapped.

15.4.6.3 The closest AHLV is located on the Isle of Man. The extent of this, locally designated landscape area is shown on the Isle of Man 1982 Development Plan South Map and North Map (as noted in annex 15.1, Table 1.12, Summary of The Isle of Man Strategic Plan 2016 policy on decision making relevant to SLVIA (Section of the Area Plan for the East 2020) Environmental Policy 2. Within these areas the character of the landscape will be the most important consideration. The Morgan Generation Assets are not located within this locally designated landscape.

15.4.6.4 The Isle of Man Landscape Character Assessment (CBA, 2008) describes the AHLV in its Explanatory Memorandum. From the description, it is evident that preserving landscape quality was not the sole function of the designation. Chapter 4, page 148 of the same document, presents landscape policy recommendations for the AHLV at paragraph 4.4, which, in summary are, that the Isle of Man Government considers replacing the local landscape designation with the landscape character area-based approach.

15.4.6.5 In line with the move away from local landscape designations and towards character-based analysis of the landscape, this SLVIA has used the most recent landscape character assessment for the Isle of Man as the basis for its assessment of the effects of the Morgan Generation Assets.

15.4.6.6 No other locally designated landscapes have the potential to be significantly affected, due to distance.

15.4.7 Future baseline scenario

15.4.7.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires that *"an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge"* is included within the Environmental Statement. If Morgan Generation Assets does not come forward, an assessment of the future baseline conditions has been carried out and is described within this section.

Future seascape, landscape character and visual baseline

15.4.7.2 Landscape and adjacent seascapes are constantly evolving; evolution is an intrinsic attribute of landscapes, which are in constant flux. The forces driving landscape/seascape change are both human and natural, predominantly the former within the SLVIA study area. Building and infrastructure development, intensive agriculture and minerals exploitation is changing the character of both urban and rural landscapes. Climate change driven by human activity has the potential to alter vegetation patterns and landscape character in the longer term, although to what extent and over what timeframe is a matter of conjecture.

15.4.7.3 Predicted changes in the climate relating to the SLVIA study area, include those resulting from extreme weather events of heat, cold, rainfall, drought, and wind. It is predicted that mean temperatures will increase, winter precipitation will increase; and summer precipitation will decrease. Overall, the frequency of hot days, dry spells and heavy rainfall is predicted to increase. Climate change impacts are considered in chapter 17: Climate change, of the PEIR.

15.4.7.4 The current landscape and seascape character baseline situation is described in volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR. The climate change predictions recorded in chapter 17: Climate change of the PEIR are unlikely to be sufficient to lead to an appreciable change in the baseline vegetation and character within the SLVIA study area. The underlying landscape and seascape characteristics are therefore predicted to remain broadly constant. Consequently, excluding building/infrastructure development, the future landscape and seascape character baseline, and the related visual baseline, would be essentially the same as the current baseline situation summarised above in this SLVIA and presented in more detail in volume 4 annex 15.2: Seascape and landscape character baseline technical report of the PEIR.

15.4.7.5 Regarding future building/infrastructure development, it is not possible to accurately predict future change. The cumulative effects assessment section of the SLVIA below identifies the relevant planned development for the SLVIA study area for the immediate future, the focus being on offshore infrastructure. The current development pipeline in the Northern Wales and Irish Sea Round 4 area is likely to lead to an increase in offshore wind development within the SLVIA study area in the future.

15.4.8 Data limitations

15.4.8.1 The SLVIA assumptions and limitations are set out in volume 4, annex 15.4 SLVIA methodology of the PEIR.

15.4.8.2 Regarding the approach taken in the SLVIA to the assessment of the different development phases of Morgan Generation Assets, the following assumption/limitation should be noted. For developments of this type and scale, seascape, landscape, and visual impacts arising will increase in magnitude on a continuum from the start of construction through to completion of works and commencement of operations and maintenance in the short term, remaining fairly constant during operations and maintenance in the long term. The decommissioning phase is effectively the construction process in reverse (also short-term in duration). In addition, during the latter stages of construction and early stages of decommissioning, the Morgan Generation Assets will give rise to similar levels of seascape, landscape, and visual change as during the operations and maintenance phase (the difference being the absence of rotor/blade movement). Consequently, in this SLVIA, for each seascape, landscape and visual receptor, construction and decommissioning effects are dealt with together, recorded separately from the operational effects.

15.4.8.3 Consultations with key consultees (see Table 15.8 above) regarding the preferred scheme and the representative viewpoints for Morgan Generation Assets have been undertaken to inform this assessment for the PEIR. The list of representative viewpoints may change for the Environmental Statement subject to stakeholder feedback during consultation.

15.5 Impact assessment methodology

15.5.1 Overview

15.5.1.1 The SLVIA has followed the methodology set out in volume 1, chapter 5: EIA methodology of the PEIR, a summary of which is reproduced below in this section.

15.5.1.2 Specific to the SLVIA, the following guidance document is the key consideration:

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

15.5.1.3 In addition, the SLVIA has considered the relevant legislative and policy framework as identified above in Table 15.1.

15.5.1.4 A detailed SLVIA methodology based on GLVIA3 is provided in volume 4 annex 15.4 SLVIA methodology of the PEIR. For the purposes of this SLVIA, the standard criteria wording has been refined to accord with GLVIA3 best practice guidelines. That said, it should be noted that the SLVIA methodology employs the same terminology as that set out volume 1, chapter 5: EIA methodology of the PEIR, as reproduced below.

15.5.2 Impact assessment criteria

15.5.2.1 The criteria for determining the significance of effects is a two-stage process that involves defining the magnitude of the impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on those which are described in further detail in volume 1, chapter 5: EIA methodology of the PEIR.

Magnitude

15.5.2.2 The criteria for defining magnitude in this chapter are outlined in Table 15.13.

Table 15.13: Definition of terms relating to the magnitude of an impact.

Magnitude of impact	Definition
High	Seascape/landscape Total loss, or/very substantial loss or addition of key elements/features/patterns of the baseline (i.e., pre-development seascape/landscape) and/or introduction of dominant, uncharacteristic elements compared with the attributes of the receiving seascape/landscape.
	Visual Complete or very substantial visual change involving complete or very substantial obstruction of existing view or complete change in character and composition of visual baseline (i.e. pre-development view), (e.g. through removal of key elements).
Medium	Seascape/landscape Partial loss or addition of, or moderate alteration to, one or more key elements/features/patterns of the baseline (i.e., pre-development seascape/landscape) and/or introduction of elements that may be prominent but would not be substantially uncharacteristic in comparison to the attributes of the receiving seascape/landscape.
	Visual Moderate visual change, which may involve partial obstruction of existing view or partial change in character and composition of visual baseline (i.e., pre- development view) through the introduction of new elements or removal of existing elements. Change may be prominent but would not substantially alter the scale and character of the surroundings and the wider setting. Composition of views would alter. View character may be partially changed through the introduction of features which, although uncharacteristic, may not necessarily be visually discordant.
Low	Seascape/landscape Minor loss or addition of, or alteration to, one or more key elements/features/patterns of the baseline, i.e., pre-development seascape/landscape and/or introduction of elements that may not be uncharacteristic compared with the surrounding seascape/landscape.
	Visual Minor change to the visual baseline (i.e., pre-development view) – change would be distinguishable from the surroundings whilst view composition and character would be similar to the pre- change circumstances.
Negligible	Seascape/landscape Very minor loss or addition of, or alteration to, one or more key elements/features/patterns of the baseline (i.e., pre-development seascape/landscape) and/or introduction of elements that are not uncharacteristic in comparison to the surrounding seascape/landscape; approximating to a ‘no-change’ situation.
	Visual Very slight change in visual baseline (i.e., pre- development view) – change barely distinguishable from the surroundings. Composition and character of view substantially unaltered.
No change	No loss, alteration, or addition to the receiving seascape/landscape resource. No alteration to the existing view.

15.5.2.3 Where the magnitude of impact is judged to fall in between the above categories it is expressed as low to negligible, medium to low or high to medium.

Sensitivity

15.5.2.4 The criteria for defining sensitivity in this chapter are outlined in Table 15.14. Note that, in SLVIA, the sensitivity of seascape/landscape and visual receptors is determined by an assessment of two separate factors: the value of the receptor and the receptor's susceptibility to the development proposed.

Table 15.14: Definition of terms relating to the sensitivity of the receptor.

Sensitivity	Definition	
Seascape/landscape	**Receptor susceptibility**	**Receptor value**
Very High	Exceptional seascape/landscape quality; absence of seascape/landscape detractors; no or limited potential for substitution. Key elements/features well known to the wider public.	Nationally/internationally designated seascape/landscape, or key elements or features of nationally/internationally designated seascape/landscape.
High	Strong/distinctive seascape/landscape character; relatively free of seascape/landscape detractors.	Regionally/nationally designated seascape/landscape areas or features.
Medium	Some distinctive seascape/landscape characteristics; presence of seascape/landscape detractors.	Locally/regionally designated/valued seascape/landscape and features.
Low	Absence of distinctive seascape/landscape characteristics; unavoidable presence of seascape/landscape detractors.	Undesignated seascape/landscape and features.
Negligible	Absence of positive seascape/landscape characteristics. Significant presence of seascape/landscape detractors.	Undesignated seascape/landscape and features.
Visual	**Receptor susceptibility**	**Receptor value**
Very High	Observers, drawn to a particular view, including those who have travelled from around Britain and overseas to experience the views.	Judgements made about the value of views should take account of: "*recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations; and, indicators of value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment (such as parking places, sign boards or interpretive material) and references to them in literature or art…*" (GLVIA3, para 6.37).
High	Observers on the public rights of way network in the countryside are more sensitive to visual change.	
Medium	Observers enjoying the countryside from vehicles on quiet/promoted routes or pedestrians on less scenic/urban rights of way are moderately sensitive to visual change.	
Low	Observers in vehicles or people involved in outdoor activities where attention is not focused on landscape are less sensitive to visual change.	
Negligible	Observers in vehicles or people involved in frequent or frequently repeated activities are less sensitive to visual change.	

15.5.2.5 Where the sensitivity of a particular receptor is judged to be in between the above categories it is expressed as low to medium, medium to high, or high to very high.

Significance

15.5.2.6 The significance of the effect upon seascape, landscape and visual resources is determined by correlating the magnitude of the impact and the sensitivity of the receptor to the Morgan Generation Assets. The method employed for this assessment is presented in Table 15.15. Where a range of significance of effect is presented, the final assessment for each effect is based upon professional judgement.

15.5.2.7 For the purposes of this assessment, only those effects with a significance level of substantial or major have been deemed significant in terms of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. In general, any effects with a significance level of moderate or less have been judged as not significant. This may differ from some other chapters, but allows for a local level of landscape designations, which persist in some counties of the UK. However, an accumulation of individual moderate effects, for instance those experienced during a journey undertaken by the same visual receptor, may also be judged as significant in some circumstances.

15.5.2.8 An effect of X to Y is made where the effects on a resource or receptor change within a large area of land being assessed, or along a route being travelled by a visual receptor (person).

15.5.2.9 Effects are assessed as being adverse, neutral, or positive. The judgements regarding the significance of effect and that relating to whether an effect is beneficial or adverse are entirely separate. The assessment of whether an effect is positive, neutral, or adverse is based on professional judgement having regard to the relevant objective factors.

Table 15.15: Matrix used for the assessment of the significance of the effect.

Sensitivity of Receptor	Magnitude of Impact				
	No Change	**Negligible**	**Low**	**Medium**	**High**
Negligible	No change	Negligible	Negligible to Minor	Negligible to Minor	Negligible to Minor
Low	No change	Negligible to Minor	Negligible to Minor	Minor	Minor to Moderate
Medium	No change	Negligible to Minor	Minor	Moderate	Moderate to Major
High	No change	Negligible to Minor	Minor to Moderate	Moderate to Major	Major

Sensitivity of Receptor	Magnitude of Impact				
	No Change	Negligible	Low	Medium	High
Very High	No change	Minor	Moderate to Major	Major	Substantial

15.5.2.10 Table 15.16 provides definitions for significance of effect levels recorded in the SLVIA.

Table 15.16: Definitions of SLVIA significance criteria.

Level of Significance	Typical Descriptors	
	Seascape/Landscape Resource	Visual Resource
Substantial	Where proposed changes would be uncharacteristic and/or would significantly alter a landscape of exceptional landscape quality (e.g., internationally designated landscapes), or key elements known to the wider public of nationally designated seascape/landscapes (where there is no or limited potential for substitution nationally).	Where proposed changes would be uncharacteristic and/or would significantly alter a view of remarkable scenic quality, within internationally designated landscapes or key features or elements of nationally designated seascapes/landscapes that are well known to the wider public.
Major	Where proposed changes would be uncharacteristic and/or would significantly alter a valued aspect of (or a high quality) seascape/landscape.	Where proposed changes would be uncharacteristic and/or would significantly alter a valued view or a view of high scenic quality.
Moderate	Where proposed changes would be demonstrably out of scale or at variance with the character of an area.	Where proposed changes to views would be demonstrably out of scale or at variance with the existing view.
Minor	Where proposed changes would be at slight variance with the character of an area.	Where proposed changes to views, although discernible, would only be at slight variance with the existing view.
Negligible	Where proposed changes would have an indiscernible effect on the character of an area.	Where proposed changes would have a barely noticeable effect on views/visual amenity.
No Change	No discernible loss or alteration to seascape/landscape character, features or elements.	No part of the Morgan Generation Assets MDS is discernible.

15.5.3 Designated sites

15.5.3.1 Designated areas of landscape/seascape identified for the inclusion in the seascape, landscape and visual resources chapter are listed above in Table 15.12, above.

15.6 Key parameters for assessment

15.6.1 Maximum Design Scenario

15.6.1.1 The MDSs identified in Table 15.17 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the Project Design Envelope provided in volume 1, chapter 3: Project description of the PEIR. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g., different infrastructure layout), to that assessed here be taken forward in the final design scheme.

Table 15.17: Maximum Design Scenario considered for the assessment of potential impacts on seascape, landscape and visual resources.

[a] C=construction, O=operational and maintenance, D=decommissioning

Potential impact	Phase			Maximum Design Scenario	Justification
	C	O	D		
The SLVIA considers the likely impacts of the Morgan Generation Assets on the seascape, landscape and visual resources of the SLVIA study area resulting from its construction, operations and maintenance and decommissioning. The receptor groups considered in the SLVIA are those located within the 50km radius SLVIA study area as follows: <u>Seascape/landscape receptors</u> • seascape/marine character areas • landscape character areas • special qualities of internationally / nationally designated landscapes. <u>Visual receptors</u> • people using national trails/long distance paths • people using access land/open country (or equivalent) • people accessing key coastal settlement seafronts/shorelines • cyclists using national cycle routes • people travelling along key coastal roads • people using key coastal railway routes • people travelling on key ferry routes • 17 representative viewpoints corresponding to views experienced by people at of the above receptors. The potential sources of seascape, landscape and visual impacts deriving from the Morgan Generation Assets development components and associated activities are detailed here.	✓	✓	✓	**Morgan Generation Assets** Morgan Offshore Wind Project comprises the Morgan Generation Assets as set out in volume 1 chapter 3: Project description of the PEIR. The offshore and onshore transmission elements of Morgan Offshore Wind Project are being considered as part of a separate conjoined application with Morecombe Offshore Windfarm for a single (coordinated) grid connection location at Penwortham in Lancashire. The construction, operations and maintenance and decommissioning phases of Morgan Generation Assets are summarised below. **Construction phase** The offshore components and activities relating to construction of Morgan Generation Assets considered in the SLVIA are described below. <u>Construction works/activities</u> Generally, wind turbines are installed using the following process: • Wind turbine components (blades, nacelles, towers, foundation and transition pieces) are transported to Morgan Array Area by dedicated vessels • Wind turbine components will be assembled on site and erected on to foundations by an installation vessel (e.g., Jack-Up Vessel (JUV), Dynamic Positioning Vessel (DPV) or heavy lift vessel). The process is assisted by smaller support vessels (e.g., tugs, guard vessels and anchor handling vessels), which tend to shadow the installation vessels. The maximum number of wind turbine installation and support vessels on site during construction of the array area is 62 vessels and 7 helicopters. The number of return trips to the Morgan Array Area from port required throughout installation is 1828 vessel movements and 1095 helicopter movements. **<u>Construction programme/duration</u>** The total duration for wind turbine installation is expected to be a maximum of 24 months. **Operations and maintenance phase** The SLVIA assesses the MDS for Morgan Generation Assets during operations and maintenance comprising the following key upstanding project components and equipment: • 68 wind turbines (dimensions below) • Four OSPs (dimensions below) • Construction and service vessels/helicopters. The above components are also a consideration during the construction and decommissioning phases. The wind turbines will be attached to the seabed by monopile foundation structures (the type to be deployed is subject to further investigations). The wind turbine towers are connected to the monopile via a transition piece which is visible above sea level. <u>Wind turbines</u> The wind turbines will be the standard horizontal axis design with three blades connected to the nacelle housing the wind turbine. An illustration of this design can be seen in volume 1, chapter 3: Project description of the PEIR. The tallest wind turbines have been used the Maximum Design Scenario for the project. The wind turbine MDS dimensions are: • Maximum blade tip height (above LAT) – 324m • Maximum rotor diameter – 280m • Maximum hub height (above LAT) – 184m. <u>Offshore Substations Platforms (OSP)</u> There are four options for the OSPs within the array. The maximum number (4 no x 375MW OSPs) is considered to be the Maximum Design Scenario in terms of seascape. landscape and visual impacts. The dimensions are: • Maximum height of main structure (above LAT) – 55m • Height of lightning protector (above LAT) – 70m	Greatest extent of the Morgan Offshore Wind Project, with the tallest wind turbines, over the longest duration, therefore the greatest potential for impacts on seascape and landscape areas, including nationally / internationally designated landscapes, as well as visual receptors.

Potential impact	Phase			Maximum Design Scenario	Justification
	C	O	D		
				• Height of helideck (above LAT) – 65m • Height of crane (above LAT) – 65m • Height of antenna structure (above LAT) – 75m • Maximum topside length – 65m • Maximum topside width – 45m. <u>Vessel movements</u> <u>The maximum number of vessels on site at any one time during the operations and maintenance phase is 21 vessels and 8 helicopters. There are predicted to be a maximum of 2351 vessel and 1460 helicopter return trips per year during the operations and maintenance phase.</u> <u>Aids to navigation, colour, marking and lighting</u> Appropriate marking, lighting and aids to navigation will be employed during the operations and maintenance phase (and also during construction and decommissioning phases) of Morgan Generation Assets. The nacelles, blades and towers will be painted light grey and the foundation structures, up to +15m from Highest Astronomical Tide (HAT), will be traffic light yellow (RAL 1023). Appropriate lighting at night-time will ensure the offshore structures are visible for search and rescue and emergency response procedures. In addition, lighting will conform to the following: • Red, medium intensity aviation warning lights (of variable brightness between 200-2,000 candela (cd)) will be located on either side of the nacelle of significant peripheral wind turbines. These lights will flash simultaneously with a Morse W flash pattern (and will also include an infra-red component) • All aviation warning lights will flash synchronously throughout the Morgan Array Area • Aviation warning lights will allow for reduction in lighting intensity at and below the horizon when visibility from every wind turbine is more than 5km (to a minimum of 10% of the maximum, i.e., 200cd) • SAR lighting of each of the non-periphery wind turbines will be combi infra-red (IR)/200cd steady red aviation hazard lights • All wind turbines will be fitted with a low intensity light for the purpose of helicopter winching (green hoist lamp). All wind turbines will also be fitted with suitable illumination (minimum one 5cd light) for ID signs. Marine navigational lights will be fitted at the platform level on significant peripheral structures (SPS). 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. **Decommissioning phase** Where feasible and practical, all Morgan Generation Assets structures (above sea level) will be completely removed at the end of its operational lifetime. The decommissioning sequence will generally be the reverse of the construction sequence and involve similar types and numbers of vessels and equipment.	

15.6.2 Impacts scoped out of the assessment

15.6.2.1 On the basis of the baseline environment and the description of development outlined in volume 1, chapter 3: Project description of the PEIR, a number of impacts are proposed to be scoped out of the SLVIA. These impacts are outlined, together with a justification for scoping them out, in Table 15.18.

Table 15.18: Impacts scoped out of the assessment for seascape, landscape and visual resources.

Potential impact on	Justification
Non statutory and local seascape/landscape designations in the SLVIA study area including special landscape areas (SLA) and heritage coasts, (e.g., St Bees Head Heritage Coast (Cumbria, England)) and Isle of Man areas of high landscape or coastal value and scenic significance (AHLV).	Desk study supported by fieldwork indicates there is no potential for significant effects on either the character or the special qualities/reasons for designation of these resources., due to distance – to be agreed with the relevant consultees/authorities.
Seascape/landscape character areas located towards the outer limit of the SLVIA study area (in excess of 50km from Morgan Array Area) and/or where there is little or no ZTV overlap, (e.g., MCA 30 Solway Firth (England)).	There is no potential for significant effects to arise where desk study and fieldwork indicates there would be negligible distant visibility of Morgan Generation Assets – to be agreed with the relevant consultees/authorities as part of PEIR consultation.

15.7 Measures adopted as part of the Morgan Generation Assets

15.7.1.1 As part of the project design process several measures adopted as part of the Morgan Generation Assets have been proposed to reduce the potential for impacts on seascape, landscape, and visual resources (see Table 15.19). As there is a commitment to implementing these measures, they are considered inherently part of the design of the Morgan Generation Assets and have therefore been considered in the assessment presented in section 15.8 below (i.e., the determination of magnitude and therefore significance assumes implementation of these measures). These measures are considered standard industry practice for this type of development.

Table 15.19: Measures adopted as part of the Morgan Generation Assets.

Measures adopted as part of the Morgan Generation Assets	Justification
The nacelles, blades and towers will be painted light grey.	Light grey is considered the optimum colour for offshore wind turbines to minimise adverse effects on seascape, landscape, and visual resources.

15.8 Assessment of significant effects

15.8.1.1 The impacts of the construction, operations and maintenance, and decommissioning phases of the Morgan Generation Assets have been assessed on seascape, landscape and visual resources. The MDS against which each impact has been assessed arising from the construction, operations and maintenance and decommissioning phases of the Morgan Generation Assets are listed in Table 15.17.

15.8.1.2 In the interests of proportionality, and in line with GLVIA3, the text within this assessment section (section 15.8.2 onwards) describes potential impacts on receptors which may result in potentially significant effects, or when the potential impact on the receptor is combined the significance of effect will be more of note. The detailed description of all the potential effects of Morgan Generation Assets on individual seascape, landscape and visual resources and receptors, including the representative viewpoints, is set out in tabular format within each assessment section below.

15.8.1.3 With respect to the representative viewpoints listed at Table 15.11, in the interests of proportionality of assessment and to avoid duplication and double recording of effects, these are considered in this section in tandem with the assessment visual receptors they represent, referenced accordingly.

15.8.1.4 Impacts will arise on seascape, landscape and visual resources during construction, operations and maintenance, and decommissioning phases resulting from the following MDS components (as set out in more detail in Table 15.17 above):

- 68 wind turbines (324m LAT maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.1.5 The seascape, landscape and visual impacts will be caused by both static and moving elements of the above components which will affect the characteristics and perceptions of the seascape/marine character areas in the SLVIA study area, as assessed in section 15.8 below.

15.8.1.6 Regarding the approach taken in the SLVIA to the assessment of the different development phases of Morgan Generation Assets, the assumption/limitation set out above in section 15.4.8 should be noted. In short, seascape, landscape and visual impacts arising will increase in magnitude on a continuum from the start of construction through to completion of works and commencement of operations and maintenance in the short term, remaining constant during operations and maintenance in the long term. The decommissioning phase is effectively the construction process in reverse. Consequently, in the interests of proportionality, construction and decommissioning effects are dealt with together for each seascape, landscape, and visual receptor, recorded separately from the operational effects.

15.8.1.7 Offshore wind energy development, wherever it occurs, is usually visible in some form. The Morgan generation Assets would have the following general attributes typical of most offshore wind farms: engineered, large scale, simple in form, smooth texture, monochrome/muted colour, and strong vertical form. Wind energy development can give rise to a spectrum of responses from individuals and organisations who perceive its effects ranging from strongly adverse to strongly beneficial. Responses by people to wind farms can vary from ‘beautiful’ to ‘offensive’, with respondents perceiving wind turbines as potentially rhythmic, unusual, safe, interesting, invigorating, majestic and spiritual on the one hand and degrading, jarring, overbearing, industrial, clashing, and ugly on the other.

15.8.1.8 The likely significant effects in this assessment are described in type (i.e., direct, indirect, or cumulative), temporal nature (short, medium and long term, permanent or temporary), and valency (beneficial or positive and adverse or negative). Accordingly,

judgements as to valency of the effect are presented and justified in an explicit and transparent manner since they are inevitably subjective.

15.8.1.9 For the purposes of this assessment, effects have been defined based on the scenario of an individual who may perceive the array as a negative addition to the seascape or view. Effects are, therefore, defined as adverse throughout the assessment; but may in fact be seen as beneficial or positive by large numbers of viewers. An individual who perceives offshore wind farms as a positive addition to the seascape or view may consider the same effects to be beneficial or neutral in nature.

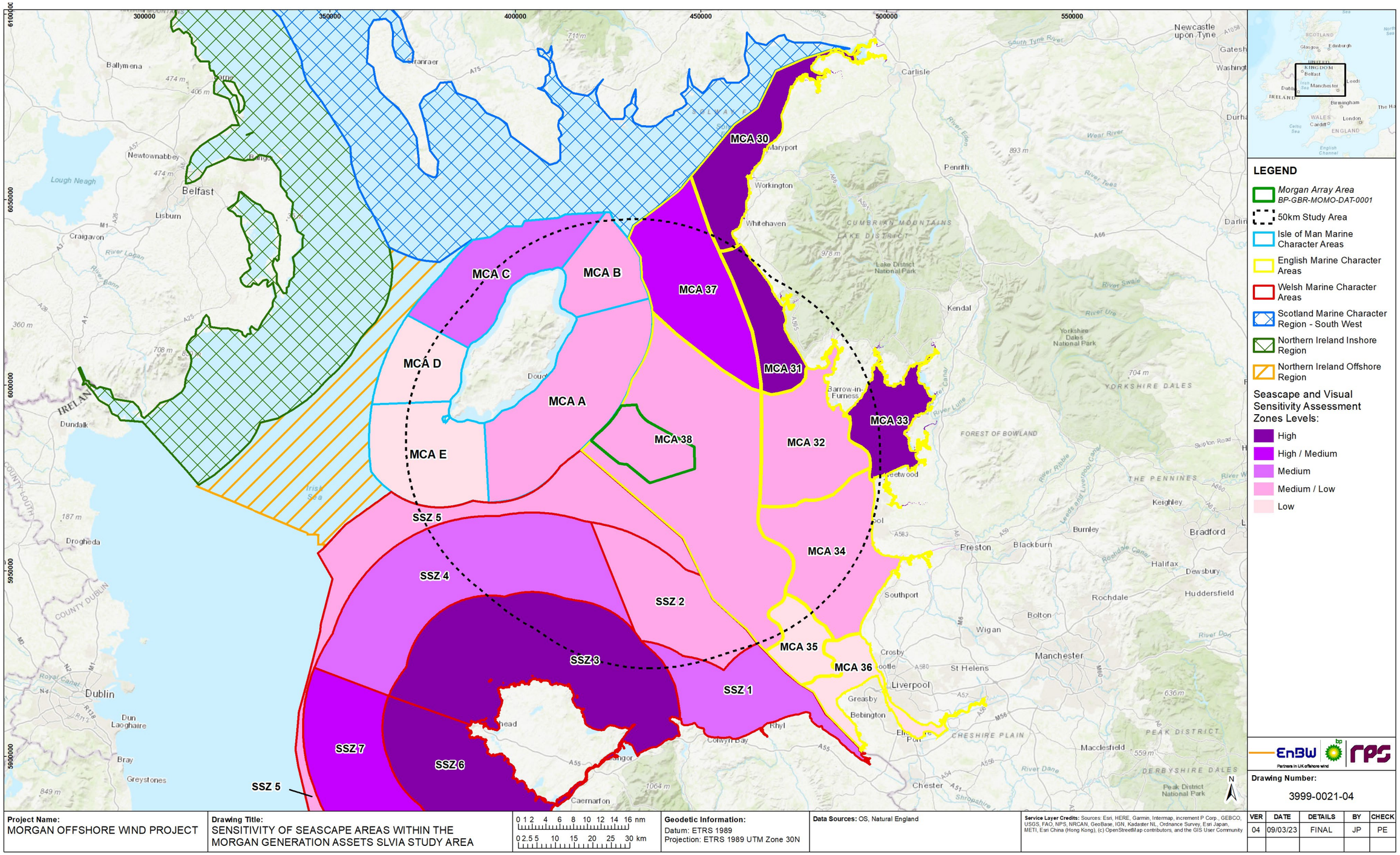


Figure 15.2: Sensitivity of seascape areas within the Morgan Generation Assets SLVIA study area.

15.8.2 Potential impacts on seascape and marine character areas

15.8.2.1 Potential impacts will arise on seascape/marine character areas in the vicinity of the Morgan Array Area during the construction, operations and maintenance, and decommissioning phases as a result of the following Morgan Generation Assets MDS components (summarised in Table 15.17 above):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.2.2 The potential impact will be caused by both static and moving elements of the above components which will affect the characteristics and perceptions of the seascape/marine character areas in the SLVIA study area. The three seascape/marine character areas which will experience the most change, due to being directly affected or adjacent to the proposed development, are:

- Marine Character Area (MCA) 38 Irish Sea South (host seascape – direct effects)
- MCA A Dreswick Point to Maughold Head Isle of Man southeast inshore waters (RPS defined) (adjacent seascape – indirect effects)
- Seascape Sensitivity Zone (SSZ) 5 North Wales and Anglesey Outer Offshore (adjacent seascape – indirect effects).

15.8.2.3 The representative viewpoints relevant to these receptors are included in Table 15.11 and assessed in full in section 15.8.

Baseline conditions

15.8.2.4 Wales SSZ 5 occupies the offshore, open water immediately north of SSZ 4. It abuts the English offshore MCA 38 to the east and Isle of Man and Northern Irish territorial waters to the north and northwest respectively. Described further in volume 4, annex 15.2: Seascape and landscape character baseline technical report of the PEIR.

Impact considerations

15.8.2.5 Morgan Array Area lies approximately 5km to the northeast of this offshore SSZ which extends westwards beyond the SLVIA study area. It is assessed as medium/low sensitivity in NRW/White 2019 (although considered, separate findings for seascape value and susceptibility to the proposed development are not provided by NRW). Analysis of the blade-tip ZTV indicates visibility of Morgan Generation Assets across the whole Zone within the SLVIA study area.

15.8.2.6 There is limited potential for significant effects to arise on other remaining seascape/marine character areas in the SLVIA study area. Other seascape/marine character areas are, therefore, not considered further in the PEIR.

Construction and decommissioning phases

Magnitude of impact

15.8.2.7 A potential impact will arise on the seascape character of MCA 38 Irish Sea South, the host seascape/marine character area, due to the erection and dismantling of the wind turbines, OSPs and the associated vessel and equipment activities/movements described in Table 15.17. This will affect the characteristics and perceptions of the area of open sea occupied by the Morgan Generation Assets. The potential impact on seascape character is predicted to be of local/regional spatial extent, short term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude of seascape character impact within Morgan Array Area itself is, therefore, considered to be **high** at most during the construction and decommissioning phases. The magnitude of seascape character impact will be lower farther away from Morgan Array Area and is judged to be **low** for MCA 38 Irish Sea South when considered as a whole.

15.8.2.8 The potential impact arising on the adjacent seascape character areas, MCA A Dreswick Point to Maughold Head Isle of Man Southeast inshore waters and SSZ 5 North Wales and Anglesey Outer Offshore, will also be of local/regional spatial extent, short term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. Due to the separation of MCA A and SSZ 5 from the Morgan Array Area, combined with the potential impacts being indirect as opposed to direct, the magnitude of seascape impact is predicted to be **medium to low**.

Sensitivity of the receptor

15.8.2.9 MCA 38 Irish Sea South, MCA A Dreswick Point to Maughold Head Isle of Man southeast inshore waters, and SSZ 5 North Wales and Anglesey Outer Offshore are deemed to be of medium seascape value and low susceptibility to the proposed development. The sensitivity of the receptors is, therefore, considered to be **medium to low**.

Significance of the effect

15.8.2.10 The magnitude of potential direct seascape impact during construction and decommissioning on the part of MCA 38 Irish Sea South occupied by Morgan Generation Assets is deemed to be high and the sensitivity of the receptor to the proposed array area is medium to low. The temporary effects are, judged to be **moderate to major adverse**, which are not significant (moderate) to significant (major).

15.8.2.11 The significance of effect on seascape character will be less farther away from Morgan Array Area and is judged to be **minor adverse** for MCA 38 Irish Sea South when considered as a whole, which is not significant.

15.8.2.12 The magnitude of the indirect seascape impact on MCA A Dreswick Point to Maughold Head Isle of Man southeast inshore waters and SSZ 5 North Wales and Anglesey Outer Offshore during construction and decommissioning is deemed to be low and the sensitivity of the receptor is medium to low. The temporary effect will be **minor adverse**, which is not significant.

Further mitigation and residual effect

15.8.2.13 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.2.14 A potential impact will arise on the seascape character of MCA 38 Irish Sea South, the host seascape/marine character area due to the operations and maintenance of Morgan Generation Assets. A seascape impact will also potentially arise on the adjacent waters, namely MCA A Dreswick Point to Maughold Head Isle of Man southeast inshore waters and SSZ 5 North Wales and Anglesey Outer Offshore. The impact will be caused by the presence of both moving and static project components (as described in Table 15.17, namely: the rotating wind turbines, OSPs and service vessels/helicopters) which will affect the characteristics and perceptions of the area of open sea occupied by and adjacent to Morgan Array Area.

15.8.2.15 The seascape character impact is predicted to be of local/regional spatial extent, long term duration, continuous and high reversibility. It is predicted that the impact will affect MCA 38 Irish Sea South directly. The magnitude within Morgan Array Area itself and extending a short distance from the array boundary is therefore considered to be **high** at most during the operations and maintenance phase, reducing with distance. The magnitude of seascape character impact is judged to be **low** for MCA 38 Irish Sea South considered as a whole.

15.8.2.16 Regarding the adjacent seascape, MCA A Dreswick Point to Maughold Head Isle of Man southeast inshore waters and SSZ 5 North Wales and Anglesey Outer Offshore will be affected indirectly. The magnitude of indirect seascape impact is predicted to be higher adjacent to Morgan Array Area with the potential impact reducing with increasing distance from the array area. Overall, the magnitude of potential impact for Isle of Man MCA A and Wales SSZ 5, when considered as a whole, is assessed as **medium to low**.

Sensitivity of the receptor

15.8.2.17 The sensitivity of MCA 38 Irish Sea South, MCA A Dreswick Point to Maughold Head Isle of Man southeast inshore waters and SSZ 5 North Wales and Anglesey Outer Offshore is as set out for the construction and decommissioning phases above, namely **medium to low**.

Significance of the effect

15.8.2.18 Overall, the magnitude of the seascape impact within Morgan Array Area itself (MCA 38 Irish Sea South) during operations and maintenance is deemed to be high and the sensitivity of the receptor is considered to be medium to low. The effects are, judged to be **moderate to major adverse** which are not significant (moderate) to significant (major).

15.8.2.19 The potential impact on seascape character will reduce with distance from Morgan Array Area. The seascape impact magnitude is predicted to be low across the wider MCA 38 Irish Sea South and the adjacent MCA A Dreswick Point to Maughold Head Isle of Man southeast inshore waters and SSZ 5 North Wales and Anglesey Outer Offshore as a whole. The sensitivity of the seascape is considered to be medium to low and the resulting significance of effects **minor to moderate adverse** at most upon Isle of Man MCA A and Wales SSZ 5, which are not significant.

15.8.2.20 A summary assessment of these seascape/marine character areas is provided in .

Further mitigation and residual effect

15.8.2.21 No further mitigation is proposed.

15.8.3 Potential impacts on national landscape character areas

15.8.3.1 Indirect impacts will potentially arise on certain landscape character areas falling within the ZTV and the SLVIA study area during the construction, operations and maintenance, and decommissioning phases resulting from the following MDS components of the Morgan Generation Assets (as set out in Table 15.17 above):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.3.2 The potential impact will be caused by both static and moving elements of the above components which can affect the characteristics and perceptions of the landscape character areas, particularly those identified on the Isle of Man within approximately 20-25km from Morgan Array Area:

- Isle of Man LCT D Incised Slopes
- Isle of Man LCT E Rugged Coast
- Isle of Man LCT H Coastal Cliffs.

As with the seascape/marine character areas, these two national landscape character areas have a greater potential to be impacted by the proposed development than other national landscape character areas within the 50km study area and are therefore assessed within this section of the chapter. The assessment has identified limited potential for significant impacts to arise on the remaining landscape character areas within the SLVIA study area (see Table 15.10 and Figure 15.2).

Isle of Man LCT D Incised Slopes

Baseline conditions

15.8.3.3 Incised Slopes LCAs D1 and D2 Ballajora and Ballaglass, D3 Laxey, D12 Douglas Head and D13 Santon and D15 Poort Erin and Port St. Mary bordering the coast fall within the ZTV. Parts of the inland LCAs D10 Braaid and D14 Ballamodha, Earystane and St Mark's also fall within the study area and the ZTV. The landscape Is strongly sloping and wooded north of Laxey; to the south the land is gently undulating with rounded hill tops, sloping south-eastwards down towards the coast. There are panoramic views eastwards across the sea. Described further in volume 4, annex 15.2: seascape and landscape character baseline of the PEIR.

Impact considerations

15.8.3.4 The Incised Slopes LCAs D2, D3, D10, D12, D13 and D14 are located just over 20km to the north-west of Morgan Array Area at their closest points between Douglas Head and Clay Head. The LCAs are judged to have a high/medium value and high/medium susceptibility to the proposed development giving it a high/medium sensitivity overall. Analysis of the blade-tip ZTV indicates variable visibility of Morgan Generation Assets across the Incised Slopes LCAs as follows: D2 – 88%, D3 – 62%, D10 – 37%, D12 – 43%, D13 – 50% and D14 – 65%. The visual influence of the offshore turbines will be tempered to varying degrees by landform and vegetation. This and the presence of existing offshore wind farms (e.g., Walney Extension) and commercial shipping would limit the visual influence of the Morgan Generation Assets to a degree.

Isle of Man LCT E Rugged Coast

Baseline conditions

15.8.3.5 Apart for Maughold Head (LCA H5) in the north, the whole length of IoM south-east coast is classified as LCT E Rugged Coast and falls within the study area and the ZTV. North of Douglas–- LCAs E4 Clay Head, E5 Laxey Bay and E6 Dhoon Bay and Port Cornaa are characterised by a rugged rocky coastline and rocky foreshore; around Laxey Bay cliffs fall steeply towards the sea from the Incised Slopes; strong sense of embayment/enclosure provided by headlands; expansive sea views. Central – LCA E3 Douglas Bay is characterised by Douglas and Onchan built-up area/bay enclosed by two prominent rocky headlands with jagged sea cliffs. South of Douglas (LCAs E1 Port Grenaugh, E2 Port Soderick, E9 Bay Ny Carrickey, E10 Castletown Bay and E11 Langness) – LCAs E1 and E2 to E6 are characterised by low rocky coast with jagged cliffs and sheltered coves with shelving shale beaches. LCA E11 coastline comprises a flat peninsula/isthmus, general sense of openness and expansive sea views. Described further in volume 4, annex 15.2: seascape and landscape character baseline of the PEIR.

Impact considerations

15.8.3.6 The Rugged Coast LCAs are situated just over 20km to the north-west of Morgan Array Area at their closest points between Douglas Head and Clay Head. Analysis of the blade-tip ZTV indicates visibility of Morgan Generation Assets across much of the LCAs as follows: E1 – 99%, E2 – 100%, E3 – 99%, E4 – 100%, E5 – 93%, E6 – 86%, E9 – 83%, E10 – 80% and E11 – 67%. Morgan Generation Assets turbines will be visible on the eastern horizon seen in the context of an expansive seascape animated by commercial shipping/ferries, and fishing and recreational vessels, and containing operational wind farms further offshore, in particular Walney Extension to the east. This would temper the visual influence of the Morgan Generation Assets to a degree.

Isle of Man LCT H Coastal Cliffs

Baseline conditions

15.8.3.7 LCAs H4 Cregneash and Meayll Peninsular in the south and H5 Maughold Head to the north are characterised by rugged cliffs, indented bays and rocky outcrops. Both LCAs fall within the ZTV and the study area. Described further in volume 4, annex 15.2: seascape and landscape character baseline of the PEIR.

Impact considerations

15.8.3.8 Coastal Cliffs LCAs H4 and H5 are located at the southern and northern ends of the IoM approximately 30km to the west and 25km to the north of Morgan Array Area respectively. Analysis of the blade-tip ZTV indicates visibility of Morgan Generation Assets across 54% of H4 and 79% of H5.

Construction and decommissioning phases

Magnitude of impact

15.8.3.9 An impact will potentially arise on the character of the Isle of Man LCT E Rugged Coast, LCT H Coastal Cliffs and the adjacent LCT D Incised Slopes due to the erection and dismantling of the wind turbines, OSPs and the associated vessel and equipment activities/movements described in Table 15.17. This may affect the characteristics and perceptions of the landscape of the southeast coast of Isle of Man facing Morgan Array Area situated over 20km away.

15.8.3.10 The potential character impact is predicted to be of local/regional spatial extent, short term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect the receptor indirectly. The magnitude of landscape character impact is therefore considered to be **low** at most during the construction and decommissioning phases.

15.8.3.11 The character of other areas of land in the SLVIA study area, namely northwest England, will be affected to a negligible degree.

Sensitivity of the receptor

15.8.3.12 LCT E Rugged Coast, LCT H Coastal Cliffs and LCT D Incised Slopes are deemed to be of high to medium landscape value (taking account of the Isle of Man's UNESCO Biosphere status) and high to medium susceptibility to the proposed development. The sensitivity of the receptors is therefore, considered to be **high to medium**.

Significance of the effect

15.8.3.13 Overall, the magnitude of the landscape character impact on LCT E Rugged Coast, LCT H Coastal Cliffs and LCT D Incised Slopes during construction and decommissioning is deemed to be low and the sensitivity of the receptor is high to medium. The temporary effects will be **minor to moderate adverse** at most, which are not significant.

Further mitigation and residual effect

15.8.3.14 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.3.15 An indirect impact will potentially arise on the character of the Isle of Man LCT E Rugged Coast, LCT H Coastal Cliffs and the adjacent LCT D Incised Slopes due to the operations and maintenance of Morgan Generation Assets. The potential impact will be caused by the presence of both moving and static project components occupying Morgan Array Area (as described in Table 15.17 above, namely: the rotating wind turbines, OSPs and service vessels/helicopters) which will affect the characteristics and perceptions of the coastal landscape.

15.8.3.16 The character impact is predicted to be of local/regional spatial extent, long term duration, continuous and high reversibility. It is predicted that the impact will affect the Isle of Man LCT E Rugged Coast, LCT H Coastal Cliffs and the adjacent LCT D Incised Slopes indirectly. The magnitude of character change is therefore considered to be **low** at most during the operations and maintenance phase reducing to lower magnitudes with distance.

Sensitivity of the receptor

15.8.3.17 The sensitivity of LCT E Rugged Coast, LCT H Coastal Cliffs and LCT D Incised Slopes is as set out above for the construction and decommissioning phases, namely **high to medium**.

Significance of the effect

15.8.3.18 Overall, the magnitude of landscape character impact in relation to Isle of Man LCT E Rugged Coast, LCT H Coastal Cliffs and the adjacent LCT D Incised Slopes during operations and maintenance is deemed to be low at most and the sensitivity of the receptor is high/medium. The effects will be m**inor to moderate adverse** at most, which are not significant.

Further mitigation and residual effect

15.8.3.19 No further mitigation is proposed.

15.8.4 Potential impacts on the special qualities, themes and criteria of nationally and internationally designated landscapes

15.8.4.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on the special qualities of nationally and internationally designated landscapes in the SLVIA study area falling within the ZTV of Morgan Generation Assets. These potential impacts would be a result of the following MDS components (as summarised in Table 15.17 above):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.4.2 The potential impacts will be caused by both static and moving elements of the above components which have the potential to affect those special qualities identified as being susceptible to changes in visual environment.

Lake District National Park

Baseline conditions

15.8.4.3 Lake District National Park is located approximately 38km to the northeast of Morgan Array Area at its closest point. The qualifying special qualities relevant to the SLVIA are:

- The high fells
- Mosaic of lakes, tarns, rivers and coast
- Opportunities for quiet enjoyment.

15.8.4.4 The remaining special qualities are not considered relevant to the SLVIA of Morgan Generation Assets (and/or are covered elsewhere in the SLVIA) and therefore are scoped out of the assessment:

- A world class cultural landscape
- Complex geology and geomorphology
- Rich archaeology and historic landscape
- Unique farming heritage and concentration of common land
- Wealth of habitats and wildlife
- Extensive seminatural woodlands
- Distinctive buildings and settlement character
- A source of artistic inspiration
- A model for protecting cultural landscapes
- A long tradition of tourism and outdoor activities.

Impact considerations

15.8.4.5 There is potential for Morgan Generation Assets to affect the three qualifying special qualities in areas of the national park lying within the ZTV of Morgan Generation Assets. It is important to note that, in areas falling outside the ZTV of the proposed development, there would be no perceived landscape or visual change compared to the existing situation.

15.8.4.6 Analysis of the relevant representative viewpoint visualisations and the ZTV, supported by fieldwork, indicates theoretical visibility of Morgan Generation Assets across approximately 53% of the designated area (within the SLVIA study area) at distances between 38-50km. Representative viewpoint 16 Gutterby Banks/Townend Bank (Figure 15.6) and representative viewpoint 17 Buck Barrow/Kinmont Mount (Figure 15.7) present two contrasting views looking west towards Morgan Array Area from within the national park. These represent the contrasting aspects of its landscape character and special qualities as reflected in the character area descriptions for NCA 7 West Cumbria Coastal Plain and NCA 8 Cumbria High Fells respectively.

15.8.4.7 In regard to the high fells special quality, due to the remote offshore location the Morgan Array Area, sited beyond existing offshore wind farms (Ormonde, Barrow, West of Duddon Sands and Walney/Walney Extension), the special character and quality of this upland landscape would be affected to a negligible degree. This is in keeping with the assessment findings above in relation landscape perception and NCA 8 Cumbria High Fells and representative viewpoint 17 Buck Barrow/Kinmont Mount (Figure 15.7).

15.8.4.8 The same justification and assessment apply to the Mosaic of lakes, tarns, rivers and coast. The predicted effect on the coast component of this national park special quality has been assessed previously in relation to the perceptual aspects of NCA 7 West Cumbria Coastal Plain and representative viewpoint 16 Gutterby Banks/Townend Bank (Figure 15.6).

15.8.4.9 Regarding Opportunities for quiet enjoyment, at 35-50km distance or more, given the dynamic character of the seascape context in which Morgan Array Area is located (animated/characterised by existing offshore wind farms and commercial shipping), opportunities for quiet enjoyment of the national park as a whole would be affected to a negligible degree.

15.8.4.10 In summary, the influence of Morgan Generation Assets in favourable visibility on the above Lake District National Park special qualities at such distances would be very limited.

The English Lake District World Heritage Site

15.8.4.11 The English Lake District WHS was inscribed in 2017. The criteria for its inscription are set out in volume 4, annex 15.2 Seascape and landscape character baseline technical report of the PEIR and summarised below.

Baseline conditions

15.8.4.12 The Outstanding Universal Value (OUV) for the Lake District is based on a combination of attributes falling under three intertwining and interdependent themes:

- A landscape of exceptional beauty, shaped by persistent and distinctive agro-pastoral traditions which give it special character
- A landscape which has inspired artistic and literary movements and generated ideas about landscapes that have had global influence and left their physical mark
- A landscape which has been the catalyst for key developments in the national and international protection of landscapes.

Impact considerations

15.8.4.13 As described above in relation to the national park, the influence of Morgan Generation Assets in favourable visibility on the three OUV attributes of the WHS summarised above at distances of well over 35km, bearing in mind the seascape context, would be very limited.

15.8.4.14 The representative viewpoints relevant to Lake District National Park and English Lake District WHS are the following:

- Representative viewpoint 16 – Cumbria Coastal Way, Gutterby Banks/Townend Bank (Figure 15.6)
- Representative viewpoint 17 – Kinmont Buck Barrow (Figure 15.7).

Construction and decommissioning phases

Magnitude of impact

15.8.4.15 The influence of Morgan Generation Assets due to the erection and dismantling of the wind turbines, OSPs and the associated vessel and equipment activities/movements (described in Table 15.17 above) on the above special qualities at distances in excess of 35km would be very limited. Furthermore, existing offshore wind farms (Ormonde, Barrow, West of Duddon Sands and Walney/Walney Extension) are located in the waters separating Morgan Array Area from the Lake District National Park and The English Lake District WHS and already exert an influence on these designated landscape/sites.

15.8.4.16 The potential impact is predicted to be of local/regional spatial extent, short term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect the receptor indirectly. The magnitude of landscape character impact is therefore considered to be **negligible** at most during the construction and decommissioning phases.

Sensitivity of the receptors

15.8.4.17 The Lake District National Park special qualities and criteria of the English Lake District WHS are deemed to be of very high landscape value and high susceptibility to the proposed development. The sensitivity of the receptors is therefore, considered to be **very high**.

Significance of the effect

15.8.4.18 Overall, the magnitude of the potential impact on the Lake District National Park and The English Lake District WHS during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is considered to be very high. The temporary significance of effect will be n**egligible adverse**, which is not significant. Representative viewpoint 16 and representative viewpoint 17 (Figure 15.6 and Figure 15.7) are representative of the predicted visual change involved.

Further mitigation and residual effect

15.8.4.19 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.4.20 An indirect impact will potentially arise on the qualifying national park special qualities referred to above due to the operations and maintenance of Morgan Generation Assets. The potential impact will result from the presence of both moving and static project components occupying Morgan Array Area, as described in Table 15.17,

namely, the rotating wind turbines, OSPs and service vessels/helicopters which have the potential to affect perceptions of the landscape. The potential impact is predicted to be of local/regional spatial extent, long term duration, continuous and high reversibility. It is predicted that the impact will affect national park special qualities indirectly. The magnitude of impact is therefore considered to be **negligible** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.4.21 The sensitivity of the Lake District National Park special qualities and The English Lake District WHS themes and criteria to the proposed Morgan Generation Assets are as set out above for the construction and decommissioning phases, namely **very high**.

Significance of the effect

15.8.4.22 Overall, the magnitude of potential landscape character impact in relation to the Lake District National Park special qualities and The English Lake District WHS themes and criteria during operations and maintenance of the Morgan Generation Assets is deemed to be negligible at most and the sensitivity of the receptor is very high. The effect will be **minor adverse** at most, which is not significant.

Further mitigation and residual effect

15.8.4.23 No further mitigation is proposed.

15.8.5 Visual impacts – potential impacts on people using National Trails and long-distance paths

15.8.5.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from National Trails/long distance paths in the SLVIA study area falling within the ZTV of Morgan Generation Assets. These potential impacts would be caused by visibility of some or all the following MDS components (as summarised in Table 15.17 above):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.5.2 The potential impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people using national trails/long distance paths on the Isle of Man. There is the potential for significant impacts on the following two receptors:

- Raad ny Foillan Coastal Path, Isle of Man (Port St Mary to Maughold via Douglas – sections 1, 2, 3, 11 and 12)
- Millennium Way, Isle of Man (between Castleton and Snaefell).

15.8.5.3 The assessment has found that there is a low potential for significant visual impacts to arise on users of other national trail/long distance paths or similar linear receptors in the SLVIA study area.

15.8.5.4 Wirelines have been generated for the turbine locations. At this PEIR stage, the locations of the four OSPs is not known and these have not been modelled/shown on the wirelines of the representative viewpoints.

Raad ny Foillan Coastal Path, Isle of Man

Baseline conditions

15.8.5.5 Raad ny Foillan is a coastal long-distance path around the Isle of Man, 164km in length, separated into 12 stages. Stages of the path falling within the ZTV include stage 1 Douglas – Derbyhaven, stage 2 Derbyhaven - Port St Mary, a section of stage 3 Port St Mary – Port Erin before to turns north at Spanish Head, a short section of stage 9 Point of Ayre – Ramsey before the coast turns in at Ramsey where landform at Maughold Head would screen views, stage 10 Ramsey – Maughold, stage 11 Maughold – Laxey and stage 12 Laxey to Douglas. The stages of the path which traverse the other side of the island are outside of the ZTV for this project and so there would be no effect. The IoM coastline is varied in elevation and the path includes elevated views as well as stretches closer to sea level along beaches and settlement promenades. The path can be walked in both directions and is well signposted. It incorporates several panoramic viewpoints marked on OS maps, several of which have been selected to represent views at intervals along the east coast of IoM towards Morgan Array Area. The most exposed sections of path with panoramic views over the sea and along the coastline are Maughold Brooghs (representative viewpoint 42, Figure 15.14), Ballafayle Cairn, Onchan Head, Douglas Head (representative viewpoint 19, Figure 15.9), Langness (representative viewpoint 18, Figure 15.8), Port of St Mary (representative viewpoint 46, Figure 15.18), The Chasms/Sugarloaf (representative viewpoint 50, Figure 15.20) and Spanish Head. The path also follows the promenade at Douglas (representative viewpoint 49, Figure 15.19) and seafront at Laxey (representative viewpoint 43, Figure 15.15) but these views are framed and less wide ranging.

Impact considerations

15.8.5.6 Analysis of the ZTV and the representative viewpoint visualisations, supported by fieldwork, indicates fairly frequent visibility of Morgan Generation Assets from the open sections of Raad ny Foillan Coastal Path affording views across the adjacent seascape (MCA A Dreswick Point to Maughold Head, Isle of Man southeast inshore waters) from much of the southeast coastal of Isle of Man between Maughold Head and Dreswick Point. The wind turbines would be seen on the horizon as part of the wide coastal panorama set within a seascape animated and characterised to varying extents by commercial shipping/ferries (a constant feature of the SLVIA study area seascape) in addition to existing offshore wind farms (Walney Extension).

15.8.5.7 The maximum visual impact (worst-case) would be that experienced at the closest sections of the route to Morgan Array Area, approximately 22km distant, namely at Douglas Bay (representative viewpoint 49, Douglas promenade (representative viewpoint 19), Onchan Head and Laxey Bay (representative viewpoint 43, Figure 15.15) Lower magnitudes of visual change would occur at other more distant points along the path, namely Maughold Brooghs (representative viewpoint 42, Figure 15.14), Port St Mary (representative viewpoint 46, Figure 15.18) and The Chasms/Sugarloaf (representative viewpoint 50, Figure 15.20). The magnitude of

visual change would be marginally higher at locations where Morgan Generation Assets appear in framed views (i.e., by headlands/landform) in particular at Douglas and Laxey.

15.8.5.8 At approximate distances of 20-30km (and up to 40km) Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The wind turbines would be difficult to discern (or not visible) at other times of the year.

Millennium Way, Isle of Man

Baseline conditions

15.8.5.9 The Millennium Way, formerly the Via Regia/Royal Way, was renamed in 1979 to celebrate 1000 years of the Manx Parliament. The long-distance path runs through the central part of the Isle of Man from Castletown to Ramsey approximately 36km long. It starts at Sky Hill in Ramsey in the north of the island, and travels south to Castle Rushen in Castletown. The route follows the varied landform of the island: elevated in parts (e.g., Skyhill and the moorlands to the south); skirting around the lower contours of Snaefell. There are long sections of path without views to the sea, such as the Silver Burn River section between Ballasalla and Castletown. Where eastward views towards the sea are possible these would be across varied landform in the foreground.

Impact considerations

15.8.5.10 Fieldwork and analysis of the ZTV and the representative viewpoint visualisations indicate limited visibility of Morgan Generation Assets from Millennium Way, including from the lower, east facing slopes of Slieau Ruy (representative viewpoint 44, Figure 15.16) at approximately 30km. Otherwise, visibility of Morgan Generation Assets would be screened by intervening landform and vegetation and sometimes buildings/settlement. Where visible the wind turbines would be seen on the horizon as part of a wide coastal panorama characterised by existing offshore wind farms (Walney Extension) and commercial shipping/ferries (a constant feature of the seascape within the SLVIA study area).

15.8.5.11 At approximately 30km distance Morgan Generation Assets would be theoretically visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The wind turbines would be difficult to discern (or not visible) at other times of the year.

15.8.5.12 The representative viewpoints relevant to this receptor type are set out below. The viewpoint locations which represent views from national trails and long-distance paths are illustrated on Figure 15.3, and shown as wirelines from each of the viewpoints listed below:

- Representative viewpoint 14 – Cistercian Way, Walney Island, Cumbria (Figure 15.4)
- Representative viewpoint 16 – Cumbria Coastal Way, Gutterby Banks/Townend Bank, Cumbria (Figure 15.6)
- Representative viewpoint 17 – Kinmont/Buck Barrow, Lake District National Park (Figure 15.7)
- Representative viewpoint 19 – viewpoint at arch southwest of Douglas Head, Isle of Man (Figure 15.9)
- Representative viewpoint 42 – Maughold Head/Maughold Brooghs, Isle of Man (Figure 15.14)
- Representative viewpoint 43 – Car park/seafront at Old Laxey, Isle of Man (Figure 15.15
- Representative viewpoint 46 – TSS Mona's Queen lll anchor memorial at Port St. Mary Point, Isle of Man (Figure 15.18)
- Representative viewpoint 49 – Douglas promenade, Isle of Man (Figure 15.19)
- Representative viewpoint 50 – Coast Path at the Chasms/Sugarloaf, Isle of Man (Construction and decommissioning phases (Figure 15.20).

Magnitude of impact

15.8.5.13 An impact will potentially arise on the views/visual amenity of people using the Raad ny Foillan Coastal Path. There is a potential impact from the erection and dismantling of the wind turbines, OSPs and the associated vessel and equipment activities/movements within Morgan Array Area (Table 15.17) which would be situated offshore over 20km away.

15.8.5.14 The potential impact is predicted to be of local/regional spatial extent, short term duration (increasing during construction, decreasing during decommissioning), intermittent and high reversibility. It is predicted that the impact will affect receptors directly. Regarding Raad ny Foillan Coastal Path, the magnitude of visual impact is therefore considered to be **low** at most during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.5.15 Based on the high value of the view and a high visual susceptibility to the proposed development, people using national trails/long distance paths including the Raad ny Foillan Coastal Path and Millennium Way are considered to have **high** sensitivity to change.

Significance of the effect

15.8.5.16 Overall, the magnitude of the visual impact on people using Raad ny Foillan Coastal Path during construction and decommissioning is deemed to be low and the sensitivity of the receptor is high. The temporary effect will be **moderate adverse** at most, for Raad ny Foillan Coastal Path which is not significant.

Further mitigation and residual effect

15.8.5.17 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.5.18 A visual impact will potentially arise on people using Raad ny Foillan Coastal Path due to the operations and maintenance of Morgan Generation Assets. The potential impact will result from visibility of both moving and static project components occupying Morgan Array Area (as described in Table 15.17) namely, some or all of the turbines, the OSPs and service vessels/helicopters, which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.5.19 The potential impact is predicted to be of local/regional spatial extent, long term duration, intermittent and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** in the case of Raad ny Foillan Coastal Path during the operations and maintenance phase.

Sensitivity of the receptor

15.8.5.20 The sensitivity of the people using national trails/long distance paths is as set out above for the construction and decommissioning phases, namely **high.**

Significance of the effect

15.8.5.21 Overall, the magnitude of visual impact in relation to people using Raad ny Foillan Coastal Pathway during operations and maintenance is deemed to be medium to low at most and the sensitivity of the receptor is high. The effect will be **moderate** adverse in general, which is not significant. The exception to this will be the sections in the vicinity of Douglas and Laxey (due to framed nature of views and the proximity of the receptor to Morgan Array Area) where the effects will be **moderate to major adverse** which are not significant (moderate) to significant (major). Representative viewpoint 19 at Douglas Head (Figure 15.9) representative viewpoint 43 at Laxey (Figure 15.15) and representative viewpoint 49 Douglas promenade (Figure 15.19) are representative of the predicted visual change at these locations

Further mitigation and residual effect

15.8.5.22 No further mitigation is proposed.

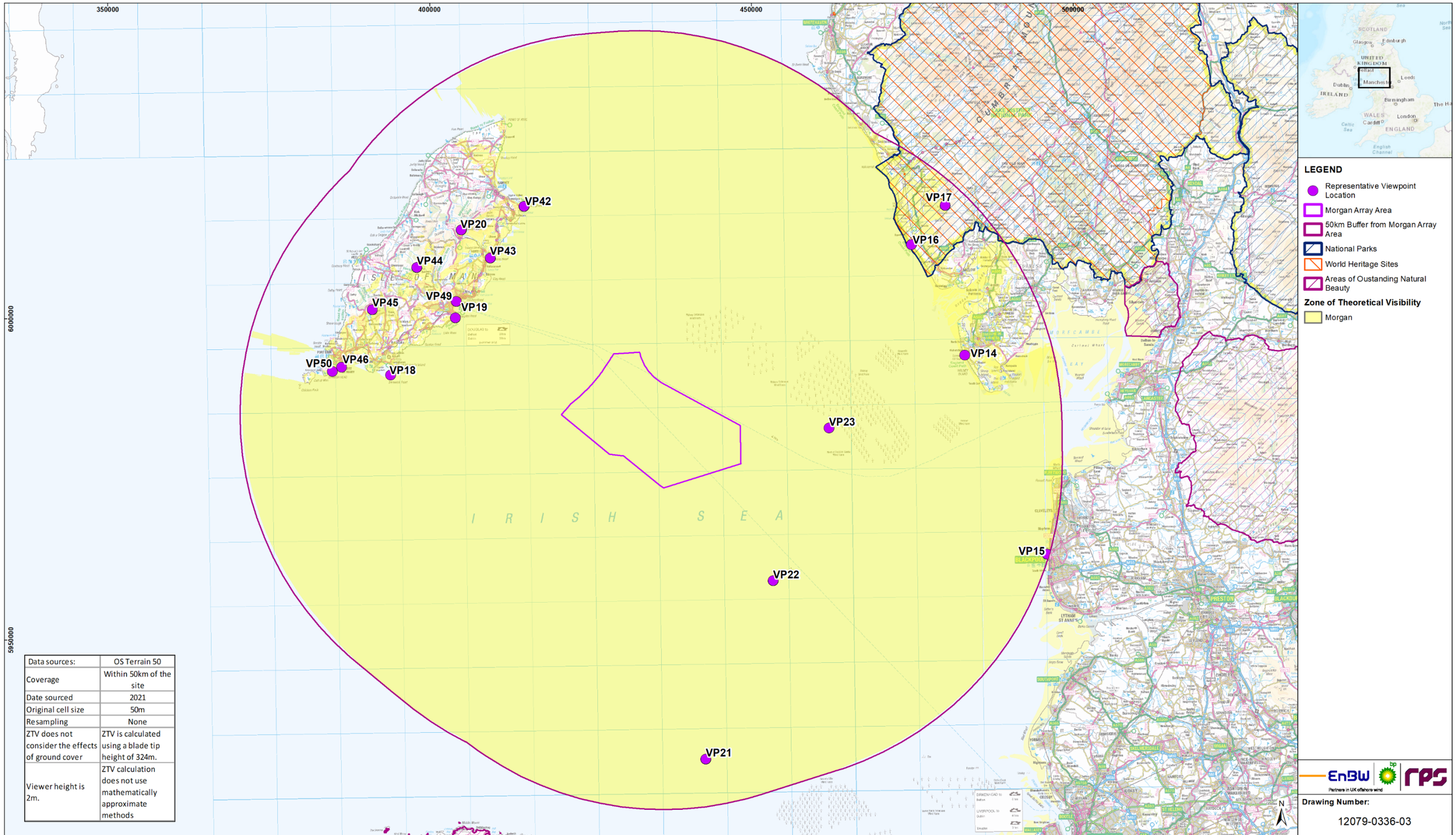


Figure 15.3: Representative viewpoint locations within the Morgan Generation Assets SLVIA study area and ZTV.

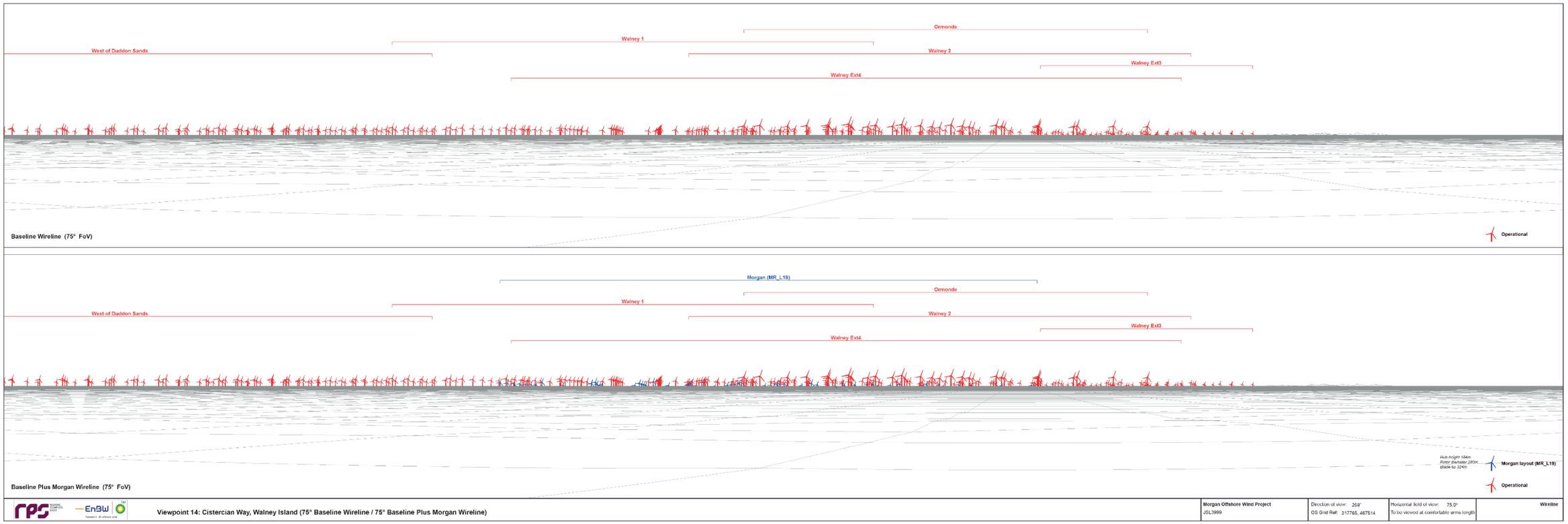


Figure 15.4: Representative viewpoint 14 Cistercian Way, Walney Island.

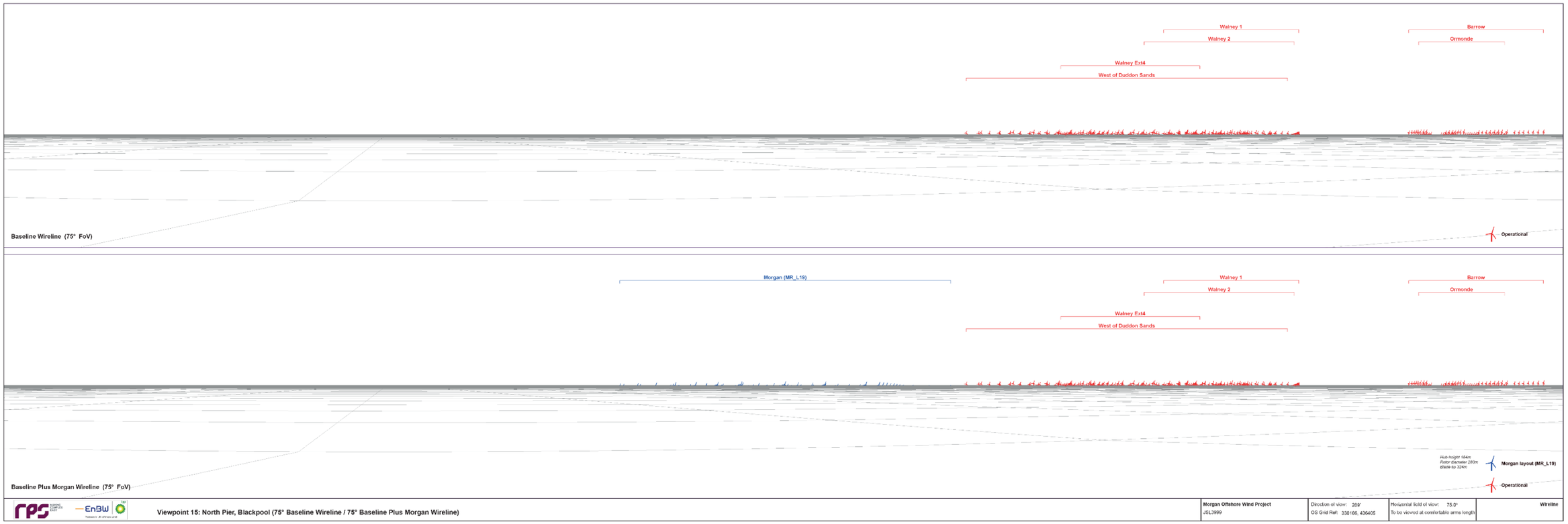


Figure 15.5: Representative viewpoint 15 North Pier, Blackpool

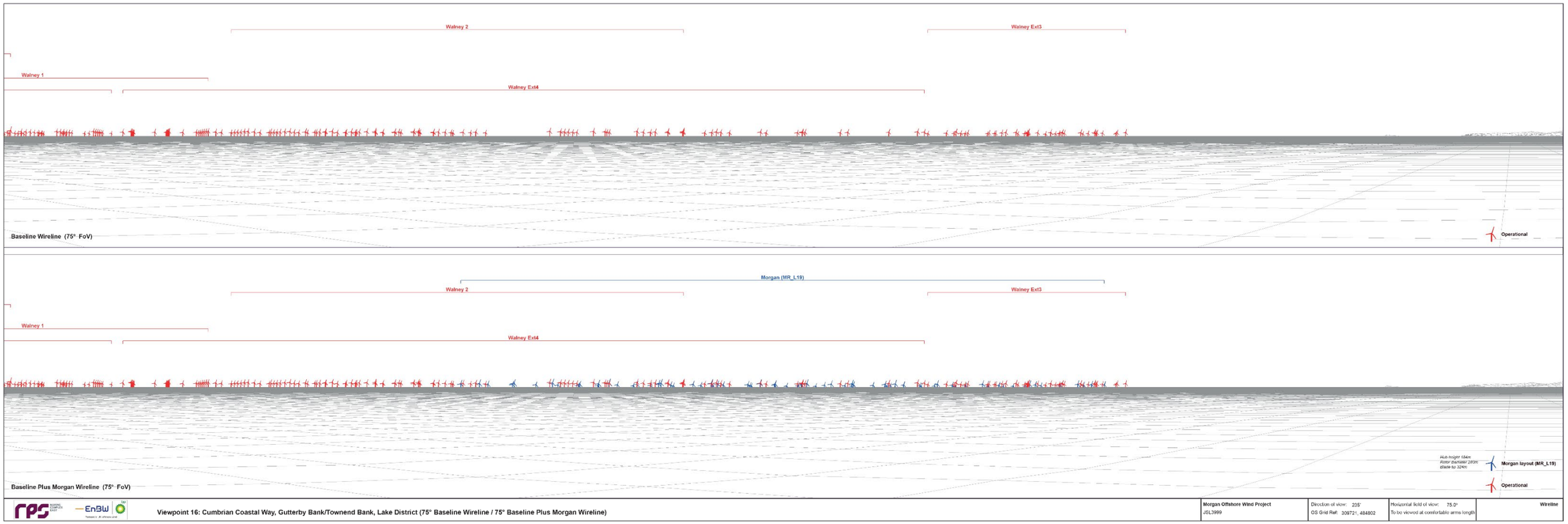


Figure 15.6: Representative viewpoint 16 Cumbria Coastal Way, Gutterby Banks/Townend Bank, Lake District National Park.

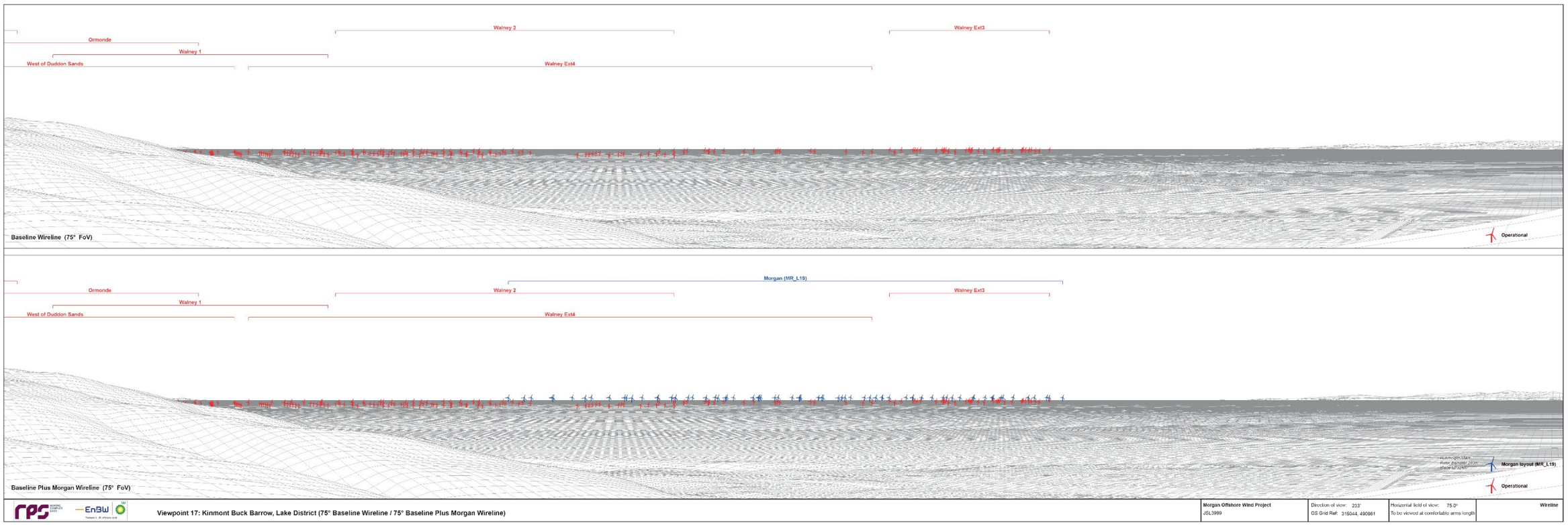


Figure 15.7: Representative viewpoint 17 Kinmont/Buck Barrow Access Land, Lake District National Park.

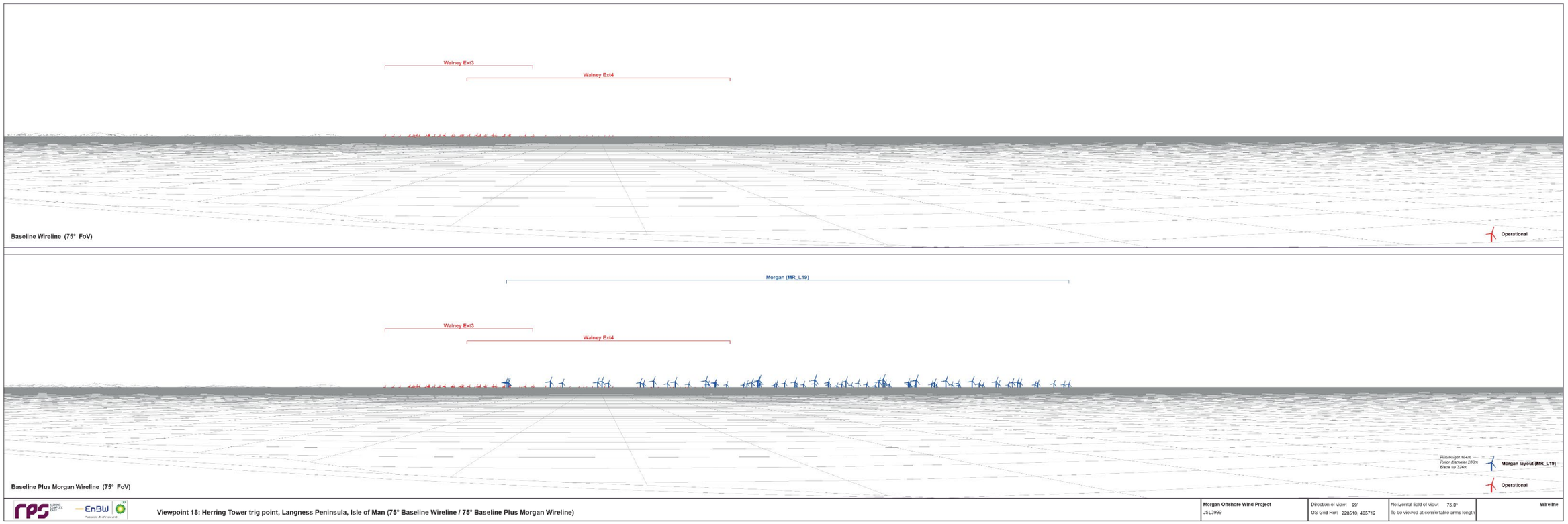


Figure 15.8: Representative viewpoint 18 Herring Tower trig point, Langness Peninsula, Isle of Man.

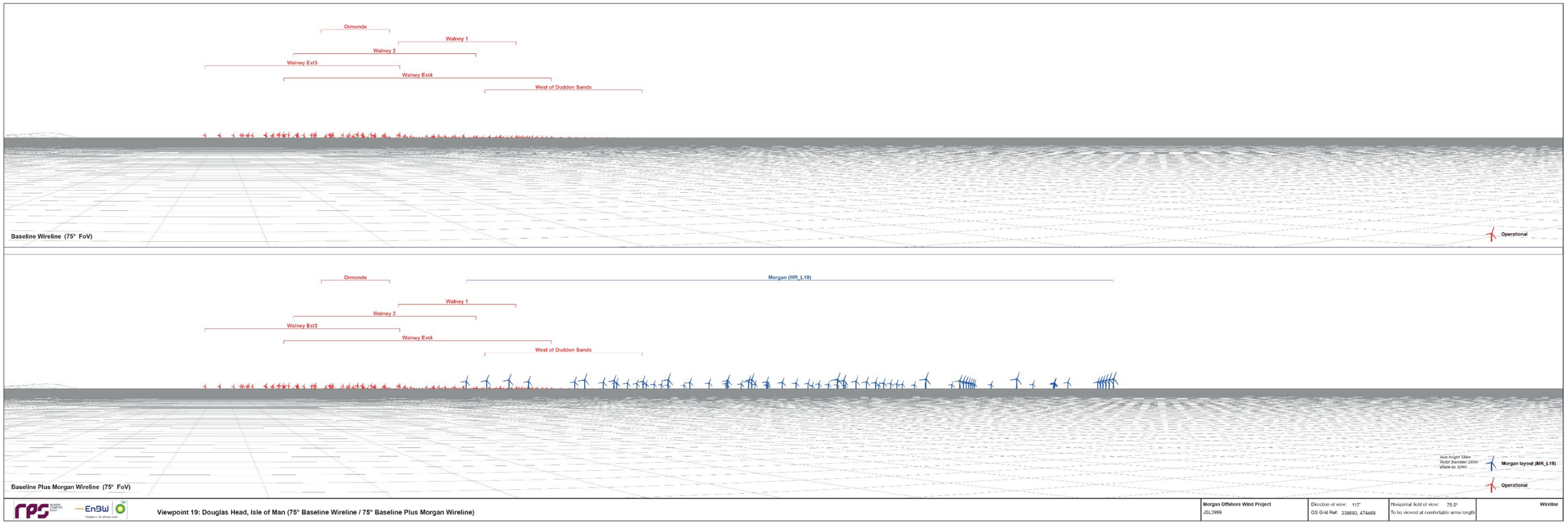


Figure 15.9: Representative viewpoint 19 viewpoint at arch southwest of Douglas Head, Isle of Man.

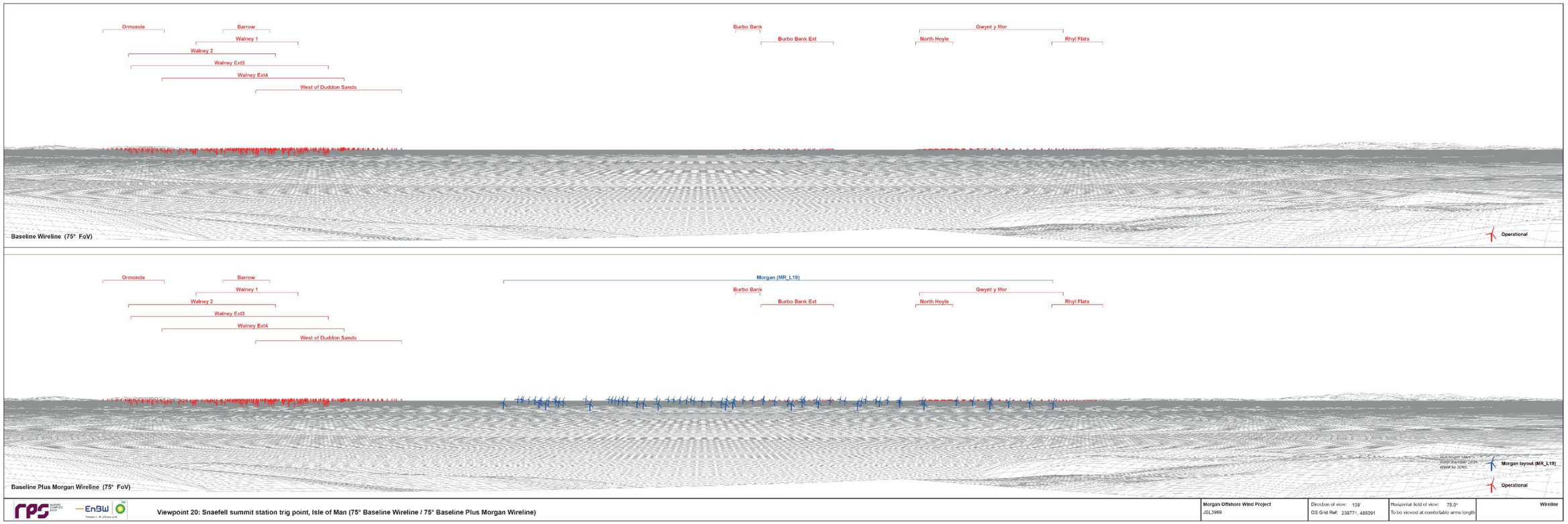


Figure 15.10: Representative viewpoint 20 Snaefell summit station trig point, Isle of Man.

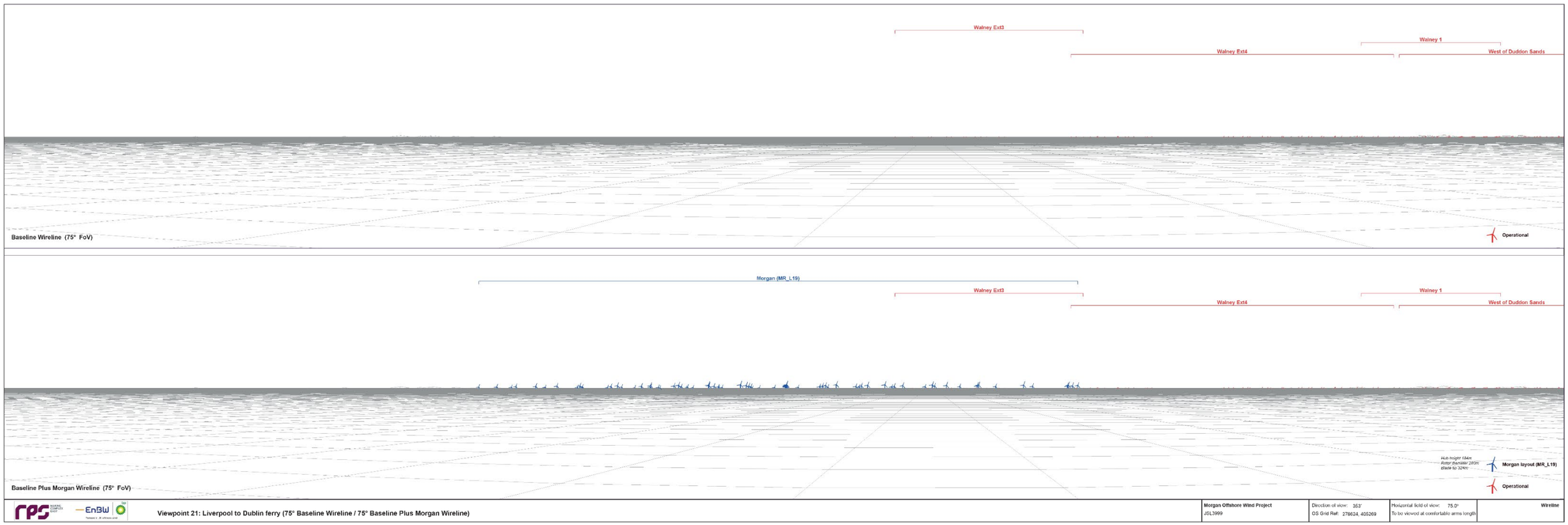


Figure 15.11: Representative viewpoint 21: Liverpool to Dublin ferry.

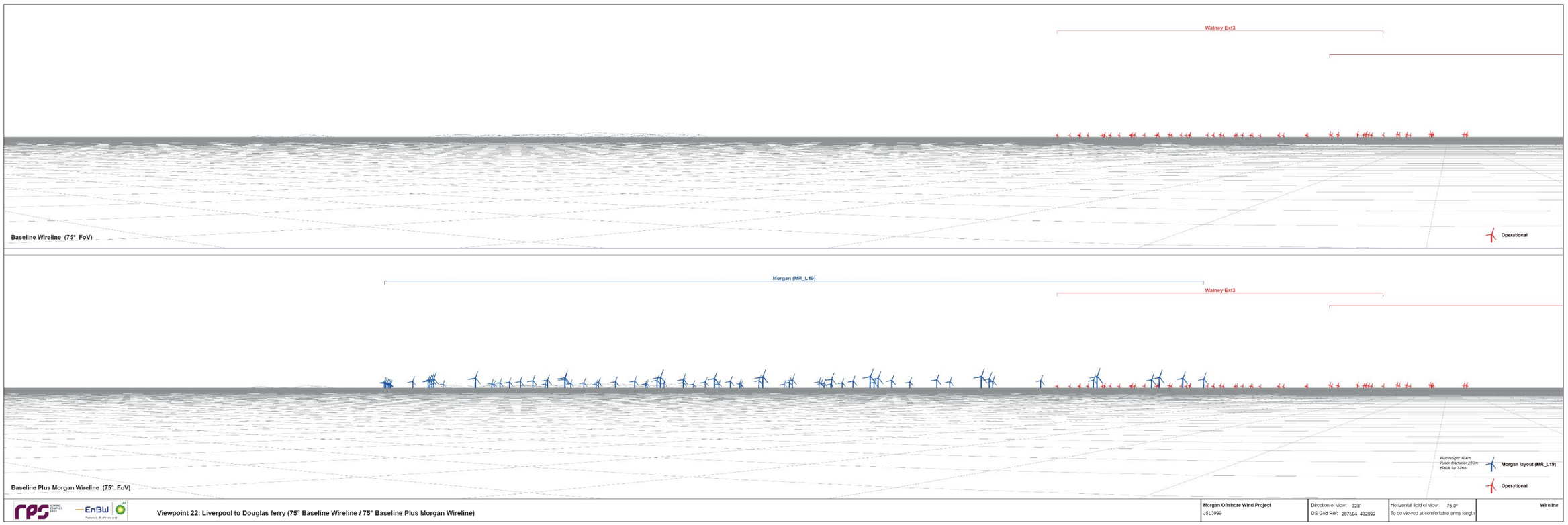


Figure 15.12: Representative viewpoint 22 Liverpool to Douglas ferry.

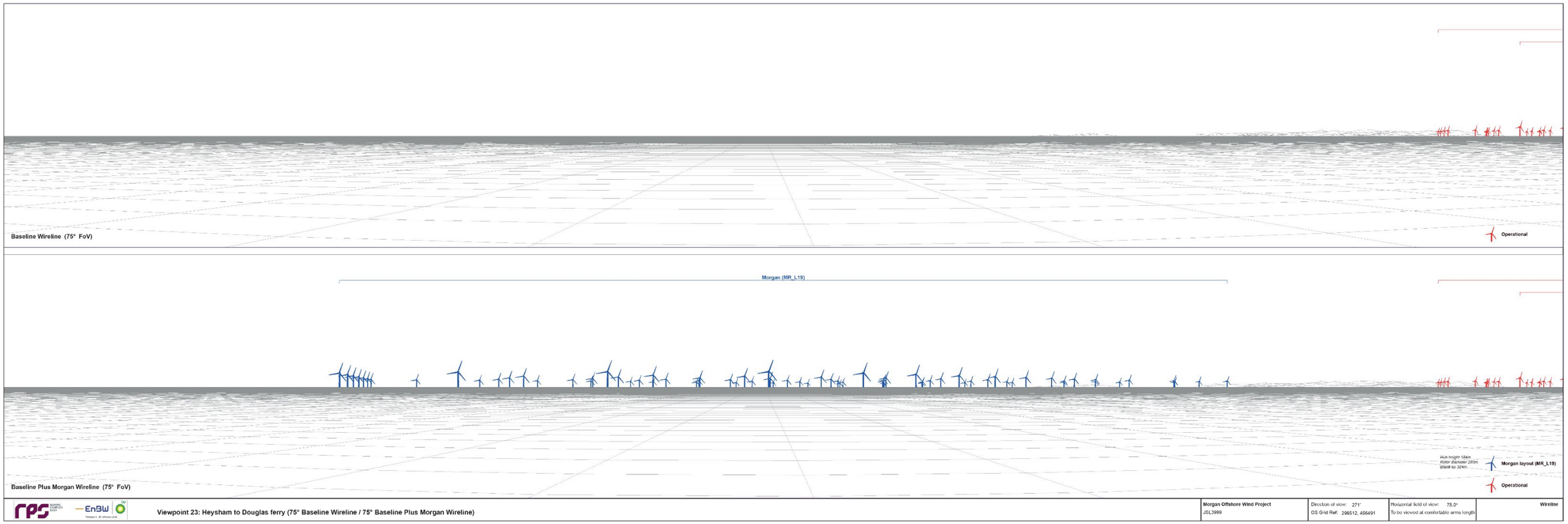


Figure 15.13: Representative viewpoint 23 Heysham to Douglas ferry.

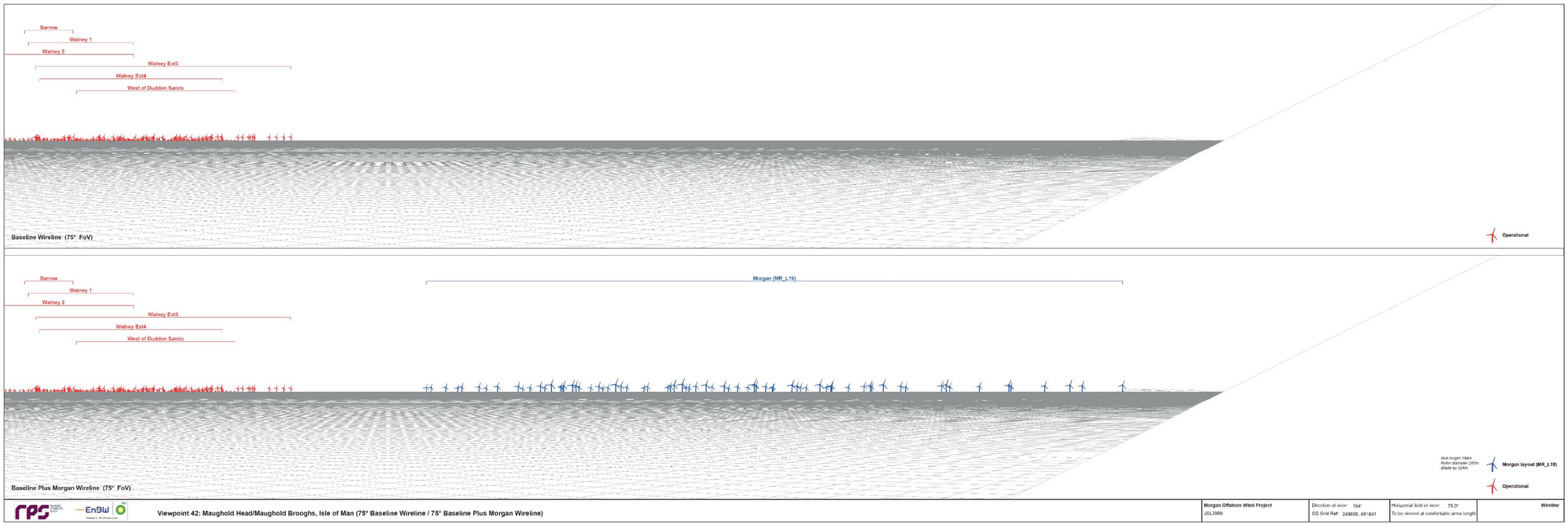


Figure 15.14: Representative viewpoint 42 Maughold Head/Maughold Brooghs, Isle of Man.

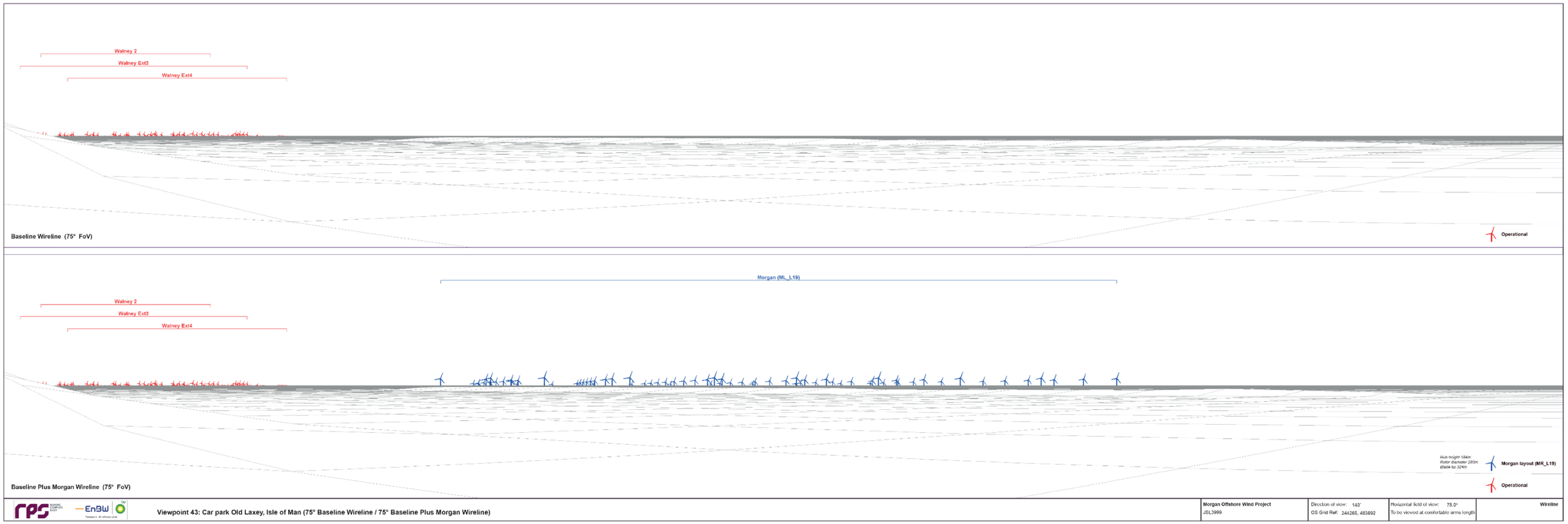


Figure 15.15: Representative viewpoint 43 car park, seafront at Old Laxey, Isle of Man.

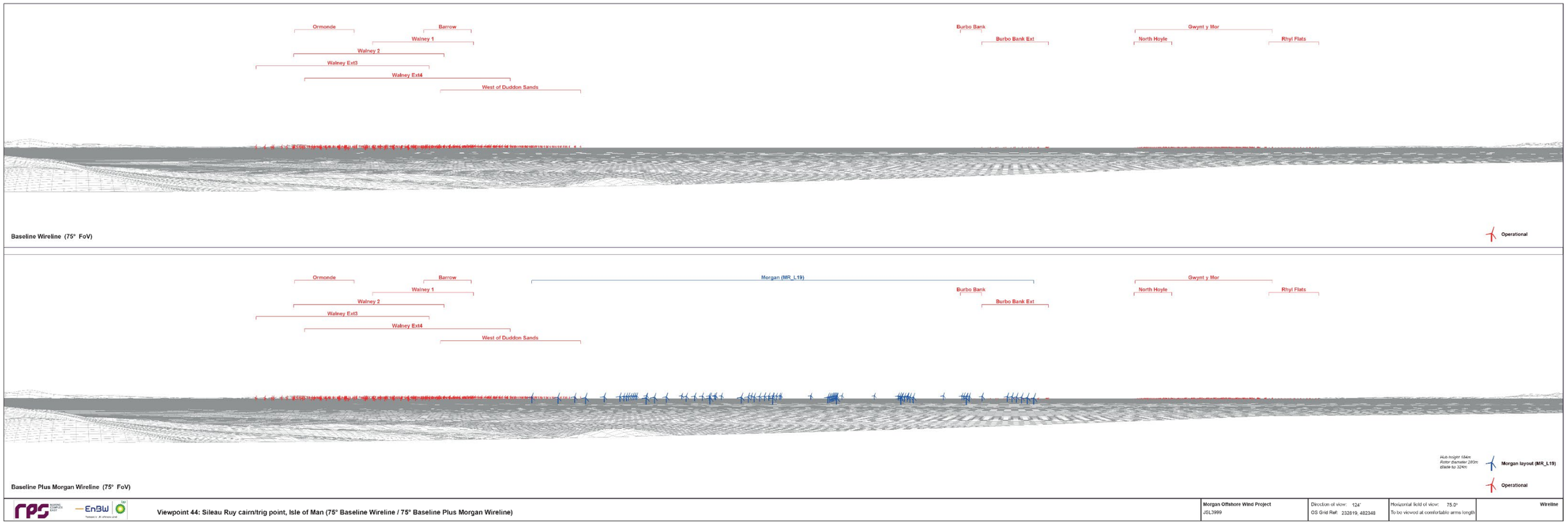


Figure 15.16: Representative viewpoint 44 Slieau Ruy cairn/trig point, Isle of Man.

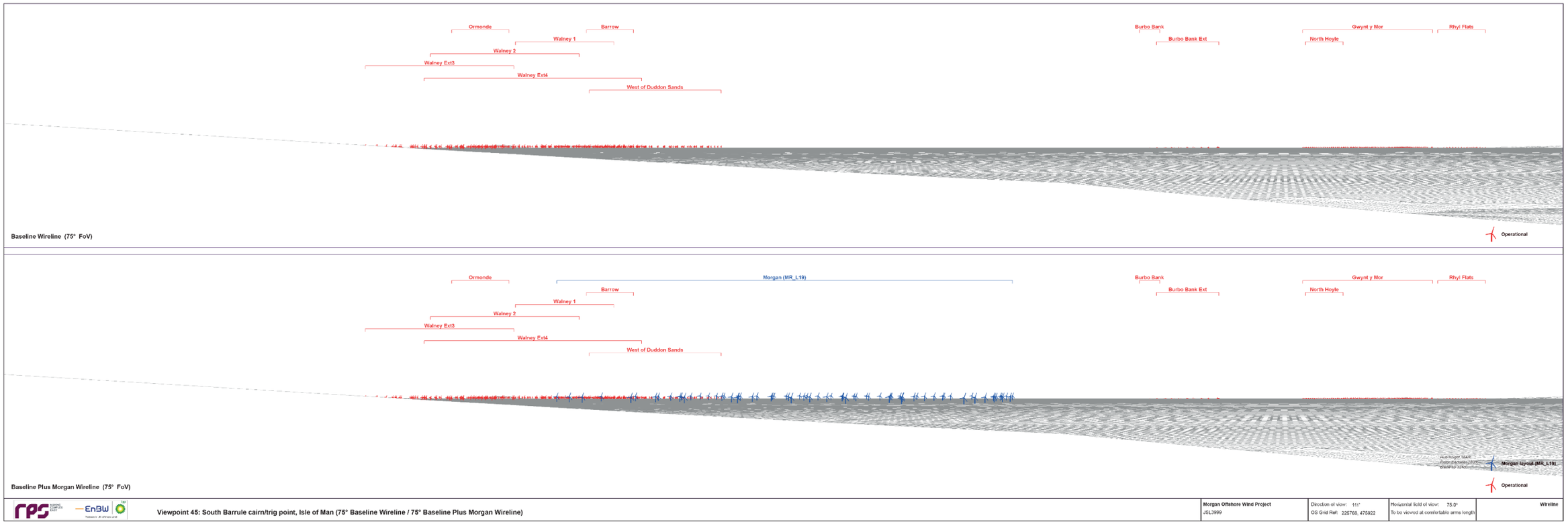


Figure 15.17: Representative viewpoint 45 South Barrule cairn/trig point, Isle of Man.

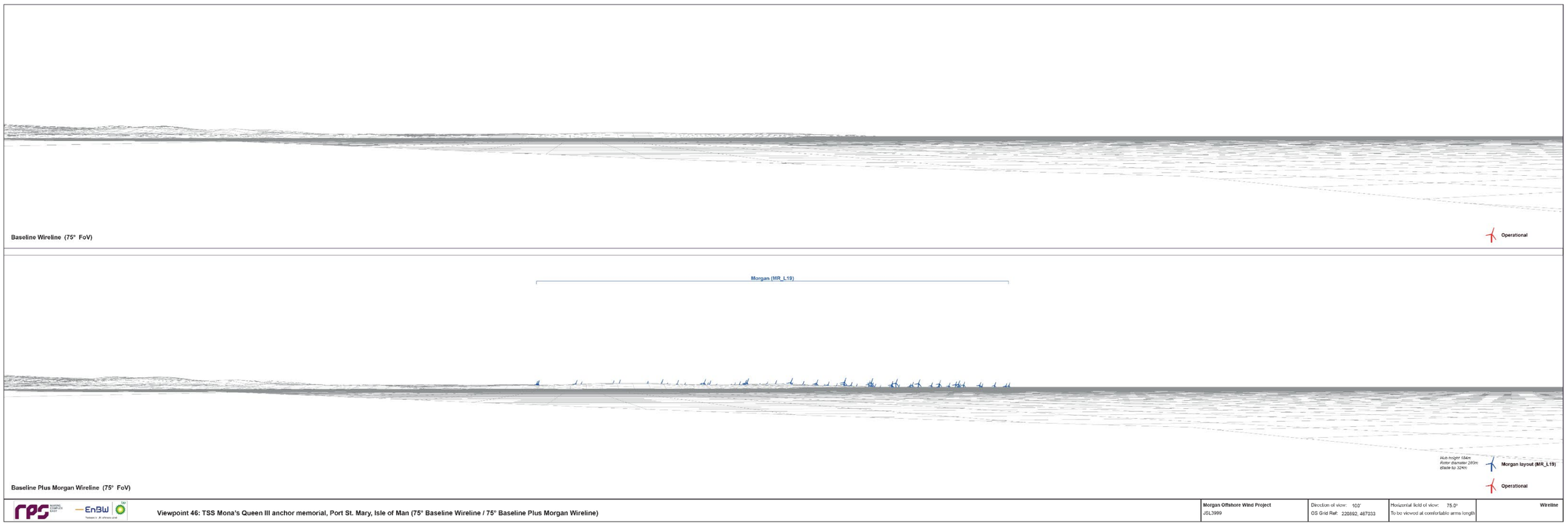


Figure 15.18: Representative viewpoint 46 TSS Mona's Queen III anchor memorial at Port St. Mary Point, Isle of Man.

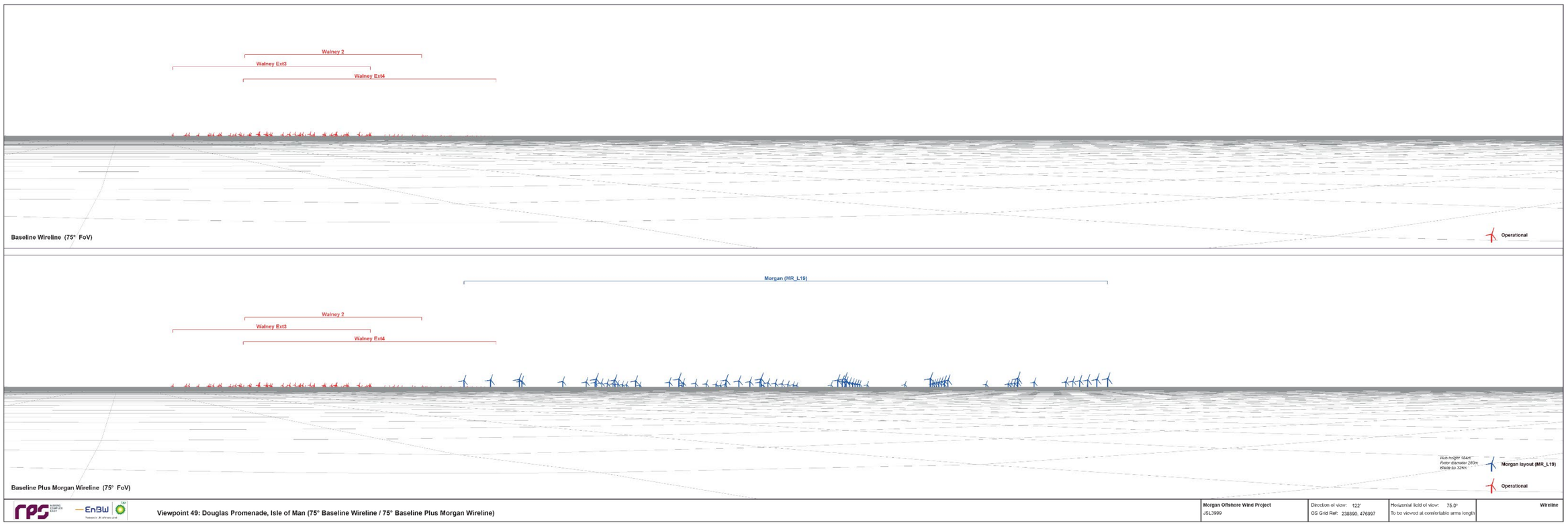


Figure 15.19: Representative viewpoint 49 Douglas promenade, Isle of Man.

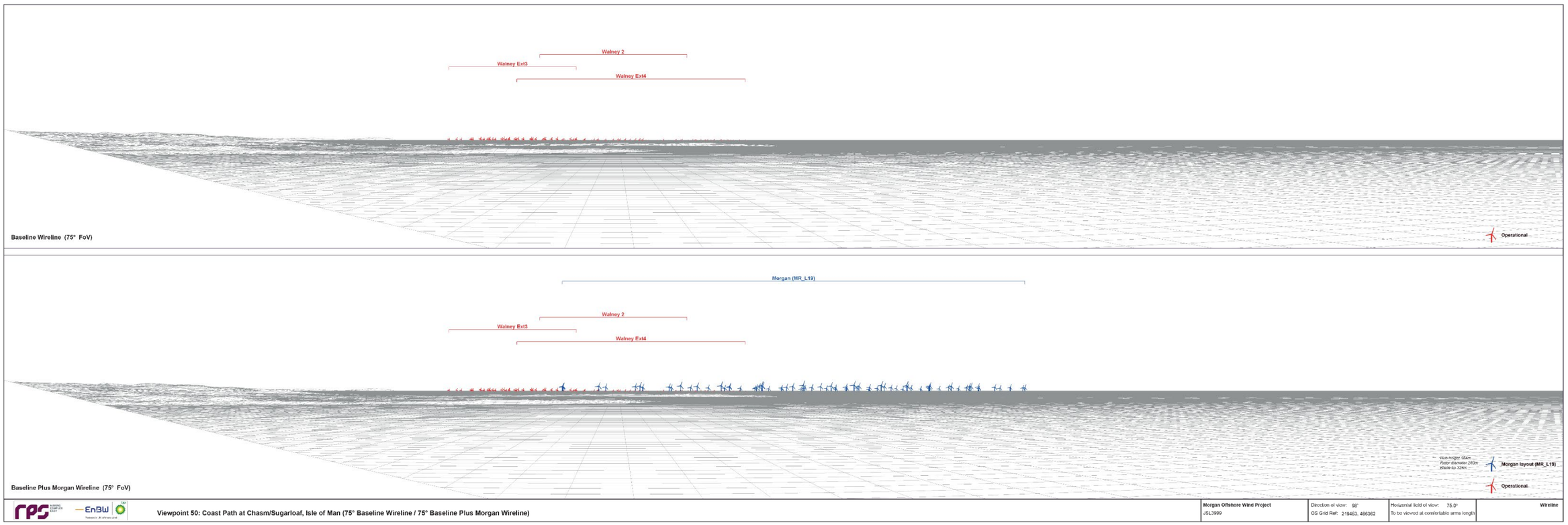


Figure 15.20: Representative viewpoint 50 Coast path at Chasm/Sugarloaf, Isle of Man

15.8.6 Visual impacts – people using Countryside Rights of Way Act 2000 Access Land, or equivalent land with public access

15.8.6.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from land with public access in the SLVIA study area falling within the ZTV of Morgan Generation Assets. These potential impacts would be caused by visibility of some or all the following MDS components (as summarised in Table 15.17 above):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.6.2 The potential impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people using informal publicly accessible land within the SLVIA study area. The greatest potential for significant effects will be restricted to the following elevated locations on the Isle of Man:

- Snaefell, Isle of Man
- Slieau Ruy, Isle of Man
- South Barrule, Isle of Man.

15.8.6.3 Other areas of land with informal public access on the Isle of Man (both those close to the south-east coast and inland) have been considered as part of the assessments of the representative viewpoints referred below in addition to the assessments relating to the following receptors.

- Raad ny Foillan Coastal Path
- Millenium Way.

15.8.6.4 The assessment has found that there is no potential for significant visual effects to arise on users of other access land/open country or equivalent receptors in the SLVIA study area.

15.8.6.5 There is no access land/open country on the Isle of Man. Neither is there the 'right to roam' as in Scotland. However, key areas with representative viewpoints where there is permissive access are considered, including coastal locations (e.g. The Chasms/Sugarloaf (representative viewpoint 50 Figure 15.20), Langness Peninsula (representative viewpoint 18 Figure 15.8), Douglas Head (representative viewpoint 19 Figure 15.9), Maughold Head (representative viewpoint 42 Figure 15.14), and inland upland (e.g. Snaefell (representative viewpoint 20 Figure 15.10), Slieau Ruy (representative viewpoint 44 Figure 15.16) and South Barrule (representative viewpoint 45 Figure 15.17).

Snaefell

Baseline conditions

15.8.6.6 Snaefell (621m AOD) is the highest point on the Isle of Man, the summit of an upland area with public access affording wide ranging, inland panorama extending across the adjacent Irish Sea (representative viewpoint 20, Figure 15.10). The descending slopes in fore/middle ground comprise the Isle of Man LCA A1 Northern Uplands and LCA B4 Laxey Glen with LCA E5 Laxey Bay below. MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters (RPS defined) forms wider seascape with MCA 38 Irish Sea South (England) making up the background seascape. The adjacent waters are animated by coastal commercial shipping, mainland ferries, fishing vessels and recreational sailing. Several operational offshore wind farms are visible including Walney Extension/Walney and West of Duddon Sands to the east, and Gwynt y Môr to the south-east. Described further in volume 4, annex 15.3: visual baseline of the PEIR

Impact considerations

15.8.6.7 Fieldwork and analysis of the visualisation indicates visibility of Morgan Generation Assets in the distance occupying approximately 34% (26°) of the 75° HFoV. The turbines would be visible in the far distance, appearing closer than the existing Walney offshore wind farm group, set within a seascape animated by commercial shipping/ferries. At approximately 30km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Slieau Ruy

Baseline conditions

15.8.6.8 Slieau Ruy (479m AOD) forms the high point of upland in the centre of the Isle of Man affording wide ranging, inland views extending over the adjacent Irish Sea encompassing Isle of Man LCA A1 Northern Uplands and Douglas settlement on the coast below (LCA E3 Douglas Bay) (representative viewpoint 45, Figure 15.17). The surrounding seascape comprises MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined) with MCA 38 Irish Sea South (England) beyond. The inshore and offshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing. Several offshore wind farms are visible including Walney/Walney Extension and West of Duddon Sands in the east and Gwynt y Môr to the southwest. The North Wales coast including Eryri forms the backdrop on the far horizon. Described further in volume 4, annex 15.3: visual baseline of the PEIR (representative viewpoint 44, Figure 15.16).

Impact considerations

15.8.6.9 Fieldwork and analysis of the visualisation indicates visibility of Morgan Generation Assets in the distance occupying approximately 33% (24°) of the 75° HFoV. The turbines would be visible in the far distance, appearing closer than the existing Walney Extension offshore wind farm group, set within a seascape animated by commercial shipping/ferries. At approximately 32km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

South Barrule

Baseline conditions

15.8.6.10 South Barrule (483m AOD) is the high point of the inland upland west of Douglas of the Isle of Man affording wide ranging, inland views which extend south-east across the adjacent Irish Sea encompassing Isle of Man LCA A2 Southern Uplands and the coast below including Santon Head (LCA D13 Santon and LCA E2 Port Soderick). The surrounding seascape comprises MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters (RPS defined) with MCA 38 Irish Sea South (England) beyond. The inshore and offshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing. Several offshore wind farms are visible including Walney/Walney Extension and West of Duddon Sands in the east and Gwynt y Môr to the southwest. In the most favourable visibility, the North Wales coast including Eryri can be seen on the far horizon. Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Impact considerations

15.8.6.11 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the distance occupying approximately 30% (22°) of the 75° HFoV. The turbines would be visible in the far distance, appearing closer than the existing Walney Extension offshore wind farm group, set within a seascape animated by commercial shipping/ferries. At approximately 34km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

15.8.6.12 The representative viewpoints relevant to this receptor type listed below:

- Representative viewpoint 14 – Cistercian Way, Walney Island, Cumbria Figure 15.4
- Representative viewpoint 16 – Cumbria Coastal Way, Gutterby Banks/Townend Bank, Cumbria Figure 15.6
- Representative viewpoint 17 – Kinmont/Buck Barrow, Lake District National Park Figure 15.7
- Representative viewpoint 18 – Herring Tower trig point, Langness Peninsula, Isle of Man Figure 15.8
- Representative viewpoint 19 – viewpoint at arch southwest of Douglas Head, Isle of Man Figure 15.9
- Representative viewpoint 20 – Snaefell, summit station trig point, Isle of Man Figure 15.10
- Representative viewpoint 42 – Maughold Head/Maughold Brooghs, Isle of Man Figure 15.14
- Representative viewpoint 44 – Slieau Ruy cairn/trig point, Isle of Man Figure 15.16
- Representative viewpoint 45 – South Barrule cairn/trig point, Isle of Man Figure 15.17
- Representative viewpoint 50 – Coast Path at the Chasms/Sugarloaf, Isle of Man Figure 15.20

Construction and decommissioning phases

Magnitude of impact

15.8.6.13 An impact will potentially arise on the views/visual amenity of people visiting the summits Snaefell, Slieau Ruy and South Barrule. This will be caused by visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17 above) within Morgan Array Area situated offshore at distances of 30-35km.

15.8.6.14 The potential impact is predicted to be of local/regional spatial extent, short term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.6.15 People visiting the summit of Snaefell are deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

15.8.6.16 People visiting the summits of Slieau Ruy and South Barrule are deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.6.17 Overall, the magnitude of the visual impact on people using publicly accessible land at Snaefell during construction and decommissioning is deemed to be low to negligible and the sensitivity of the receptor is high. The temporary effects will be **minor to moderate adverse** at most, which are not significant.

15.8.6.18 Overall, the magnitude of the visual impact on people using publicly accessible land at Slieau Ruy and South Barrule during construction and decommissioning is deemed to be low to negligible and the sensitivity of the receptor is high. The effects will be m**inor to moderate adverse** at most, which are not significant.

Further mitigation and residual effect

15.8.6.19 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.6.20 A visual impact will potentially arise on people visiting the summits Snaefell, Slieau Ruy and South Barrule due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project

components occupying Morgan Array Area (as described in Table 15.17), namely, some or all of the rotating wind turbines, the OSPs and service vessels/helicopters, which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.6.21 The impact is predicted to be of local/regional spatial extent, long term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.6.22 The sensitivity of the people visiting these summits is as set out above for the construction and decommissioning phases, namely **high** for Snaefell, and **high** for Slieau Ruy and South Barrule.

Significance of the effect

15.8.6.23 Overall, the magnitude of visual impact in relation to people using publicly accessible land at Snaefell caused by Morgan Generation Assets during operations and maintenance, situated offshore at distances of 30-35km is deemed to be medium to low at most. The sensitivity of the receptor is high. The effect will be **moderate adverse** at most, which is not significant.

15.8.6.24 Overall, the magnitude of visual impact during operations and maintenance caused by Morgan Generation Assets situated offshore at distances of 30-35km in relation to people using publicly accessible land at Slieau Ruy and South Barrule is deemed to be medium to low at most. The sensitivity of the receptor is high. The effects will be **Minor to Moderate adverse** at most, which is not significant.

Further mitigation and residual effect

15.8.6.25 No further mitigation is proposed.

15.8.7 Visual impacts – potential impacts on people using National Cycle Routes and the National Cycleway Network

15.8.7.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from sections of the National Cycleway Network on the Isle of Man, that fall within the ZTV of the Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets components (as summarised in Table 15.17):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.7.2 The potential impacts will be generated by both static and moving elements of the above components which will intermittently affect the views/visual amenity of people using the following key routes on/near the coast of the Isle of Man, or on high land, with views towards the Morgan Generation Assets array area:

- Isle of Man National Cycleway Network No. 1
- Isle of Man National Cycleway Network No. 2
- Isle of Man National Cycleway Network No. 3
- Isle of Man National Cycleway Network No. 5
- Isle of Man National Cycleway Network No. 6

15.8.7.3 The potential visual effects arising on cyclists using these routes are assessed below.

Baseline conditions

15.8.7.4 The main sections of National Cycleway Network Route Nos. 1, 2, 3, 5, and 6. in coastal locations and on high land of the Isle of Man, with the potential for visibility towards Morgan Array Area along these routes there are sections where visibility is reduced due to intervening vegetation, landform, and settlement. Many of these routes are aligned perpendicular to the direction of Morgan Array Area. Cyclists' attention would be generally focussed on the road. However, they would be free to appreciate views of the surrounding landscape and seascape where available.

Impact considerations

15.8.7.5 Analysis of the ZTV supported by fieldwork and the representative viewpoint visualisations referred to below indicates intermittent visibility of Morgan Generation Assets from the Isle of Man National Cycleway Network. Fleeting views of Morgan Generation Assets are likely from open stretches of the network, along the coast and from high land. Where visibility is afforded, the proposed wind turbines would be visible on the horizon at closest distances of approximately 25km. Morgan Generation Assets would be viewed in the context of a seascape to an extent already characterised by offshore wind farms (Walney Extension being the closest) and commercial shipping/ferry traffic.

15.8.7.6 At distances in the region of 22-30km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The wind turbines would be difficult to discern (or not visible) at other times of the year.

15.8.7.7 The following representative viewpoints relevant to this receptor type are:

- Representative viewpoint 19 – viewpoint at arch southwest of Douglas Head, Isle of Man (Figure 15.9)
- Representative viewpoint 43 – Car park/seafront at Old Laxey, Isle of Man (Figure 15.15)
- Representative viewpoint 49 – Douglas promenade, Isle of Man (Figure 15.19).

15.8.7.8 Within England the key coastal National Cycle Route (NCR) that falls within the SLVIA study area is:

- NCR 62 on Lancashire coast between the Ribble Estuary and Morecombe Bay, see representative viewpoint 15 Queen's Promenade, Blackpool (Figure 15.5).

15.8.7.9 There is a negligible to no potential for significant visual effects to be experienced by users of the NCR in England, within the SLVIA study area, due to cyclists having a medium sensitivity to the Morgan Generation Assets and the distance of the proposed

development from those cycle routes. Therefore, cyclists using NCR in England, including NCR 62, are assessed no further here.

Construction and decommissioning phases

Magnitude of impact

15.8.7.10 An impact will potentially arise on the views/visual amenity of people using the sections of the Isle of Man National Cycleway Network Route Nos. 1, 2, 3, 5 and 6, identified above. This will be caused by intermittent and fleeting visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17 above) within the Morgan Array Area situated offshore at a minimum approximate distance of 25km.

15.8.7.11 The impact is predicted to be of local/regional spatial extent, short term duration (increasing during construction, decreasing during decommissioning), intermittent and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **negligible to low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.7.12 Views obtained by people using the cycleway routes on the Isle of Man are deemed to be of medium value and medium susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered on balance to be **medium**.

Significance of the effect

15.8.7.13 Overall, the magnitude of the visual impact on people using the Isle of Man National Cycleway Network during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is medium. The effects will be **Negligible to Minor adverse**, which are not significant.

Further mitigation and residual effect

15.8.7.14 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.7.15 A visual impact will potentially arise on people using the Isle of Man National Cycleway Network during the operations and maintenance phase of the Morgan Generation Assets array. The potential impact will result from visibility of both moving and static project components occupying Morgan Array Area (as described in Table 15.17), namely, some or all of the rotating wind turbines, the OSPs and service vessels/helicopters which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.7.16 The potential impact will be fleeting and is predicted to be of local/regional spatial extent, long term duration, intermittent and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.7.17 The sensitivity of the people using the Isle of Man National Cycleway Network is as set out above for the construction and decommissioning phases, namely **medium**.

Significance of the effect

15.8.7.18 Overall, the magnitude of visual impact in relation to people using sections of the Isle of Man National Cycleway Network during the operations and maintenance phase is deemed to be low at most and the sensitivity of the receptor is medium. The effect will be **Minor adverse** at most, which is not significant.

Further mitigation and residual effect

15.8.7.19 No further mitigation is proposed.

15.8.8 Visual impacts – potential impacts on people at main coastal settlement seafronts/shorelines

15.8.8.1 visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from coastal settlement seafronts/shorelines in the SLVIA study area falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all of the following MDS components (as summarised in Table 15.17):

- 68 wind turbines 324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.8.2 The potential impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people using the following seafront promenades and/or shorelines and beaches on the Isle of Man:

- Douglas
- Laxey.

15.8.8.3 The potential impacts on people at these locations are assessed below. There is negligible potential for significant visual effects to arise on people using other coastal settlement seafronts/shorelines or equivalent receptors in the SLVIA study area.

15.8.8.4 The following representative viewpoints are relevant to this receptor type:

- Representative viewpoint 14 – Cistercian Way, Walney Island, Cumbria (Figure 15.4)
- Representative viewpoint 15 – Blackpool North Pier (Figure 15.5)
- Representative viewpoint 43 – Car park/seafront at Old Laxey, Isle of Man (Figure 15.15)
- Representative viewpoint 46 – TSS Mona's Queen III anchor memorial at Port St. Mary Point, Isle of Man (Figure 15.18)
- Representative viewpoint 49 – Douglas promenade, Isle of Man (Figure 15.19).

Baseline conditions

15.8.8.5 There are a number of coastal settlements situated in the SLVIA study area on the east coast of the Isle of Man with popular, publicly accessible seafronts/shorelines. Several of these afford views across the adjacent seascape towards Morgan Array Area. These are principally (from north to south): Laxey (representative viewpoint 43, Figure 15.15), Douglas and Onchan (representative viewpoint 19, Figure 15.9, and representative viewpoint.49 Figure 15.19), Castletown (represented by representative viewpoint 18, Figure 15.8 but likely to be more restricted) and Port Saint Mary (representative viewpoint 46, Figure 15.18). Views towards Morgan Array Area from Ramsey to the north of the Island are restricted by landform at Maughold Head; similarly views from Castletown are restricted by the elongated land strip at Langness Peninsula. Consequently, these two settlement seafronts are assessed no further.

Impact considerations

15.8.8.6 Fieldwork and analysis of the ZTV and the representative viewpoint visualisations indicate visibility of Morgan Generation Assets from the main IoM settlements on the southeast coast between Maughold Head and Spanish Head. Being the closest, the framed seaward views from Douglas and Laxey seafronts are likely to be the most affected by Morgan Generation Assets. This is in part because the views would be framed by the headlands/landform that encloses the Laxey and Douglas bays – representative viewpoint 43, Figure 15.15 and representative viewpoint 49, Figure 15.19 are illustrative. In wider panoramas from the coast more of the existing seascape context would be in view (including commercial shipping traffic and ferries and the operational Walney Extension offshore wind farm) and the visual change due to introduction of Morgan Generation Assets less. The visual change would also be lower in more distant views from other settlement seafronts such as at Port St Mary (representative viewpoint 46, Figure 15.18) where Morgan Generation Assets would be viewed obliquely.

15.8.8.7 At approximate closest distance of 22km Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The wind turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.8.8 An impact will potentially arise on the views/visual amenity of people using the seafront promenades and beaches at Douglas and Laxey. This will be caused by visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17) within Morgan Array Area situated offshore at distances of approximately 24km.

15.8.8.9 The impact is predicted to be of local/regional spatial extent, short term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.8.10 People using the seafront promenades and beaches at Douglas and Laxey are deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.8.11 Overall, the magnitude of the visual impact on people using the seafront promenades and beaches at Douglas and Laxey during construction and decommissioning is deemed to be low and the sensitivity of the receptor is high. The temporary effect will be **minor to moderate adverse**, which is not significant.

Further mitigation and residual effect

15.8.8.12 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.8.13 A visual impact will potentially arise on people using the seafront promenades and beaches at Douglas and Laxey due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying Morgan Array Area (as described in Table 15.17), namely, some or all of the rotating wind turbines, the OSPs and service vessels/helicopters, which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.8.14 The impact is predicted to be of local/regional spatial extent, long term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** during the operations and maintenance phase. The magnitude of visual impact at other seafront locations farther away from the Morgan Array Area will be lower.

Sensitivity of the receptor

15.8.8.15 The sensitivity of the people using the seafront promenades and beaches at Douglas and Laxey is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.8.16 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, situated at an approximate distance of 24km offshore, in relation to people using the seafront promenades and beaches at Douglas and Laxey is deemed to be medium to low at most. The sensitivity of the receptor is high. The effect will be **moderate to major adverse** effect in the case of the views across the adjacent seascape from Douglas and Laxey seafronts, which is not significant (moderate) to significant (major). Representative viewpoint 49 (Figure 15.19) and representative viewpoint 43 (Figure 15.15) are representative of the predicted visual change involved.

15.8.8.17 The significance of visual effects at other seafront locations farther away from the Morgan Generation Assets is assessed as lower and not significant. Representative viewpoint 14 (Figure 15.4), representative viewpoint 15 (Figure 15.5) and representative viewpoint 46 (Figure 15.18) provide illustrated views from these locations.

Further mitigation and residual effect

15.8.8.18 No further mitigation is proposed.

15.8.9 Visual impacts – potential impacts on people travelling along coastal roads

15.8.9.1 visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from key coastal roads in the SLVIA study area falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets components (as summarised in Table 15.17):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.9.2 The potential impacts will be generated by both static and moving elements of the above components which will intermittently affect the views/visual amenity of people using the following key roads on/near the coast of the Isle of Man:

- A2 between Douglas/Onchan and Laxey
- A5 between Douglas and Castleton
- A11 Queen's Promenade/King Edward Road at Douglas/Onchan
- A25 at Quine's Hill.

15.8.9.3 Only the visual amenity of people travelling on roads on the Isle of Man are assessed in the following paragraphs. There is negligible potential for significant visual effects to arise on road users or similar linear receptors in the wider SLVIA study area.

15.8.9.4 The following representative viewpoints are relevant to this receptor type:

- Representative viewpoint 15 – Blackpool North Pier, Lancashire (Figure 15.5)
- Representative viewpoint 43 – Car park/seafront at Old Laxey, Isle of Man (Figure 15.15)
- Representative viewpoint 46 – TSS Mona's Queen III anchor memorial at Port St. Mary Point, Isle of Man (Figure 15.18)
- Representative viewpoint 49 – Douglas promenade, Isle of Man (Figure 15.19).

Baseline conditions

15.8.9.5 Along the stretches of A2, A5, A11 and A25 coastal roads falling within the ZTV of Morgan Generation Assets referred to above, there are sections where visibility is reduced due to intervening vegetation, landform, and settlement. These roads tend to be aligned perpendicular to the direction of Morgan Array Area. Drivers would be travelling at appropriate speeds with their attention focussed on the road. That said, passengers would be free to appreciate views of the surrounding landscape and seascape where available. There is negligible potential for significant visual effects to arise on users of the A5 and A25 between Douglas and Castleton and therefore they are assessed no further here.

Impact considerations

15.8.9.6 Analysis of the ZTV supported by fieldwork and the representative viewpoint visualisations indicate intermittent visibility of Morgan Generation Assets from the A2, A5, A11 and A25. Fleeting views of Morgan Generation Assets are likely from open stretches of the A2 between Douglas/Onchan, Laxey and Maughold Head and the A11 Queen's Promenade/King Edward Road at Douglas/Onchan. Where visibility is occasionally afforded, the proposed wind turbines would be visible on the horizon at closest distances of approximately 25km. Morgan Generation Assets would be viewed in the context of a seascape to an extent already characterised by offshore wind farms (Walney Extension being the closest) and commercial shipping/ferry traffic. At distances in the region of 22km to 30km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The wind turbines would be difficult to discern (or not visible) at other times of the year.

15.8.9.7 In summary, there would be limited visual change from sections of the coastal (or near coast) roads where views across the adjacent sea of Morgan Generation Assets are afforded. Furthermore, there would be negligible or no visibility of Morgan Generation Assets from those parts of these and other routes set back from the coast and farther inland.

Construction and decommissioning phases

Magnitude of impact

15.8.9.8 An impact will potentially arise on the views/visual amenity of people using the sections of the A2, A5, A11 and A25 on the Isle of Man identified above. This will be caused by intermittent and fleeting visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17 above) within Morgan Array Area situated offshore approximately 25km away minimum.

15.8.9.9 The impact is predicted to be of local/regional spatial extent, short term duration (increasing during construction, decreasing during decommissioning), intermittent and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.9.10 Views obtained by people using the A2, A5, A11 and A25 roads on the Isle of Man are deemed to be of medium value and low susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered on balance to be **low**.

Significance of the effect

15.8.9.11 Overall, the magnitude of the visual impact on people using the A2, A5, A11 and A25 roads during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is low. The temporary effect will be **negligible adverse**, which is not significant.

Further mitigation and residual effect

15.8.9.12 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.9.13 A visual impact will potentially arise on people using the A2, A5, A11 and A25 roads due to the operations and maintenance of Morgan Generation Assets. The potential impact will result from visibility of both moving and static project components occupying Morgan Array Area (as described in Table 15.17 above, namely: some or all of the rotating wind turbines, the OSPS and service vessels/helicopters) which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.9.14 The impact will be fleeting and is predicted to be of local/regional spatial extent, long term duration, intermittent and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.9.15 The sensitivity of the people using the A2, A5, A11 and A25 roads is as set out above for the construction and decommissioning phases, namely **low**.

Significance of the effect

15.8.9.16 Overall, the magnitude of visual impact in relation to people using the A2, A5, A11 and A25 roads during operations and maintenance is deemed to be low at most and the sensitivity of the receptor is low. The effects will be **negligible to minor adverse** at most, which are not significant. Representative viewpoint 49 (Figure 15.19) illustrates the predicted visual change involved at the closest stretch of road to Morgan Array Area.

Further mitigation and residual effect

15.8.9.17 No further mitigation is proposed.

15.8.10 Visual impacts – potential impacts on people travelling along coastal railways

15.8.10.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from key coastal railways in the SLVIA study area falling within the ZTV of Morgan Generation Assets.

These potential impacts would be caused by visibility of some or all the following MDS components (as summarised in Table 15.17 above):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.10.2 The potential impacts will be generated by both static and moving elements of the above components which will intermittently affect the views/visual amenity of people using the following key railways on/near the coast of the Isle of Man:

- Isle of Man Steam Railway – between Port Erin and Douglas
- Manx Electric Railway (MER) – between Laxey and Douglas
- Snaefell Mountain Railway – Laxey to Snaefell summit.

15.8.10.3 These railway routes are assessed below. There is negligible potential for significant visual effects to arise on users of other key coastal railways or similar linear receptors in the SLVIA study area.

Baseline conditions

15.8.10.4 The MER broadly follows the route of the A2 (with some local diversions) between Douglas and Ramsey via Laxey where it links with Snaefell Mountain Railway which runs up to Snaefell summit.

15.8.10.5 The Douglas Bay Horse Tramway runs the length of Queens Promenade (representative viewpoint 49, Figure 15.19) linking MER with Derby Castle.

15.8.10.6 Isle of Man Steam Railway links Douglas with Port Erin via Castleton to the south broadly following the A5, mainly set back from the coast, meandering south and north of the route.

Impact considerations

15.8.10.7 Fieldwork and analysis of the ZTV and the representative viewpoint visualisations indicate visibility of Morgan Generation Assets from the IoM railways between Maughold Head and Laxey in the north and Port Erin in the south. In keeping with the road routes that they broadly follow, and the landscape context, intermittent and fleeting views of Morgan Generation Assets are anticipated from open stretches between Douglas via Onchan and Laxey as far as Maughold Head. Where visibility is occasionally afforded, the proposed wind turbines would be visible on the horizon at closest approximately 22km. Morgan Generation Assets would be viewed in the context of a seascape already characterised to an extent by offshore wind farms (Walney Extension being the closest) and commercial shipping/ferry traffic. At distances of approximately 22km to 30km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The wind turbines would be difficult to discern (or not visible) at other times of the year.

15.8.10.8 In summary, the sections of Isle of Man railway with potential to be visual affected are the exposed sections MER in the vicinity of Douglas/Onchan, the Douglas Bay Horse Tramway and Snaefell Mountain Railway. There would be negligible or no visibility of

Morgan Generation Assets from stretches of railways at enclosed locations set back from the coast.

15.8.10.9 The following representative viewpoints are relevant to this receptor type are:

- Representative viewpoint 20 – Snaefell, summit station trig point, Isle of Man (Figure 15.10)
- Representative viewpoint 43 – Car park/seafront at Old Laxey, Isle of Man (Figure 15.15)
- Representative viewpoint 46 – TSS Mona's Queen III anchor memorial at Port St. Mary Point, Isle of Man (Figure 15.18)
- Representative viewpoint 49 – Douglas promenade, Isle of Man (Figure 15.19).

Construction and decommissioning phases

Magnitude of impact

15.8.10.10 An impact will potentially arise on the views/visual amenity of people using the railways on/near the coast identified above on the Isle of Man. This will be caused by intermittent and fleeting visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17) within Morgan Array Area situated offshore at distances ranging between approximately 25-35km.

15.8.10.11 The impact is predicted to be of local/regional spatial extent, short term duration (increasing during construction, decreasing during decommissioning), intermittent and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.10.12 Views obtained by people using the railways on/near the coast on the Isle of Man identified above are deemed to be of medium value and medium susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered on balance to be **medium**.

Significance of the effect

15.8.10.13 Overall, the magnitude of the visual impact on people using the MER, the Isle of Man Steam Railway and Snaefell Mountain Railway during construction and decommissioning is deemed to be low/negligible and the sensitivity of the receptor is medium. The temporary effect will be **minor adverse**, which is not significant.

Further mitigation and residual effect

15.8.10.14 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.10.15 A visual impact will potentially arise due to the operations and maintenance of Morgan Generation Assets on people using the railways on/near the coast on the Isle of Man identified above. The potential impact will result from visibility of both moving and static project components occupying Morgan Array Area (as described in Table 15.17) namely, some or all of the turbines, the OSPs and service vessels/helicopters, which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.10.16 The impact will be fleeting and is predicted to be of local/regional spatial extent, long term duration, intermittent and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.10.17 The sensitivity of the people using the railways on/near the coast on the Isle of Man is as set out above for the construction and decommissioning phases, namely **medium**.

Significance of the effect

15.8.10.18 Overall, the magnitude of visual impact in relation to people using the MER, the Isle of Man Steam Railway and Snaefell Mountain Railway during operations and maintenance is deemed to be low at most and the sensitivity of the receptor is medium. The effects will be **minor to moderate adverse** at most, which are not significant. Representative viewpoint 49 (Figure 15.19) illustrates the predicted visual change involved at the closest section of railway to Morgan Array Area.

Further mitigation and residual effect

15.8.10.19 No further mitigation is proposed.

15.8.11 Visual impacts – potential impacts on people using main ferry routes

15.8.11.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases in views from key ferry routes in the SLVIA study area falling within the ZTV of Morgan Generation Assets. These potential impacts would be caused by visibility of some, or all, of the following MDS components (as summarised in Table 15.17):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.11.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people onboard ferries using the following routes passing through the SLVIA study area:

- Liverpool to Douglas (representative viewpoint 22) (Figure 15.12)

- Heysham to Douglas (representative viewpoint 23) (Figure 15.13)

15.8.11.3 There is negligible potential for significant visual effects on people onboard the Liverpool to Dublin ferry (representative viewpoint 21) the route of which is located over 40km to the south of Morgan Array Area. Given this ferry route is over 40km south of the Morgan Array Area, it is assessed no further here.

Baseline conditions

15.8.11.4 The seascape context of both the above routes is influenced to varying degrees by existing offshore wind farms (West of Duddon Sands and Walney group to the north; Gwynt y Môr and Burbo Bank to the south), as well as offshore oil and gas infrastructure, and commercial shipping en route to/from Merseyside ports.

Impact considerations

15.8.11.5 The likely worst-case visual impact on ferry passengers has been assessed for vessels passing through or immediately adjacent to Morgan Array Area using the representative viewpoints as an aid to assessment. Fieldwork observations indicate that ferry passengers in transit are generally confined to the cabin/interior of the vessel, a factor that is considered in this assessment.

15.8.11.6 Ferry passengers using these routes are assessed based on the experience of the journey taking account of the opportunities the vessel provides for appreciating the seascape and views during the trip. Analysis of the ZTV supported by fieldwork and the representative viewpoint visualisations indicate Morgan Generation Assets would be theoretically visible in excellent conditions for most of the Liverpool to Douglas and Heysham to Douglas routes. At distances of approximately 20km to 40km Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). At over approximately 40km away, it would only be visible in the most favourable conditions (i.e., excellent visibility >40km approximately 28% of the year). The wind turbines would be difficult to discern (or not visible) at other times of the year.

15.8.11.7 The following representative viewpoints are relevant to this receptor type are:

- Representative viewpoint 21 – Liverpool to Dublin ferry (Figure 15.11)
- Representative viewpoint 22 – Liverpool to Douglas ferry (Figure 15.12)
- Representative viewpoint 23 – Heysham to Douglas ferry (Figure 15.13).

Construction and decommissioning phases

Magnitude of impact

15.8.11.8 An impact will potentially arise on the views/visual amenity of people onboard the ferries plying the two routes identified above. This will be caused by visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17 above) within the Morgan Array Area.

15.8.11.9 The impact is predicted to be of local/regional spatial extent, short term duration (increasing during construction, decreasing during decommissioning), continuous in favourable conditions (increasing with proximity/decreasing with distance) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of maximum visual impact is therefore considered to be **high** during the construction and decommissioning phases. This maximum impact will occur when the ferry is passing through or immediately adjacent to the Morgan Array Area on known routes at time of writing. At other points along the route farther away from the Morgan Array Area the magnitude of visual impact will be lower.

Sensitivity of the receptor

15.8.11.10 Views obtained by people onboard the ferries identified above are deemed to be of medium value and medium susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **medium**.

Significance of the effect

15.8.11.11 Overall, the magnitude of the visual impact during construction and decommissioning arising for people onboard the Liverpool to Douglas and Heysham to Douglas ferries passing through or immediately adjacent to Morgan Array Area on known routes at time of writing is deemed to be high and the sensitivity of the receptor is medium. The temporary effects will be **moderate to major adverse**, which is not significant (moderate) to significant (major). At other points along the route, farther away from Morgan Array Area, the significance of visual effect will be less, reducing to negligible and not significant.

Further mitigation and residual effect

15.8.11.12 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.11.13 A visual impact will potentially arise due to the operations and maintenance of Morgan Generation Assets on people onboard the Liverpool to Douglas and Heysham to Douglas ferries passing through or immediately adjacent to the Morgan Array Area, on known routes at the time of writing. The impact will result from visibility of both moving and static project components occupying Morgan Array Area (as described in Table 15.17 above, namely: some or all of the rotating wind turbines, the OSPs and service vessels/helicopters,) which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.11.14 The impact is predicted to be of local/regional spatial extent, long term duration, continuous in favourable conditions (increasing with proximity/decreasing with distance) and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The maximum magnitude of impact is therefore considered to be **high** during the operations and maintenance phase where the ferries pass within or adjacent to the Morgan Array Area. At other points along the route farther away from the Morgan Array Area the magnitude of visual impact will be lower, reducing to negligible. Representative Viewpoint 22 (Figure 15.12) and representative viewpoint 23 (Figure 15.13) are representative of the predicted visual change involved along the two ferry routes at approximately 15-20km distance from Morgan Array Area.

Sensitivity of the receptor

15.8.11.15 The sensitivity of the people onboard the ferries is as set out above for the construction and decommissioning phases, namely **medium**.

Significance of the effect

15.8.11.16 Overall, the magnitude of visual impact in relation to people onboard the Liverpool to Douglas and Heysham to Douglas ferries passing through or immediately adjacent to Morgan Array Area on known routes at time of writing during operations and maintenance is deemed to be high and the sensitivity of the receptor is medium. The effects will be **moderate to major adverse**, which is not significant (moderate) to significant (major). At other points along the route, farther away from the Morgan Array Area, the significance of visual effect will be less and not significant.

Further mitigation and residual effect

15.8.11.17 No further mitigation is proposed.

15.8.12 Visual impacts – potential impacts on people using commercial shipping, recreational craft and fishing vessels

15.8.12.1 visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from commercial shipping, recreational craft and fishing vessels in the SLVIA study area falling within the ZTV of Morgan Generation Assets. These potential impacts would be caused by visibility of some, or all, of the following MDS components (as summarised in Table 15.17):

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.12.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people onboard using commercial shipping, recreational craft and fishing vessels navigating in the SLVIA study area, in particular those vessels navigating in the vicinity of Morgan Array Area (and passing through the array in the case of recreational craft).

Commercial shipping and fishing vessels

Baseline conditions and impact considerations

15.8.12.3 Commercial vessels keep to well-defined routes. Generally, these are either designated shipping lanes or regular passages (volume 4 annex 15.3: Visual baseline technical report of the PEIR).

15.8.12.4 Commercial fishing vessels follow different routes and patterns of movement depending on the type fishing being carried out and the fishing grounds being worked. In general, commercial fishing boats use specific harbours on the coast and, depending on the season, follow a range of routes to and from the various fishing grounds (Figure 15.3. of volume 4 annex 15.3: Visual baseline technical report of the PEIR). Commercial fishing harbours relevant to the SLVIA study area include Douglas on the Isle of Man, Bangor in North Wales, and Liverpool in England.

15.8.12.5 There is very little potential for significant visual effects to be experienced by people onboard commercial shipping and fishing vessels and therefore these marine user receptors are assessment no further here.

Recreational craft

Baseline conditions

15.8.12.6 Recreational boating includes a range of pleasure craft both sailing and motor powered. Unlike commercial ships and ferries, pleasure craft tend not to follow regular routes. However, the points of departure and arrival are fixed, being generally safe harbours/anchorages at suitable locations on the coast. Due the coastline's profile, the shallow inshore waters and the tidal ranges, there are relatively few suitable harbours in the SLVIA study area. They are primarily: Douglas on the Isle of Man; Menai Strait (including Beaumaris) and Conwy in North Wales, and Liverpool in England. Journeys from these points, out a short distance and back, and in between some of them along the coast, is the norm. Thus, the pattern of use is generally dispersed and inshore, occurring within fairly close proximity to the safe harbours and along the intervening coasts of Wales, the Isle of Man and England. In addition, recreation boating is seasonal, typically confined to periods between late spring and early autumn (beginning of May to end of September). That said, within the wider seascape, there are some longer distance 'routes' used by a relatively small of pleasure craft operating in the SLVIA study area. These are predominantly offshore journeys undertaken by experienced yachtsmen between the Wales, England, the Isle of Man, Scotland, and Ireland. Data relating to recreational boating activity is available from the Royal Yachting Association (RYA). Further information on vessel routes within the SLVIA study area can be found in volume 2, chapter 12: Shipping and navigation of the PEIR.

Impact considerations

15.8.12.7 Analysis of the ZTV indicates widespread visibility of Morgan Generation Assets from the areas of sea within the SLVIA study area. Consideration of the available RYA data relating to recreational boating (see volume 2, chapter 12: Shipping and navigation of the PEIR, informed by fieldwork and professional judgement indicates that a substantial proportion of recreational boating activity takes place close to safe harbours and the adjacent coast where potential visual impacts will be at a minimum. Broadly speaking, this means that at Douglas and Laxey, for example, and along the south-east coast of the Isle of Man (the closest recreational cruising grounds to Morgan Generation Assets), recreational craft will tend not to navigate closer than approximately 20km to Morgan Array Area. One can reasonably assert, therefore, that only a small minority of recreational craft are likely to navigate close to or within Morgan Array Area. These considerations are factored into the assessment that follows.

15.8.12.8 The following representative viewpoints are relevant to this receptor type insofar as they are illustrative of views experienced at sea within the wider SLVIA study area or those from the Isle of Man coast closest to Morgan Array Area. The representative viewpoints are:

- Representative viewpoint 19 – viewpoint at arch southwest of Douglas Head, Isle of Man (Figure 15.9)
- Representative viewpoint 21 – Liverpool to Dublin ferry (Figure 15.11)
- Representative viewpoint 22 – Liverpool to Douglas ferry (Figure 15.12)
- Representative viewpoint 23 – Heysham to Douglas ferry (Figure 15.13)
- Representative viewpoint 43 – Car park/seafront at Old Laxey, Isle of Man (Figure 15.15)
- Representative viewpoint 46 – TSS Mona's Queen III anchor memorial at Port St. Mary Point, Isle of Man (Figure 15.18)
- Representative viewpoint 49 – Douglas promenade, Isle of Man (Figure 15.19).

Construction and decommissioning phases

Magnitude of impact

15.8.12.9 An impact will potentially arise on the views/visual amenity of people onboard recreational craft navigating in and around Morgan Array Area. This will be caused by visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17 above) within the Morgan Array Area.

15.8.12.10 The impact is predicted to be of local/regional spatial extent, short term duration (increasing during construction, decreasing during decommissioning), continuous in favourable conditions (increasing with proximity/decreasing with distance) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of maximum visual impact is therefore considered to be **high** during the construction and decommissioning phases. This maximum impact will occur when recreational craft area passing through or immediately adjacent to the Morgan Array Area. At other points farther away from the Morgan Array Area the magnitude of visual impact will be lower.

Sensitivity of the receptor

15.8.12.11 Views obtained by people onboard recreational craft are deemed to be of medium value and medium susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **medium**.

Significance of the effect

15.8.12.12 Overall, the magnitude of the visual impact during construction and decommissioning arising for people onboard recreational craft passing through or immediately adjacent to Morgan Array Area is deemed to be high and the sensitivity of the receptor is medium. The temporary effects will be m**oderate to major adverse** at most, which are not significant to significant. At other points, farther away from Morgan Array Area, the significance of visual effect will be less, reducing to negligible and not significant.

Further mitigation and residual effect

15.8.12.13 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

15.8.12.14 A visual impact will potentially arise due to the operations and maintenance of Morgan Generation Assets on people recreational craft passing through or immediately adjacent to the Morgan Array Area, on known routes at the time of writing. The impact will result from visibility of both moving and static project components occupying Morgan Array Area (as described in Table 15.17 above, namely: some or all of the rotating wind turbines, the OSPs and service vessels/helicopters,) which have the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.12.15 The impact is predicted to be of local/regional spatial extent, long term duration, continuous in favourable conditions (increasing with proximity/decreasing with distance) and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The maximum magnitude of impact is therefore considered to be **high** during the operations and maintenance phase where recreational craft pass through or adjacent to the Morgan Array Area. At other farther away from the Morgan Array Area the magnitude of visual impact will be lower, reducing to negligible. Representative viewpoint 21 (Figure 15.11), representative viewpoint 22 (Figure 15.12) and representative viewpoint 23 (Figure 15.13) illustrate the predicted visual change involved at the approximate distances of 43km, 19km and 15km respectively from Morgan Array Area.

Sensitivity of the receptor

15.8.12.16 The sensitivity of the people onboard recreational craft is as set out above for the construction and decommissioning phases, namely **medium**.

Significance of the effect

15.8.12.17 Overall, the magnitude of visual impact in relation to people onboard recreational craft passing through or immediately adjacent to Morgan Array Area during operations and maintenance is deemed to be high and the sensitivity of the receptor is medium. The effects will be **moderate to major adverse**, which are not significant to significant. At other points along the route, farther away from the Morgan Array Area, the significance of visual effect will be less and not significant.

Further mitigation and residual effect

15.8.12.18 No further mitigation is proposed.

15.8.12.19 Regarding residual effects overall, notwithstanding the conclusion reached above (namely **moderate to major adverse** effects, which are not significant to significant), the vast majority of recreational craft users would experience low to negligible magnitudes of visual change, and hence no significant visual effects, due to implementation of Morgan Offshore Wind Project. This assessment is based on analysis of the available RYA data (see volume 2, chapter 12: Shipping and navigation) informed by fieldwork and professional judgement, which indicates that a very substantial proportion of recreational boating activity takes place close to safe harbours and the adjacent coast where potential visual impacts will be at a minimum.

15.8.13 Visual impacts – representative viewpoints

15.8.13.1 The representative viewpoints have been detailed within the above grouped receptors for which they represent. A full assessment of these representative viewpoints is presented below.

15.8.13.2 Potential significant visual effects are predicted to arise at the following two viewpoints:

- Representative viewpoint 43 Car park/beach front at Old Laxey, Isle of Man (Figure 15.15)
- Representative viewpoint 49 Douglas Promenade, Isle of Man (Figure 15.19).

15.8.13.3 At none of the other representative viewpoints on the Isle of Man or within the wider study area are people likely to be significantly affected by changes to views due to implementation of Morgan Offshore Wind Project.

15.8.14 Visual effects – Potential effects on people at Representative Viewpoint 14 – Cistercian Way, Walney Island, Cumbria

15.8.14.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all of the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.14.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.14.3 Located on Cistercian Way/England Coast Path in Access Land. A shoreline panorama looking south-west from the settled coastal landscape of Walney Island within NCA 7 West Cumbria Coastal Plain. MCA 32 Walney Coastal Waters and Duddon Estuary forms the seascape in the middle/background with the characteristic gently shelving sandy shore in the foreground. Barrow, Ormonde, West of Duddon Sands and Walney operational offshore windfarms are visible on the near and far horizons. Described further in volume 4, annex 15.3: visual baseline of the PEIR.

Description of visual change

15.8.14.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the distance occupying approximately 34% (26°) of the 75° HFoV. The turbines would be visible on the distant western horizon, directly beyond and partly masked by the existing offshore wind farms (Barrow, Ormonde, West of Duddon Sands and Walney). At approximately 35km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.14.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people using the Cistercian Way/England Coast Path and Access Land at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 35km.

15.8.14.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.14.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.14.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effects will be **negligible to minor adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.14.9 A visual impact will potentially arise at this viewpoint which is representative of people using the Cistercian Way/England Coast Path and Access Land at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.14.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **negligible** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.14.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.14.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 35km offshore, is deemed to be negligible. The sensitivity of the receptor is high. The effects will be **negligible to minor adverse**, which are not significant.

15.8.15 Visual effects – Potential effects on people at Representative Viewpoint 15 – Blackpool North Pier, Lancashire

15.8.15.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.15.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.15.3 Located on a public seafront/pier. A framed panorama from Blackpool North Pier looking west out over MCA 34 Blackpool Coastal Waters and Ribble Estuary forming the middle/background seascape in the view. An iconic Victorian resort seafront set within an urban coastal landscape context, located within NCA 32 Lancashire and Amounderness Plain. Described further in volume 4, annex 15.3: Visual baseline technical report of the PEIR.

Description of visual change

15.8.15.4 Fieldwork and analysis of the visualisation indicates distant visibility of Morgan Generation Assets occupying approximately 22% (17°) of the 75° HFoV. The turbines would be visible on the distant north-western horizon, set within an open seascape relatively free of offshore infrastructure. At close to 50km, Morgan Generation Assets would only be visible in the most favourable conditions (i.e., excellent visibility >40km approximately 28% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.15.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people using the seafront/pier at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 50km.

15.8.15.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.15.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.15.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effects will be **negligible to minor adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.15.9 A visual impact will potentially arise at this viewpoint which is representative of people using the seafront/pier at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.15.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **negligible** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.15.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.15.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 50km offshore, is deemed to be negligible. The sensitivity of the receptor is high. The effects will be **negligible to minor adverse**, which are not significant.

15.8.16 Visual effects – Potential effects on people at Representative Viewpoint 16 – Cumbria Coastal Way, Gutterby Banks/Townend Bank, Cumbria

15.8.16.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.16.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.16.3 Located on Cumbria Coastal Way/England Coast Path in Access Land within Lake District National Park. A shoreline panorama looking south-west from within NCA 7 West Cumbria Coastal Plain. MCA 31 St Bees to Haverigg Coastal Waters forms the middle/background seascape with the characteristic, gently shelving, rocky/sandy shore in the foreground. Ormonde and Walney operational offshore windfarms are visible on the near and far horizons with Barrow and West of Duddon Sands also in view to the south. Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Description of visual change

15.8.16.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the far distance occupying approximately 41% (31°) of the 75° HFoV. The turbines would be visible on the distant south-western horizon, beyond and partly masked by the existing offshore wind farms (Ormonde, Walney and West of Duddon Sands). At approximately 40km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.16.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people using the Cumbria Coastal Way/England Coast Path in Access Land within Lake District National Park at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 40km.

15.8.16.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.16.7 The views/visual amenity of people at this viewpoint is deemed to be of very high value and medium susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.16.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effects will be **negligible to minor adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.16.9 A visual impact will potentially arise at this viewpoint which is representative of people using the Cumbria Coastal Way/England Coast Path in Access Land within Lake District National Park at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.16.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **negligible** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.16.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.16.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 40km offshore, is deemed to be negligible. The sensitivity of the receptor is high. The effects will be **negligible to minor adverse**, which are not significant.

15.8.17 Visual effects – Potential effects on people at Representative Viewpoint 17 – Kinmont Buck Barrow, Cumbria

15.8.17.1 visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this

viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.17.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.17.3 Located in Access Land within Lake District National Park. A wide ranging, elevated panorama from within NCA 8 Cumbria High Fells looking south-west across MCA 31 St Bees to Haverigg Coastal Waters and MCA 32 Walney Coastal Waters and Duddon Estuary which form seascape below in the middle ground. MCA 38 Irish Sea South makes up the background seascape. Ormonde, Walney, West of Duddon Sands and Barrow operational offshore windfarms are visible spreading across both MCA 32 and MCA 38. The Isle of Man is visible on the horizon beyond right of frame. Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Description of visual change

15.8.17.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the far distance occupying approximately 36% (27°) of the 75° HFoV. The turbines would be visible on the distant horizon, beyond the existing offshore wind farms (Ormonde, Walney and West of Duddon Sands). At just over 45km, Morgan Generation Assets would only be visible in the most favourable conditions (i.e., excellent visibility >40km approximately 28% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.17.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people using the Access Land/National Park at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 45km.

15.8.17.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.17.7 The views/visual amenity of people at this viewpoint is deemed to be of very high value and medium susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.17.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effects will be **negligible to minor adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.17.9 A visual impact will potentially arise at this viewpoint which is representative of people using the Access Land/National Park at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.17.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **negligible** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.17.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.17.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 45km offshore, is deemed to be negligible. The sensitivity of the receptor is high. The effects will be **negligible to minor adverse**, which are not significant.

15.8.18 Visual effects – Potential effects on people at Representative Viewpoint 18 – Herring Tower trig point, Langness Peninsula, Isle of Man

15.8.18.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all of the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)

- Four OSPs
- Construction and service vessels/helicopters.

15.8.18.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.18.3 Located on a PROW at local landmark. Wide coastal panorama looking east from Langness Peninsula across MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined). A rocky, relatively undeveloped coast. The inshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing. The west edge of Walney offshore wind farm (Walney Extension) is visible on the far horizon in the most favourable conditions. Described further in volume 4, annex 15.3: Visual baseline technical report of the PEIR.

Description of visual change

15.8.18.4 Fieldwork and analysis of the visualisation indicates visibility of Morgan Generation Assets on the horizon occupying approximately 37% (28°) of the 75° HFoV, appearing closer than the existing Walney Extension offshore wind farm. The turbines would be set within a seascape animated intermittently by commercial shipping/ferries. At a closest distance of approximately 27km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.18.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people using the PROW at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 27km.

15.8.18.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.18.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.18.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be low/negligible and the sensitivity of the receptor is high. The temporary effect will be **minor adverse**, which is not significant.

Operations and maintenance phase

Magnitude of impact

15.8.18.9 A visual impact will potentially arise at this viewpoint which is representative of people using the PROW at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.18.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.18.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.18.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 27km offshore, is deemed to be low. The sensitivity of the receptor is high. The effects will be **minor to moderate adverse**, which are not significant.

15.8.19 Visual effects – Potential effects on people at Representative Viewpoint 19 – Panoramic viewpoint at Arch southwest of Douglas Head, Isle of Man

15.8.19.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.19.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.19.3 Located at a public binocular viewpoint. Broad panorama looking east across Douglas Bay fringed by Douglas settlement. MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined) form wider seascape. The adjacent inshore waters are animated by coastal commercial shipping, mainland ferries, fishing vessels and recreational sailing. The west edge of Walney offshore wind farm (Walney Extension) is visible on the far horizon left of frame. Described further in volume 4, annex 15.3: Visual baseline technical report of the PEIR.

Description of visual change

15.8.19.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the distance occupying approximately 43% (32°) of the 75° HFoV. The turbines would be visible on the distant horizon, appearing closer than the existing Walney Extension offshore wind farm, set within a seascape animated by commercial shipping/ferries. At a closest distance of approximately 22km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.19.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people at the public binocular viewpoint and this part of Douglas Head. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 22km.

15.8.19.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.19.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.19.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effect will be **minor to moderate adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.19.9 A visual impact will potentially arise at this viewpoint which is representative of people at the public binocular viewpoint and this part of Douglas Head due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.19.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.19.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.19.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 22km offshore, is deemed to be medium/low. The sensitivity of the receptor is high. The effect will be **moderate adverse**, which is not significant.

15.8.20 Visual effects – Potential effects on people at Representative Viewpoint 20 – Snaefell, summit station trig point, Isle of Man

15.8.20.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.20.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.20.3 Located at an elevated local landmark and public viewpoint. Wide ranging, inland panorama looking south-east from adjacent to Snaefell summit station/cafe. The descending slopes in fore/middle ground comprise the Isle of Man LCA A1 Northern Uplands and LCA B4 Laxey Glen with LCA E5 Laxey Bay below. MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters (RPS defined) forms wider seascape with MCA 38 Irish Sea South (England) making up the background

seascape. The adjacent waters are animated by coastal commercial shipping, mainland ferries, fishing vessels and recreational sailing. Several operational offshore wind farms are visible including Walney Extension/Walney and West of Duddon Sands to the east, and Gwynt y Môr to the south-east. Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Description of visual change

15.8.20.4 Fieldwork and analysis of the visualisation indicates visibility of Morgan Generation Assets in the distance occupying approximately 34% (26°) of the 75° HFoV. The turbines would be visible in the far distance, appearing closer than the existing Walney offshore wind farm group, set within a seascape animated by commercial shipping/ferries. At approximately 30km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.20.5 An impact will potentially arise during construction and decommissioning at this viewpoint, which is representative of people at this popular, elevated location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 30km.

15.8.20.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.20.7 The views/visual amenity of people at this viewpoint is deemed to be of very high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.20.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effects will be **minor to moderate adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.20.9 A visual impact will potentially arise at this viewpoint which is representative of people at this popular, elevated location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.20.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.20.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.20.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 30km offshore, is deemed to be low. The sensitivity of the receptor is high. The effect will be **moderate adverse**, which is not significant.

15.8.21 Visual effects – Potential effects on people at Representative Viewpoint 21 – Liverpool to Dublin (Ireland) ferry

15.8.21.1 visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.21.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.21.3 Representative 360° view within/looking across MCA 04 North Wales Open Waters / SCA 28 North-east of Anglesey. Located approximately 40km south of Morgan Array Area, 15km north of Great Orme and 30km east of Point Lynas, Anglesey. The North Wales coast with Eryri mountain range beyond is visible to the south; on good days the north coast of Anglesey is in view farther to the west. The Isle of Man is a distant presence on the horizon to the north-west in the most favourable conditions. Gwynt y Môr OWF lies 10km to the east with oil and gas infrastructure Burbo Bank visible beyond. The ferry route passes through/close to the north these OWF groups the influence of which diminishes farther west travelling towards Dublin, vice versa on the return journey. Commercial shipping en route to/from Merseyside ports (some vessels moored waiting for Liverpool pilot) is a constant feature of the seascape at this point,

and of the ferry route. Described further in volume 4, annex 15.3: visual baseline of the PEIR.

Description of visual change

15.8.21.4 Analysis of the visualisation supported by fieldwork indicates distant visibility of Morgan Generation Assets occupying approximately 38% (29°) of the 75° HFoV to the north. The closest turbine would be approximately 48km distant. Views to the west, south and east would remain unchanged.

Construction and decommissioning phases

Magnitude of impact

15.8.21.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of ferry passengers in transit at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area, the closest turbine being situated approximately 40km away.

15.8.21.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.21.7 The views/visual amenity of people (ferry passengers in transit) at this viewpoint is deemed to be of medium value and medium susceptibility to the proposed. The sensitivity of the receptor is therefore, considered to be **medium**.

Significance of the effect

15.8.21.8 Overall, the magnitude of the visual impact experienced by ferry passengers in transit at this location during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is medium. The temporary effect will be **negligible adverse**, which is not significant. This assessment considers that ferry passengers in transit are generally confined to the cabin/interior of the vessel.

Operations and maintenance phase

Magnitude of impact

15.8.21.9 A visual impact will potentially arise at this viewpoint which is representative of ferry passengers in transit at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape in one direction.

15.8.21.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low to negligible** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.21.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **medium**.

Significance of the effect

15.8.21.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by ferry passengers in transit at this location, approximately 40m from the closest turbine, is deemed to be low/negligible. The sensitivity of the receptor is medium. The effects will be **negligible to minor adverse**, which are not significant. This assessment considers that ferry passengers in transit are generally confined to the cabin/interior of the vessel.

15.8.22 Visual effects – Potential effects on people at Representative Viewpoint 22 – Liverpool to Douglas (Isle of Man) ferry

15.8.22.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.22.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.22.3 Representative 360° view within/looking across MCA 38 Irish Sea South approximately 20km south-east of Morgan Array Area about halfway between Liverpool and Douglas. West of Duddon Sands and Walney OWFs feature in views to the north-east. Static sea infrastructure and OWFs (including Gwynt y Môr) off the North Wales coast are visible to the south. Isle of Man is barely discernible on the horizon to the north-west. Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Description of visual change

15.8.22.4 Morgan Array Area is located to the north/west of the ferry route at this point. The turbines would occupy around 53% (40°) of the 75° HFoV. The closest turbine would be approximately 19km distant. Views to the west, south and east would remain unchanged.

Construction and decommissioning phases

Magnitude of impact

15.8.22.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of ferry passengers in transit at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area, the closest turbine being situated approximately 19km away.

15.8.22.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.22.7 The views/visual amenity of people (ferry passengers in transit) at this viewpoint is deemed to be of medium value and medium susceptibility to the proposed. The sensitivity of the receptor is therefore, considered to be **medium**.

Significance of the effect

15.8.22.8 Overall, the magnitude of the visual impact experienced by ferry passengers in transit at this location during construction and decommissioning is deemed to be low and the sensitivity of the receptor is medium. The temporary effects will be **negligible to minor adverse**, which are not significant. This assessment considers that ferry passengers in transit are generally confined to the cabin/interior of the vessel.

Operations and maintenance phase

Magnitude of impact

15.8.22.9 A visual impact will potentially arise at this viewpoint which is representative of ferry passengers in transit at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape in one direction.

15.8.22.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.22.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **medium**.

Significance of the effect

15.8.22.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by ferry passengers in transit at this location, approximately 19km from the closest turbine, is deemed to be medium/low. The sensitivity of the receptor is medium. The effect will be **minor adverse**, which is not significant. This assessment considers that ferry passengers in transit are generally confined to the cabin/interior of the vessel.

15.8.23 Visual effects – Potential effects on people at Representative Viewpoint 23 – Heysham to Douglas (Isle of Man) ferry

15.8.23.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.23.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.23.3 Representative 360° view within/looking across MCA 32 Walney Coastal Waters and Duddon Estuary approximately 15km east of Morgan Array Area about halfway between Heysham and Douglas. West of Duddon Sands and Walney Offshore Wind Farms form a constant feature within the seascape to the north for much of the middle section of the ferry journey. Static marine infrastructure is visible to the south; the North Wales coast and associated offshore wind farms (including Gwynt y Môr and Burbo Bank) are only discernible in very clear conditions at long distance.

Description of visual change

15.8.23.4 Morgan Array Area is located to the west of the ferry route at this point. All the turbines would be visible in favourable conditions/visibility at approximately 15km distance to the west. Analysis of the visualisation supported by fieldwork indicates distant visibility of Morgan Generation Assets occupying approximately 57% (43°) of the 75° HFoV. Views to the north, east and south would remain unchanged.

Construction and decommissioning phases

Magnitude of impact

15.8.23.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of ferry passengers in transit at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area, the closest turbine being situated approximately 15km away.

15.8.23.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.23.7 The views/visual amenity of people (ferry passengers in transit) at this viewpoint is deemed to be of medium value and medium susceptibility to the proposed. The sensitivity of the receptor is therefore, considered to be **medium**.

Significance of the effect

15.8.23.8 Overall, the magnitude of the visual impact experienced by ferry passengers in transit at this location during construction and decommissioning is deemed to be medium/low and the sensitivity of the receptor is medium. The temporary effects wills be **negligible to minor adverse**, which are not significant. This assessment considers that ferry passengers in transit are generally confined to the cabin/interior of the vessel.

Operations and maintenance phase

Magnitude of impact

15.8.23.9 A visual impact will potentially arise at this viewpoint which is representative of ferry passengers in transit at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape in one direction.

15.8.23.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.23.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **medium**.

Significance of the effect

15.8.23.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by ferry passengers in transit at this location, approximately 15km from the closest turbine, is deemed to be medium/low. The sensitivity of the receptor is medium. The effect will be **minor adverse**, which is not significant. This assessment considers that ferry passengers in transit are generally confined to the cabin/interior of the vessel.

15.8.24 Visual effects – Potential effects on people at Representative Viewpoint 42 – Maughold Head/Maughold Brooghs, Isle of Man

15.8.24.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.24.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.24.3 Located at a local monument/landmark. An open, elevated south-east view from the headland looking out across MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined). The coastline (Isle of Man LCA H5 Maughold Head) is rugged with steep cliffs. The inshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing. The western edge of Walney offshore wind farm (Walney Extension) is visible on the far horizon. Described further in volume 4, annex 15.3: visual baseline of the PEIR.

Description of visual change

15.8.24.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the distance occupying approximately 44% (33°) of the 75° HFoV. The turbines would be visible on the distant horizon appearing closer than the existing Walney Extension offshore wind farm group, set within a seascape animated by commercial shipping/ferries. At just over 30km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.24.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people at/in the vicinity of the local monument/landmark. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within part of the Morgan Array Area situated offshore at distances of approximately 30km.

15.8.24.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.24.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.24.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be low to negligible and the sensitivity of the receptor is high. The effect will be **minor adverse**, which is not significant.

Operations and maintenance phase

Magnitude of impact

15.8.24.9 A visual impact will potentially arise at this viewpoint which is representative of people at/in the vicinity of the local monument/landmark due to the operations and maintenance of Morgan Generation Assets. The impact will result from partial visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.24.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.24.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.24.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 30km offshore, is deemed to be negligible. The sensitivity of the receptor is high. The effects will be **Minor to Moderate adverse**, which are not significant.

15.8.25 Visual effects – Potential effects on people at Representative Viewpoint 43 – Car park/beach front at Old Laxey, Isle of Man

15.8.25.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.25.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.25.3 Located on a public seafront/beach. Framed, southeast view from the enclosed Laxey Bay looking out across MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined). The coast beyond Laxey itself is relatively undeveloped. The inshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing in summer. The west edge of Walney offshore wind farm (Walney Extension) is visible on the far horizon. Described further in volume 4, annex 15.3: Visual baseline technical report of the PEIR.

Description of visual change

15.8.25.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the distance occupying approximately 42% (32°) of the 75° HFoV. The turbines would be visible on the distant horizon, appearing closer than the existing Walney Extension offshore wind farm, set within a seascape animated by commercial shipping/ferries. At just over 24km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.25.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people using the seafront/beach at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within part of the Morgan Array Area situated offshore at distances of approximately 24km.

15.8.25.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.25.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.25.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be low and the sensitivity of the receptor is high. The temporary effects will be **minor to moderate adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.25.9 A visual impact will potentially arise at this viewpoint which is representative of people using the seafront/beach at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from partial visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.25.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.25.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.25.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 24km offshore, is deemed to be medium/low. The sensitivity of the receptor is high. The effects will be **moderate to major adverse**, which are not significant to significant. This assessment takes account of the popularity of the location and framed nature of the view.

15.8.26 Visual effects – Potential effects on people at Representative Viewpoint 44 – Slieau Ruy cairn/trig point, Isle of Man

15.8.26.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on the view from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all of the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.26.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.26.3 Located on land with informal public access (Neither the CROW Act 2000 nor Scotland's 'right to roam' apply in Isle of Man to date). Elevated, inland panorama looking south-east across Isle of Man LCA A1 Northern Uplands towards Douglas settlement on the coast below (LCA E3 Douglas Bay). The surrounding seascape comprises MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined) with MCA 38 Irish Sea South (England) beyond. The inshore and offshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing. Several offshore wind farms are visible including Walney/Walney Extension and West of Duddon Sands in the east and Gwynt y Môr to the southwest. The North Wales coast including Eryri forms the backdrop on the far horizon. Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Description of visual change

15.8.26.4 Fieldwork and analysis of the visualisation indicates visibility of Morgan Generation Assets in the distance occupying approximately 33% (24°) of the 75° HFoV. The turbines would be visible in the far distance, appearing closer than the existing Walney Extension offshore wind farm group, set within a seascape animated by commercial shipping/ferries. At approximately 32km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.26.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people at this elevated location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 32km.

15.8.26.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.26.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.26.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the

sensitivity of the receptor is high. The temporary effects will be **minor adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.26.9 A visual impact will potentially arise at this viewpoint which is representative of people at this elevated location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels / helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.26.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.26.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.26.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 32km offshore, is deemed to be low. The sensitivity of the receptor is high. The effects will be **minor to moderate adverse**, which are not significant.

15.8.27 Visual effects – Potential effects on people at Representative Viewpoint 45 – South Barrule cairn/trig point, Isle of Man

15.8.27.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.27.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.27.3 Located on land with informal public access (Neither the CROW Act 2000 nor Scotland's 'right to roam' apply in Isle of Man to date). Elevated, inland panorama looking south-east across Isle of Man LCA A2 Southern Uplands towards the coast below including Santon Head (LCA D13 Santon and LCA E2 Port Soderick). The surrounding seascape comprises MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters (RPS defined) with MCA 38 Irish Sea South (England) beyond. The inshore and offshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing. Several offshore wind farms are visible including Walney/Walney Extension and West of Duddon Sands in the east and Gwynt y Môr to the southwest. In the most favourable visibility, the North Wales coast including Eryri can be seen on the far horizon. Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Description of visual change

15.8.27.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the distance occupying approximately 30% (22°) of the 75° HFoV. The turbines would be visible in the far distance, appearing closer than the existing Walney Extension offshore wind farm group, set within a seascape animated by commercial shipping/ferries. At approximately 34km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.27.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people at this elevated location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 34km.

15.8.27.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.27.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.27.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effect will be **minor adverse**, which is not significant.

Operations and maintenance phase

Magnitude of impact

15.8.27.9 A visual impact will potentially arise at this viewpoint which is representative of people at this elevated location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels / helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.27.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.27.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.27.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 34km offshore, is deemed to be low. The sensitivity of the receptor is high. The effects will be **minor to moderate adverse**, which are not significant.

15.8.28 Visual effects – Potential effects on people at Representative Viewpoint 46 – TSS Morgan's Queen III anchor memorial at Port St. Mary Point, Isle of Man

15.8.28.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all of the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.28.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.28.3 A public seafront/beach location on a local heritage trail. Framed, coastal panorama looking south-east from the TSS Mona's Queen III Anchor Memorial across Isle of Man E9 Bay Ny Carrickey. MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined) forms the wider, open seascape beyond. A settled bay enclosed by relatively undeveloped coast. The inshore waters are animated by coastal commercial shipping/ferries, fishing vessels and recreational sailing. Described further in volume 4, annex 15.3: visual baseline of the PEIR.

Description of visual change

15.8.28.4 Fieldwork and analysis of the visualisation indicates visibility of Morgan Generation Assets in the distance occupying approximately 31% (23°) of the 75° HFoV. The turbines would be visible on the distant horizon, set within a seascape occasionally animated by commercial shipping/ferries. At approximately 35km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.28.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people at this elevated location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 35km.

15.8.28.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.28.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.28.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effect will be **minor adverse**, which is not significant.

Operations and maintenance phase

Magnitude of impact

15.8.28.9 A visual impact will potentially arise at this viewpoint which is representative of people at this elevated location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels / helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.28.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.28.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.28.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 35km offshore, is deemed to be low. The sensitivity of the receptor is high. The effects will be **minor to moderate adverse**, which are not significant.

15.8.29 Visual effects – Potential effects on people at Representative Viewpoint 49 – Douglas promenade

15.8.29.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all of the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.29.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.29.3 Located on a public seafront/beach. Framed, south-east panorama from the Douglas promenade looking out across the enclosed Douglas Bay with MCA A Dreswick Point to Maughold Head, Isle of Man southeast Inshore Waters (RPS defined) forming wider seascape. Douglas settlement extends around the enclosing coastline/headlands. Douglas Bay and adjacent inshore waters are animated by mainland ferries, coastal commercial shipping, fishing vessels and recreational sailing in summer. The western edge of Walney offshore wind farm (Walney Extension) is visible on the far horizon left of frame. Described further in volume 4, annex 15.3: visual baseline of the PEIR.

Description of visual change

15.8.29.4 Analysis of the visualisation supported by fieldwork indicates visibility of Morgan Generation Assets in the distance occupying approximately 41% (31°) of the 75° HFoV. The turbines would be visible on the distant horizon, appearing closer than the existing Walney Extension offshore wind farm group, set within a seascape animated by commercial shipping/ferries and other craft. At approximately 24km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.29.5 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people using the seafront/beach at this location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within part of the Morgan Array Area situated offshore at distances of approximately 24km.

15.8.29.6 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.29.7 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.29.8 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be low and the sensitivity of the receptor is high. The temporary effects will be **minor to moderate adverse**, which are not significant.

Operations and maintenance phase

Magnitude of impact

15.8.29.9 A visual impact will potentially arise at this viewpoint which is representative of people using the seafront/beach at this location due to the operations and maintenance of Morgan Generation Assets. The impact will result from partial visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels/helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.29.10 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **medium to low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.29.11 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.29.12 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 24km offshore, is deemed to be medium/low. The sensitivity of the receptor is high. The effects will be **moderate to major adverse**, which are not significant to significant. This assessment takes account of the popularity of the location and framed nature of the view.

15.8.30 Visual effects – Potential effects on people at Representative Viewpoint 50 – Coast path at the Chasms/Sugarloaf, Isle of Man

15.8.30.1 Visual impacts will potentially be experienced by people during the construction, operations and maintenance, and decommissioning phases on views from this viewpoint falling within the ZTV of Morgan Generation Assets. These impacts would be caused by visibility of some or all of the following Morgan Generation Assets.

- 68 wind turbines (324m maximum blade-tip height)
- Four OSPs
- Construction and service vessels/helicopters.

15.8.30.2 The impacts will be generated by both static and moving elements of the above components which will affect the views/visual amenity of people at this viewpoint.

Summary of visual baseline

15.8.30.3 Open view from Raad ny Foillan Coastal Path near The Chasms and Sugarloaf looking along the south-eastern coast of the IoM to the sea beyond. The coastline at Port St. Mary Point, the bay at Castletown and the arc of Langness feature in the distance left of frame; rough grassland and stone wall enclosed pasture make up the foreground of the view. The inshore waters are animated by commercial shipping/ferries with the addition of recreational craft during summer. The western edge of Walney Extension is visible on the far horizon left of frame. Described further in volume 4, annex 15.3: visual baseline of the PEIR.

15.8.30.4 Described further in volume 4, annex 15.3: Visual baseline of the PEIR.

Description of visual change

15.8.30.5 Fieldwork and analysis of the visualisation indicates visibility of Morgan Generation Assets in the distance occupying approximately 30% (23°) of the 75° HFoV. The turbines would be visible beyond the intervening coastline on the distant horizon, appearing closer than the existing Walney Extension offshore wind farm group, set within a seascape occasionally animated by commercial shipping/ferries. At approximately 36km, Morgan Generation Assets would be visible in favourable conditions (i.e., very good visibility 20km to 40km approximately 70% of the year). The turbines would be difficult to discern (or not visible) at other times of the year.

Construction and decommissioning phases

Magnitude of impact

15.8.30.6 An impact will potentially arise during construction and decommissioning at this viewpoint which is representative of people at this elevated location. This will be caused by visibility of the erection and dismantling of the wind turbines and OSPs and the associated vessel and equipment activities/movements within the Morgan Array Area situated offshore at distances of approximately 364km.

15.8.30.7 The impact is predicted to be of local/regional spatial extent, short-term duration, continuous (increasing during construction, decreasing during decommissioning) and high reversibility. It is predicted that the impact will affect receptors directly. The magnitude of visual impact is therefore considered to be **low to negligible** during the construction and decommissioning phases.

Sensitivity of the receptor

15.8.30.8 The views/visual amenity of people at this viewpoint is deemed to be of high value and high susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **high**.

Significance of the effect

15.8.30.9 Overall, the magnitude of the visual impact experienced by people at this viewpoint during construction and decommissioning is deemed to be negligible and the sensitivity of the receptor is high. The temporary effect will be **minor adverse**, which is not significant.

Operations and maintenance phase

Magnitude of impact

15.8.30.10 A visual impact will potentially arise at this viewpoint which is representative of people at this elevated location due to the operations and maintenance of Morgan Generation Assets. The impact will result from visibility of both moving and static project components occupying the Morgan Array Area (namely: some or all of the rotating wind turbines and service vessels / helicopters, and the stationary OSPs) which has the potential to affect peoples' appreciation of the surrounding seascape/landscape.

15.8.30.11 The impact is predicted to be of local/regional spatial extent, long-term duration, continuous and high reversibility. It is predicted that the impact will affect views/visual amenity directly. The magnitude of impact is therefore considered to be **low** during the operations and maintenance phase.

Sensitivity of the receptor

15.8.30.12 The sensitivity of the views/visual amenity at this viewpoint is as set out above for the construction and decommissioning phases, namely **high**.

Significance of the effect

15.8.30.13 Overall, the magnitude of visual impact caused by Morgan Generation Assets during operations and maintenance, experienced by people at this viewpoint, situated at an approximate distance of 36km offshore, is deemed to be low. The sensitivity of the receptor is high. The effects will be **minor to moderate adverse**, which are not significant.

15.8.31 Future monitoring

15.8.31.1 No seascape, landscape and visual resources monitoring to test the predictions made within the impact assessment is proposed.

15.9 Cumulative effect assessment methodology

15.9.1 Methodology

15.9.1.1 The Cumulative Effects Assessment (CEA) takes into account the impact associated with the Morgan Generation Assets together with other projects and plans. The projects and plans selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (see volume 3, annex 5.1: Cumulative effects screening matrix of the PEIR). Each project has been considered on a case by case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.

15.9.1.2 The seascape, landscape and visual resources CEA methodology has followed the methodology set out in volume 1, chapter 5: EIA methodology of the PEIR. As part of the assessment, all projects and plans considered alongside the Morgan Generation Assets have been allocated into 'tiers' reflecting their current stage within the planning and development process, these are listed below.

15.9.1.3 A tiered approach to the assessment has been adopted, as follows:

- Tier 1
  - Under construction
  - Permitted application
  - Submitted application
  - Those currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact
- Tier 2
  - Scoping report has been submitted
- Tier 3
  - Scoping report has not been submitted
  - Identified in the relevant Development Plan
  - Identified in other plans and programmes.

15.9.1.4 This tiered approach is adopted to provide a clear assessment of the Morgan Generation Assets alongside other projects, plans and activities.

15.9.1.5 The specific projects, plans and activities scoped into the CEA, are outlined in Table 15.20 and shown on Figure 15.21 below.

Study area

15.9.1.6 The study area for the Morgan Generation Assets is a 50km buffer from the outer edges of the array area. The CEA study area for offshore wind farms with similar height turbines is 100km (50km + 50km study areas). This distance allows for other arrays with similar height turbines to be included within the CEA for seascape, landscape and visual resources. The CEA study area for onshore wind farms is 85km (50km + 35km). The study area for onshore wind farms is reduced, as onshore wind farms currently have smaller turbines and so the potential impacts will be exerted over a smaller area. For all other development the CEA area has been confined to 50km, (see Figure 15.21).

15.9.1.7 For the ES, individual ZTVs will be run for each wind farm located within the respective study areas. Where the ZTV of the existing cumulative schemes overlap with the ZTV of the Morgan Generation Assets array area, there is the potential for cumulative effect on seascape, landscape and visual resources.

Project types

15.9.1.8 The NatureScot 2021 Guidance advises that an assessment of cumulative impacts associated with a specific development proposal should encompass the impacts of the proposal in combination with:

- Existing development, either built or under construction
- Approved development, awaiting implementation
- 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.

15.9.1.9 The long list of cumulative projects for the cumulative seascape, landscape and visual impact assessment, within the study areas, is set out in volume 3, annex 5.1: Cumulative effects screening matrix of the PEIR.

Cumulative effects assessment - baseline projects

15.9.1.10 The existing onshore and offshore wind farm projects within the respective study areas (detailed in paragraph 15.9.1.6, above) with the potential to have significant cumulative seascape, landscape and visual effects with the Morgan Generation Assets are listed below and shown on Figure 15.21:

Offshore wind farms

- Barrow (30km from Morgan Generation Assets) 30 wind turbines, 120m to tip
- Burbo Bank (61km from Morgan Generation Assets) 25 wind turbines, 138m to tip

- Burbo Bank Extension (56km from Morgan Generation Assets) 32 wind turbines, 187m to tip
- Gwynt y Môr Offshore (51km from Morgan Generation Assets) 160 wind turbines, 138m to tip
- North Hoyle Offshore (61km from Morgan Generation Assets) 30 wind turbines, 107m to tip
- Ormonde (23km from Morgan Generation Assets) 30 wind turbines, 153m to tip
- Robin Rigg (73km from Morgan Generation Assets) 58 wind turbines, 125m to tip
- Walney (12km from Morgan Generation Assets) 102 wind turbines with tip heights of 150m
- Walney Extension (7.5km from Morgan Generation Assets) 87 wind turbines with tip heights in the range of 188m to 195m
- West of Duddon Sands (15km from Morgan Generation Assets) 108 wind turbines, 150m to tip.

Onshore Wind farms

- Armistead (81km from Morgan Generation Assets) six wind turbines 100m to tip
- Askam (45km from Morgan Generation Assets) seven wind turbines 63.5m to tip
- Caton Moor Repowering (75km from the Morgan Generation Assets) eight wind turbines, 90m to tip
- Claughton Moor (75.5km from the Morgan Generation Assets) 13 wind turbines, 126.5m to tip
- Claughton Moor Community Wind Farm (73km from the Morgan Generation Assets) 20 wind turbines 126.5m to tip
- Dewlay Cheese Wind Turbine (66km from the Morgan Generation Assets) one wind turbine, 126m to tip
- Eastman Chemicals, Workington (71.5km from the Morgan Generation Assets) two wind turbines, 107m to tip
- Fairfield Farm (63km from the Morgan Generation Assets) five wind turbines, 99m to tip
- Fanny House Farm/Heysham Moss (60km from the Morgan Generation Assets) one wind turbine, 110m to tip
- Furness/High Winds (Harlock Repowering) (48km from the Morgan Generation Assets) five wind turbines, 100m to tip
- Harlock Hill (48km from the Morgan Generation Assets) five wind turbines, 92.5m to tip
- Haverigg Extension (38km from the Morgan Generation Assets) four wind turbines, 100m to tip
- Haverigg Prison (41km from the Morgan Generation Assets) five wind turbines, 121 to tip
- Haverigg Repowering (Haverigg II) (38km from the Morgan Generation Assets) five wind turbines,62.5m to tip
- Heysham South (61km from the Morgan Generation Assets) three wind turbines, 125m to tip
- Kingspan (82.5km from the Morgan Generation Assets) two wind turbines, 78m to tip
- Kirkby Moor (51.5km from the Morgan Generation Assets) 12 wind turbines, 42m to tip
- Lambrigg (84.5km from the Morgan Generation Assets) five wind turbines, 75m to tip
- Lancaster University (66km from the Morgan Generation Assets) one wind turbine, 125m to tip
- Land at Flimby Hall Farm (73.5km from the Morgan Generation Assets) three wind turbines, 102m to tip
- Llanbabo (70km from the Morgan Generation Assets) 34 wind turbines, 100m to tip (max)
- Lowca (63km from the Morgan Generation Assets) seven wind turbines, 63.5m to tip
- Mawdesley Moss (74.5km from the Morgan Generation Assets) three wind turbines, 80m to tip
- Nant Bach (80km from the Morgan Generation Assets) one wind turbine, 100m to tip
- Oldside (69.5km from the Morgan Generation Assets) nine wind turbines, 62m to tip
- Orchard End (60.5km from the Morgan Generation Assets) two wind turbines, 125m to tip
- Port of Liverpool (75.5km from the Morgan Generation Assets) four wind turbines, 125m to tip
- Potato Pot (66km from the Morgan Generation Assets) three wind turbines, 100m to tip (min)
- Promised Land Farm (84km from the Morgan Generation Assets) two wind turbines, 77.5m to tip
- Royal Seaforth Dock (72.5km from the Morgan Generation Assets) six wind turbines, 90m to tip (max)
- Siddick (71.5km from the Morgan Generation Assets) seven wind turbines, 61m to tip

- Tallentire Hill (80.5km from the Morgan Generation Assets) six wind turbines, 42.6m to tip
- Trysglwyn (64.5km from the Morgan Generation Assets) 14 wind turbines, 44m to tip
- Winscales Moor (70km from the Morgan Generation Assets) seven wind turbines, 81m to tip
- Winscales Phase I and II (68.5km from the Morgan Generation Assets) 11 wind turbines, 52m to tip (max)
- Wythegill Wind Turbine (72km from the Morgan Generation Assets) one wind turbine, 92.5m to tip
- Ystgellog Farm (64km from the Morgan Generation Assets) two wind turbines, 92.5m to tip.

Other major offshore development projects

15.9.1.11 Other offshore projects that form part of the baseline, but might have an ongoing impact include:

- Millom West oil and gas field and platform (0.75km from the Morgan Generation Assets)
- North Morecambe oil and gas platforms (7.6km from the Morgan Generation Assets)
- OSI (oil and gas offshore storage installation) (33km from the Morgan Generation Assets)
- South Morecambe oil and gas drilling platforms DP3, DP4, DP6 and DP8 (20.5km, 16.6km, 14.2km and 12.2km from the Morgan Generation Assets)
- South Morecambe FL1 (17.2km from the Morgan Generation Assets)
- Douglas oil and gas drilling area, drilling platform and drilling well (DA, DP and DW) (47.2km, 47.2km and 47.3km from the Morgan Generation Assets)
- Irish Sea offshore wind farms inter-array and export cable repairs and remediation (various distances)
- Routine operational and maintenance activities to turbines of offshore wind farms in the Irish Sea (various distances)
- Irish Sea North Meteorological Mast and geotechnical survey (8.4km from the Morgan Generation Assets).

Other major onshore development projects

15.9.1.12 Other onshore projects that form part of the cumulative baseline are not expected to result in significant cumulative effects on landscape, seascape and visual resources. This is due to the distance to Morgan Generation Assets which, for the majority of the relevant projects listed in section 15.9.1.10, will be over 50km. The closest of these are Haverigg Extension Wind farm and Haverigg Repowering Wind farm both of which feature a small number of wind turbines with tip heights of 100m or less. This scale of development at the distances specified to Morgan Generation Assets is not expected to result in significant cumulative effects. Other onshore projects, including the Sellafield multi function nuclear site, that form part of the baseline which may be relevant to the cumulative SLVIA will be considered in the ES. In regard to the Sellafield site, significant cumulative effects on landscape, seascape and visual amenity are not expected to arise due to the distance to Morgan Generation Assets being in excess of 45km.

Cumulative effects assessment - proposed projects

15.9.1.13 PINS Advice Note 17 defines cumulative projects as those that are proposed or under construction. It does not include existing projects. Following the GLVIA3 and PINS guidance, this chapter has split the SLVIA CEA projects into cumulative baseline and cumulative proposed projects.

15.9.1.14 For the Environmental Statement, individual ZTVs will be run for each proposed wind farm located within the respective SLVIA study areas. Where the ZTV of the cumulative schemes overlaps with the ZTV of the Morgan Array Area, there is the potential for cumulative seascape, landscape and visual cumulative effects.

15.9.1.15 An initial cumulative ZTV has been generated for the Morgan Generation Assets in combination with the proposed Mona Offshore Wind Project (Figure 15.34, below).

15.9.1.16 For the purposes of this PEIR assessment, the specific projects, plans and activities included in the CEA are outlined in Table 15.20 and shown on Figure 15.21 and Figure 15.22. The projects and plans selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (see volume 3, annex 5.1: CEA screening matrix of the PEIR).

Table 15.20: List of other projects, plans and activities considered within the CEA for seascape, landscape and visual resources.

Project/Plan	Status	Distance from the Morgan array area (km)	Description of project/plan	Dates of construction (if applicable)	Dates of operation (if applicable)	Overlap with the Morgan Generation Assets
Tier 1						
Awel y Môr Offshore Wind Farm	Submitted but not yet determined	47.2	Currently at examination; array area shown on Figure 15.21	2026 to 2029	2030	Yes
Deans Lane Wind Turbine (onshore)	Permission granted	76	Awaiting construction, Figure 15.21	To be confirmed	To be confirmed	To be confirmed
HMS Eaglet, Sefton Street - Wind Turbine (onshore) & Solar Panels	Submitted	81.5	Submitted 05/09/2022, Figure 15.21	To be confirmed	To be confirmed	To be confirmed
Langthwaite Farm Wind Farm (onshore)	Submitted	40	Submitted 30/03/2012, Figure 15.21	To be confirmed	To be confirmed	To be confirmed
Rhyd-y-Groes Wind Farm repowering (onshore)	Permission granted	62.5	Awaiting construction, Figure 15.21	To be confirmed	To be confirmed	To be confirmed
Tier 2						
Mona Offshore Wind Project	Pre-application - scoping	5.5	PEIR in preparation; array area shown on Figure 15.21	2026 to 2029	2030	Yes
Morecambe Offshore Wind farm Generation Assets	Pre-application - scoping	11	PEIR in preparation; array area shown on Figure 15.21	2026 to 2029	2030	Yes
Morgan and Morecambe offshore wind farm transmission assets	Pre-application - scoping	Various (to be confirmed)	Various elements (offshore export cable, offshore substation platforms, landfall, onshore cable route and onshore substation at Penwortham). To be confirmed	2026 to 2029	2030	Yes
Tier 3						

Project/Plan	Status	Distance from the Morgan array area (km)	Description of project/plan	Dates of construction (if applicable)	Dates of operation (if applicable)	Overlap with the Morgan Generation Assets
Isle of Man Offshore Wind farm	Pre-planning	6km	Lease agreement in place; lease area shown on Figure 15.21	To be confirmed	To be confirmed	To be confirmed

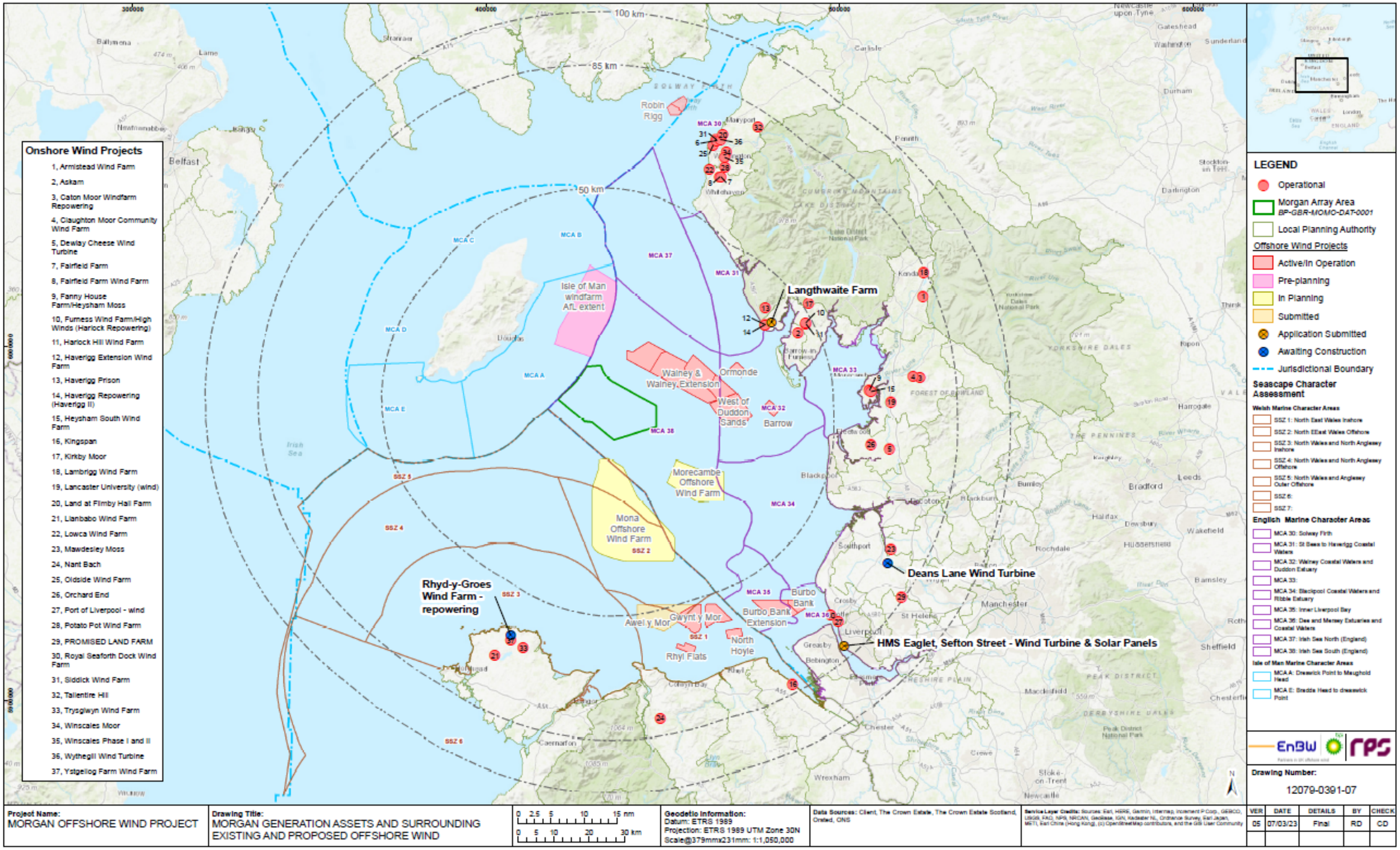


Figure 15.21: Morgan Generation Assets and surrounding existing and proposed offshore and onshore wind projects.

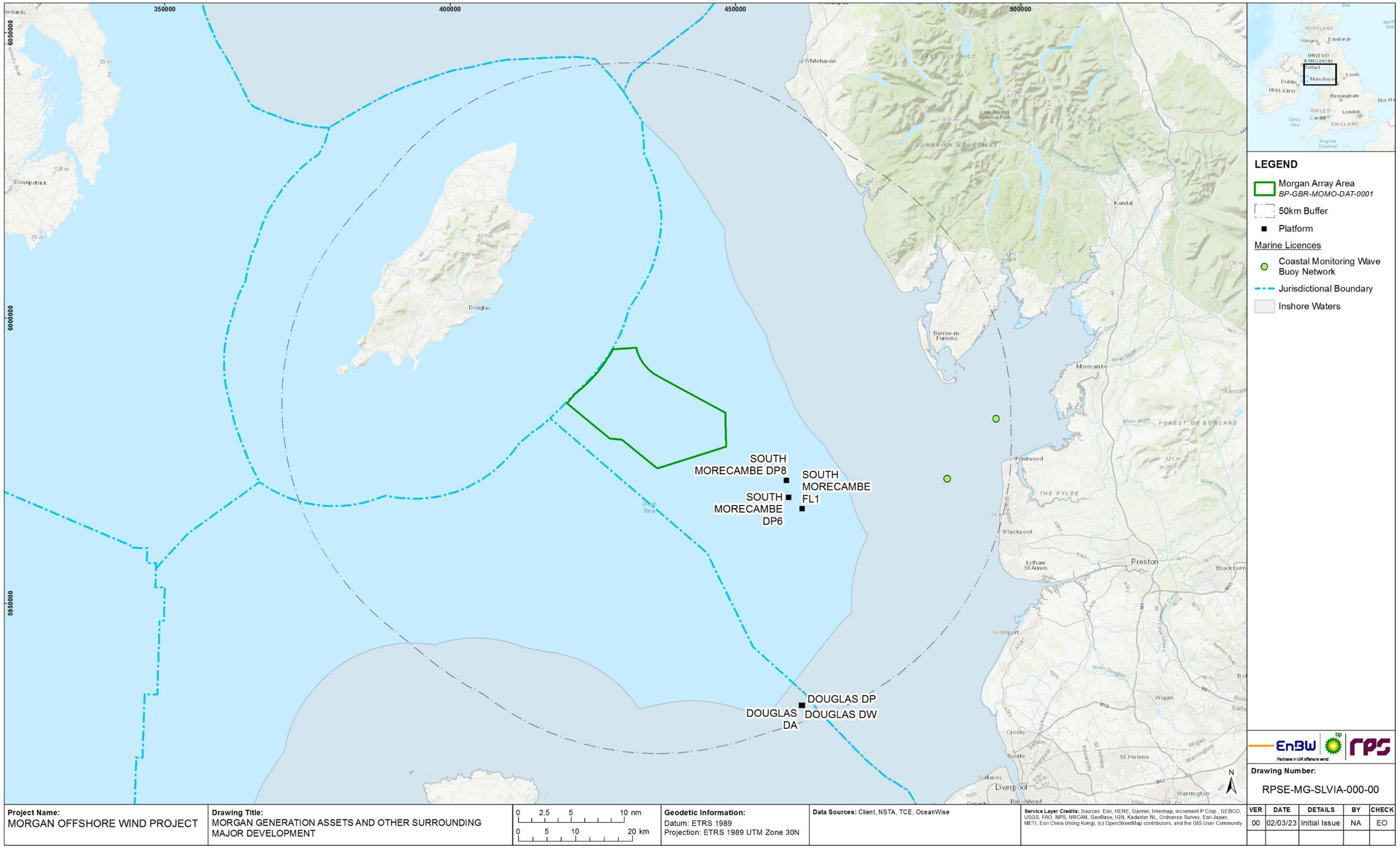


Figure 15.22: Morgan Generation Assets and other surrounding major development

15.10 Maximum Design Scenario

15.10.1.1 The MDSs identified in Table 15.17 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. The cumulative effects presented and assessed in this section have been selected from the PDE provided in volume 1, chapter 5: Project description, of the PEIR as well as the information available on other projects and plans, in order to inform a 'MDS'. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g. different wind turbine layout) to that assessed here, be taken forward in the final design scheme.

Table 15.21 Maximum design scenario considered for the assessment of potential cumulative effects on seascape landscape and visual resources.

[a] C=construction, O=operations and maintenance, D=decommissioning

Potential cumulative effect	Phase[a]			Maximum Design Scenario	Justification
	C	O	D		
The SLVIA considers the likely impacts of the Morgan Generation Assets on the seascape, landscape and visual resources of the SLVIA study area resulting from its construction, operations and maintenance and decommissioning. The receptor groups considered in the SLVIA are those located within the 50km radius SLVIA study area as follows: <u>Seascape/landscape receptors</u> • seascape/marine character areas • landscape character areas • special qualities of internationally / nationally designated landscapes. <u>Visual receptors</u> • people using national trails/long distance paths • people using access land/open country (or equivalent) • people accessing key coastal settlement seafronts/shorelines • cyclists using national cycle routes • people travelling along key coastal roads • people using key coastal railway routes • people travelling on key ferry routes • 17 representative viewpoints corresponding to views experienced by people at of the above receptors. The potential sources of seascape, landscape and visual impacts deriving from the Morgan Array Area development components and associated activities are detailed here.	✓	✓	✓	Maximum design scenario as described for the Morgan Offshore Wind Project (Table 15.17) assessed cumulatively with the following other projects/plans: **Tier 1** • Awel y Môr Offshore Wind Farm (Figure 15.21) • Deans Lane Wind Turbine (Figure 15.21) • HMS Eaglet, Sefton Street - Wind Turbine (Figure 15.21) • Langthwaite Farm Wind Farm (Figure 15.21) • Rhyd-y-Groes Wind Farm repowering (Figure 15.21) **Tier 2** • Mona Offshore Wind Farm project (Figure 15.21) • Morecambe Offshore Wind Farm Generation Assets (Figure 15.21)	Outcome of the CEA will be greatest when the greatest number of other schemes are considered.

15.11 Cumulative effects assessment

15.11.1.1 A description of the significance of cumulative effects upon seascape, landscape and visual resources receptors arising from each identified impact is given below.

15.11.2 Types of cumulative landscape effects

15.11.2.1 GLVIA3 identifies the likely potential cumulative seascape/landscape effects as including:

- Effects on the fabric of the seascape/landscape resulting from the removal of, or changes in, individual elements or features of the landscape, and/or the introduction of new elements or features in the landscape
- Effects on the aesthetic aspects of the seascape/landscape, e.g., scale, sense of enclosure, sense of naturalness, remoteness or tranquillity
- Effects on the overall character of the seascape/landscape, resulting from the above, leading to modification of key characteristics and possible creation of new seascape/landscape character.

15.11.2.2 A description of those seascape, landscape and visual effects that have the potential to be significant in terms of cumulative effects upon seascape, landscape and visual resources receptors arising from each identified impact is given below.

15.11.3 Types of cumulative visual effects

15.11.3.1 GLVIA3 sets out the types of cumulative visual effects on receptors. These are:

- Combined – where the observer is able to see two or more developments from one viewpoint. The subsets of combined visual effects are:
  - In combination, where two or more developments are or would be within the observer's arc of vision at the same time, without turning their head
  - In succession, where the observer has to turn their head to see the various developments, both existing and proposed.
- Sequential- where the observer has to move to another viewpoint to see the same or different developments. Sequential effects may occur along routes or roads and/or public rights of way. The subsets of sequential effects are:
  - Frequently sequential, where the features appear regularly and with short time lapses between instances (dependant on speed and distance)
  - Occasionally sequential, where longer time lapses between appearances occur, due to speed of the observer and/or longer distances between viewpoints.

15.11.4 Potential cumulative effects with existing wind farm projects

15.11.4.1 Existing offshore wind farms considered in this cumulative assessment have been grouped into three, as follows:

- Northwest England cluster, consisting of:
  - Barrow
  - Ormonde
  - Walney
  - Walney Extension
  - West of Duddon Sands.
- North Wales cluster, consisting of:
  - Burbo Bank
  - Burbo Bank Extension
  - Gwynt y Môr Offshore
  - North Hoyle Offshore.
- Robin Rigg.

15.11.4.2 Combined ZTVs of each cluster of existing offshore wind farms and the Morgan Generation Assets have been produced (Figure 15.23, Figure 15.24 and Figure 15.25). The study areas for the individual wind farms have been calculated using the known heights of the turbines of each offshore wind farm and the table at paragraph 48 of Visual Representation of Wind Farms: Version 2.2 (SNH, 2017).

15.11.4.3 A description of the significance of cumulative effects of Morgan Generation Assets upon seascape, landscape and visual resources receptors arising from identified impacts in Table 15.20 is given below.

15.11.4.4 For a cumulative effect to occur, an additional effect must arise over and above the likely effect of implementing the Morgan Generation Assets, measured against baseline conditions.

15.11.4.5 The assessment of cumulative seascape, landscape and visual effects is presented in two stages as follows:

- Effects arising from the Morgan Generation Assets in conjunction with existing offshore and onshore projects as listed in section 15.9.1. ZTVs have been generated using the available data for the existing offshore wind farms, which have been grouped into three offshore clusters, namely: Northwest England, North Wales and Robin Rigg. The existing onshore wind farms have also been grouped, into seven clusters (Figure 15.26 to Figure 15.32, below)
- Effects resulting from the Morgan Generation Assets in conjunction with planned Tier 1 and Tier 2 offshore and onshore projects listed in Table 15.20.

15.11.4.6 Cumulative ZTV plans relating to these two assessment scenarios are presented in Figure 15.23 to Figure 15.32. Relevant figure references are given in brackets in the assessment below.

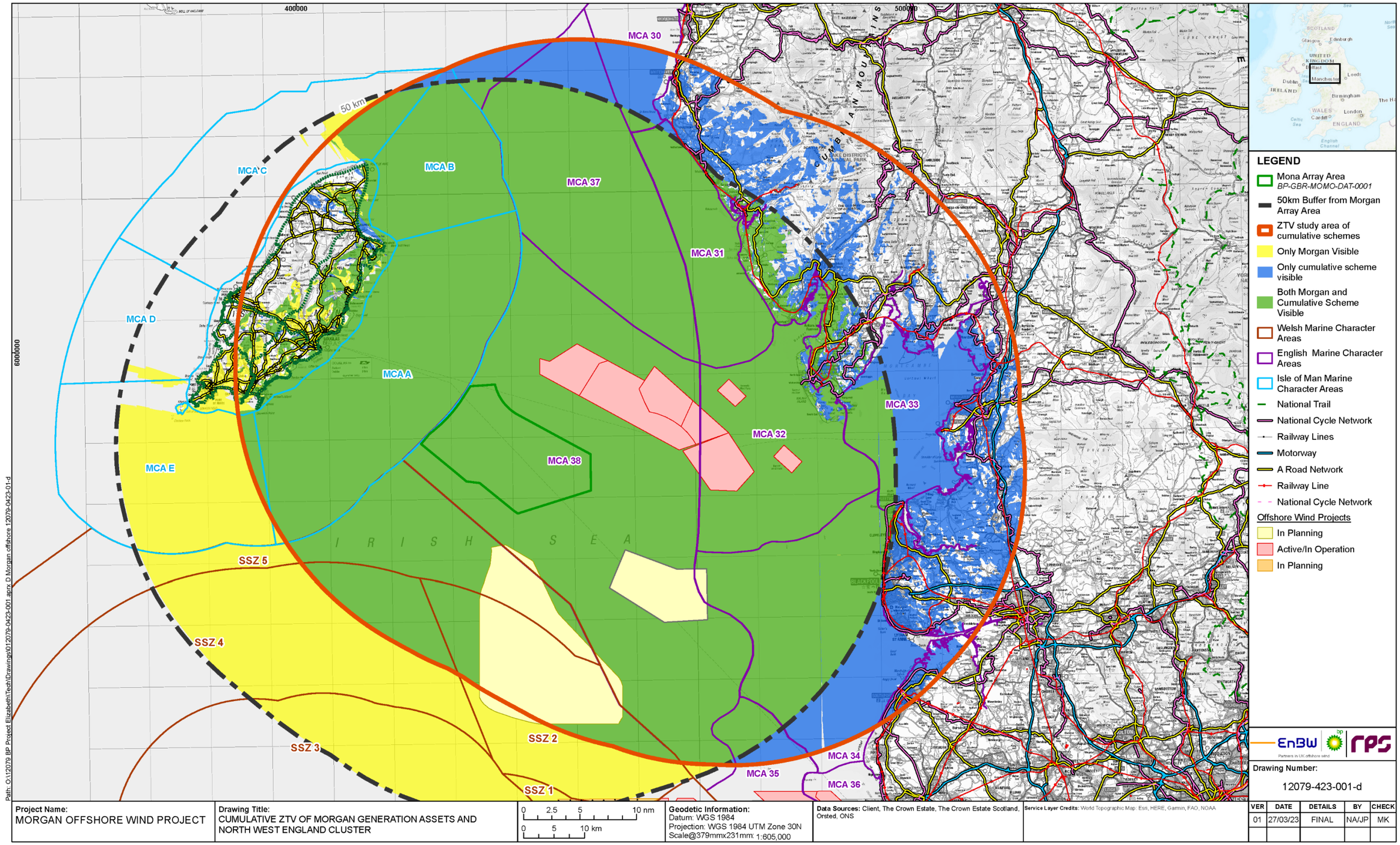
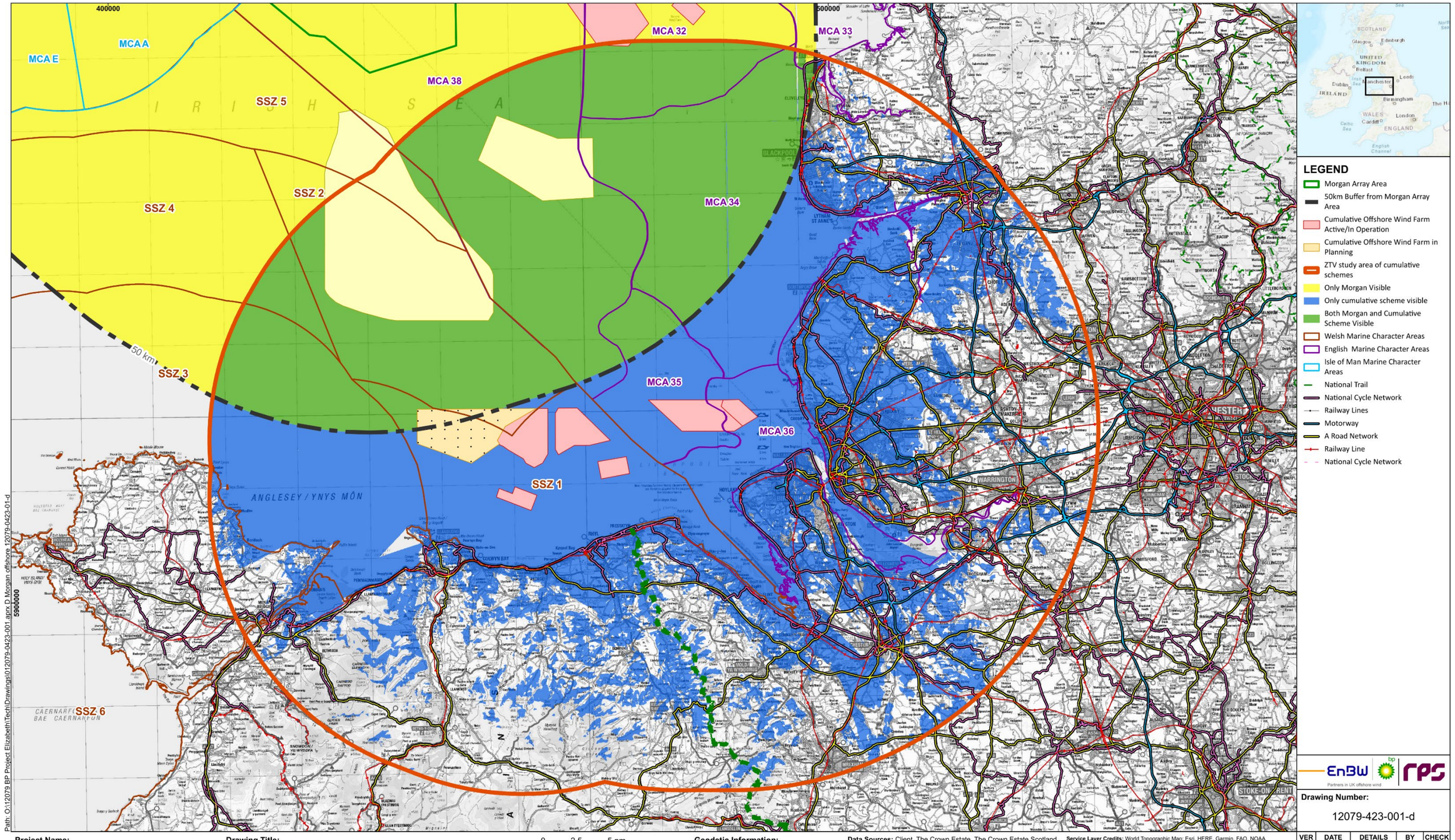


Figure 15.23. Cumulative ZTV of Morgan Generation Assets with Northwest England cluster of existing offshore wind farms.

Partners in UK offshore wind



Project Name:
MORGAN OFFSHORE WIND PROJECT

Drawing Title:
CUMULATIVE ZTV OF MORGAN GENERATION ASSETS AND NORTH WALES CLUSTER

0 2.5 5 nm
0 5 10 km

Geodetic Information:
Datum: WGS 1984
Projection: WGS 1984 UTM Zone 30N
Scale@379mmx231mm: 1:533,000

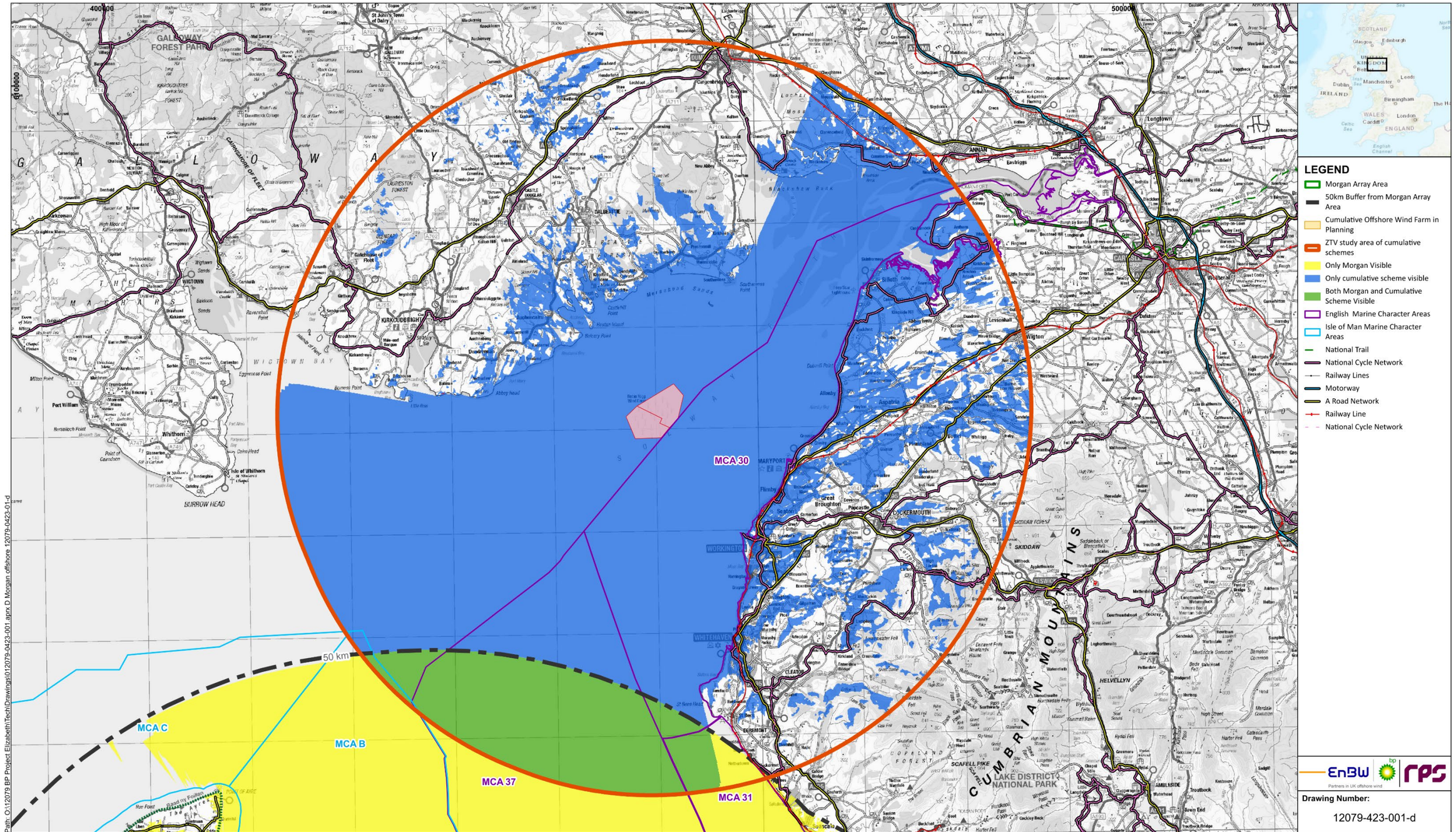
Data Sources: Client, The Crown Estate, The Crown Estate Scotland, Orsted, ONS

Service Layer Credits: World Topographic Map: Esri, HERE, Garmin, FAO, NOAA

Drawing Number:
12079-423-001-d

VER	DATE	DETAILS	BY	CHECK
00	13/01/23	Initial Issue	NA	MK

Figure 15.24. Cumulative ZTV of Morgan Generation Assets with North Wales Cluster of existing offshore wind farms.



Project Name:
MORGAN OFFSHORE WIND PROJECT

Drawing Title:
CUMULATIVE ZTV OF MORGAN GENERATION ASSETS AND ROBIN RIGG

0 2.5 5 nm
0 5 10 km

Geodetic Information:
Datum: WGS 1984
Projection: WGS 1984 UTM Zone 30N
Scale@379mmx231mm: 1:376,000

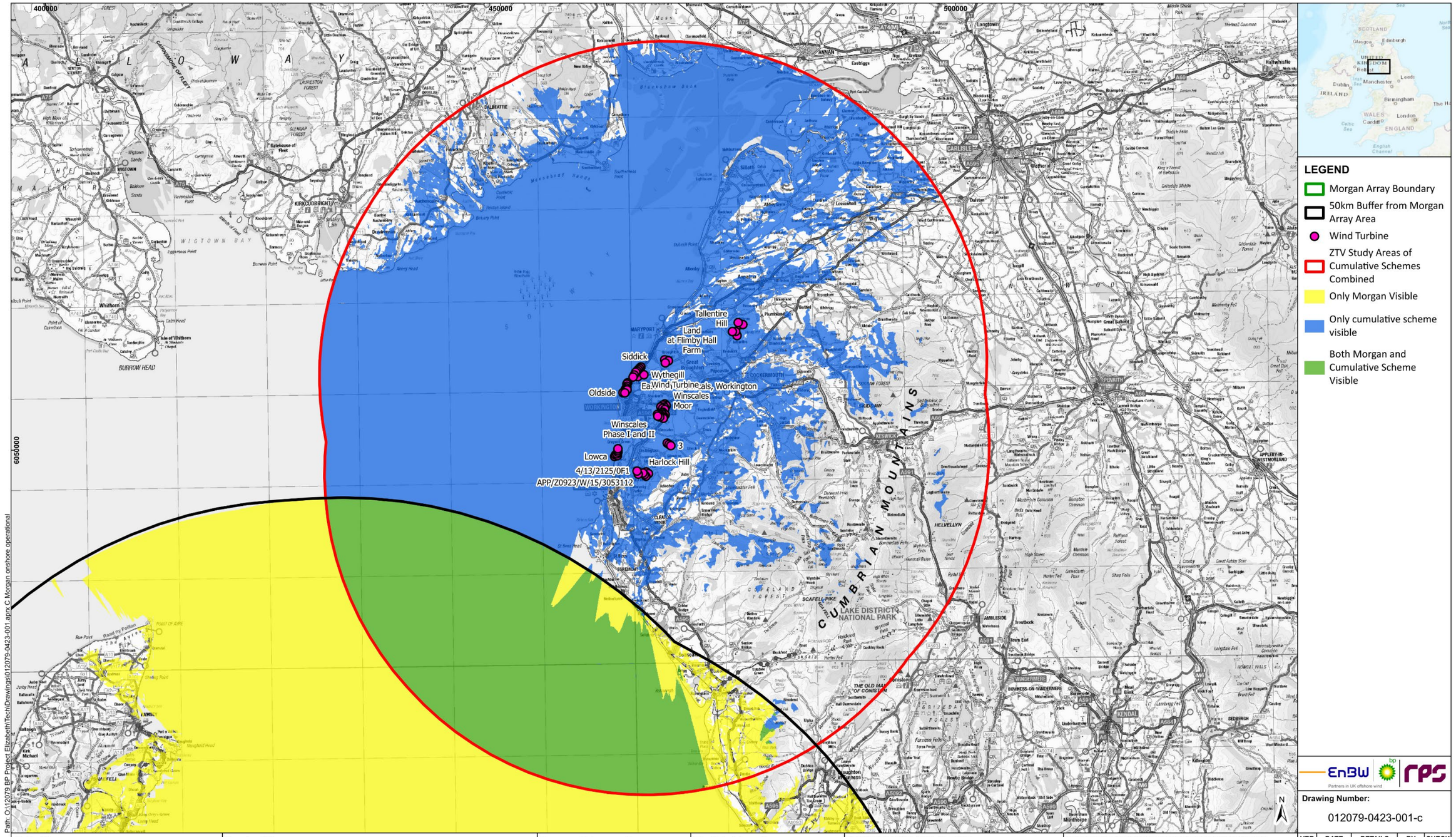
Data Sources: Client, The Crown Estate, The Crown Estate Scotland, Orsted, ONS

Service Layer Credits: World Topographic Map: Esri, HERE, Garmin, FAO, NOAA

Drawing Number:
12079-423-001-d

VER	DATE	DETAILS	BY	CHECK
00	13/01/23	Initial Issue	NA	MK

Figure 15.25. Cumulative ZTV of Morgan Generation Assets with Robin Rigg existing offshore wind farm.



Project Name: MORGAN OFFSHORE WIND PROJECT	**Drawing Title:** CUMULATIVE ZTV OF MORGAN GENERATION ASSETS AND ONSHORE WINDFARM SCHEMES IN THE WORKINGTON TO COCKERMOUTH CLUSTER	0 2.5 5 nm 0 5 10 km	**Geodetic Information:** Datum: WGS 1984 Projection: WGS 1984 UTM Zone 30N Scale@379mmx231mm: 1:422,000	**Data Sources:** Client, NSTA, OceanWise	**Service Layer Credits:** World Topographic Map: Esri, HERE, Garmin, FAO, NOAA World Hillshade: Esri, CGIAR, USGS

Drawing Number: 012079-0423-001-c

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00	01/02/23	Initial Issue	RD	CD

Figure 15.26. Cumulative ZTV of Morgan Generation Assets and onshore wind farm schemes in the Workington to Cockermouth Cluster.

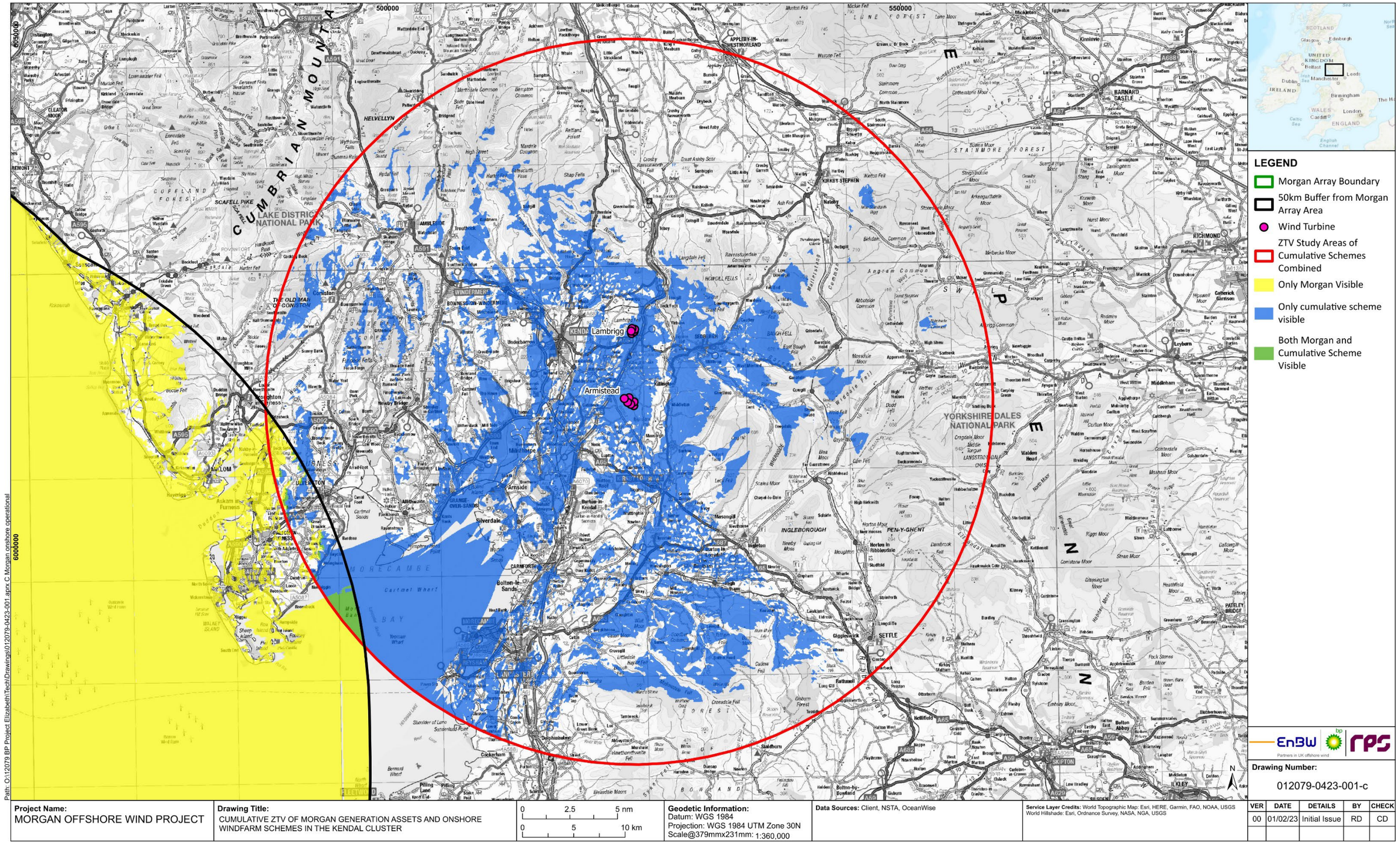
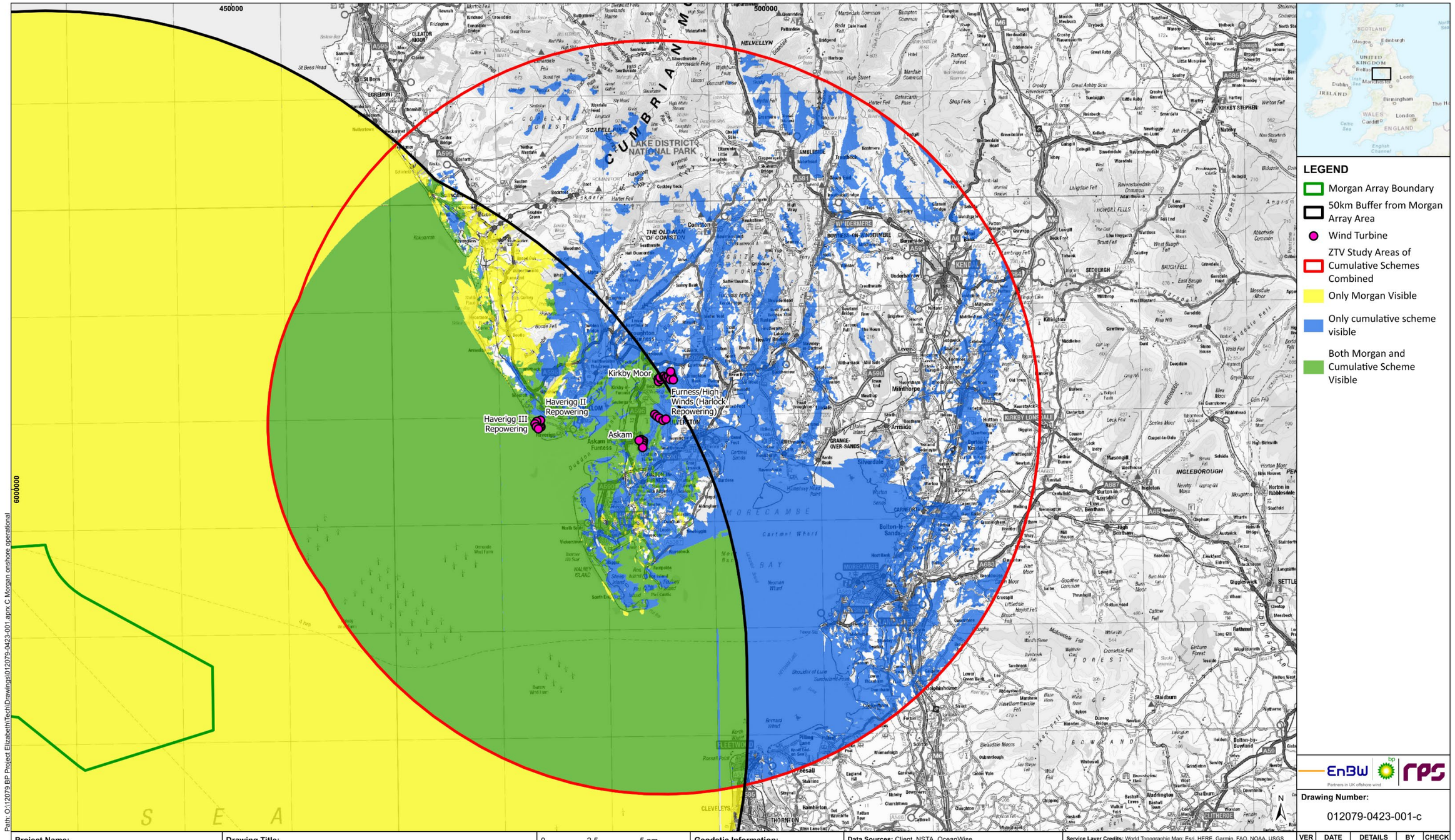


Figure 15.27. Cumulative ZTV of Morgan Generation Assets and existing onshore wind farm schemes in the Kendal Cluster.



Project Name: MORGAN OFFSHORE WIND PROJECT	**Drawing Title:** CUMULATIVE ZTV OF MORGAN GENERATION ASSETS AND ONSHORE WINDFARM SCHEMES IN THE BARROW CLUSTER	0 2.5 5 nm 0 5 10 km	**Geodetic Information:** Datum: WGS 1984 Projection: WGS 1984 UTM Zone 30N Scale@379mmx231mm: 1:359,000	**Data Sources:** Client, NSTA, OceanWise	**Service Layer Credits:** World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS World Hillshade: Esri, Ordnance Survey, NASA, NGA, USGS

Drawing Number: 012079-0423-001-c

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Figure 15.28. Cumulative ZTV of Morgan Generation Assets and existing onshore wind farm schemes in the Barrow Cluster

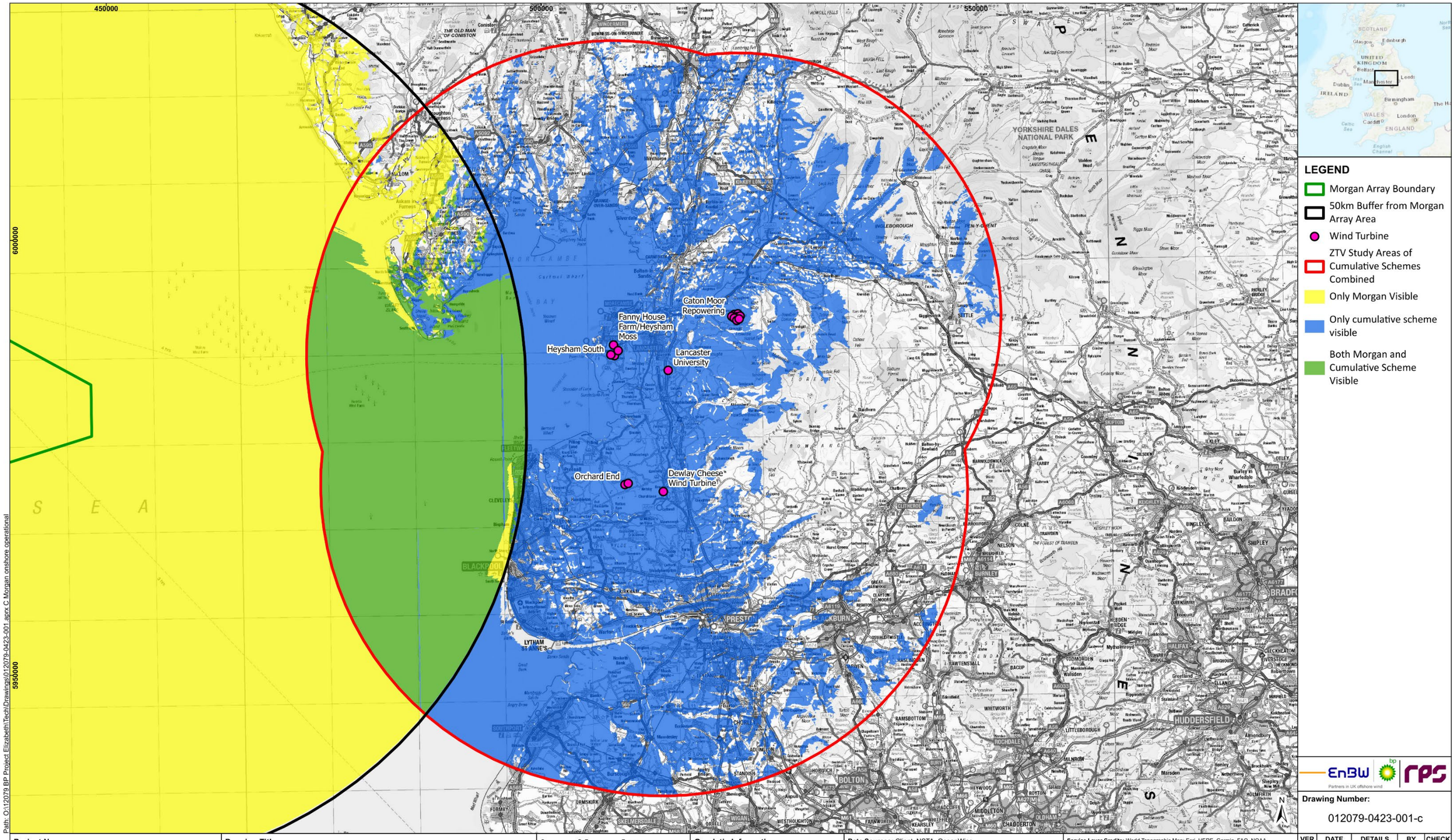


Figure 15.29. Cumulative ZTV of Morgan Generation Assets and existing onshore wind farm schemes in the Preston to Lancaster Cluster.

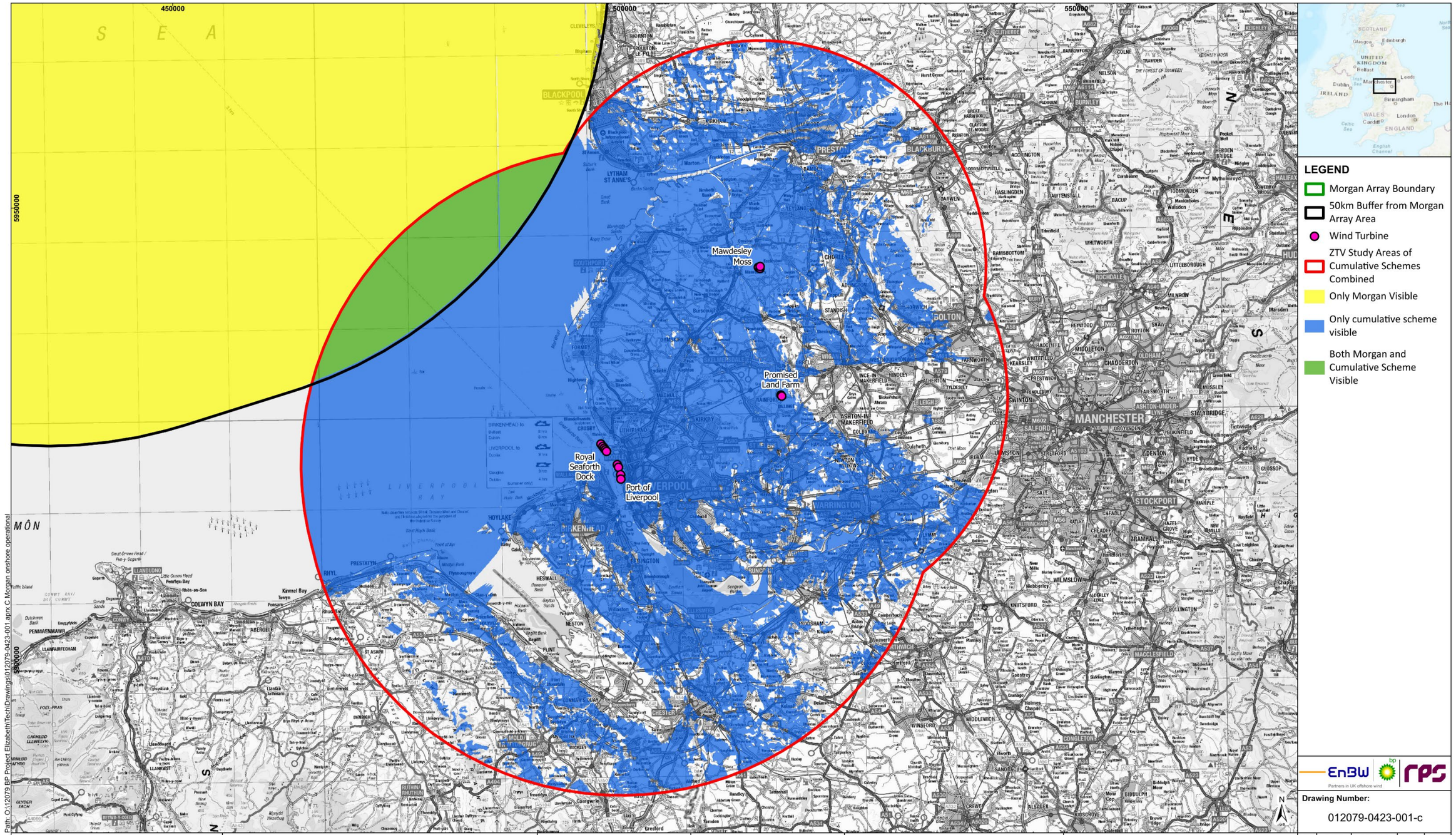
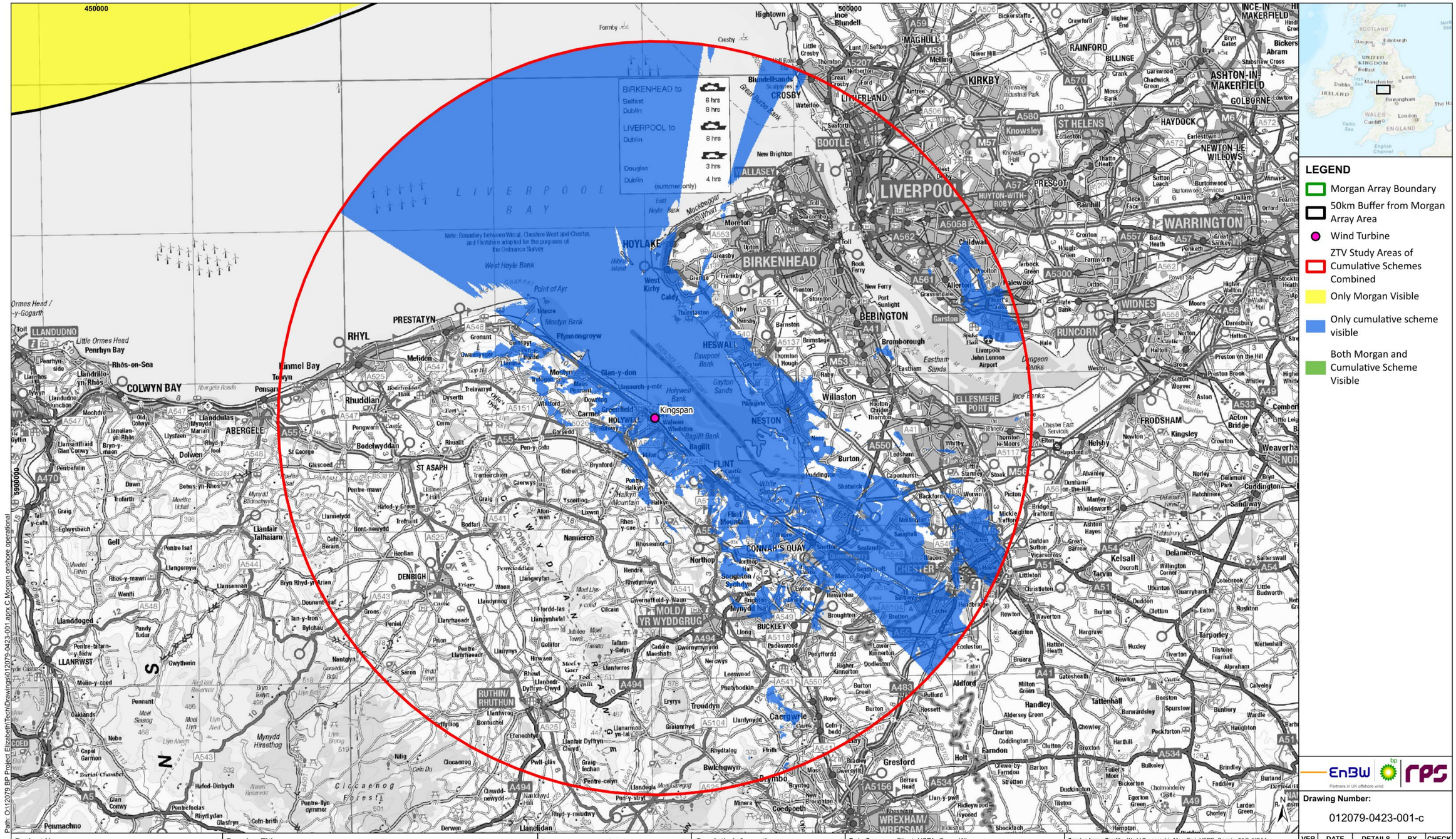


Figure 15.30. Cumulative ZTV of Morgan Generation Assets and existing onshore wind farm schemes in the Liverpool to Preston Cluster.



Project Name: MORGAN OFFSHORE WIND PROJECT	**Drawing Title:** CUMULATIVE ZTV OF MORGAN GENERATION ASSETS AND ONSHORE WINDFARM SCHEMES IN THE HOLYWELL CLUSTER	0 2.5 5 km / 0 5 10 Km	**Geodetic Information:** Datum: WGS 1984 Projection: WGS 1984 UTM Zone 30N IScale@379mmx231mm: 1:255,000	**Data Sources:** Client, NSTA, OceanWise	**Service Layer Credits:** World Topographic Map: Esri, HERE, Garmin, FAO, NOAA World Hillshade: Esri, CGIAR, USGS

Drawing Number: 012079-0423-001-c

VER	DATE	DETAILS	BY	CHECK
00	01/02/23	Initial Issue	RD	CD

Path: O:\12079 BP Project Elizabeth\Tech\Drawings\012079-0423-001.aprx C-Morgan onshore operational

Figure 15.31. Cumulative ZTV of Morgan Generation Assets and existing onshore wind farm schemes in the Holywell Cluster.

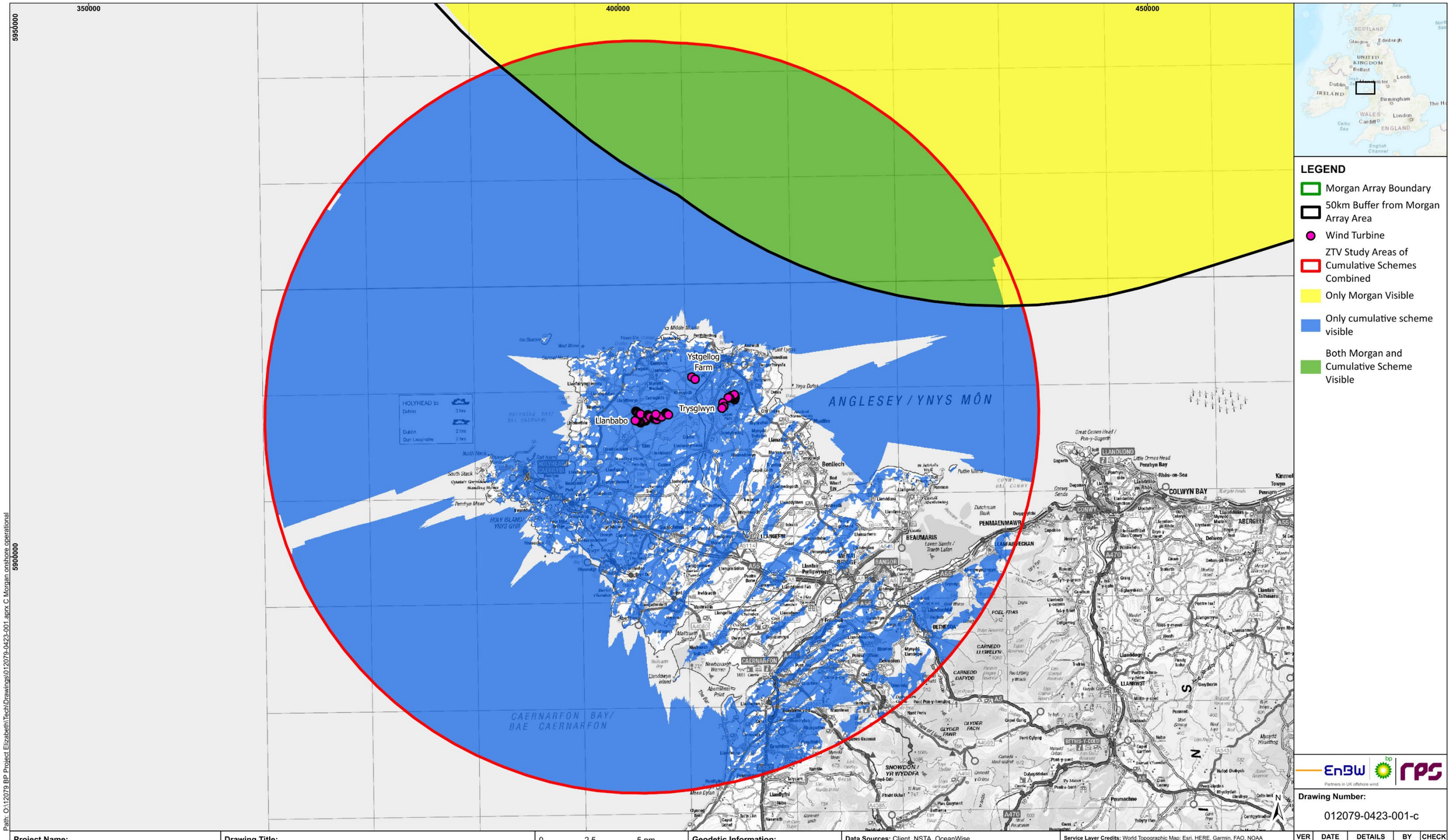


Figure 15.32. Cumulative ZTV of Morgan Generation Assets and existing onshore wind farm schemes in the Anglesey Cluster

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15.11.5 Potential cumulative effects on seascape, landscape and visual resources of Morgan Generation Assets together with existing development projects

15.11.5.1 Cumulative impacts will potentially be caused by both static and moving elements of the development components of the identified cumulative projects, in combination with those of Morgan Generation Assets. Together these will potentially affect the characteristics, qualities and perceptions of the seascape, landscape and visual resource of the SLVIA study area.

15.11.5.2 The assessment presented in section 15.8 considered the likely effects on seascape, landscape and visual resources against the baseline conditions current at the time of writing (February 2023). The baseline includes existing major offshore, as well as both offshore and onshore, operational wind farms within the SLVIA study area (Figure 15.21 and Figure 15.22). The SLVIA findings and conclusions thus had regard to these major development factors and the influence they exert on existing seascape and landscape character and on views and visual amenity. This section provides a brief review of these findings and conclusions, in the light of GLVIA3 guidance on CEA, in particular the following recommendations:

- The 'filling' of an area with either the same or a different type of development, which may substantially alter the seascape, landscape resource, views or visual amenity
- Incremental change resulting from successive individual developments such that the combined seascape, landscape or visual effect is significant even though the individual effects may not be (GLVIA3, paragraph 7.17).

Potential cumulative effects on the fabric of seascape elements and features together with existing development projects

15.11.5.3 Due to the nature of the proposed development, Morgan Array Area will occupy a comparatively small area of sea within the overall seascape. Implementation of Morgan Generation Assets will therefore have negligible impact on the physical fabric of the seascape within the SLVIA study area, whether considered in isolation or together with existing development projects. Consequently, there is **no potential** for significant adverse, cumulative effects to arise on the fabric of seascape elements and features together with existing development projects.

Potential cumulative effects on the aesthetic aspects and overall character of internationally and nationally designated landscapes together with existing development projects

15.11.5.4 The aesthetic aspects of seascape and landscape resources are expressed in their overall character, their distinctive characteristics and qualities, and the value attached to them by people/society. Regarding aesthetic aspects, GLVIA3 states:

"Character is not just about the physical elements and features that make up a landscape, but also embraces the aesthetic, perceptual and experiential aspects of the landscape that make different places distinctive." (GLVIA3, paragraph 2.19 – a similar statement is made with respect to seascape at paragraph 5.6). And in defining them GLVIA3 states: *"…the aesthetic aspects of the landscape – for example its scale, sense of enclosure, diversity, pattern and colour, and/or on its perceptual or experiential attributes, such as a sense of naturalness, remoteness or tranquillity."* (GLVIA3, paragraph 7.25)

15.11.5.5 GLVIA 3 adds that regarding the assessment of landscape/seascape value:

"Scenic quality may also be relevant and will need to reflect factors such as sense of place and aesthetic and perceptual qualities." (GLVIA3, paragraph 5.29).

15.11.5.6 The potential effect of Morgan Generation Assets alone on the aesthetic aspects of seascape and landscape (as defined in GLVIA3 and summarised above) has been assessed earlier in this chapter in relation to a) seascape/marine character areas and national landscape character areas, and b) the special qualities of nationally and internationally designated landscapes.

15.11.5.7 National and international landscape designations represent the most sensitive landscape resources and thus the highest value and most susceptible aesthetic aspects in the SLVIA study area. By implication, the aesthetic aspects of other landscape and seascape resources in the SLVIA study area are less sensitive. Section 15.8.4 presents the assessment on the characteristics and special qualities of national landscape designations in the SLVIA study area and concluded that no significant effects would arise on them due to implementation of Morgan Generation Assets. This PEIR assessment has regard to existing offshore major development projects and both offshore and onshore wind farms (Figure 15.21 and Figure 15.22).

15.11.5.8 Morgan Array Area is located over 35km from the closest area of designated land in the SLVIA study area, that being the Lake District National Park and English Lake District WHS, which is designated nationally and internationally for its special qualities, themes and criteria. The cumulative ZTVs reveal no effects on this designated landscape resulting from both Morgan Generation Assets in combination with either the North Wales Cluster or Robin Rigg. The cumulative ZTV for Morgan Generation Assets and the Northwest England cluster reveals theoretical effects on approximately 3.79% of the land within the boundary of this nationally and internationally designated landscape. The intervening seascape between this landscape and the Morgan Array Area is affected by the Northwest England Cluster of existing offshore wind farms (Figure 15.23), along with commercial shipping vessels and oil and gas platforms. The Implementation of Morgan Generation Assets, sited beyond and behind the existing development at the distance specified (over 35km), would result in scarcely discernible, cumulative effects on a very limited extent of this nationally and internationally designated landscape resource.

15.11.5.9 The Lake District National Park special qualities and the criteria of the English Lake District WHS is assessed as being of very high sensitivity to the proposed development (section 15.8.4).

15.11.5.10 A cumulative magnitude of impact in the range of negligible to no change during operation would arise resulting in a **negligible adverse** cumulative effect on the aesthetic aspects of this nationally and internationally designated landscape resource in the SLVIA study area which is not significant.

15.11.5.11 During construction and decommissioning, the short term nature of the effects is such that an almost no change magnitude of cumulative impact is considered to arise on the aesthetic aspects of this nationally and internationally designated landscape resource resulting in an effect that is so limited resulting in a **no change/negligible adverse** effect.

Potential cumulative effects on the aesthetic aspects and overall character of seascape and landscape character areas together with existing development projects

15.11.5.12 The Morgan Generation Assets is located over 22km from the nearest area of land within the SLVIA study area, that being the east coast of the Isle of Man. There is potential for cumulative effects to arise on landscape character along the coast as a result of Morgan Generation Assets and existing development projects, in particular the Northwest England Cluster of offshore wind farms. The Northwest England Cluster is located further from the Isle of Man coastline than the Morgan Generation Assets.

15.11.5.13 The cumulative effects with existing wind farms in the Northwest England Cluster will result from the presence of the Morgan Generation Assets wind turbines which will increase the extent of wind farm development in the area, as well as introducing larger wind turbines. Based on the distance and the extent to which Morgan Generation Assets adds further wind farm development to the baseline, there is potential for significant cumulative effects on landscape character along the east coast of the Isle of Man, specifically, Isle of Man LCT E Rugged Coast and the adjacent LCT D Incised Slopes. The assessment considered these landscape receptors as being of high/medium sensitivity (section 15.8.3). A medium magnitude of cumulative impact is considered to arise resulting in a **moderate to major adverse** and potentially significant cumulative effect.

15.11.5.14 During construction and decommissioning, the short term nature of the effects is such that a negligible / low magnitude of cumulative impact is considered to arise on the aesthetic aspects and character of these Isle of Man landscapes resulting in a **negligible to minor adverse** cumulative effect.

15.11.5.15 Due to the offshore location of Morgan Generation Assets, there is no potential for significant cumulative effects to arise on national landscape character areas together with existing development projects and therefore no further assessment is provided here.

15.11.5.16 Cumulative effects will potentially arise on the character of the seascape in the SLVIA study area due to implementation of Morgan Generation Assets.

15.11.5.17 Desk study and fieldwork indicate that potential cumulative effects will arise to the following seascape character areas/sensitivity zones as a result of Morgan Generation Assets:

- Marine Character Area (MCA) 38 Irish Sea South
- MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters
- Seascape Sensitivity Zone (SSZ) 5 North Wales and Anglesey Outer Offshore.

15.11.5.18 The assessment presented in section 15.8.3 concluded that effects on MCA 38 overall will be minor adverse and not significant. It also concluded that effects on MCA A and sensitivity zones SSZ 5 will be minor to moderate adverse (not significant) and minor adverse (not significant) respectively.

15.11.5.19 Regarding the aesthetic aspects of the above seascape units, the MCA 38 Irish Sea South character description states: *"The southern part of the Irish Sea is a busy area, with multiple offshore activities including fishing, main shipping routes, oil and gas extraction and dredging. Offshore wind farms extend into the north-west of the MCA. These activities also influence the night-time character with lighting on the main offshore platforms and wind turbines across the area" … "The offshore area is distant from low-lying coasts and is not widely visible, except from the ferry routes which link England with Ireland and the Isle of Man, although it is overlooked in distant views from the Lake District fells"* (MMO 2018).

15.11.5.20 With respect to the Isle of Man marine character areas, defined and characterised by RPS in the absence of available published data, The MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters is described as *"The waters to the east of the Isle of Man are less than 50m deep, with a large area of shallower water to the north of the area, close to Isle of Man MCA B" …. "This is a busy area of the Isle of Man inshore waters, as there are ferry routes from the English mainland (Liverpool and Heysham to Douglas) as well as smaller numbers of shipping from the Island of Ireland and Scotland. Shipping routes from the English mainland to Scotland and the Island of Ireland pass through this MCA. This is also a popular area for recreational sailing, with boats crossing the Irish sea, as well as travelling along the coast of the Isle of Man. An MoD firing practice area is located to the north of IoM MCA A. This is linked to a larger area in English territorial waters (D406C), extending from the MoD's Eskmeals Range, Cumbria. The western edge of Walney Extension is less than 5.5km from the eastern edge of this MCA."*

15.11.5.21 With respect to the seascape sensitivity zones, NRW states regarding SSZ 5 North Wales and Anglesey Outer Offshore: 'The area lies in open sea at least 44km offshore from the Anglesey, North Wales and Llŷn Peninsula coasts although the zone's northern edge is located around 22km from the Isle of Man. To the southeast there are the existing arrays at Gwynt y Môr and further arrays lie to the northeast including Walney, Walney Extension and West of Duddon Sands. The sea is open and exposed with commercial vessels running inshore from this zone to and from the Mersey ports, and ferries issue from Holyhead's busy harbour.'

15.11.5.22 The siting of the Morgan Array Area at a distance of 7.5km to the Northwest England Cluster of existing offshore wind farms will result in cumulative effects on seascape. The cumulative effects with existing wind farms in the Northwest England Cluster will result from the presence of the Morgan Generation Assets wind turbines which will increase the extent of wind farm development within the seascape (representative viewpoints 18, 19 and 43, , and). Cumulative effects with existing wind farms in the Northwest England Cluster and the North Wales Cluster will also arise (representative viewpoint 20,). The effect of Morgan Generation Assets will be to increase the extent of wind turbines in the seascape. However, this is not expected to fill the area of seascape to the extent that would lead to a substantial alteration to the baseline conditions. This is because of the separation distance between Morgan Generation Assets and the North Wales cluster of existing wind farms being in the range of 51 to 61km. At these separation distances, significant cumulative effects are not expected to arise.

15.11.5.23 The Morgan Generation Assets is considered to bring about a medium magnitude of cumulative impact on MCA 38, assessed as being of medium to low sensitivity (Section15.8.2). The wind turbines represent a partial addition to the baseline seascape which would not be substantially uncharacteristic in comparison to the attributes of the receiving seascape. A **minor to moderate adverse** and not significant cumulative effect is, therefore, predicted to arise during operation which is not significant.

15.11.5.24 During construction and decommissioning, the short term nature of the effects is such that a low magnitude of cumulative impact is considered to arise on the aesthetic aspects and character of MCA 38 resulting in a **minor adverse** cumulative effect.

15.11.5.25 Cumulative effects on MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters are expected to arise with the North West England Cluster of offshore wind farms according to the cumulative ZTVs. There are no cumulative effects with the North Wales Cluster or Robin Rigg within the SLVIA study area. There will be a cumulative effect on MCA A due to the increased effect of the Morgan Generation Assets wind turbines along with the North West England Cluster. The increase in the extent of wind turbines is not expected to lead to a substantial alteration to the baseline conditions. A low magnitude of cumulative impact is considered to arise to Seascape MCA A resulting in a **minor adverse** cumulative effect during operation which is not significant.

15.11.5.26 During construction and decommissioning, the short term nature of the effects is such that a negligible magnitude of cumulative impact is considered to arise on the aesthetic aspects and character of MCA A resulting in a **negligible adverse** cumulative effect which is not significant

15.11.5.27 Cumulative effects on Seascape Sensitivity Zone (SSZ) 5 North Wales and Anglesey Outer Offshore are expected to arise with the North West England Cluster and the North Wales Cluster of offshore wind farms according to the cumulative ZTVs. There are no cumulative effects with the North Wales Cluster or Robin Rigg within the SLVIA study area. These effects will arise over a limited extent of SSZ 5. A low to negligible magnitude of impact is considered to arise to SSZ 5 resulting in a **negligible to minor adverse** cumulative effect during operation which is not significant.

15.11.5.28 During construction and decommissioning, the short term nature of the effects is such that a negligible magnitude of cumulative impact is considered to arise to of SSZ 5 resulting in a **negligible adverse** cumulative effect which is not significant

Potential cumulative visual effects together with existing development projects – static and dynamic visual receptors

15.11.5.29 Cumulative visual effects will potentially occur in the SLVIA study area due to implementation of Morgan Generation Assets together with existing development projects. These effects can potentially arise on both static and dynamic visual receptors, the nature of which is summarised in the cumulative assessment methodology above (section 15.9.1).

15.11.5.30 Desk study and fieldwork indicate that potential significant cumulative visual effects together with existing development projects will be restricted to the following receptor groups in the SLVIA study area. These receptors may experience significant cumulative visual effects due to their coastal location, from which panoramic sea views are available along with the proximity of the Morgan Generation Assets and existing offshore wind farms, in particular the North West England Cluster and the North Wales Cluster:

- National trails or equivalent non-vehicular recreational routes e.g, Raad ny Foillan Coastal Path, Isle of Man)
- People at the seafronts and promenades of the coastal settlements of Douglas and Laxey
- Ferry routes (in particular, Liverpool to Dublin and Liverpool to Douglas).

15.11.5.31 The assessment in section 15.8.5 concluded that there is the potential for significant effects on people using national trails and long-distance paths at the following locations:

- Raad ny Foillan Coastal Path, Isle of Man (Representative viewpoints 19 at Douglas head, 43 at Laxey and 49 at Douglas Promenade)
- Millennium Way between Castleton and Snaefell, Isle of Man.

15.11.5.32 The assessment in section 15.8.5 assessed effects on users of Raad ny Foillan as being moderate adverse and not significant. An exception to this is the sections in the vicinity of Douglas and Laxey due to the framed nature of views and the proximity of the receptor to the Morgan Array Area where a moderate to major adverse and significant visual effect may arise.

15.11.5.33 Cumulative wirelines illustrating Morgan Array Area and existing offshore wind projects have been prepared for the representative viewpoints along the sections of the Raad ny Foillan Coastal Path in the vicinity of Douglas and Laxey Figure 15.37. These viewpoint locations are representative of both static (receptors who stop en route to admire views) and dynamic visual receptors (receptors on foot experiencing these views).

15.11.5.34 This assessment took account of existing major development, in particular the Northwest England and North Wales clusters of offshore wind farms. Note that the cumulative ZTV for the Morgan Array Area and the Robin Rigg cluster reveals no cumulative effects on the Isle of Man (Figure 15.25).

15.11.5.35 There is some limited influence of existing offshore wind farms (Northwest England Cluster) in views towards Morgan Generation Assets from the Raad ny Foillan Coastal Path at the aforementioned viewpoints. The closest sections of this route to the Morgan Array Area, approximately 22km distance, are Douglas Bay (representative viewpoint 49), Douglas Promenade (representative viewpoint 19) and Laxey Bay (representative viewpoint 43). Turbines associated with some of these existing offshore wind farms (Northwest England cluster) are visible and occupy a small part of the existing view from representative viewpoint 19 at a distance of over 35km. Morgan Generation Assets will increase the overall extents of offshore wind farms visible from these particular locations on the Raad ny Foillan Coastal Path resulting in cumulative effects. Lower levels of cumulative visual effects would occur along more distant sections of this route. It is noted however that these cumulative effects will be experienced only during extremely clear weather conditions and with ferries and sea vessels providing intermittent movement in the view. Furthermore, the cumulative effect associated with Morgan Generation Assets will result in the filling of only a limited area of sea. This is due to the relatively close proximity of the Morgan Array Area to the Northwest England Cluster and, indeed, the large separation distance between the Morgan Array Area and the North Wales Cluster.

15.11.5.36 A **low** magnitude of cumulative impact is considered to arise to users of the Raad ny Foillan Coastal Path of **high** sensitivity resulting in a **minor to moderate adverse** cumulative visual effect during operation which is not significant.

15.11.5.37 During construction and decommissioning, the short term nature of the effects is such that a negligible magnitude of cumulative impact is considered to arise to users of the

Raad ny Foillan Coastal Path of **high** sensitivity resulting in a **negligible to minor adverse** cumulative visual effect during operation which is not significant.

15.11.5.38 In regard to users of Millennium Way between Castleton and Snaefell, cumulative visual effects are expected to be very limited due to the location of this long-distance walking route, inland where cumulative effects will be mostly screened by intervening topography, vegetation and structures. A negligible to low magnitude of cumulative impact is considered to arise to users of the Millennium Way of **high** sensitivity resulting in a **minor adverse** and not significant cumulative visual effect.

15.11.5.39 During construction and decommissioning, the short term nature of the effects is such that a no change / negligible magnitude of cumulative impact is considered to arise to users of the Millennium Way of **high** sensitivity resulting in a **negligible adverse** cumulative visual effect during operation which is not significant.

15.11.5.40 Cumulative effects are expected to arise to people at the seafronts and promenades of the coastal settlements of Douglas and Laxey (Representative viewpoints 43 and 49). A **low** magnitude of cumulative impact is considered to arise to users of the seafront promenades and beaches at these settlements which are of **high** sensitivity resulting in a **minor to moderate adverse** cumulative visual effect which is not significant.

15.11.5.41 During construction and decommissioning, the short term nature of the effects is such that a negligible magnitude of cumulative impact is considered to arise to people at the seafronts and promenades of the coastal settlements of Douglas and Laxey of **high** sensitivity resulting in a **negligible to minor adverse** cumulative visual effect during operation which is not significant.

15.11.5.42 The SLVIA concluded that there is the potential for significant effects on people using main ferry routes at the following locations:

- Liverpool to Douglas Ferry (representative viewpoint 22, Figure 15.12)
- Heysham to Douglas Ferry (representative Viewpoint 23, Figure 15.13)

15.11.5.43 The SLVIA states that a **high** magnitude of visual impact will arise to people onboard these ferry routes (of **medium** sensitivity) where these are passing through or immediately adjacent to the Morgan Generation Assets array area resulting in **moderate to major adverse** visual effects, which are not significant to significant. The significance of visual effects will diminish with increasing distance from Morgan Generation Assets.

15.11.5.44 A medium magnitude of cumulative visual impact will arise to people onboard these ferry routes (of medium sensitivity) where these are passing through or immediately adjacent to the Morgan Generation Assets array area resulting in **moderate adverse** cumulative visual effects. This arises as a result of existing offshore wind farms in the Northwest England cluster which are clearly visible at relatively short range on a continuous basis from a section of the Heysham to Douglas Ferry Route, in particular, along with the array area for Morgan Generation Assets.

15.11.5.45 This cumulative magnitude of visual impact will diminish with increasing distance from Morgan Generation Assets. Overall a low to medium magnitude of cumulative impact will arise to users of these ferry routes of medium sensitivity resulting in an overall **minor to moderate adverse** and not significant cumulative visual effect.

15.11.5.46 During construction and decommissioning, the short term nature of the effects is such that a negligible to low magnitude of cumulative impact is considered to arise to users of these ferry routes of **medium** sensitivity resulting in a **negligible to minor adverse** cumulative visual effect during operation which is not significant.

Summary - Potential cumulative effects on seascape, landscape and visual resources of Morgan Generation Assets together with existing development projects

15.11.5.47 Cumulative effects during operation and maintenance in the range of moderate to major adverse and potentially significant may arise to landscape character along the east coast of the Isle of Man, specifically, Isle of Man LCT E Rugged Coast and the adjacent LCT D Incised Slopes.

15.11.5.48 Significant cumulative effects on the remaining seascape, landscape and visual resources of Morgan Generation Assets together with existing development projects are not anticipated to arise during the construction, operations and maintenance and decommissioning phases. Cumulative effects arising from the extension of existing development in a manner which intensifies the effect of Morgan Generation Assets may occur but are not expected to be significant. Similarly the filling of an area as a result of the addition of Morgan Generation Assets to existing development projects is not expected to result in significant cumulative effects. The effects documented above reflect the appropriate level of detail in line with guidance in GLVIA 3 which promotes an assessment approach that is in proportion to the scale of the project that is being assessed and the nature of its likely effects

15.11.6 Potential cumulative effects on the fabric of seascape and landscape elements and features together with proposed development projects

Due to the nature of the proposed development, no land will be occupied by the Morgan Generation Assets and the development components will occupy a negligible area of sea within the Morgan Array Area. The same applies to the Tier 1, 2 and 3 cumulative projects identified in Table 15.20, above. Consequently, implementation of Morgan Generation Assets will have negligible cumulative impact on the physical fabric of the seascape and landscape within the SLVIA study area. As a result, there is no potential for additional (incremental/in-filling) cumulative effects to arise on the fabric of seascape and landscape elements and features together with proposed development projects and, therefore, no further assessment is provided here.

15.11.7 Potential cumulative effects on the aesthetic aspects and overall character of internationally and nationally designated landscapes together with proposed development projects

Tier 1

Construction and decommissioning phases

Magnitude of impact

15.11.7.1 Taking into account the scale and geographic extent of predicted effects on seascape character resulting from Tier 1 projects, in combination with the Morgan Generation

Assets, the cumulative effect during construction is predicted to be of regional spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will be caused by the combined influence of construction activities and marine-based construction traffic associated with Awel y Môr Offshore Wind farm and the Morgan Generation Assets which will scarcely affect the receptor indirectly. It should be noted that Awel y Môr Offshore Wind farm is effectively a westward extension of the existing Gwynt y Môr Offshore Wind farm (Figure 15.33). The magnitude of the cumulative impact is therefore, considered to be **negligible.**

Sensitivity of the receptor

15.11.7.2 The Lake District National Park special qualities and the criteria of the English Lake District WHS is assessed as being of **very high** sensitivity to the proposed development (section 15.8.4).

Significance of effect

15.11.7.3 Overall, the magnitude of the cumulative impact The Lake District National Park special qualities and the criteria of the English Lake District WHS is deemed to be **negligible**. The cumulative effect will, therefore, be of **minor adverse** significance, which is not significant.

Further mitigation and residual effect

15.11.7.4 No further mitigation is proposed.

Operational phase

Magnitude of impact

15.11.7.5 The cumulative ZTV for Morgan Generation Assets and Awel y Môr Offshore Wind farm reveals no effects on the Lake District National Park special qualities and the criteria of the English Lake District WHS (Figure 15.33) within the study area. Although occasional sea vessels will attend to the maintenance of the offshore wind turbines associated with both wind farms, these vessels are likely to be indistinguishable from routine sea traffic generally. The magnitude of the cumulative impact is therefore, considered to be **no change**.

Sensitivity of the receptor

15.11.7.6 The Lake District National Park special qualities and the criteria of the English Lake District WHS is assessed as being of **very high** sensitivity to the proposed development (section 15.8.4).

Significance of effect

15.11.7.7 Overall, the magnitude of the cumulative impact on The Lake District National Park special qualities and the criteria of the English Lake District WHS is deemed to be no change. A **no change** cumulative effect will, therefore arise, which is not significant.

Further mitigation and residual effect

15.11.7.8 No further mitigation is proposed.

Tier 2

Construction and decommissioning phases

Magnitude of impact

15.11.7.9 Taking into account the scale and geographic extent of predicted effects on seascape character resulting from Tier 2 projects, in combination with the Morgan Generation Assets, the cumulative effect during construction is predicted to be of regional spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will be caused by the combined influence of construction activities and marine-based construction traffic associated with both Morecambe and Mona Offshore Wind farms and the Morgan Generation Assets which will have a negligible indirect effect on the receptor. It should be noted that the existing Northwest England Cluster of offshore wind farms is located closer to the boundary of the Lake District National Park / English Lake District WHS than Morgan Generation Assets and Tier 2 projects (Mona and Morecambe OWFs) (Figure 15.34 and Figure 15.35). Cumulative effects on this designated landscape resulting from Morgan Generation Assets and Tier 2 projects are expected to be limited due to distance and the influence of existing intervening offshore wind farms. The magnitude of the cumulative impact is therefore, considered to be **negligible**.

Sensitivity of the receptor

15.11.7.10 The Lake District National Park special qualities and the criteria of the English Lake District WHS is assessed as being of **very high** sensitivity to the proposed development (section 15.8.4).

Significance of effect

15.11.7.11 Overall, the magnitude of the cumulative impact on The Lake District National Park special qualities and the criteria of the English Lake District WHS is deemed to be **negligible**. The cumulative effect will, therefore, be of **minor adverse** significance, which is not significant.

Further mitigation and residual effect

15.11.7.12 No further mitigation is proposed.

Operational phase

Magnitude of impact

15.11.7.13 The cumulative ZTV for Morgan Generation Assets and the Mona Offshore Wind Farm reveals no theoretical effects on the Lake District National Park special qualities and the criteria of the English Lake District WHS (Figure 15.34). This means that cumulative effects on the designated landscape as a result of Morgan Generation Assets and Mona OWF will not arise. The cumulative ZTV for Morgan Generation

Assets and Morecambe OWF reveals scarcely any cumulative effects amounting to less than 1% of the area of land within the boundary of this designated landscape (Figure 15.35). Although occasional sea vessels will attend to the maintenance of the offshore wind turbines associated with all three offshore wind farms, these vessels are likely to be indistinguishable from routine sea traffic generally. The magnitude of the cumulative impact is very limited and is therefore, considered to be **no change**.

Sensitivity of the receptor

15.11.7.14 The Lake District National Park special qualities and the criteria of the English Lake District WHS is assessed as being of **very high** sensitivity to the proposed development (section 15.8.4).

Significance of effect

15.11.7.15 Overall, the magnitude of the cumulative impact on The Lake District National Park special qualities and the criteria of the English Lake District WHS is deemed to be no change. A **no change** cumulative effect will, therefore arise, which is not significant.

Further mitigation and residual effect

15.11.7.16 No further mitigation is proposed.

15.11.8 Potential cumulative effects on the aesthetic aspects and overall character of seascape and landscape character areas together with proposed development projects

15.11.8.1 Cumulative effects will potentially arise on landscape and seascape/marine character areas in the vicinity of Morgan Generation Assets array area during the construction, operations and maintenance, and decommissioning phases. The cumulative effects will be due to the combined influence on the seascape of Tier 1 and Tier 2 cumulative projects (as identified in Table 15.20 above) and Morgan Generation Assets array area.

15.11.8.2 The cumulative impact will be caused by both static and moving elements of the development components of the cumulative projects, in combination with those of Mona Offshore Wind Project array area. Together these will potentially affect the characteristics and perceptions of the landscape and seascape/marine character areas in which Morgan Offshore Wind Project array area is located, or which lie adjacent to it, as identified below (see Figure 15.21 for seascape/marine character are locations).

- Isle of Man landscape character, specifically, Isle of Man LCT E Rugged Coast and the adjacent LCT D Incised Slopes
- MCA 38 Irish Sea South
- MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters
- SSZ 5 North Wales and Anglesey Outer Offshore.

Tier 1

Construction phase

15.11.8.3 The assessment has considered that the latter stages of construction and early stages of decommissioning of Morgan Generation Assets are assessed as having a similar worst case potential impact as the operations and maintenance phase but for a much shorter duration.

15.11.8.4 The assessment has considered the magnitude of impact resulting from Morgan Generation Assets on Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) as being low at most.

15.11.8.5 The magnitude of impact resulting from Morgan Generation Assets is considered to be **high** within the Morgan Generation Assets array area and low on MCA 38 as a whole.

15.11.8.6 Similarly, the magnitude of impact resulting from Morgan Generation Assets is considered to be medium to low at most on MCA A and low at most on SSZ 5.

Magnitude of impact

15.11.8.7 Given the scale and geographic extent of predicted effects on seascape character resulting from Tier 1 projects in combination with Morgan Generation Assets, the cumulative effect during construction is predicted to be of regional spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will be caused by the combined influence on seascape character of Awel y Môr Offshore Wind Farm and Morgan Generation Assets array area which will affect the receptor directly and indirectly. It should be noted that Awel y Môr Offshore Wind farm is effectively a westward extension of the existing Gwynt y Môr Offshore Wind Farm, within the North Wales Cluster of existing offshore wind farms (Figure 15.24 and Figure 15.33).

15.11.8.8 Taking into account the short-term nature of construction activities the magnitude of cumulative impact on Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) is considered to be almost **no change**. Effects would be extremely limited arising from the temporary presence of sea based construction traffic.

15.11.8.9 Taking into account the short-term nature of construction activities the magnitude of cumulative impact on MCA 38 is considered to be **low**. The magnitude of cumulative impact on MCA A and SSZ 5 is considered to be **low to negligible**.

Sensitivity of the receptor

15.11.8.10 The sensitivity of the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) to Morgan Generation Assets is considered to be **medium to high.**

15.11.8.11 Seascape areas MCA 38 Irish Sea South and MCA A Dreswick Point to Maughold Head, Isle of Man Southeast Inshore Waters are deemed to be of medium seascape value. MCA 38 is deemed to be of low susceptibility and MCA A is deemed to be of medium susceptibility. These two marine/seascape character areas together with SSZ 5 North Wales and Anglesey Outer Offshore, are considered to have a **medium to low** sensitivity to the Morgan Generation Assets (section 15.8.3).

Significance of effect

15.11.8.12 The cumulative effect during construction and decommissioning on the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) will be a **no change** and not significant effect.

15.11.8.13 The cumulative effect during construction and decommissioning will, be of **minor adverse** and not significant for MCA 38, which is not significant.

15.11.8.14 The cumulative effect during construction and decommissioning will, be of **negligible adverse** and not significant for MCA A and SSZ 5.

Further mitigation and residual effect

15.11.8.15 No further mitigation is proposed.

Operations and maintenance phase

15.11.8.16 The assessment has considered the magnitude of impact resulting from Morgan Generation Assets on Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) as being low at most.

15.11.8.17 The assessment has considered the magnitude of impact resulting from Morgan Generation Assets as being high within the Morgan Generation Assets array area and diminishing to a lower magnitude of impact across the wider MCA 38.

15.11.8.18 Similarly, the magnitude of impact resulting from Morgan Generation Assets is considered to be medium to low on MCA A. A high to medium magnitude of impact is assessed for the eastern part of SSZ 5 decreasing to negligible in the west part. An overall medium to low magnitude on SSZ 5 is assessed to arise.

Magnitude of impact

15.11.8.19 Taking account of the scale and geographic extent of predicted effects on seascape character resulting from Morgan Generation Assets in combination with Tier 1 projects, in particular Awel y Môr OWF, the cumulative effect during operation and maintenance is predicted to be of regional spatial extent, long term duration, continuous and high reversibility. It is predicted that the impact will affect the receptor directly and indirectly. It should be noted that Awel y Môr OWF is effectively a westward extension of the existing Gwynt y Môr OWF within the North Wales Cluster of existing offshore wind farms (Figure 15.24 and Figure 15.33).

15.11.8.20 The Morgan Generation Assets will be located over 20km from the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes). The cumulative ZTV of Morgan generation Assets and Awel y Môr Offshore Wind Farm reveals no effects on these landscapes within the study area. A no change magnitude of cumulative impact is considered to arise.

15.11.8.21 The Morgan Generation Assets will be located within the northwestern part of MCA 38. Tier 1 projects, in particular Awel y Môr Offshore Wind farm will be located outside the southern boundary of MCA 38 at a distance of over 40km from Morgan Offshore Wind Farm. Cumulative effects will be confined to within the southern part of MCA 38 according to the cumulative ZTV of the Morgan Generation Assets and Awel y Môr Offshore Wind Farm. Given the separation distance between Morgan Generation Assets and Awel y Môr Offshore Wind Farm (over 40km), The magnitude of cumulative impact is considered to be **low**.

15.11.8.22 The Morgan Generation Assets will be located outside but adjacent to the southeastern boundary of Isle of Man MCA A. The cumulative ZTV of the Morgan Generation Assets and Awel y Môr Offshore Wind Farm reveal no theoretical cumulative effects on MCA A within the study area. The magnitude of cumulative impact is considered to be **no change**.

15.11.8.23 Both the Morgan Generation Assets and Awel y Môr Offshore Wind Farm will be located outside the eastern boundary of Welsh SSZ 5. The cumulative ZTV of the Morgan Generation Assets and Awel y Môr Offshore Wind Farm reveal theoretical cumulative effects on a small part of the eastern end of SSZ 5. Taking into account the separation distance between the Morgan Generation Assets and Awel y Môr Offshore Wind Farm (over 40km), The magnitude of cumulative impact is considered to be **low**.

Sensitivity of the receptor

15.11.8.24 The sensitivity of the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) to Morgan Generation Assets is considered to be **medium to high.**

15.11.8.25 The sensitivity of MCA 38, MCA A and SSZ 5 is considered to be **medium to low**.

Significance of effect

15.11.8.26 The cumulative effect during operation and maintenance on the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) will be a **no change** and not significant effect.

15.11.8.27 The cumulative effect during operation and maintenance will, therefore, be of **negligible to minor adverse** and not significant for MCA 38 and SSZ 5. MCA A will be unaffected.

Further mitigation and residual effect

15.11.8.28 No further mitigation is proposed.

Tier 2

Construction phase

15.11.8.29 The assessment has assessed that the latter stages of construction and early stages of decommissioning of Morgan Generation Assets are assessed as having a similar worst case potential impact as the operations and maintenance phase but for a much shorter duration.

15.11.8.30 The assessment has assessed the magnitude of impact resulting from Morgan Generation Assets on Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) as being low at most.

15.11.8.31 The magnitude of impact resulting from the Morgan Generation Assets is considered to be high within the Morgan Generation Assets array area and low on MCA 38 as a whole.

15.11.8.32 Similarly, the magnitude of impact resulting from Morgan Generation Assets is considered to be medium to low at most on MCA A and low at most on SSZ 5.

Magnitude of impact

15.11.8.33 Given the scale and geographic extent of predicted effects on seascape character resulting from Tier 2 projects in combination with Morgan Generation Assets, the cumulative effect during construction is predicted to be of regional spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will be caused by the combined influence on seascape character of the Morgan Generation Assets, Morecombe Offshore Wind Farm (Figure 15.35) and Mona Offshore Wind Project (Figure 15.34) which will affect the receptor both directly and indirectly. It should be noted that Morgan Generation Assets and Morecombe Offshore Wind Farm are both located in MCA 38 Irish Sea South. A small part of the Mona Array Area will also be located within MCA 38.

15.11.8.34 Taking into account the short-term nature of construction activities the magnitude of cumulative impact on Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) is considered to be **negligible**. Effects would be extremely limited arising from the temporary presence of sea based construction traffic.

15.11.8.35 Given the short-term nature of construction activities the magnitude of cumulative impact on MCA 38 and SSZ 5 is considered to be **low**. The magnitude of cumulative impact on MCA A is considered to be **low to negligible**.

Sensitivity of the receptor

15.11.8.36 The sensitivity of the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) to Morgan Generation Assets is considered to be **medium to high.**

15.11.8.37 The sensitivity of MCA 38, MCA A and SSZ 5 is considered to be **medium to low (section 15.8.3)**.

Significance of effect

15.11.8.38 The cumulative effect during construction and decommissioning on the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) will be **negligible to minor** and not significant effect.

15.11.8.39 The cumulative effect during construction and decommissioning will, be of **minor adverse** and not significant for MCA 38 and SSZ 5.

15.11.8.40 The cumulative effect during construction and decommissioning will, be of **negligible adverse** and not significant for MCA A.

Further mitigation and residual effect

15.11.8.41 No further mitigation is proposed.

Operations and maintenance phase

15.11.8.42 The assessment has considered the magnitude of impact resulting from Morgan Generation Assets on Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) as being low at most.

15.11.8.43 The assessment has considered that the magnitude of impact resulting from the Morgan Generation Assets as being high within the Morgan Array Area and diminishing to a lower magnitude of impact across the wider MCA 38 (section 15.8.3).

15.11.8.44 The assessment also considered, the magnitude of impact resulting from Morgan Generation Assets to be medium to low on MCA A. A high to medium magnitude of impact is assessed for the eastern part of SSZ 5 decreasing to negligible in the west part. An overall medium to low magnitude on SSZ 5 is assessed to arise (section 15.8.3).

Magnitude of impact

15.11.8.45 The Morgan Generation Assets will be located over 20km from the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes). The cumulative ZTV of Morgan generation Assets and Mona Offshore Wind Farm reveals cumulative effects on these landscapes within the study area according to the cumulative ZTV. The cumulative ZTV of Morgan Generation Assets and Morecambe Offshore Wind Farm reveals no effects within the study area. The cumulative effects on these landscapes will result from both Morgan and Mona Offshore Wind Farms. These effects will be experienced at distances of over 20km and will be largely restricted to the coastline due to screening inland by intervening vegetation and built structures. A **low** magnitude of cumulative impact is considered to arise.

15.11.8.46 Given the scale and geographic extent of predicted effects on seascape character resulting from the Morgan Generation Assets in combination with Tier 2 projects, in particular Mona Offshore Wind Project (Figure 15.34) and Morecombe Offshore Wind Farm (Figure 15.35) the cumulative effect during operation and maintenance is predicted to be of regional spatial extent, long term duration, continuous and high reversibility. It is predicted that the impact will affect the receptor directly and indirectly.

15.11.8.47 The Morgan Generation Assets and most of Morecombe Offshore Wind Farm would be located in MCA 38 Irish Sea South. A very small part of Mona Offshore Wind Farm will fall within the western boundary of MCA 38. Direct cumulative impacts will arise to MCA 38 due to the partial presence of Tier 2 offshore wind farms with the Morgan Generation Assets in this MCA.

15.11.8.48 Cumulative indirect effects will also arise in MCA 38. The cumulative ZTVs of the Morgan Generation Assets with Mona Offshore Wind Farm and the Morgan Generation Assets with Morecambe Offshore Wind Farm, reveal cumulative effects across MCA 38. Effects will be greatest in the eastern part of MCA 38, especially the area of sea in between the Morgan Generation Assets, Mona Offshore Wind Farm and Morecambe Offshore Wind Farm, thereby diminishing with distance from these offshore wind farms. Considering MCA 38 as a whole, a **medium** magnitude of cumulative impact would arise. This takes account of the baseline conditions in MCA 38 which features existing offshore wind farms, oil and gas platforms and abundant sea vessels. The cumulative changes would therefore not be entirely uncharacteristic with the baseline.

15.11.8.49 The cumulative ZTVs of the Morgan Generation Assets with Mona Offshore Wind Farm and the Morgan Generation Assets with Morecambe Offshore Wind Farm reveal cumulative effects across the eastern part of SSZ 5. Effects will be greatest in the immediate vicinity of Mona Offshore Wind Farm which will be located within SSZ 5 thereafter diminishing with distance. Considering SSZ 5, as a whole, a **low** magnitude of cumulative impact would arise.

15.11.8.50 The cumulative ZTV of the Morgan Generation Assets with Mona Offshore Wind Farm reveals that cumulative effects would be experienced over MCA A, whilst the cumulative ZTV of the Morgan Generation Assets with Morecambe Offshore Wind Farm reveals effects on the south eastern part of the MCA A. Cumulative effects will be greatest in the eastern part of the MCA A closest to the Morgan Generation Assets thereafter diminishing with distance. The overall magnitude of cumulative impact is considered to be **low to medium**.

Sensitivity of the receptor

15.11.8.51 The sensitivity of the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) to Morgan Generation Assets is considered to be **medium to high.**

15.11.8.52 The sensitivity of MCA 38, MCA A and SSZ 5 is considered to be **medium to low** (section 15.8.3).

Significance of effect

15.11.8.53 The cumulative effect during operation and maintenance on the Isle of Man landscape character types (LCT E Rugged Coast and LCT D Incised Slopes) will be **minor to moderate** and not significant.

15.11.8.54 The cumulative effect during operation and maintenance will be **moderate adverse** and not significant for MCA 38

15.11.8.55 The cumulative effect during operation and maintenance will be **minor adverse** and not significant for MCA A

15.11.8.56 The cumulative effect during operation and maintenance will be **minor adverse** and not significant for SSZ 5.

Further mitigation and residual effect

15.11.8.57 No further mitigation is proposed.

15.11.9 Potential cumulative visual effects together with proposed development projects – static and dynamic visual receptors

15.11.9.1 Cumulative visual effects will potentially occur in the SLVIA study area due to implementation of the Morgan Generation Assets together with proposed development projects. These effects can potentially arise on both static and dynamic visual receptors, the nature of which is summarised in the cumulative assessment methodology above (section 15.9.1) and detailed in volume 3, annex 15.4: Seascape, Landscape and Visual Impact Assessment Methodology of the PEIR. A sample of CEA wirelines was presented at stakeholder consultation meetings, these are presented in Figure 15.34 to Figure 15.38. The CEA representative viewpoint location plan is at Figure 15.33.

15.11.9.2 Desk study and fieldwork indicate that potential significant cumulative visual effects together with proposed development projects will be restricted to the following receptor groups in the SLVIA study area:

- National trails or equivalent non-vehicular recreational routes (e.g, Raad ny Foillan Coastal Path, Isle of Man)
- People at the seafronts and promenades of the coastal settlements of Douglas and Laxey
- Ferry routes (in particular, Liverpool to Dublin and Liverpool to Douglas).

15.11.9.3 The cumulative assessment took account of proposed major development in Tiers 1 and 2 as reported below (listed in Table 15.20).

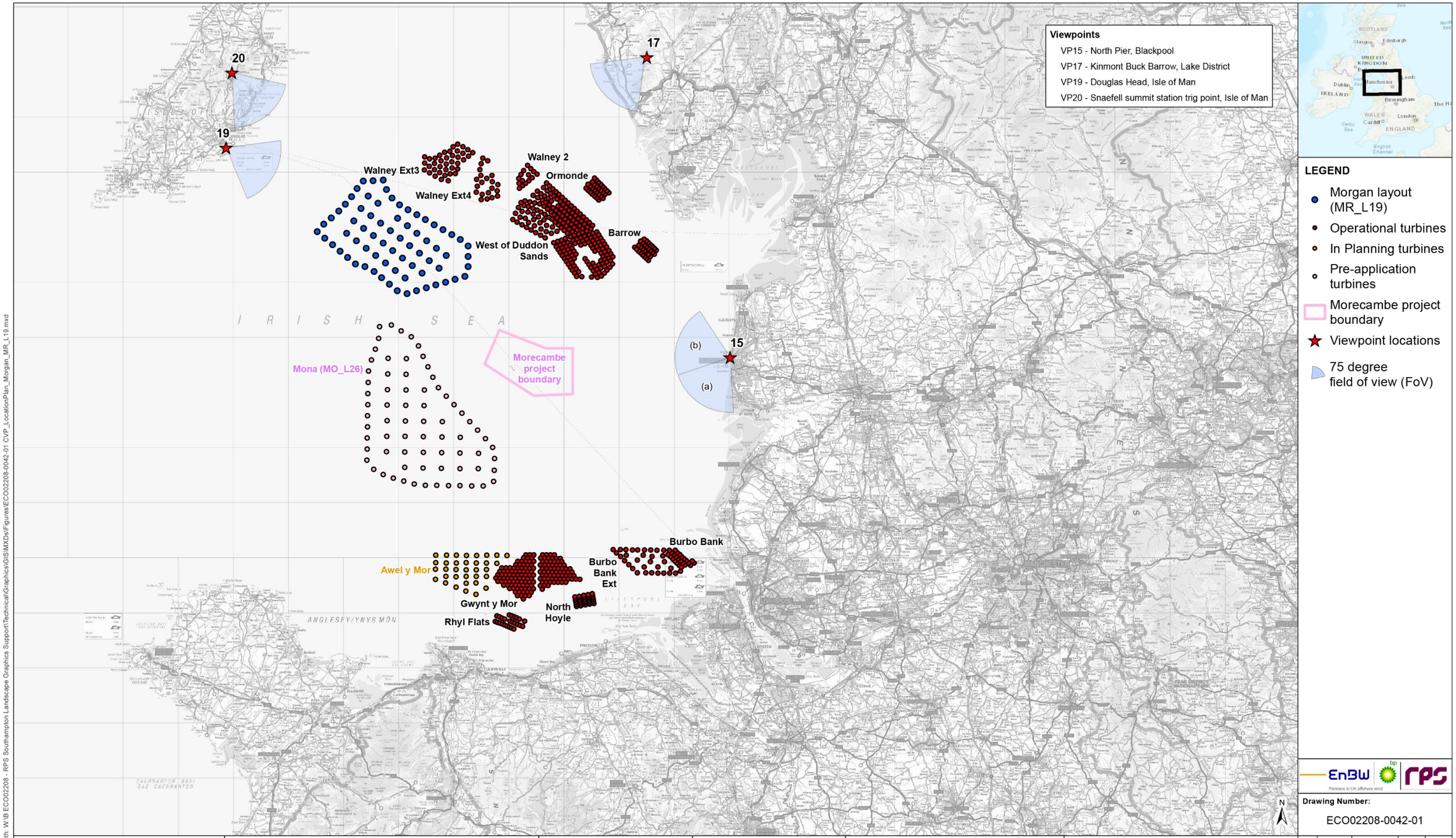

Figure 15.33 Morgan Generation Assets cumulative wireline location plan

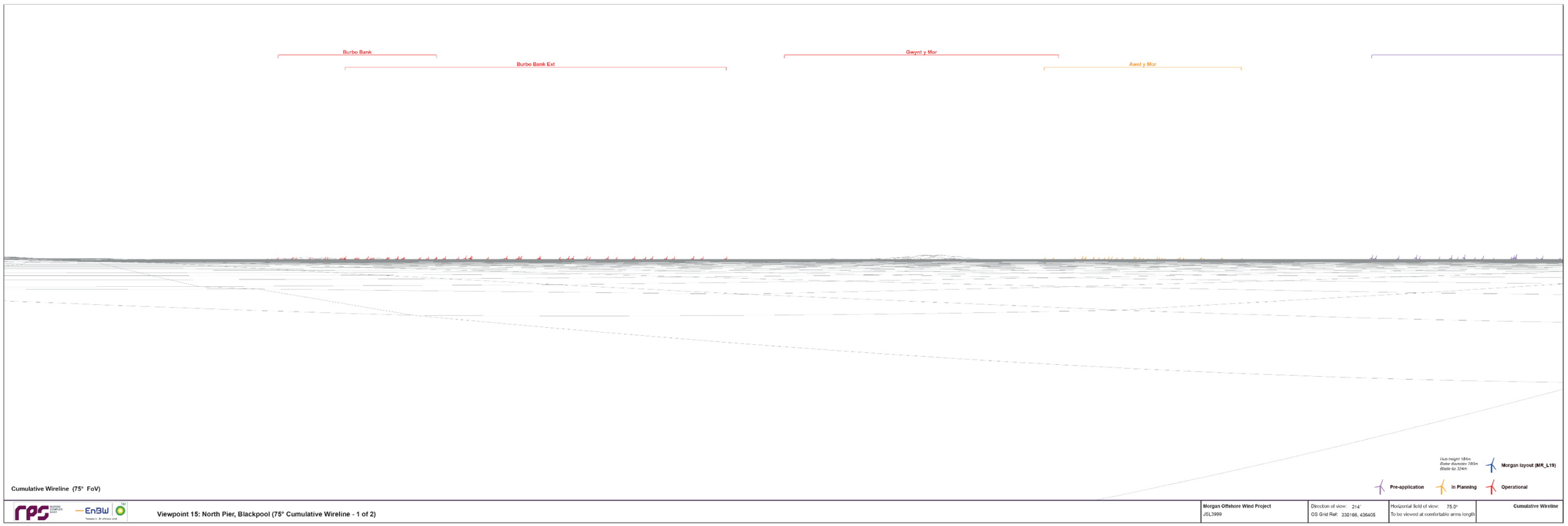

Figure 15.34 Cumulative wireline from Representative Viewpoint 15 North Pier, Blackpool (a).

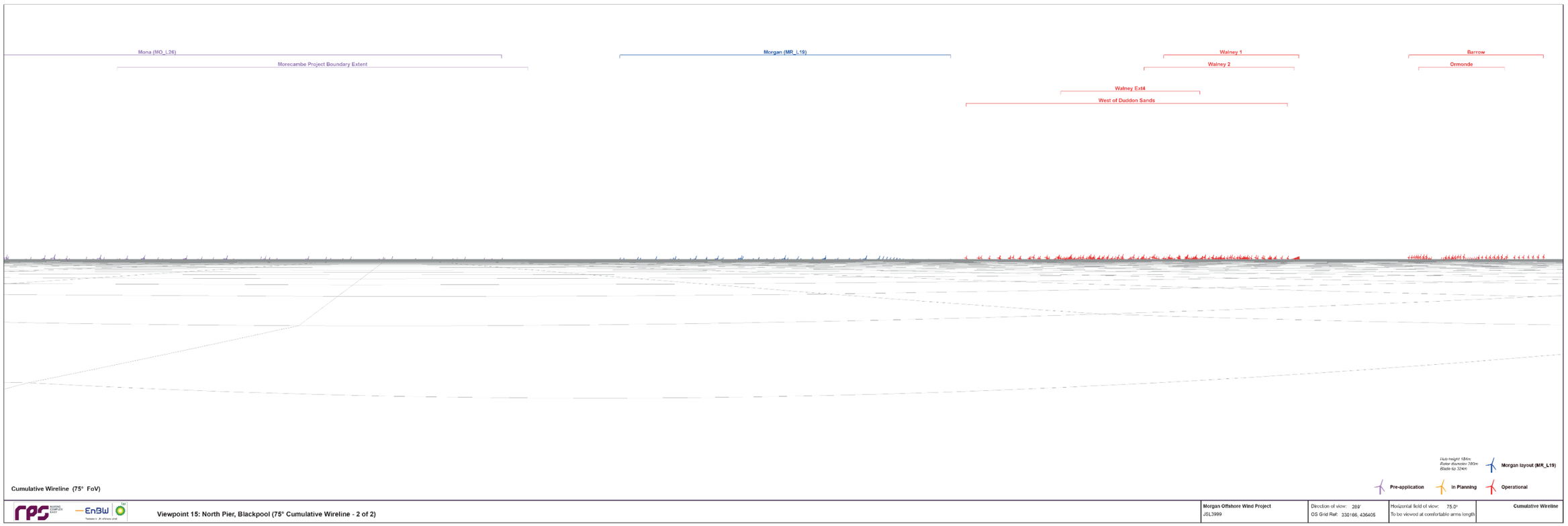

Figure 15.35 Cumulative wireline from Representative Viewpoint 15 North Pier, Blackpool (b).

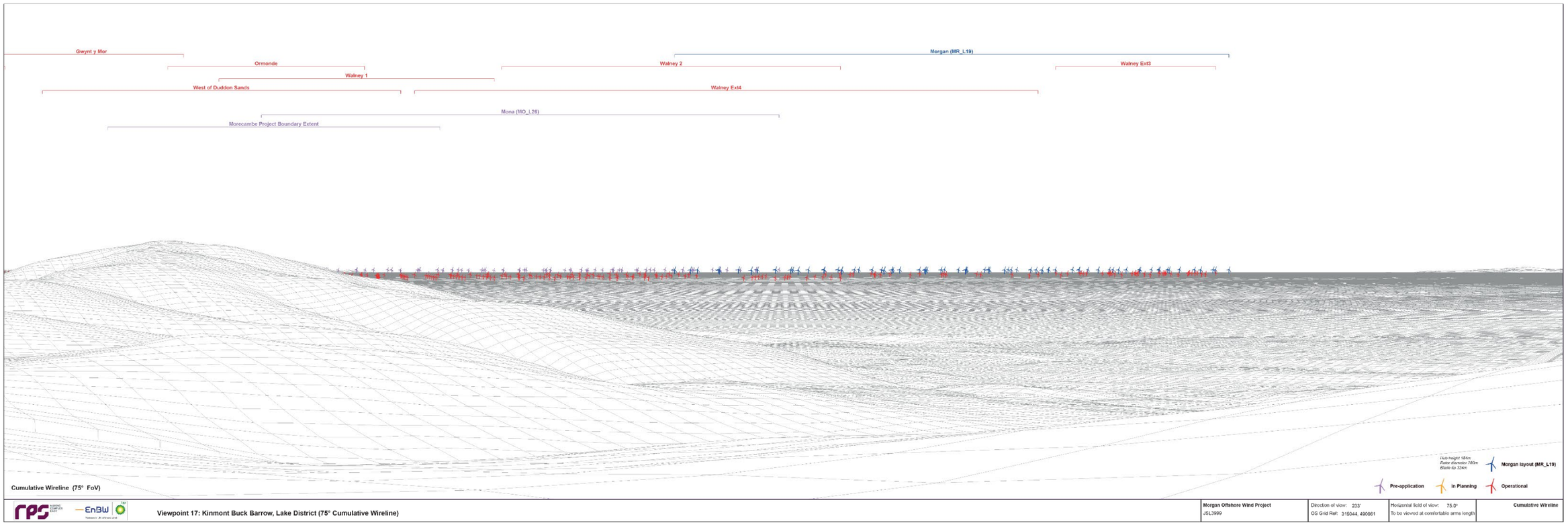

Figure 15.36 Cumulative wireline from Representative Viewpoint 17, Kinmont/Buck Barrow, Lake District National Park

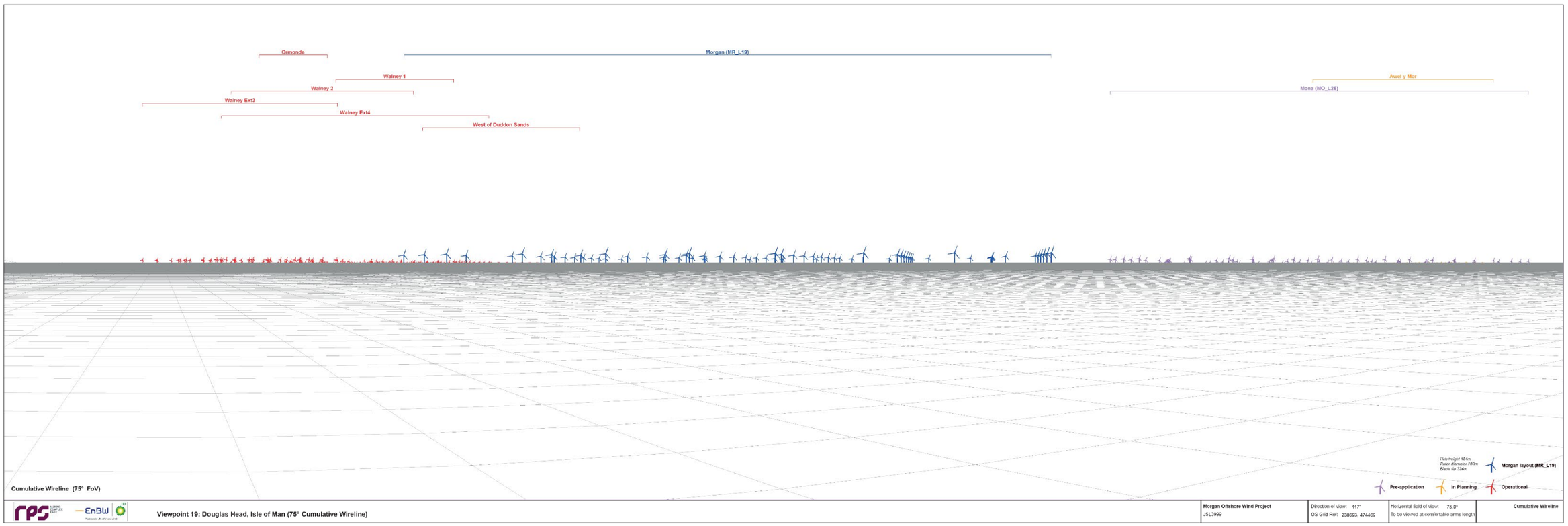

Figure 15.37 Cumulative wireline from Representative Viewpoint 19, Panoramic Viewpoint at Arch Southwest of Douglas Head, Isle of Man

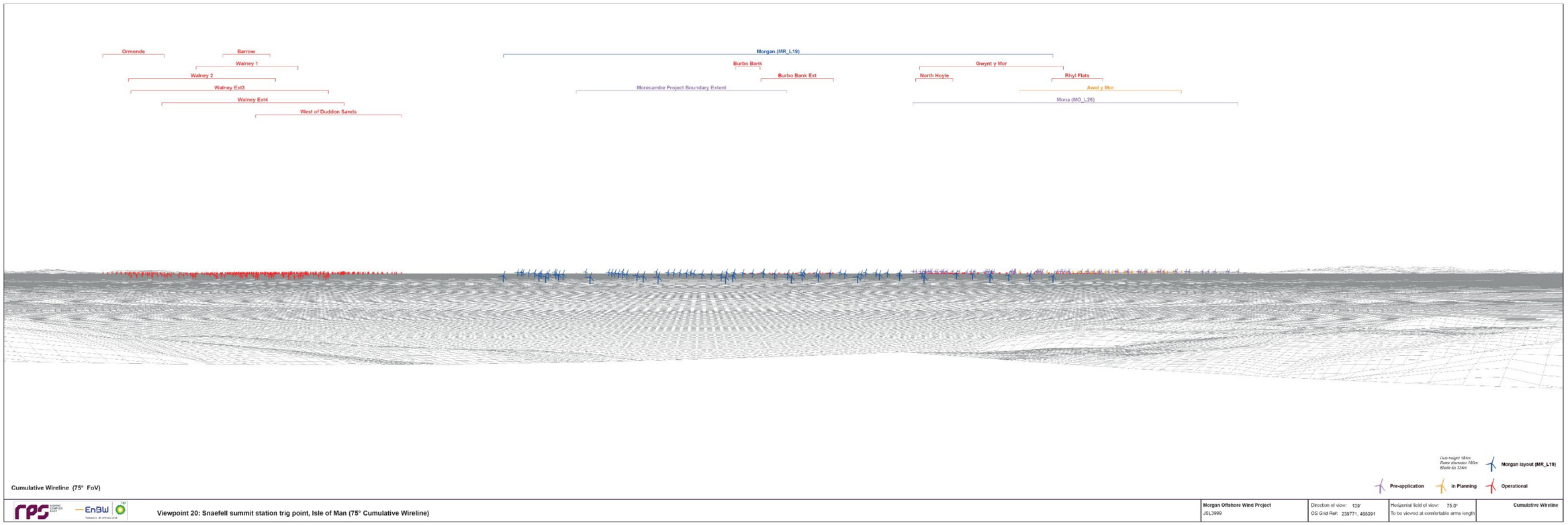

Figure 15.38 Cumulative wireline from Representative Viewpoint 20, Snaefell summit station, Isle of Man

Tier 1

Construction phase

Magnitude of impact

National trails and long-distance paths

15.11.9.4 The assessment set out in section 15.8.5 concluded that there is the potential for significant effects on people using national trails and long-distance paths at the following locations:

- Raad ny Foillan Coastal Path, Isle of Man (Representative viewpoints 19 at Douglas head Figure 15.9 43 at Laxey Figure 15.15 and 49 at Douglas Promenade Figure 15.19).
- Millennium Way between Castleton and Snaefell, Isle of Man.

15.11.9.5 Cumulative wirelines illustrating the Morgan Generation Assets along with existing and proposed offshore wind farms have been prepared for representative viewpoint 19 on the Raad ny Foillan Coastal Path Figure 15.37. This viewpoint location is representative of both static (receptors who stop en route to admire views) and dynamic visual receptors (receptors on foot experiencing these views).

15.11.9.6 Taking into account the scale and geographic extent of predicted effects on seascape character resulting from Tier 1 projects in combination with the Morgan Generation Assets, the cumulative effect during construction is predicted to be of regional spatial extent, short term duration, intermittent and high reversibility. It is predicted that the impact will be caused by the combined influence of construction activities associated with the Morgan Generation Assets and Awel y Môr Offshore Wind Farm which will affect the receptor indirectly. It should be noted that Awel y Môr Offshore Wind Farm is effectively a westward extension of the existing Gwynt y Môr Offshore Wind Farm (Figure 15.21).

15.11.9.7 During construction and decommissioning, the short term nature of the effects is such that a **no change to negligible** magnitude of cumulative visual impact is considered to arise to users of the Raad ny Foillan Coastal Path and users of the Millennium Way.

Settlements

15.11.9.8 There is the potential for cumulative visual effects on people at seafronts and promenades in the settlements of Douglas and Laxey (representative viewpoints 19, 43 and 49, , and). The magnitude of cumulative visual effects at the representative viewpoints (along promenades and beaches at these settlements) is reflected in that discussed above for users of the Raad ny Foillan Coastal Path.

15.11.9.9 During construction and decommissioning, the short term nature of the effects is such that a no **change to negligible** magnitude of cumulative visual impact is considered to arise to people at seafronts and promenades in the settlements of Douglas and Laxey.

Ferry Routes

15.11.9.10 The assessment in section 15.8.11 concluded that there is the potential for significant effects on people using main ferry routes at the following locations:

- Liverpool to Douglas Ferry (Representative viewpoint 22, Figure 15.12)
- Heysham to Douglas Ferry (Representative Viewpoint 23, Figure 15.13).

15.11.9.11 An impact will potentially arise on the views/visual amenity of people onboard the ferries plying the two routes identified above. This will be caused by visibility of the erection and dismantling of the wind turbines, the OSPs and the associated vessel and equipment activities/movements (described in Table 15.17) within the Morgan Array Area.

15.11.9.12 Taking into account the short term and reversible nature of construction activities, a **negligible** magnitude of cumulative impact is considered to arise for users of ferry routes.

Sensitivity of the receptor

National trails and long-distance paths

15.11.9.13 The sensitivity of receptors along the Raad ny Foillan Coastal Path and Millennium Way are considered to be **high (**section 15.8.5**)**.

Settlements

15.11.9.14 Cumulative visual effects at the representative viewpoints (along promenades and beaches at the settlement of Douglas and Laxey Figure 15.37) is reflected in the sensitivity assessment discussed above for users of the Raad ny Foillan Coastal Path. The sensitivity of receptors at these settlements is therefore considered to be **high.**

Ferry Routes

15.11.9.15 Section 15.8.11 sets out that the views obtained by people onboard the identified ferry routes are deemed to be of medium value and medium susceptibility to the proposed development. The sensitivity of the receptor is therefore, considered to be **medium.**

Significance of effect

National trails and long-distance paths

15.11.9.16 The cumulative visual effect on users of the Raad ny Foillan Coastal Path will, therefore, be **negligible adverse** and not significant.

15.11.9.17 In regard to users of Millennium Way between Castleton and Snaefell, cumulative visual effects are expected to be in the range of **no change to negligible adverse** and not significant. This is as a result of the location of this long-distance walking route, inland where cumulative effects will be limited due to screening by intervening topography, vegetation and structures.

Settlements

15.11.9.18 Cumulative visual effects at the representative viewpoints (along promenades and beaches at these settlements) is reflected in the cumulative assessment discussed above for users of the Raad ny Foillan Coastal Path, which is **negligible adverse** and not significant.

Ferry routes

15.11.9.19 The cumulative visual effects on users of ferry routes during construction and decommissioning is assessed to be **negligible to minor adverse** and not significant.

Further mitigation and residual effect

15.11.9.20 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

National trails and long-distance paths

15.11.9.21 The assessment within section 15.8.5 concluded that there is the potential for significant effects on people using national trails and long-distance paths at the following locations:

- Raad ny Foillan Coastal Path, Isle of Man (Representative viewpoints 19 at Douglas head Figure 15.9, 43 at Laxey Figure 15.15 and 49 at Douglas Promenade Figure 15.19)
- Millennium Way between Castleton and Snaefell, Isle of Man.

15.11.9.22 Cumulative wirelines illustrating the Morgan Generation Assets along with existing and proposed offshore wind farms have been prepared for representative viewpoint 19 on the Raad ny Foillan Coastal Path Figure 15.37. This viewpoint location is representative of both static (receptors who stop en route to admire views) and dynamic visual receptors (receptors on foot experiencing these views).

15.11.9.23 The closest sections of the Raad ny Foillan Coastal Path to the Morgan Generation Assets, approximately 22km distance, are Douglas Bay (representative viewpoint 19 Figure 15.9), Douglas Promenade (representative viewpoint 49 Figure 15.19) and Laxey Bay (representative viewpoint 43 Figure 15.15). A cumulative wireline illustrating existing offshore wind farms and the proposed Awel y Môr Offshore Wind Farm from representative viewpoint 19 is presented in Figure 15.37. Turbines associated with some of the existing offshore wind farms (Northwest England cluster) are barely visible and occupy the left part of the existing view at a distance of over 35km. Turbines associated with the proposed Awel y Môr Offshore Wind Farm located over 70km from this viewpoint would be scarcely discernible in the right part of the view even during extremely clear weather conditions and with ferries and sea vessels providing intermittent movement in the view. Lower levels of cumulative visual effects would occur along more distant sections of this route. The magnitude of cumulative effect from the Morgan Generation Assets in combination with Tier 1 projects, in particular, Awel y Môr Offshore Wind Farm is considered to be **negligible**.

15.11.9.24 The magnitude is therefore, considered to be **negligible** for users of Millennium Way. This is as a result of the location of this long-distance walking route, inland where cumulative effects will be limited due to screening by intervening topography, vegetation and structures.

Settlements

15.11.9.25 There is potential for cumulative visual effects on people in settlements at Douglas and Laxey (representative viewpoints 19 Figure 15.9, 43 Figure 15.15 and 49 Figure 15.19) The magnitude of cumulative visual impact at the representative viewpoints (along promenades and beaches at these settlements) is reflected in that discussed above for users of the Raad ny Foillan Coastal Path. Cumulative visual effects with the proposed Awel y Môr Offshore Wind Farm are judged to be **negligible adverse** and not significant.

15.11.9.26 During construction and decommissioning, the short term nature of the effects is such that a **negligible** magnitude of cumulative visual impact is considered to arise to people at seafronts and promenades in the settlements of Douglas and Laxey.

Ferry routes

15.11.9.27 The assessment presented in section 15.8.11concluded that there is the potential for significant effects on people using main ferry routes at the following locations:

- Liverpool to Douglas Ferry (Representative viewpoint 22, Figure 15.12)
- Heysham to Douglas Ferry (Representative Viewpoint 23, Figure 15.13).

15.11.9.28 It concludes that a high magnitude of visual impact will arise to people onboard these ferry routes where these are passing through or immediately adjacent to the Morgan Array Area resulting in moderate to major adverse visual effects, which are not significant in EIA terms. The significance of visual effects will diminish with increasing distance from the Morgan Generation Assets.

15.11.9.29 A cumulative visual impact is predicted on people onboard these ferry routes where these are passing through or immediately adjacent to the Morgan Array Area. This results from the proposed Awel y Môr Offshore Wind Farm (presenting as an extension of the existing North Wales Cluster which will be minimally visible at distances of over 30km on a continuous basis from a section of the Liverpool to Douglas Ferry Route. This magnitude of visual impact will diminish with increasing distance from Morgan Generation Assets. The magnitude of cumulative impact is, therefore, predicted to be **low**.

Sensitivity of the receptor

National trails and long-distance paths

15.11.9.30 The sensitivity of receptors along the Raad ny Foillan Coastal Path and Millennium way are considered to be **high** (section 15.8.5).

Settlements

15.11.9.31 Cumulative visual effects at the representative viewpoints (along promenades and beaches at the settlement of Douglas and Laxey) is reflected in the sensitivity

assessment discussed above for users of the Raad ny Foillan Coastal Path. The sensitivity of settlements receptors is therefore considered to be **high** (section 15.8.8).

Ferry routes

15.11.9.32 The sensitivity of receptors on these ferry routes are considered to be **medium** (section 15.8.11)

Significance of effect

National trails and long-distance paths

15.11.9.33 The cumulative visual effect during operation and maintenance on users of the Raad ny Foillan Coastal Path is considered to be negligible **to minor adverse** significance, which is not significant.

15.11.9.34 In regard to users of Millennium Way between Castleton and Snaefell, cumulative visual effects are expected to be **negligible adverse** and not significant. This is as a result of the location of this long-distance walking route, inland where cumulative effects will be limited due to screening by intervening topography, vegetation and structures.

Settlements

15.11.9.35 Cumulative visual effects experienced by people on promenades and beaches at the settlements of Douglas and Laxey is reflected in the cumulative assessment discussed above for users of the Raad ny Foillan Coastal Path. Cumulative effects with the proposed Awel y Môr Offshore Wind Farm are judged to be **negligible to minor adverse** and not significant.

Ferry routes

15.11.9.36 Cumulative visual effects on users of ferry routes during operation and maintenance is considered to be of **negligible to minor adverse**, which are not significant.

Further mitigation and residual effect

15.11.9.37 No further mitigation is proposed.

Tier 2

Construction phase

Magnitude of impact

National trails and long-distance paths

15.11.9.38 The assessment within section 15.8.5 concluded that there is the potential for significant effects on people using national trails and long-distance paths at the following locations:

- Raad ny Foillan Coastal Path, Isle of Man (representative viewpoints 19 at Douglas Head Figure 15.9, 43 at Laxey Figure 15.15 and 49 at Douglas Promenade Figure 15.19).
- Millennium Way between Castleton and Snaefell, Isle of Man.

15.11.9.39 Cumulative wirelines illustrating the Morgan Generation Assets along with existing and proposed offshore wind farms have been prepared for representative viewpoint 19 on the Raad ny Foillan Coastal Path Figure 15.37. This viewpoint location is representative of both static (receptors who stop en route to admire views) and dynamic visual receptors (receptors on foot experiencing these views).

15.11.9.40 Given the scale and geographic extent of predicted effects on seascape character resulting from Tier 2 projects in combination with the Morgan Generation Assets, the cumulative effect during construction is predicted to be of regional spatial extent, short term duration, intermittent and high reversibility. It is predicted that the cumulative impact will be caused by the combined influence of construction activities associated with the Morgan Generation Assets and both Mona and Morecambe Offshore Wind Farms which will affect the receptor indirectly.

15.11.9.41 During construction and decommissioning, the short term nature of the effects is such that a **no change to negligible** magnitude of cumulative impact is considered to **arise** for users of the Raad ny Foillan Coastal Path and for Millennium Way.

Settlements

15.11.9.42 The assessment presented within section 15.8.8 concluded that there is the potential for significant visual effects on people at beaches and promenades in the settlements of Douglas and Laxey (representative viewpoints 19 Figure 15.9, 43 Figure 15.15 and 49 Figure 15.19). The magnitude of cumulative visual effects at the representative viewpoints (along promenades and beaches at these settlements) is reflected in the cumulative assessment discussed above for users of the Raad ny Foillan Coastal Path.

15.11.9.43 During construction and decommissioning, the short term nature of the effects is such that a **no change to negligible** magnitude of cumulative impact is considered to arise to people at these settlements.

Ferry Routes

15.11.9.44 The assessment presented within section 15.8.11 concluded that there is the potential for significant effects on people using main ferry routes at the following locations:

- Liverpool to Douglas Ferry (Representative viewpoint 22, Figure 15.12)
- Heysham to Douglas Ferry (Representative Viewpoint 23, Figure 15.13).

15.11.9.45 The assessment states that a high magnitude of visual impact will arise to people onboard these ferry routes (of medium sensitivity) where these are passing through or immediately adjacent to the Morgan Generation Assets array area resulting in moderate to major adverse visual effects. The significance of visual effects will diminish with increasing distance from the Morgan Generation Assets.

15.11.9.46 Taking into account the short term and reversible nature of construction activities, a **negligible** magnitude of cumulative impact is predicted to arise for users of ferry routes.

Sensitivity of the receptor

National trails and long-distance paths

15.11.9.47 The sensitivity of receptors along the Raad ny Foillan Coastal Path and Millennium Way are considered to be **high (**section 15.8.5**)**.

Settlements

15.11.9.48 Cumulative visual effects at the representative viewpoints (along promenades and beaches at the settlements of Douglas and Laxey) is reflected in the sensitivity assessment discussed above for users of the Raad ny Foillan Coastal Path. The sensitivity of settlements receptors is therefore considered to be **high.**

Ferry routes

15.11.9.49 The sensitivity of receptors on these ferry routes are considered to be **medium (**section 15.8.11**)**.

Significance of effect

National trails and long-distance paths

15.11.9.50 During construction and decommissioning, the cumulative visual effect on users of the Raad ny Foillan Coastal Path is considered to be of **negligible adverse** significance, which is not significant.

15.11.9.51 In regard to users of Millennium Way between Castleton and Snaefell, cumulative visual effects are expected to be in the range of **negligible to no change adverse** and not significant. This is as a result of the location of this long-distance walking route, inland where cumulative effects will be limited due to screening by intervening topography, vegetation and structures.

Settlements

15.11.9.52 Cumulative visual effects at the representative viewpoints (along promenades and beaches at the settlements of Douglas and Laxey) is reflected in the cumulative assessment discussed above for users of the Raad ny Foillan Coastal Path, which is **negligible adverse**.

Ferry routes

15.11.9.53 The cumulative effect on users of ferry routes during construction and decommissioning is assessed to be **minor to negligible adverse** and not significant. This takes account of the short term and reversible nature of these effects.

Further mitigation and residual effect

15.11.9.54 No further mitigation is proposed.

Operations and maintenance phase

Magnitude of impact

National trails and long-distance paths

15.11.9.55 The SLVIA which concluded that there is the potential for significant effects on people using national trails and long-distance paths at the following locations:

- Raad ny Foillan Coastal Path, Isle of Man (representative viewpoints 19 Figure 15.9, 43 Figure 15.15 and 49 Figure 15.19).
- Millennium Way between Castleton and Snaefell, Isle of Man.

15.11.9.56 Cumulative wirelines illustrating the Morgan Generation Assets along with existing and proposed offshore wind farms have been prepared for representative viewpoint 19 on the Raad ny Foillan Coastal Path Figure 15.37. This viewpoint location is representative of both static (receptors who stop en route to admire views) and dynamic visual receptors (receptors on foot experiencing these views).

15.11.9.57 The closest sections of the Raad ny Foillan Coastal Path to the Morgan Generation Assets, approximately 22km distance, are Douglas Bay (representative viewpoint 49, Figure 15.19), Douglas Promenade (representative viewpoint 19, Figure 15.9) and Laxey Bay (representative viewpoint 43, Figure 15.15). A cumulative wireline illustrating existing offshore wind farms and the proposed Mona Offshore Wind farm from representative viewpoint 19 reveals that wind turbines associated with some of the existing offshore wind farms (Northwest England cluster) are barely visible and occupy the left part of the existing view at a distance of over 35km. Wind turbines associated with the proposed Mona Offshore Wind farm located over 40km from this viewpoint would be barely visible in the right part of the view even during extremely clear weather conditions and with ferries and sea vessels providing intermittent movement in the view. Morecambe Offshore Wind farm would be scarcely discernible, located almost 60km away and behind the Morgan Generation Assets array area. The cumulative magnitude of impact would be largely derived from the presence of Mona Offshore Wind farm alongside the Morgan Generation Assets, the overall effect of which will be to extend the extent of wind turbines visible in the view according to the cumulative wireline for representative viewpoint 19 Figure 15.37. In reality, this particular cumulative effect would be barely visible. Lower levels of cumulative visual effects would occur along more distant sections of this coastal path. The magnitude of cumulative impact from the Morgan Generation Assets in combination with Tier 2 projects, is considered to be **negligible**.

15.11.9.58 In regard to users of Millennium Way between Castleton and Snaefell, the magnitude of cumulative visual impact is also considered to be **negligible**.

Settlements

15.11.9.59 The SLVIA also concluded that there is the potential for cumulative visual effects on people at promenades and beaches in the settlements of Douglas and Laxey (representative viewpoints 19 Figure 15.9, 43 Figure 15.15 and 49 Figure 15.19). The cumulative magnitude of impact at the representative viewpoints (along promenades and beaches at these settlements) is reflected in that discussed above for users of the Raad ny Foillan Coastal Path.

15.11.9.60 During operation and maintenance, the cumulative magnitude of impact with the proposed Tier 2 projects are expected to be **negligible adverse** and not significant.

Ferry routes

15.11.9.61 The SLVIA concluded that there is the potential for significant effects on people using main ferry routes at the following locations:

- Liverpool to Douglas Ferry (Representative viewpoint 22, Figure 15.12)
- Heysham to Douglas Ferry (Representative Viewpoint 23, Figure 15.13).

15.11.9.62 The assessment presented within section 15.8.11 states that a high magnitude of visual impact will arise to people onboard these ferry routes (of medium sensitivity) where these are passing through or immediately adjacent to the Morgan Generation Assets array area resulting in moderate to major adverse visual effects. The significance of visual effects will diminish with increasing distance from the Morgan Generation Assets.

15.11.9.63 There is potential for cumulative visual effects for users of ferry routes, in particular the Liverpool to Douglas Route as a result of the Morgan Generation Assets and Mona and Morecambe Offshore Wind farms. Cumulative visual effects will be experienced by passengers for part of this route who, whilst travelling through the southern edge of the Morgan Generation Assets array area, will experience in combination views of both Morecambe and Mona Offshore Wind farms at approximate distances of 10 - 15km. En route southwards, the visual experience changes as the ferry passes through the Morecambe Offshore Wind farm with the Mona and Morgan Generation Assets visible in a westerly and north westerly direction respectively. The magnitude of cumulative visual impact takes account of existing wind farms visible along this route together with other marine-based infrastructure.

15.11.9.64 A **high** magnitude of cumulative visual impact is assessed to arise for part of this route as it passes through the southern edge of the Morgan Generation Assets thereafter diminishing with distance. Considering the Liverpool to Douglas Route as a whole, a **medium** magnitude of cumulative visual impact will arise to people onboard this ferry route.

15.11.9.65 A **medium** magnitude of cumulative visual impact will arise to people onboard the Heysham to Douglas ferry route. This route passes through the existing North Wales Cluster of offshore wind farms. The route is located over approximately 20km and 15km distance to Mona and Morecambe Offshore Wind farms respectively at the nearest part of the route which is close to Morgan Generation Assets and even closer to the existing Northwest England Cluster. These effects will arise for a part of the ferry route thereafter diminishing with distance.

15.11.9.66 Considering the Heysham to Douglas Route as a whole, a **low** magnitude of cumulative visual impact will arise to people onboard this ferry route.

Sensitivity of the receptor

National trails and long-distance paths

15.11.9.67 The sensitivity of receptors along the Raad ny Foillan Coastal Path and Millennium way are considered to be **high (**section 15.8.5**)**.

Settlements

15.11.9.68 Cumulative visual effects at the representative viewpoints (along promenades and beaches at the settlement of Douglas and Laxey) is reflected in the sensitivity assessment discussed above for users of the Raad ny Foillan Coastal Path. The sensitivity of settlements receptors is therefore considered to be **high (**section 15.8.8**).**

Ferry routes

15.11.9.69 The sensitivity of receptors on the above referenced ferry routes are considered to be **medium (**section 15.8.11**)**.

Significance of effect

National trails and long-distance paths

15.11.9.70 Overall, the magnitude of the cumulative impact is deemed to be negligible and the sensitivity of the receptor, users of the Raad ny Foillan Coastal Path, is considered to be high. The cumulative effect during operation and maintenance will, therefore, be of **negligible to minor adverse** significance, which is not significant.

15.11.9.71 In regard to users of Millennium Way between Castleton and Snaefell, cumulative visual effects are judged to be **negligible adverse** and not significant. This is as a result of the location of this long-distance walking route, inland where cumulative effects will be limited due to screening by intervening topography, vegetation and structures.

Settlements

15.11.9.72 Cumulative visual effects at the representative viewpoints (along promenades and beaches at the settlements of Douglas and Laxey) is reflected in the cumulative assessment discussed above for users of the Raad ny Foillan Coastal Path, which is **negligible to minor adverse**. Cumulative effects with the proposed Awel y Môr Offshore Wind farm are judged to be **minor to negligible adverse** and not significant.

Ferry routes

15.11.9.73 The cumulative visual effect on users of the Liverpool to Douglas Ferry Route during operation and maintenance is considered to be moderate **adverse** and not significant.

15.11.9.74 Overall, the magnitude of the cumulative impact is deemed to be low for the and the sensitivity of the receptor, users of ferry routes, is considered to be medium. The cumulative visual effect on users of the Heysham to Douglas Ferry Route during operation and maintenance is considered to be minor adverse and not significant.

Further mitigation and residual effect

15.11.9.75 No further mitigation is proposed.

15.12 Transboundary effects

15.12.1.1 A screening of transboundary impacts has been carried out within volume 3, annex 5.2: Transboundary impacts screening of the PEIR and has identified that there is no

potential for significant transboundary effects with regard to seascape, landscape and visual resources from the Morgan Generation Assets upon the seascapes of the Republic of Ireland territorial waters.

15.13 Inter-related effects

15.13.1.1 Inter-relationships are considered to be the impacts and associated effects of different aspects of the proposal on the same receptor. These are considered to be:

- Project lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the Morgan Generation Assets (construction, operations and maintenance, and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three phases (e.g. subsea noise effects from piling, operational wind turbines, vessels and decommissioning)
- Receptor led effects: Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor. As an example, all effects on seascape, landscape and visual resources, such as the presence of jack-up vessels, wind turbines and navigational lighting may interact to produce a different, or greater effect on this receptor than when the effects are considered in isolation. Receptor-led effects may be short term, temporary or transient effects, or incorporate longer term effects.

15.13.1.2 A description of the likely interactive effects arising from the Morgan Generation Assets on seascape, landscape and visual resources is provided in volume 2, chapter 15: Inter-related effects of the PEIR.

15.14 Summary of potential impacts arising from the Morgan Generation Assets

15.14.1.1 Baseline information on seascape, landscape and visual resources within the SLVIA study area was collected through of a combination of desktop studies, fieldwork, site surveys and consultation. These desk and field studies supported the impact assessment work and judgements on significance of effects.

15.14.1.2 The seascape and landscape character and visual receptors presented within Table 15.10 and Table 15.11 are fully assessed within section 15.8 and summarised within Table 15.22.

15.14.1.3 For each receptor, the assessment considers the likely impacts of the Morgan Generation Assets on the seascape, landscape and visual resources of the SLVIA study area resulting from its construction, operations and maintenance and decommissioning. The receptor groups considered in the SLVIA are those located within the 50km radius SLVIA study area.

15.14.1.4 Table 15.22 below, presents a summary of the potential impacts, measures adopted as part of the project and residual effects in respect to seascape, landscape and visual resources. A summary of the SLVIA findings, is set out below:

- The Morgan Array Area is located in English territorial waters in the northwest part of MCA 38 Irish Sea South. Notwithstanding this, the extensive offshore MCA 38 would not be affected significantly overall by the introduction of Morgan Generation Assets. There would be the potential for very localised significant effects where the Morgan Array Area is located within this MCA 38 (see below). This assessment has regard to the baseline character of the wider host seascape (including MCA 38, SSZ 5 to the southwest and IoM MCA A to the northwest) which is partly characterised by commercial shipping and ferries, and by several operational offshore wind farms including the Gwynt y Môr/Rhyl Flats/North Hoyle/Burbo Bank (North Wales cluster) to the south, and the West of Duddon Sands/Walney/Walney Extension/Barrow/Ormonde (Northwest England cluster) to the west-northwest, of the Morgan Array Area.
- Regarding the area of offshore waters occupied by Morgan Array Area, a significant, adverse seascape character effect would arise during construction, operations and maintenance and decommissioning of Morgan Generation Assets. The long term but reversible, significant seascape effect would extend a modest distance from Morgan Array Area across MCA 38 Irish Sea South (England) during operations and maintenance, overlapping with the edges of the adjacent IoM MCA A and Welsh SSZ 5. The extent of seascape affected significantly would be less during construction and decommissioning and would be short term and temporary. The limited extent of significant seascape effects predicted to arise during operations and maintenance, construction and decommissioning of Morgan Generation Assets would not significantly affect the above MCAs and SSZs considered as a whole
- No significant effects are predicted during construction, operations and maintenance and decommissioning of Morgan Generation Assets on landscape character areas in the SLVIA study area. Morgan Array Area lies predominantly over 22km distant from the nearest land which is Isle of Man. At just over 20km, Douglas Head, Onchan Head and Clay Head are the closest part of the IoM coast. The separation distance between these areas of coastal landscape and Morgan Array Area is such that significant adverse character effects on land would be avoided. The same mitigating factor, together with the stronger presence of existing offshore wind farms (the Northwest England cluster), applies to a greater extent with the closest parts of England (the west coast of Cumbria is situated approximately 36km from Morgan Array Area and the Lancashire coast around Blackpool approximately 50km). For the same reasons, the character of the elevated inland landscapes of the IoM (approximately 30km distant) the Lake District National Park and The English Lake District WHS (approximately 38km closest distance) would also not be significantly affected
- No significant effects are predicted during construction, operations and maintenance and decommissioning of Morgan Generation Assets on nationally designated landscapes in the SLVIA study area, namely Lake District National Park and The English Lake District WHS (approximately 38km distant at its nearest point on the coast). The SLVIA concludes that the special qualities of this nationally designated landscape would remain intact, and Morgan Generation Assets would not conflict with or compromise the reasons for its designation.
- A significant adverse visual effect (long term and reversible) is predicted during operations and maintenance of Morgan Generation Assets for people using Douglas promenade and other similar publicly accessible, seafront/shoreline locations on the IoM's east coast where framed views of Morgan Generation Assets are available at distances less than approximately 25km (e.g. Laxey).

Representative viewpoint 43 (Figure 15.15) and representative viewpoint 49 (Figure 15.19) are representative of the predicted visual change for users of Laxey seafront and Douglas promenade at approximately 25.5km and 22.5km distance respectively. Visual effects arising during construction and decommissioning would be lower, temporary, short term in duration and not significant.

- The same level of significant visual effect would be experienced during operations and maintenance (but not during construction and decommissioning) by users of the Raad ny Foillan Coastal Path on the Isle of Man's east coast along sections where framed views of Morgan Generation Assets are afforded. For instance, at Douglas Bay and Laxey (representative viewpoint 49 (Figure 15.19) and representative viewpoint 43 (Figure 15.15) respectively).
- Other locations and sections of Raad ny Foillan Coastal Path (and other long distance paths including Millennium Way) from where broader, more wide-ranging views are available would not be affected to a significant degree because Morgan Generation Assets would be seen in the context of a seascape already characterised to a certain extent by commercial shipping/ferry traffic and operational offshore wind farms, in particular the Northwest England cluster Representative viewpoint 42 Maughold Head and representative viewpoint 50 Chasms/Sugarloaf. A significant adverse visual effect (long term and reversible) is predicted for people onboard the Liverpool to Douglas and Heysham to Douglas ferries during construction, operations and maintenance and decommissioning of Morgan Generation Assets when passing through and/or adjacent to Morgan Array Area, travelling in either direction. Representative Viewpoint 23 (Figure 15.13) illustrates the predicted visual change at approximately 15km distance on the Heysham to Douglas route. The visual effect during construction and decommissioning would be less, temporary, short term in duration and not significant beyond Morgan Array Area boundary.
- A significant adverse visual effect (long term and reversible) is predicted during construction, operations and maintenance and decommissioning of Morgan Generation Assets for people onboard recreational craft when passing through and/or adjacent to Morgan Array Area. The visual effect during construction and decommissioning would be less, temporary, short term in duration and not significant beyond Morgan Array Area boundary
- No other significant visual effects are predicted to arise during construction, operations and maintenance and decommissioning of Morgan Generation Assets, including people using or in areas of land situated in the SLVIA study area, below:
  - National trails/long distance paths (IoM Millennium Way and England Coast Path)
  - National Cycle Network (England; no equivalent on IoM)
  - Key coastal roads and railways
  - Access land/open country, including land within National Parks and AONBs (England; no equivalent on IoM)
  - World Heritage Sites and National Parks (The English Lake District WHS and Lake District National Park). Note, there are no AONBs in the SLVIA study area.
  - Key ferry routes (Liverpool to Dublin and Douglas to Dublin)
  - All representative viewpoints except representative viewpoint 43 (Figure 15.15) and representative viewpoint 49 (Figure 15.19)
- Overall, it is concluded that there will be the following significant effects arising from the Morgan Generation Assets during the construction, operations and maintenance or decommissioning phases:
  - Moderate to major adverse, short term and temporary, significant seascape character and visual effects would arise during construction and decommissioning on the offshore waters within and immediately adjacent to the Morgan Array Area, namely MCA 38 Irish Sea South.
  - Moderate to major adverse, long term and reversible, significant effects on seascape character during operations and maintenance within/adjacent to the Morgan Array Area affecting the northwest part of MCA 38 Irish Sea South and small tracts of adjacent offshore seascape, namely parts of MCA A (IoM) and SSZ 5 (Wales).
  - Moderate to major adverse, long term and reversible, significant visual effects during operations and maintenance would be experienced by people using Douglas promenade and similar seafront locations such as Laxey which would be subject to framed views of Morgan Array Area. The same would apply to users of Raad ny Foillan Coastal Path at Douglas and Laxey.
  - Moderate to major adverse, long term and reversible, significant visual effects during operations and maintenance would be experienced by people onboard the Liverpool to Douglas and Heysham to Douglas ferries when passing through and/or adjacent to Morgan Array Area in either direction.

15.15 Summary - Potential cumulative effects on seascape, landscape and visual resources of Morgan Generation Assets together with proposed development projects

15.15.1.1 Significant cumulative effects on seascape, landscape and visual resources of Morgan Generation Assets together with proposed Tier 1 and Tier 2 development projects are not anticipated to arise during the construction, operations and maintenance and decommissioning phases.

15.15.1.2 Table 15.23 presents a summary of the potential cumulative seascape, landscape and visual impacts, mitigation measures and residual effects resulting from Morgan Generation Assets and existing proposed development projects.

15.15.1.3 There is no potential for significant transboundary effects with regard to seascape, landscape and visual resources from the Morgan Generation Assets upon the seascapes of the Republic of Ireland territorial waters.

Table 15.22 Summary of potential impacts on seascape, landscape and visual resources and receptors from the Morgan Generation Assets.

[a] C=construction, O=operational and maintenance, D=decommissioning

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
Potential impacts on seascape/marine/landscape character areas											
England - Marine Character Areas											
MCA 31 St Bees to Haverigg Coastal Waters		✓		It is judged that the sensitivity of the MCA is high (based on a high value and high susceptibility to the proposed development). The impact on seascape would be greatest in the south part (low) and least in the northern section (negligible). The significant effect on the MCA is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having a similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The significance of effect is, therefore, considered to be negligible to minor adverse.	Temporary	Indirect	Negligible	High	Negligible to minor adverse	None proposed	Negligible to minor adverse Not significant
MCA 32 Walney Coastal Waters and Duddon Estuary		✓		It is judged that the sensitivity of this MCA is medium to low (based on a medium value and low susceptibility to the proposed development) The magnitude of impact of the Morgan Array Area is low. The significance of effect on the seascape is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low	Medium to low	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The significance of effect is predicted to be negligible to minor adverse during construction and decommissioning phases.	Temporary	Indirect	Negligible	Medium to low	Negligible adverse	None proposed	Negligible Not significant
MCA 34 Blackpool Coastal Waters and Ribble Estuary		✓		Based on an assessment of medium to low value and low susceptibility to the proposed development, it is judged that the sensitivity of the MCA to be medium to low. There is an indirect impact on the MCA as a whole. The magnitude of impact of the Morgan Array Area is low. The significance of effect on the seascape is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low	Medium to low	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having a similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The significance of effect is, therefore, considered to be negligible to minor adverse.	Temporary	Indirect	Low to negligible	Medium to low	Negligible to minor adverse	None proposed	Negligible to minor adverse Not significant
MCA 37 Irish Sea North		✓		It is judged to have a medium value and high susceptibility to the proposed development giving it a high to medium sensitivity overall. There is considered to have an indirect impact on the MCA. The magnitude of impact is, therefore, considered to be low. The significance of effect on the seascape is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low	High to medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The significance of effect is, therefore, predicted to be negligible to minor adverse	Temporary	Indirect	Low to negligible	High to medium	Negligible to minor adverse	None proposed	Negligible to minor adverse Not significant
MCA 38 Irish Sea South		✓		It is judged to have a medium value and low susceptibility to the proposed development giving it a medium to low sensitivity overall. (The MCA lies outside the area of sea assessed in NRW/White 2019.)	Permanent	Direct	High within Morgan Array Area Low overall	Medium to low	Moderate adverse Not Significant	None proposed	Moderate adverse Not Significant to

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				There is a direct impact on the MCA as a whole from the presence of the Morgan Array Area within the MCA. The magnitude of impact is high in relation to the array area itself and diminishing to a lower magnitude of impact across the wider MCA – reducing with distance from the array area. The significance of effect on the MCA 38 seascape overall is predicted to be minor adverse and not significant. However, a moderate to major adverse significant effect is predicted for the area of seascape occupied by Morgan Array Area itself, which is significant.					to Major adverse significant within Morgan Array Area Minor adverse overall Not significant		Major adverse significant within Morgan Array Area Minor adverse overall Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having a similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The magnitude of impact is, therefore, considered to be high within the Morgan Array Area and low on MCA 38. The significance of effect on MCA38 seascape overall is predicted to be moderate adverse and not significant. However, a major adverse significant effect is predicted for the area of seascape occupied by Morgan Array Area itself, which is significant.	Temporary	Direct	High within Morgan Array Area Low overall	Medium to low	Moderate adverse to major adverse within Morgan Array Area Minor adverse overall	None proposed	Moderate adverse Not significant To Major adverse within Morgan Array Area Significant Minor adverse overall Not significant
Wales – Anglesey and Eryri Seascape Character Areas (SCA)											
SCA 28 Northeast of Anglesey		✓		The SCA falls within an area of sea assessed in NRW/White 2019 as high sensitivity. It is judged that the SCA's sensitivity is high to medium (based on a high value and medium susceptibility to the proposed development). Implementation of the Morgan Array Area is assessed as having an indirect impact on the SCA. The magnitude of impact is, therefore, considered to be low to negligible. The significance of effect on the seascape is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low to negligible	High to medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The magnitude of impact is negligible. The significance of effect is predicted to be negligible to minor adverse and not significant.	Temporary	Indirect	Negligible	High to medium	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
SCA 29 North of Anglesey		✓		The sensitivity of the seascape is judges to be high to medium (based on a high value and medium susceptibility to the proposed development). The magnitude of impact is therefore considered to be negligible. The residual effect on the seascape is predicted to be negligible to minor adverse which is not significant.	Permanent	Indirect	Negligible	High to medium	Negligible to minor adverse	None proposed	Negligible to minor adverse Not significant
	✓		✓	The magnitude of impact is negligible. The significance of effect is predicted to be negligible and not significant.	Temporary	Indirect	Negligible	High to medium	Negligible adverse	None proposed	Negligible adverse Not significant
Wales – NRW Marine Character Areas (MCA)											
MCA 04 North Wales Open Waters (east section, excluding area coterminous with SCA 28 assessed above)		✓		The east part of the MCA falls mainly within an area of sea assessed in NRW/White 2019 as medium and medium to low sensitivity; the west half is assessed as high sensitivity. It is judged that the sensitivity of east half of the MCA is medium to low. The Morgan Array Area is considered to have an indirect impact on the MCA (east section) as a whole. The magnitude of impact is, therefore,	Permanent	Indirect	Low to negligible	Medium to low	Negligible adverse	None proposed	Negligible adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				considered to be low to negligible. The significance of effect on the seascape is predicted to be negligible.							
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having a similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The magnitude of impact is, therefore, considered to be negligible.	Temporary	Indirect	Negligible	Medium to low	Negligible adverse	None proposed	Negligible adverse Not significant
MCA 05 North West Anglesey Open Waters (area coterminous with SCA 29 assessed above)		✓		MCA 05 is coterminous with SCA 29 assessed above. It is judged to have the same sensitivity to Morgan Array Area and the same potential effect on seascape character.	Permanent	Indirect	Negligible	High to medium	Negligible adverse to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	Assessed as SCA 29 above.	Temporary	Indirect	Negligible	High to medium	Negligible adverse	None proposed	Negligible adverse Not significant
Wales – NRW Seascape Sensitivity Zones (SSZ)											
Zone 1 North East Wales Inshore		✓		Zone 1 overall sensitivity is assessed in NRW/White 2019 as medium. The magnitude of impact of the Morgan Array Area on the Zone is assessed as negligible. The significance of effect on the seascape of Zone 1 is predicted to be negligible to minor adverse which is not significant.	Permanent	Indirect	Negligible	Medium	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	The magnitude of impact is negligible at most. The significance of effect is predicted to be negligible which is not significant.	Temporary	Indirect	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
Zone 2 North East Wales Offshore		✓		Morgan Array Area is located 15km to the north of this offshore Zone which is assessed in NRW/White 2019 medium to low sensitivity. The magnitude of impact of the Morgan Array Area is low on the Zone as a whole. The residual effect on the seascape of Zone 2 is predicted to be minor adverse at most which is not significant.	Permanent	Indirect	Low	Medium to low	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be low to negligible at most. The significance of effect is predicted to be negligible which is not significant.	Temporary	Indirect	Low to negligible	Medium to low	Negligible adverse	None proposed	Negligible adverse Not significant
Zone 3 North Wales and North Anglesey Inshore		✓		Zone is assessed in NRW/White 2019 as high sensitivity. The Morgan Array Area will have an indirect impact on the Zone with the potential impact on seascape greatest in the east part (low) and least in the west section (negligible). The magnitude of impact is, therefore, considered to be low to negligible. The significance of effect on the seascape of Zone 3 is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The magnitude of impact is negligible at most. The significance of effect is predicted to be negligible which is not significant.	Temporary	Indirect	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
Zone 4 North Wales and North Anglesey Offshore		✓		The east edge of Zone 4 lies within 20km of Morgan Array Area and extends westwards beyond the SLVIA study area. The offshore Zone is assessed in NRW/White 2019 as medium sensitivity. The magnitude of impact is to be low. The potential impact on seascape would be greatest in the east part (medium/low) and least in the west section (negligible). The significance of effect on the Zone is, therefore, predicted to be negligible to minor adverse which is not significant.	Permanent	Indirect	Low to negligible	Medium	Negligible adverse to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	Based on the description of the works and related activities set out in Table 15.17, the latter stages of construction and early stages of decommissioning are assessed as having similar worst-case potential impact as the operations and maintenance phase, but for a much	Temporary	Indirect	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				shorter duration. The magnitude of impact is, therefore, considered to be negligible at most. The significance of effect is predicted to be negligible which is not significant.							
Zone 5 North Wales and Anglesey Outer Offshore		✓		Morgan Array Area lies approximately 5km to the northeast of this offshore Zone which extends westwards beyond the SLVIA study area. It is assessed as medium/low sensitivity in NRW/White 2019. The Morgan Array Area is assessed as having a high to medium magnitude indirect impact on the east part of the Zone, decreasing to negligible in the west part, giving a medium to low magnitude indirect impact on the Zone as a whole. The residual effect on the seascape of Zone 5 as a whole is predicted to be minor adverse at most which is not significant.	Permanent	Indirect	Medium to low	Medium to low	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The magnitude of impact is, therefore, considered to be low at most. The significance of effect is predicted to be negligible to minor adverse which is not significant.	Temporary	Indirect	Low	Medium to low	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
Isle of Man Marine Character Areas (RPS Characterisation)											
MCA A Dreswick Point to Maughold Head, Isle of Man south east Inshore Waters (RPS defined)		✓		The MCA is judged to have a medium to low value and medium susceptibility to the proposed development giving it a medium to low sensitivity overall. The magnitude of impact on this adjacent seascape MCA A is, therefore, assessed as medium to low whereby potential seascape impact would diminish with distance. The residual effect on the seascape of MCA A overall is predicted to be minor to moderate adverse and not significant.	Permanent	Indirect	Medium to Low	Medium to low	Minor to moderate adverse	None proposed	Minor to moderate adverse Not significant
	✓		✓	The magnitude of impact is medium to low at most. The significance of effect is predicted to be minor adverse which is not significant.	Temporary	Indirect	Medium to Low	Medium to low	Minor adverse	None proposed	Minor adverse Not significant
MCA B Isle of Man, Maughold Head to Point of Ayre northeast Inshore Waters (RPS defined)		✓		The sensitivity of the MCA is medium to low based on an assessment of medium to low value and low susceptibility to the proposed development. The introduction of Morgan Array Area into MCA 38 over 25km to the south is assessed as having an indirect impact on the MCA. The magnitude of impact is therefore considered to be low. The residual effect on the seascape is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low	Medium to low	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	the latter stages of construction and early stages of decommissioning are assessed as having similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The magnitude of impact is, therefore, considered to be at most low to negligible. The significance of effect is predicted to be negligible to minor adverse which is not significant	Temporary	Indirect	Low to negligible	Medium to low	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
MCA E Bradda Head to Dreswick Point, Isle of Man southwest Inshore Waters (RPS defined)		✓		It is judged that the sensitivity of the MCA is low based on an assessment of low value and low susceptibility to the proposed development. The magnitude of impact is low. The significance of effect on the seascape is predicted to be minor adverse which is not significant.	Permanent	Indirect	Low	Low	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	Based on the description of the works and related activities set out in Table 15.17, the latter stages of construction and early stages of	Temporary	Indirect	Low to negligible	Low	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				decommissioning are assessed as having similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The magnitude of impact is, therefore, considered to be at most low to negligible. The significance of effect is predicted to be negligible to minor adverse which is not significant.							Not significant
The MCAs and SCAs are illustrated by the following marine-based Representative Viewpoints:											
Representative Viewpoint 21 Liverpool to Dublin ferry		✓		The magnitude of impact is low to negligible. Bearing in mind the medium sensitivity of visual receptors (medium value seascape views; medium susceptibility ferry passengers in transit), a negligible to minor adverse visual effect is predicted which would be not significant.	Permanent	Direct	Low to negligible	Medium	Negligible adverse to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	The magnitude of impact is negligible. The significance of effect is predicted to be negligible which is not significant.	Temporary	Direct	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
Representative Viewpoint 22 Liverpool to Douglas ferry		✓		Views to the west, south and east would remain unchanged. The operational Morgan Array Area is medium to low. Bearing in mind the medium sensitivity of visual receptors, a minor adverse visual effect is predicted which would be not significant.	Permanent	Direct	Medium to low	Medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be low. The significance of effect is predicted to be negligible to minor adverse which is not significant.	Temporary	Direct	Low	Medium	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
Representative viewpoint 23 Heysham to Douglas ferry		✓		Morgan Array Area is located to the west of the ferry route at this point. The magnitude of impact of the operational Morgan Array Area is medium to low. Considering the medium sensitivity of visual receptors, a minor adverse visual effect is predicted which would be not significant.	Permanent	Direct	Medium to low	Medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The magnitude of impact is at most medium to low. The significance of effect is predicted to be negligible to minor adverse which is not significant	Temporary	Direct	Medium to low	Medium	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
Special qualities, themes and criteria of nationally and internationally designated landscapes											
Lake District National Park		✓		There is potential for Morgan Generation Assets to affect aspects of the following national park special qualities in areas lying within the ZTV of Morgan Array Area, as listed in the assessment section above. Areas falling outside the ZTV of the proposed development, there would be no perceived landscape or visual change compared to the existing situation. Overall, the influence of Morgan Array Area in favourable visibility on the above special qualities at such distances would be very limited. The magnitude of impact is assessed as negligible at most. The sensitivity of the special qualities is judged to be high based on a high value and high susceptibility to the proposed development. The significance of effect on the national park special qualities is predicted to be negligible to minor adverse at most which is not significant.	Permanent	Direct (views) Indirect (landscape)	Negligible	High	Negligible adverse to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The magnitude of impact is, therefore, considered to be negligible. The significance of effect is predicted to be negligible which is not significant.	Temporary	Direct (views) Indirect (landscape)	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
The English Lake District WHS		✓		There is potential for Morgan Generation Assets to affect aspects of the WHS themes and criteria in areas lying within the ZTV of Morgan Array Area, as listed in the assessment section above. For areas falling outside the ZTV of the proposed development, there would be no perceived landscape or visual change compared to the existing situation, as the Morgan Generation Assets will not be visible from these areas of land. Overall, the influence of Morgan Array Area in favourable visibility on the above themes and criteria at such distances would be very limited. The magnitude of impact is assessed as negligible at most. The sensitivity of the special qualities is judged to be high based on a high value and high susceptibility to the proposed development. The significance of effect on the WHS is predicted to be negligible to minor adverse at most, which is not significant.	Permanent	Direct (views) Indirect (landscape)	Negligible	High	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	The magnitude of impact is negligible. The significance of effect is predicted to be negligible which is not significant.	Temporary	Direct (views) Indirect (landscape)	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
Landscape Character Resource											
England											
NCA 7 West Cumbria Coastal Plain		✓		The shoreline of NCA 7 lies approximately 40km to the north-east of Morgan Array Area at its closest point. It is judged that the sensitivity of the NCA to be high/medium (based on a high value and medium susceptibility to the proposed development). Having regard to the scale and size of development proposed, the geographic extent of impact, and the distance and context factors (including the aforementioned intervening offshore wind farm grouping) implementation of the Morgan Array Area is assessed as having a low/negligible magnitude indirect impact on the NCA as a whole. The residual effect on the NCA is predicted to be minor which is not significant.	Permanent	Indirect	Low to negligible	Low to negligible	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	Based on the description of the works and related activities set out in volume 4 chapter 15 SLVIA of the PEIR at Table 15.17, the latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a negligible impact magnitude.	Temporary	Indirect	Negligible	Negligible	Negligible to minor adverse	None proposed	Negligible to minor adverse Not significant
NCA 8 Cumbria High Fells		✓		The closest part of the Cumbria High Fells NCA lies approximately 45km to the north-east of Morgan Array Area. The NCA's sensitivity is judged to be high (based on a very high value and medium susceptibility to the proposed development). Having regard to the scale and size of development proposed, the geographic extent of impact, and the distance and context factors (including the aforementioned intervening offshore wind farm grouping) implementation of the Morgan Array Area is assessed as having a negligible magnitude indirect impact on NCA 8 as a whole. The residual effect on the NCA is predicted to be minor to negligible which is not significant.	Permanent	Indirect	Negligible	Negligible	Negligible to minor adverse	None proposed	Negligible to minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the	Temporary	Indirect	Negligible	Negligible	Negligible adverse	None proposed	Negligible adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				operation phase, but for a much shorter duration, giving rise to a negligible impact magnitude.							
NCA 32 Lancashire and Amounderness		✓		Scoped out of the assessment	Permanent	Indirect	N/A	N/A	N/A	N/A	N/A
	✓		✓		Temporary	Indirect	N/A	N/A	N/A	N/A	N/A
Isle of Man											
LCT A Uplands		✓		The Northern Uplands LCA A1 is situated approximately 25km to the north-west of Morgan Array Area, and the Southern Uplands approximately 30km at their closest points. LCAs A1 and A2 are judged to have a high to medium value and high to medium susceptibility to the proposed development giving it a high to medium sensitivity overall. Implementation of the Morgan Array Area is assessed as having a low magnitude indirect impact on the LCAs. The residual effect on the landscape is predicted to be minor which is not significant.	Permanent	Indirect	Low	High to medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a low to negligible impact magnitude.	Temporary	Indirect	Low to negligible	High to medium	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
LCT B Narrow Upland Glens		✓		At their closest point, the Narrow Upland Glens LCAs B4 and B5 are located just under 25km to the north-west of Morgan Array Area. LCAs B4 and B5 are judged to have a high/medium value and medium/low susceptibility to the proposed development giving it a medium sensitivity overall. Implementation of the Morgan Array Area is assessed as having a low magnitude indirect impact on the LCA. The residual effect on the landscape is predicted to be minor which is not significant.	Permanent	Indirect	Low	Medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a low to negligible impact magnitude at most.	Temporary	Indirect	Low to negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
LCT C Broad Valley Lowland		✓		Broad Valley Lowland LCA C3 is located just under 25km to the north-west of Morgan Array Area at its closest point west of Douglas. LCA C3 is assessed as having a medium value and medium susceptibility to the proposed development giving it a medium sensitivity overall. Implementation of the Morgan Array Area is assessed as having a low magnitude indirect impact on the LCA. The residual effect on the landscape is predicted to be minor which is not significant.	Permanent	Indirect	Low	Medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a low to negligible impact magnitude at most.	Temporary	Indirect	Low to negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
LCT D Incised Slopes		✓		The Incised Slopes LCAs D2, D3, D10, D12, D13 and D14 are located just over 20km to the north-west of Morgan Array Area at their closest points between Douglas Head and Clay Head. The LCAs are judged to have a high/medium value and high/medium susceptibility to the proposed development giving it a high/medium sensitivity overall. The visual influence of the offshore turbines will be tempered to varying degrees by landform and vegetation. This and the presence of existing	Permanent	Indirect	Medium to low	High to medium	Moderate adverse	None proposed	Moderate adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				OWFs and commercial shipping would limit the visual influence of the Morgan Array Area to a degree. Having regard to the scale and size of development proposed and geographic extent of impact and taking account of the distance and context factors, implementation of the Morgan Array Area is assessed as having a medium to low magnitude indirect impact on the LCA. The residual effect on the landscape is predicted to be moderate and not significant.							
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a low impact magnitude at most.	Temporary	Indirect	Low	High to medium	Minor adverse	None proposed	Minor adverse Not significant
LCT E Rugged Coast		✓		The Rugged Coast LCAs are situated just over 20km to the north-west of Morgan Array Area at their closest points between Douglas Head and Clay Head. The LCAs are judged to have a high to medium value and high medium susceptibility to the proposed development giving it a high to medium sensitivity overall. Morgan Array Area turbines will be visible on the eastern horizon seen in the context of an expansive seascape animated by commercial shipping/ferries, and fishing and recreational vessels, and containing operational OWF further offshore. This would temper the visual influence of the Morgan Array Area to a degree. Implementation of the Morgan Array Area is assessed as having a medium to low magnitude indirect impact on the closest LCAs. On balance, the residual effect on the Rugged Coast LCT E is predicted to be moderate at most and not significant.	Permanent	Indirect	Medium to low	High to medium	Moderate adverse	None proposed	Moderate adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a low impact magnitude at most.	Temporary	Indirect	Low	High to medium	Minor adverse	None proposed	Minor adverse Not significant
LCT H Coastal Cliffs		✓		Coastal Cliffs LCAs H4 and H5 are located at the southern and northern ends of the IoM approximately 30km to the west and 25km to the north of Morgan Array Area respectively. The LCAs are judged to have a high to medium value and high to medium susceptibility to the proposed development giving it a high to medium sensitivity overall. Morgan Array Area turbines will be visible on the eastern horizon seen in the context of an expansive seascape animated by commercial shipping/ferries, and fishing and recreational vessels, and containing operational OWFs further offshore. This would temper the visual influence of the Morgan Array Area to a degree. Implementation of the Morgan Array Area is assessed as having a low magnitude indirect impact on the closest LCAs. On balance, the residual effect on Coastal Cliffs LCAs H4 and H5 is predicted to be minor and not significant.	Permanent	Indirect	Low	High to medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a low to negligible impact magnitude at most.	Temporary	Indirect	Low to negligible	High to medium	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
LCT J Islands		✓		Islands J1 Calf of Man is approximately 30km to the west of Morgan Array Area. The LCA is judged to have a high to medium value and	Permanent	Indirect	Low	High to medium	Minor adverse	None proposed	Minor adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				high to medium susceptibility to the proposed development giving it a high to medium sensitivity overall. Morgan Array Area turbines will be visible beyond the IoM's southern coastline on the eastern horizon seen in the context of an expansive seascape animated by commercial shipping/ferries, and fishing and recreational vessels. This would temper the visual influence of the Morgan Array Area to a degree. Having regard to the scale and size of development proposed and geographic extent of impact and taking account of the aforementioned distance and context factors, implementation of the Morgan Array Area is assessed as having a low magnitude indirect impact on the closest LCAs. On balance, the residual effect on the Islands LCA J1 is predicted to be minor and not significant.							
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as having similar potential worst-case impact to the operation phase, but for a much shorter duration, giving rise to a low to negligible impact magnitude at most.	Temporary	Indirect	Low to negligible	High to medium	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
Visual receptor groups from the Morgan Generation Assets											
England - People using national trails and long-distance paths											
England Coast Path		✓		The wind turbines would be seen on the far horizon, forming part of the wide coastal panorama, set within a seascape characterised by existing OWFs, and seen behind these operational OWFs. The sensitivity of users of the England Coast Path is assessed as high based on the high value of the view and a high visual susceptibility to the proposed development. Overall, the significance of the visual effect on users of the England Coast Path is predicted to be negligible to minor adverse at most which is not significant. This assessment takes account of the OWFs in the baseline view which would interrupt visibility of Morgan Array Area.	Permanent	Direct (views)	Negligible	High	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	The magnitude of impact is negligible. The significance of effect is predicted to be negligible which is not significant.	Temporary	Direct (views)	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
England - People using Countryside Rights of Way Act 2000 Access Land or equivalent land with public access											
Key areas of Access Land/Open Country/Common Land (i.e., within NPs/AONBs)		✓		For areas access land/open country of the Cumbrian coast, where the Morgan Array Area would be seen from the shoreline fringes, it would be beyond and behind existing OWFs. The sensitivity of people using areas of access land/open country is assessed as high. Having regard to the scale and size of development proposed, the distance and context factors, and the very limited extent of visual change, implementation of Morgan Array Area is assessed as having a negligible magnitude, direct visual impact on access land/open country in the SLVIA study area at the most. Taking account of high sensitivity of the receptor, the significance of visual effect on users of access land/open country is predicted to be negligible to minor adverse at most which is not significant.	Permanent	Direct (views)	Negligible	High	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	The magnitude of impact is negligible. The significance of effect is predicted to be negligible which is not significant	Temporary	Direct (views)	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
England - People using national cycle routes (NCRs)											

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
Key coastal NCRs		✓		At distances of just under 50km Morgan Array Area would only be visible in the most favourable conditions. The wind turbines would be difficult to discern (or not visible) at other times of the year. The sensitivity of the people visiting the NCRs is assessed as medium based on the medium value views and a medium visual susceptibility to the proposed development. The implementation of Morgan Array Area is assessed as having a negligible magnitude, direct visual impact at the most on the NCR 62. Taking account of medium sensitivity of the receptor, the significance of visual effect on users of the NCR is predicted to be negligible adverse at most which is not significant.	Permanent	Direct (views)	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
	✓		✓	The magnitude of impact is negligible. The significance of effect is predicted to be negligible which is not significant	Temporary	Direct (views)	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
England - Coastal settlement seafronts / shorelines											
Key coastal settlement seafronts / shorelines		✓		The maximum potential visual impact (worst-case) would be that experienced at the closest areas with the most open/unrestricted seaward views, namely those from and the Cumbrian coast, approximately 35km distant, whereby the Morgan Array Area would be visible on the far horizon beyond and behind the existing OWFs. The sensitivity of people at the Cumbrian settlement seafronts/shorelines is assessed as high based on the high value of the view and a high visual susceptibility to the proposed development. The implementation of Morgan Array Area is assessed as having a negligible magnitude, direct visual impact on key settlement seafronts/shorelines in the SLVIA study area at the most. The significance of visual effect on users of settlement seafronts/shorelines is predicted to be negligible to minor adverse at most which is not significant.	Permanent	Direct (views)	Negligible	High	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be negligible. The significance of effect is predicted to be negligible which is not significant	Temporary	Direct (views)	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
England - People travelling along coastal roads											
Key coastal roads		✓		There would be the potential for unrestricted visibility of the Morgan Array Area from some stretches of the identified coastal routes where they afford open views across the adjacent seascape from the Cumbrian coast. From the parts of Lancashire coast, views of Morgan Array Area would be intermittently available. The maximum visual impact (worst-case) would be that experienced at the closest sections of road from the Cumbria coast at Walney Island/Barrow-in-Furness. The sensitivity of people travelling along the roads is assessed as low based on the generally low value views and a low visual susceptibility to the proposed development. The implementation of Morgan Array Area is assessed as having a negligible magnitude, direct visual impact at the most Taking account of low sensitivity of the receptor, the significance of visual effect on roads users in the SLVIA study area is predicted to be negligible at most which is not significant.	Permanent	Direct (views)	Negligible	Low	Negligible adverse	None proposed	Negligible adverse Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be negligible. The significance of effect is predicted to be negligible which is not significant	Temporary	Direct (views)	Negligible	Low	Negligible adverse	None proposed	Negligible adverse Not significant

Receptor	Phase* C	Phase* O	Phase* D	Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
England - People travelling by rail											
Key coastal railways		✓		There would be unrestricted visibility of Morgan Array Area from the section of Cumbrian coast railway. The Morgan Array would be visible on the far horizon to the southwest, seen beyond and behind the existing OWFs. The sensitivity of people travelling on the railway is assessed as medium based on the high value views and a low visual susceptibility to the proposed development. The implementation of Morgan Array Area is assessed as having a negligible magnitude, direct visual impact on the railway. The significance of visual effect on rail passengers is predicted to be negligible which is not significant.	Permanent	Direct (views)	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
	✓		✓	The magnitude of impact is, considered to be negligible. The significance of effect is predicted to be negligible which is not significant	Temporary	Direct (views)	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
Isle of Man - People using national trails and long-distance paths											
Raad ny Foillan Coastal Path Port St Mary to Maughold via Douglas (stages 1, 2, 3, 9, 10, 11 and 12)		✓		The would be fairly frequent visibility of Morgan Array Area from the open sections of Raad ny Foillan Coastal Path affording views across the adjacent seascape. The maximum visual impact (worst-case) would be that experienced at the closest sections of the route to Morgan Array Area, at Douglas Bay, Douglas promenade, Onchan Head and Laxey Bay. Lower magnitudes of visual change would occur at other more distant points along the path. People using this national trail are considered to be of high sensitivity to visual change, based on the high value of the view and a high visual susceptibility to the proposed development. Implementation of Morgan Array Area is assessed as having a medium to low magnitude, direct visual impact on Raad ny Foillan Coastal Path at the most, occurring at the closest sections. Sections of the route located further away would be affected to a lesser degree. The significance of visual effect on users of the Raad ny Foillan Coastal Path is predicted to be moderate or major adverse in the case of the framed views at Douglas and Laxey seafronts which is significant, but moderate adverse and not significant at other locations where views are open and panoramic, and which include existing offshore wind farms as well as commercial shipping traffic and ferries.	Permanent	Direct (views)	Medium to low	High	Moderate to major adverse at Douglas and Laxey seafronts Moderate adverse elsewhere (e.g., The Chasms/Sugarloaf, Port St Mary, Langness and Maughold)	None proposed	Moderate adverse Not significant to Major adverse at Douglas and Laxey seafronts Significant Moderate adverse elsewhere (e.g., The Chasms/Sugarloaf, Port St Mary, Langness and Maughold) Not significant
	✓		✓	Based on the description of the works and related activities set out in Table 15.17, the latter stages of construction and early stages of decommissioning are assessed as having similar worst-case potential impact as the operations and maintenance phase, but for a much shorter duration. The magnitude of impact is, therefore, considered to be low. The significance of effect is predicted to be moderate which is not significant	Temporary	Direct (views)	Low	High	Moderate adverse	None proposed	Moderate adverse Not significant
Millennium Way Castletown to Ramsey via the base of Snaefell		✓		The would be limited visibility of Morgan Array Area from Millennium Way at approximately 30km. Otherwise, visibility of Morgan Array Area would be screened by intervening landform and vegetation and sometimes buildings/settlement. Where visible the wind turbines would be seen on the horizon as part of a wide coastal panorama characterised by existing OWFs. There would be no visibility of Morgan Array Area from much of the inland route. Implementation of Morgan Array Area is assessed as having a negligible magnitude, direct visual impact on the Millennium Way. Taking account of high sensitivity of the receptor, the significance of	Permanent	Direct (views)	Negligible	High	Minor adverse	None proposed	Minor adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				visual effect for users of Millennium Way is predicted to be minor adverse at most which is not significant.							
	✓		✓	The magnitude of impact is, therefore, considered to be negligible. The significance of effect is predicted to be negligible to minor adverse which is not significant	Temporary	Direct (views)	Negligible	High	Negligible to minor adverse	None proposed	Negligible adverse to minor adverse Not significant
Isle of Man - People using land with public access											
Key areas of land with public access		✓		There is no access land/open country on the Isle of Man. Neither is there the 'right to roam' as in Scotland. However, key areas with representative viewpoints where there is permissive access are considered, including coastal locations. See Representative viewpoints 18, 19, 20, 42, 44, 45 and 50 in rows below.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	✓		✓	See Representative viewpoints 18, 19, 20, 42, 44, 45 and 50 in rows below.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isle of Man - People using the National Cycleway Network											
National Cycleway Network		✓		The would be intermittent and fleeting visibility of Morgan Array Area from the Isle of Man National Cycleway Network. Where visibility is afforded, the proposed wind turbines would be visible on the horizon at closest distances of approximately 25km. Morgan Array Area would be viewed in the context of a seascape to an extent already characterised by OWFs and commercial shipping/ferry traffic. Cyclists are of medium sensitivity to visual change, based on the medium value of views from the main roads and a medium visual susceptibility to the proposed development. Implementation of Morgan Array Area is assessed as having a low magnitude, direct visual impact on the cycleway network. There would be negligible or no visibility of Morgan Array Area from those parts of the network set back from the coast. The significance of visual effect for road users is predicted to be minor adverse at most which is not significant.	Permanent	Direct (views)	Low	Medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be negligible to low. The significance of effect is predicted to be negligible to minor adverse which is not significant	Temporary	Direct (views)	Negligible to low	Medium	Negligible to Minor adverse	None proposed	Negligible adverse to minor adverse Not significant
Isle of Man - Coastal settlement seafronts / shorelines											
Key coastal settlement seafronts / shorelines		✓		There would be visibility of Morgan Array Area from the main settlements on the southeast coast. The framed seaward views from Douglas and Laxey seafronts are likely to be the most affected by Morgan Generation Assets. This is in part because the views would be framed by the headlands/landform that encloses the Laxey and Douglas bays. The visual change would be lower magnitude in more distant views from other settlement seafronts where views are more oblique. At approximate closest distance of 22km Morgan Array Area would be visible in favourable conditions. People using settlement seafronts are of high sensitivity to visual change, based on the high value of the view and a high visual susceptibility to the proposed development. Implementation of Morgan Array Area is assessed as having a medium to low magnitude, direct visual impact on the framed views from Douglas and Laxey seafronts. Those located further away, would be affected to a lesser degree. The significance of visual effect on people	Permanent	Direct (views)	Medium to low	High	Moderate to major adverse at Douglas and Laxey seafronts Moderate adverse elsewhere (e.g., Port St Mary)	None proposed	Moderate adverse Not Significant to Major adverse Significant at Douglas and Laxey seafronts Moderate adverse Not significant elsewhere (e.g., Port St Mary)

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				using Douglas and Laxey seafronts is predicted to be moderate to major adverse which is significant. Other settlement seafronts, such as Port St Mary, would not be significantly affected.							
	✓		✓	The magnitude of impact is, therefore, considered to be low. The significance of effect is predicted to be minor to moderate adverse which is not significant.	Temporary	Direct (views)	Low	High	Minor adverse to moderate adverse	None proposed	Minor adverse to moderate adverse Not significant
Isle of Man - People travelling along coastal roads											
Key roads – A2, A5, A11 and A25		✓		There would be intermittent and a fleeting visibility of Morgan Array Area from the A2, A5, A11 and A25. Fleeting views of Morgan Array Area are likely from open stretches of the A2 between Douglas/Onchan, Laxey and Maughold Head and the A11 Queen's Promenade/King Edward Road at Douglas/Onchan. Where visible, the proposed wind turbines would be at a closest distance of approximately 25km. Morgan Array Area would be viewed in the context of a seascape to an extent already characterised by OWFs and commercial shipping/ferry traffic. Road users are of low sensitivity to visual, based on the medium value of views from the main roads and a low visual susceptibility to the proposed development. There would be a low magnitude, direct visual impact on the A2 and A25. There would be negligible or no visibility of Morgan Array Area from those parts of the route set back from the coast. The significance of visual effect for road users is predicted to be negligible to minor at most which is not significant.	Permanent	Direct (views)	Low	Low	Negligible to minor adverse	None proposed	Negligible to minor adverse Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be low to negligible. The significance of effect is predicted to be negligible which is not significant	Temporary	Direct (views)	Low to negligible	Low	Negligible adverse	None proposed	Negligible Not significant
Isle of Man - People travelling by rail											
Key railways		✓		There would be intermittent and fleeting visibility of Morgan Array Area from the IoM railways between Maughold Head and Laxey in the north and Port Erin in the south. Where visibility is occasionally afforded, the proposed wind turbines would be visible on the horizon at closest approximately 22km. Morgan Array Area would be viewed in the context of a seascape already characterised to an extent by OWFs and commercial shipping/ferry traffic. People using the IoM railways are considered to be of medium sensitivity to visual change, based on the medium value of views and a medium visual susceptibility to the proposed development. The significance of visual effect for railway users is predicted to be minor to moderate adverse at most which is not significant.	Permanent	Direct (views)	Medium to low	Medium	Minor to moderate adverse	None proposed	Minor to moderate adverse Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be low. The significance of effect is predicted to be minor adverse which is not significant	Temporary	Direct (views)	Low	Medium	Minor adverse	None proposed	Minor adverse Not significant
English, Welsh and Isle of Man Territorial Waters											
Marine users											
Ferries		✓		The Morgan Array Area would be theoretically visible in excellent conditions for the majority of the Liverpool to Douglas and Heysham to Douglas routes. People onboard ferries are of medium sensitivity to	Permanent	Direct (views)	High within or adjacent to Morgan Array Area	Medium	Moderate to major adverse	None proposed	Moderate adverse Not significant to

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
- Liverpool to Dublin (representative viewpoint 21,) - Liverpool to Douglas (representative viewpoint 22,); - Heysham to Douglas (representative viewpoint 23,)				visual change, based on the medium value of views and a medium visual susceptibility to the proposed development. The visual change for people onboard the Liverpool to Douglas and Heysham to Douglas ferries passing through or immediately adjacent to Morgan Array Area during operations and maintenance is assessed as a high magnitude, direct visual impact. The significance of residual visual effect is predicted to be moderate to major adverse at most which is significant. At other points along the route, farther away from Morgan Array Area, the magnitude of visual change will be less, diminishing with distance and the influence of existing offshore infrastructure and becoming negligible at distances more than approximately 30km. The visual effect arising in these cases will be negligible which is not significant.							Major adverse Significant
	✓		✓	The magnitude of impact is, therefore, considered to be high to medium. The significance of effect is predicted to be moderate to major adverse which is not significant to significant.	Temporary	Direct (views)	High within or adjacent to Morgan Array Area	Medium	Moderate to major adverse	None proposed	Moderate adverse Not significant to Major adverse Significant
Commercial shipping		✓		People onboard commercial ships are of low sensitivity to visual change, based on the medium to low value of views and a low visual susceptibility to the proposed development. There would be a high magnitude of change upon views for users of commercial shipping routes through or immediately adjacent to Morgan. The significance of residual visual effect for ferry users is predicted to be minor to moderate adverse at most which is not significant.	Permanent	Direct (views)	High within or adjacent to Morgan Array Area	Low	Minor to moderate adverse	None proposed	Not significant
	✓		✓	The magnitude of impact is high to medium. The significance of effect is predicted to be moderate to major adverse which is not significant to significant.	Temporary	Direct (views)	High to medium within or adjacent to Morgan Array Area	Low	Minor to moderate adverse	None proposed	Not significant
Recreational craft		✓		Recreational sailors are of medium sensitivity to visual change, based on the medium value of views and a medium visual susceptibility to the proposed development. The visual change for people onboard recreational craft passing through or immediately adjacent to Morgan Array Area during operations and maintenance is assessed as a high magnitude, direct visual impact. The significance of residual visual effect for recreational craft is predicted to be minor to moderate adverse at most which is not significant.	Permanent	Direct (views)	High within or adjacent to Morgan Array Area	Medium	Moderate to major adverse	None proposed	Not significant
	✓		✓	The magnitude of impact is, therefore, considered to be high to medium. The significance of effect is predicted to be moderate to major adverse which is not significant to significant.	Temporary	Direct (views)	High to medium within or adjacent to Morgan Array Area	Medium	Moderate to major adverse	None proposed	Not significant
Fishing vessels		✓		People onboard commercial fishing vessels are of low sensitivity to visual change, based on the medium low of views and a low visual susceptibility to the proposed development. The visual change for people onboard fishing vessels passing through or immediately adjacent to Morgan Array Area during operations and			High within or adjacent to Morgan Array Area	Low	Minor to moderate adverse	None proposed	Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
				maintenance is assessed as a high magnitude, direct visual impact. The significance of residual visual effect for recreational craft is predicted to be minor to moderate adverse at most which is not significant.							
	✓		✓	The magnitude of impact is, therefore, considered to be high to medium. The significance of effect is predicted to be minor to moderate adverse which is not significant to significant.			High to medium within or adjacent to Morgan Array Area	Low	Minor to moderate adverse	None proposed	Not significant
Potential effects on representative viewpoints from the Morgan Generation Assets											
England – Lancashire and Cumbria											
14 Cistercian Way, Walney Island		✓		The turbines would be visible on the distant western horizon, directly beyond the existing offshore wind farms (Barrow, Ormonde, West of Duddon Sands and Walney). At approximately 35km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
15 Blackpool North Pier		✓		The turbines would be visible on the distant north-western horizon, set within an open seascape relatively free of offshore infrastructure. At close to 50km, Morgan Array Area would only be visible in the most favourable conditions.	Permanent	Direct	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Negligible	High	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
16 Cumbria Coastal Way, Gutterby Banks/Townend Bank		✓		The turbines would be visible on the distant south-western horizon, beyond the existing offshore wind farms (Ormonde, Walney and West of Duddon Sands). At approximately 40km Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Negligible	High	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
17 Kinmont Mount Buck Barrow		✓		The turbines would be visible on the distant horizon, beyond the existing offshore wind farms (Ormonde, Walney and West of Duddon Sands). At just over 45km, Morgan Array Area would only be visible in the most favourable conditions.	Permanent	Direct	Negligible	High	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Negligible	High	Negligible adverse	None proposed	Negligible adverse Not significant
Isle of Man											
18 Herring Tower trig point, Langness		✓		The turbines would be set within a seascape animated intermittently by commercial shipping/ferries. At a closest distance of approximately 27km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
19 Panoramic viewpoint at Arch south-west of Douglas Head, Isle of Man		✓		The turbines would be visible on the distant horizon, appearing further away than the existing Walney Extension, set within a seascape animated by commercial shipping/ferries. At a closest distance of approximately 22km, Morgan Array Area would be visible in favourable conditions	Permanent	Direct	Medium to low	High	Moderate adverse	None proposed	Moderate adverse Significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor Not significant
20 Snaefell		✓		The turbines would be visible in the far distance, appearing further away than the existing Walney Extension, set within a seascape animated by commercial shipping/ferries. At approximately 30km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Low	High	Moderate adverse	None proposed	Moderate adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low to negligible	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
42 Maughold Head, Isle of Man		✓		The turbines would be visible on the distant horizon, beyond the existing offshore wind farms, set within a seascape animated by commercial shipping/ferries. At just over 30km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
43 Car park/beach front at Old Laxey, Isle of Man		✓		The turbines would be visible on the distant horizon, beyond the existing offshore wind farms, set within a seascape animated by commercial shipping/ferries. At just over 24km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Medium to low	High	Moderate adverse	None proposed	Moderate adverse Significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
44 Slieau Ruy cairn, Isle of Man		✓		The turbines would be visible in the far distance, appearing further away than the existing Walney Extension, set within a seascape animated by commercial shipping/ferries. At approximately 32km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
45 South Barrule cairn, Isle of Man		✓		The turbines would be visible in the far distance, appearing further away than the existing Walney Extension, set within a seascape animated by commercial shipping/ferries. At approximately 34km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
46 Port St Mary Point car park, Isle of Man		✓		The turbines would be visible on the distant horizon, set within a seascape occasionally animated by commercial shipping/ferries. At approximately 35km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
49 Douglas Bay promenade, Isle of Man		✓		The turbines would be visible on the distant horizon, appearing further away than the existing Walney Extension, set within a seascape animated by commercial shipping/ferries. At approximately 24km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Medium to low	High	Moderate adverse	None proposed	Moderate adverse Significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
50 Coast Path at The Chasms/Sugarloaf, Isle of Man		✓		The turbines would be visible beyond the intervening coastline on the distant horizon, set within a seascape occasionally animated by commercial shipping/ferries. At approximately 36km, Morgan Array Area would be visible in favourable conditions.	Permanent	Direct	Low	High	Moderate to minor adverse	None proposed	Moderate to minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low to negligible	High	Minor adverse	None proposed	Minor adverse Not significant
Marine-based receptors											
21 Liverpool to Dublin ferry		✓		Views to the west, south and east would remain unchanged. The closest turbine would be approximately 48km distant, Morgan Array Area would only be visible in the most favourable conditions.	Permanent	Direct	Low to negligible	Medium	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Negligible	Medium	Negligible adverse	None proposed	Negligible adverse Not significant
22 Liverpool to Douglas ferry		✓		Morgan Array Area is located to the north/west of the ferry route at this location. The closest turbine would be approximately 19km distant, Morgan Array Area would be visible in favourable conditions. Views to the west, south and east would remain unchanged.	Permanent	Direct	Medium to low	Medium	Minor adverse	None proposed	Minor adverse Not significant

Receptor	Phase*			Assessment of potential impact	Impact duration	Impact type	Magnitude of impact	Sensitivity of receptor	Significance of effect	Further mitigation	Residual effect
	C	O	D								
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low	Medium	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant
23 Heysham to Douglas ferry		✓		Morgan Array Area is located to the west of the ferry route at this location. All the turbines would be visible in favourable conditions/visibility at approximately 15km distance to the west. Views to the north, east and south would remain unchanged.	Permanent	Direct	Medium to low	Medium	Minor adverse	None proposed	Minor adverse Not significant
	✓		✓	The latter stages of construction and early stages of decommissioning are assessed as giving rise to similar potential worst-case visual change as the operation phase, but for a much shorter duration.	Temporary	Direct	Low	Medium	Minor to negligible adverse	None proposed	Minor to negligible adverse Not significant

Table 15.23: Summary of potential cumulative environmental effects, mitigation and monitoring from the Morgan Generation Assets.

[a] C=construction, O=operational and maintenance, D=decommissioning

Seascape, landscape and visual resources and receptors	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of cumulative impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Existing Projects										
Lake District National Park special qualities and the criteria of the English Lake District WHS	✓	✓	✓	Colour of turbines to be grey	C: No change O: Negligible/No change D: No change	C: Very High O: Very High D: Very High	C: No change / Negligible O: Negligible D: No change / Negligible	None	C: No change / Negligible O: Negligible D: No change / Negligible	None
Isle of Man Landscape Character, specifically Isle of Man LCT E Rugged Coast and the adjacent LCT D Incised Slopes	✓	✓	✓	Colour of turbines to be grey	C: Negligible to Low O: Medium D: Negligible to Low	C: Medium to High O: Medium to High D: Medium to High	C: Negligible to Minor O: Moderate to Major D: Negligible to Minor	None	C: Negligible to Minor O: Moderate to Major D: Negligible to Minor	None
Seascape - MCA 38 Irish Sea South	✓	✓	✓	Colour of turbines to be grey	C: Low O: Medium D: Low	C: Low to medium O: Low to medium D: Low to medium	C: Minor O: Minor to Moderate D: Minor	None	C: Minor O: Minor to Moderate D: Minor	None
Seascape MCA A Dreswick Point to Maughold Head, Isle of Man South East Inshore Waters	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Low D: Negligible	C: Low to medium O: Low to medium D: Low to medium	C: Negligible O: Minor D: Negligible	None	C: Negligible O: Minor D: Negligible	None
Seascape SSZ 5 North Wales and Anglesey Outer Offshore	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Negligible to Low D: Negligible	C: Low to medium O: Low to medium D: Low to medium	C: Negligible O: Negligible to minor D: Negligible	None	C: Negligible O: Negligible to minor D: Negligible	None
Visual Receptors on National Trails - Raad ny Foillan Coastal Path, Isle of Man	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Low D: Negligible	C: High O: High D: High	C: Negligible to Minor O: Minor to Moderate D: Negligible to Minor	None	C: Negligible to Minor O: Minor to Moderate D: Negligible to Minor	None
Visual Receptors on National Trails - Millennium Way between Castleton and Snaefell, Isle of Man	✓	✓	✓	Colour of turbines to be grey	C: No change / Negligible O: Negligible to Low D: No change / Negligible	C: High O: High D: High	C: Negligible O: Minor D: Negligible	None	C: Negligible O: Minor D: Negligible	None
Visual Receptors at seafronts/shorelines of the Coastal Settlements of Douglas and Laxey	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Low D: Negligible	C: High O: High D: High	C: Negligible to Minor O: Minor to Moderate D: Negligible to Minor	None	C: Negligible to Minor O: Minor to Moderate D: Negligible to Minor	None
Visual receptors on Ferries - Liverpool to Douglas Ferry	✓	✓	✓	Colour of turbines to be grey	C: Negligible to Low O: Low to Medium	C: Medium O: Medium	C: Negligible to Minor O: Minor to Moderate	None	C: Negligible to Minor	None

Seascape, landscape and visual resources and receptors	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of cumulative impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
					D: Negligible to Low	D: Medium	D: Negligible to Minor		O: Minor to Moderate D: Negligible to Minor	
Visual receptors on Ferries - Heysham to Douglas Ferry	✓	✓	✓	Colour of turbines to be grey	C: Negligible to Low O: Low to Medium D: Negligible to Low	C: Medium O: Medium D: Medium	C: Negligible to Minor O: Minor to Moderate D: Negligible to Minor	None	C: Negligible to Minor O: Minor to Moderate D: Negligible to Minor	None
Tier 1										
Lake District National Park special qualities and the criteria of the English Lake District WHS	✓	✓	✓	Colour of turbines to be grey	C: Negligible to minor O: Negligible D: Negligible to minor	C: Very High O: Very High D: Very High	C: Negligible to minor O: Negligible D: Negligible to minor	None	C: Negligible to minor O: Negligible D: Negligible to minor	None
Isle of Man Landscape Character, specifically Isle of Man LCT E Rugged Coast and the adjacent LCT D Incised Slopes	✓	✓	✓	Colour of turbines to be grey	C: No change O: No change D: No change	C: Medium to high O: Medium to high D: Medium to high	C: No change O: No change D: No change	None	C: No change O: No change D: No change	None
Seascape - MCA 38 Irish Sea South	✓	✓	✓	Colour of turbines to be grey	C: Low O: Low D: Low	C: Low to medium O: Low to medium D: Low to medium	C: Minor O: Negligible to minor D: Minor	None	C: Minor O: Negligible to Minor D: Minor	None
Seascape MCA A Dreswick Point to Maughold Head, Isle of Man South East Inshore Waters	✓	✓	✓	Colour of turbines to be grey	C: Low O: No change D: Low	C: Low to medium O: Low to medium D: Low to medium	C: Negligible O: No change D: Negligible	None	C: Negligible O: No change D: Negligible	None
Seascape SSZ 5 North Wales and Anglesey Outer Offshore	✓	✓	✓	Colour of turbines to be grey	C: Low O: Low D: Low	C: Low to medium O: Low to medium D: Low to medium	C: Negligible O: Negligible to minor D: Negligible	None	C: Negligible O: Negligible to minor D: Negligible	None
Visual Receptors on National Trails - Raad ny Foillan Coastal Path, Isle of Man	✓	✓	✓	Colour of turbines to be grey	C: Negligible/No change O: Negligible D: Negligible/No change	C: High O: High D: High	C: Negligible O: Negligible to minor D: Negligible	None	C: Negligible O: Negligible to minor D: Negligible	None
Visual Receptors on National Trails - Millennium Way between Castleton and Snaefell, Isle of Man	✓	✓	✓	Colour of turbines to be grey	C: Negligible/No change O: Negligible D: Negligible/No change	C: High O: High D: High	C: Negligible/No change O: Negligible D: Negligible/No change	None	C: Negligible/No change O: Negligible D: Negligible/No change	None
Visual Receptors at seafronts/shorelines of the Coastal Settlements of Douglas and Laxey	✓	✓	✓	Colour of turbines to be grey	C: Negligible/No change O: Negligible D: Negligible/No change	C: High O: High D: High	C: Negligible O: Negligible to minor D: Negligible	None	C: Negligible O: Negligible to minor D: Negligible	None

Seascape, landscape and visual resources and receptors	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of cumulative impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Visual receptors on Ferries - Liverpool to Douglas Ferry	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Low D: Negligible	C: Medium O: Medium D: Medium	C: Negligible to minor O: Negligible to minor D: Negligible to minor	None	C: Negligible to minor O: Negligible to minor D: Negligible to minor	None
Visual receptors on Ferries - Heysham to Douglas Ferry	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Low D: Negligible	C: Medium O: Medium D: Medium	C: Negligible to minor O: Negligible to minor D: Negligible to minor	None	C: Negligible to minor O: Negligible to minor D: Negligible to minor	None
Tier 2										
Lake District National Park special qualities and the criteria of the English Lake District WHS	✓	✓	✓	Colour of turbines to be grey	C: Negligible to minor O: Negligible D: Negligible to minor	C: Very High O: Very High D: Very High	C: Negligible to minor O: Negligible D: Negligible to minor	None	C: Negligible to minor O: Negligible D: Negligible to minor	None
Isle of Man Landscape Character, specifically Isle of Man LCT E Rugged Coast and the adjacent LCT D Incised Slopes	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Low D: Negligible	C: Medium to high O: Medium to high D: Medium to high	C: Negligible to minor O: Minor to moderate D: Negligible to minor	None	C: Negligible to minor O: Minor to moderate D: Negligible to minor	None
MCA 38 Irish Sea South	✓	✓	✓	Colour of turbines to be grey	C: Low O: Medium D: Low	C: Low to medium O: Low to medium D: Low to medium	C: Minor O: Moderate D: Minor	None	C: Minor O: Moderate D: Minor	None
MCA A Dreswick Point to Maughold Head, Isle of Man South East Inshore Waters	✓	✓	✓	Colour of turbines to be grey	C: Low/Negligible O: Low to medium D: Low/negligible	C: Low to medium O: Low to medium D: Low to medium	C: Negligible O: Minor D: Negligible	None	C: Negligible O: Minor D: Negligible	None
SSZ 5 North Wales and Anglesey Outer Offshore	✓	✓	✓	Colour of turbines to be grey	C: Low O: Low D: Low	C: Low to medium O: Low to medium D: Low to medium	C: Minor O: Minor D: Minor	None	C: Minor O: Minor D: Minor	None
Visual Receptors on National Trails - Raad ny Foillan Coastal Path, Isle of Man	✓	✓	✓	Colour of turbines to be grey	C: Negligible/No Change O: Negligible D: Negligible/No Change	C: High O: High D: High	C: Negligible O: Negligible to minor D: Negligible	None	C: Negligible O: Negligible to minor D: Negligible	None
Visual Receptors on National Trails - Millennium Way between Castleton and Snaefell, Isle of Man	✓	✓	✓	Colour of turbines to be grey	C: Negligible/No Change O: Negligible D: Negligible/No Change	C: High O: High D: High	C: Negligible/No change O: Negligible D: Negligible/No change	None	C: Negligible/No change O: Negligible D: Negligible/No change	None

Seascape, landscape and visual resources and receptors	Phase[a]			Measures adopted as part of the project	Magnitude of cumulative impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
Visual Receptors at seafronts/shorelines of the Coastal Settlements of Douglas and Laxey	✓	✓	✓	Colour of turbines to be grey	C: Negligible/No Change O: Negligible D: Negligible/No Change	C: High O: High D: High	C: Negligible O: Negligible to minor D: Negligible	None	C: Negligible O: Negligible to minor D: Negligible	None
Visual receptors on Ferries - Liverpool to Douglas Ferry	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Medium D: Negligible	C: Medium O: Medium D: Medium	C: Negligible to minor O: Moderate D: Negligible to minor	None	C: Negligible to minor O: Moderate D: Negligible to minor	None
Visual receptors on Ferries - Heysham to Douglas Ferry	✓	✓	✓	Colour of turbines to be grey	C: Negligible O: Low D: Negligible	C: Medium O: Medium D: Medium	C: Negligible to minor O: Minor D: Negligible to minor	None	C: Negligible to minor O: Minor D: Negligible to minor	None

15.16 Next Steps

15.16.1.1 Further fieldwork is proposed to capture photography suggested during consultation and during more conducive atmospheric conditions. The fieldwork will also take any additional viewpoint locations that arise out of the responses to the PEIR, where it is considered appropriate. The night-time photography will also be completed, to inform the assessment of the night-time effects, to be completed in the ES.

15.16.1.2 Wirelines for all the representative viewpoints will be generated. These will include the OSPs within the Morgan Generation Assets array area,

15.16.1.3 Once the photography has been updated/captured photomontages will be generated, these will be reproduced together with the existing panorama and the wireline overlaid on the photograph, at the correct size following *Landscape Institute Technical Guidance Note 06/19 Visual representation of development proposals*

15.16.1.4 The assessment will be revised to include any additions arising from the additional fieldwork and further visualisation.

15.16.1.5 The SLVIA CEA will be updated should further information be published on Tier 2 and Tier 3 projects.

15.16.1.6 Any revisions to planning policy and guidance will be incorporated in the ES.

15.17 References

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