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Seascape and visual sensitivity to offshore  
wind farms in Wales:

Strategic assessment and guidance

## Stage 2- Guidance on siting offshore windfarms

Simon White, Simon Michaels and Helen King, White  
Consultants

Report No 330

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# 1. Introduction

## 1.1. The brief

Natural Resources Wales (NRW) appointed White Consultants in November 2018 to undertake a strategic assessment and prepare guidance for seascape and visual sensitivity to offshore wind farms in Wales' marine plan areas.

The brief states that the project aims are:

- To undertake strategic assessment and mapping of areas of visual sensitivity to offshore windfarm development around the coast of Wales, which NRW can use to inform ongoing discussions with the Crown Estate and others, including Welsh Government and developers, about the leasing and consenting of any new areas for offshore wind.
- To prepare a short siting guidance paper in relation to seascape and visual effects of offshore wind farms aimed at an audience of developers, marine planners and NRW staff.

The project is in three parts, of which this report is the second. The parts are:

- A visual effects ready reckoner showing the recommended distances from National Parks and Areas of Outstanding Natural Beauty (AONBs) in relation to different turbine heights.
- A guidance note setting out what offshore windfarm developers need to know in relation to seascape and visual effects at their site search stage.
- A seascape sensitivity assessment for offshore windfarms in Wales' marine plan area.

These parts are complementary to each other and should be considered together in order to inform the best location for future offshore wind farm locations, in terms of seascape and visual matters.

The brief sets out the following requirement for the guidance note:

- Overview of the UK and Welsh policy context
- Overview of the seascape context
- Preparation of a short siting guidance paper aimed at an audience of developers and their planners, and regulators, including NRW staff.
- Consideration of seascape and visual factors that should influence site choice.
- Note key technical references and guidance.
- Overall, set out what a developer needs to consider and do to minimise seascape and visual impact.

The document is concise and seeks to build on, rather than duplicate or replace, existing guidance. It should be read in conjunction with national and local planning policies, National Park and AONB management plans, national and local guidance, seascape and landscape character assessments and other baseline information.

## 1.2. Background and policy context

Three rounds of offshore wind development with extensions have been implemented around English and Welsh coasts. These have been subject to UK Offshore Energy Strategic Environmental Assessments. The UK Government has now announced an intention to deploy further offshore wind developments up to a maximum additional capacity of up to 7GW. In addition to running a programme to facilitate extensions of existing windfarms in England and Wales, the Crown Estate have announced leasing Round 4 to determine further areas of sea bed that might be leased for new offshore wind. These include the North Wales Region 16 but also include Anglesey Region 15 as an area for further consideration. Within the leased areas individual developers will carry out site searches to locate wind farms and put forward proposals.

An overview of the policy context is set out in **Appendix A**. The key legislation and documents are listed below:

- The Well-being of Future Generations (Wales) Act 2015
- Planning Policy Wales (PPW10)
- Marine and Coastal Access Act (2009)
- Welsh National Marine Plan (draft)
- UK National Policy Statements (NPS)- EN-1 and EN-3- considering nationally significant energy infrastructure projects
- Environment Act 1995 with particular reference to National Parks and AONBs.

This guidance sets out good practice guidance in Chapter 2, a description of the Welsh seascape in Chapter 3, a series of objectives and principles on how to minimise seascape and visual effects in Chapter 4, and checklist of tests and relevant documentation in Chapter 5. The policy context is set out in **Appendix A**, seascape sensitivity factors in **Appendix B**, and a bibliography in **Appendix C**.

## 2. Seascape and landscape planning guidance

### 2.1. Definition of seascape

There is no legal definition of seascape. The draft Welsh National Marine Plan, drawing on the European Landscape Convention (ELC) and the UK Marine Policy Statement (MPS) states that 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.'*

NECR105 (see below) also uses the following:

*'An area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/or human factors'* (page 8)

Together, these update and incorporate the definition quoted in EN-3 and DTI (2005) which state that seascape is a discrete area within which there is shared intervisibility between land and sea (EN-3- 2.6.199).

## 2.2. Definition of natural beauty

The National Parks and Access to the Countryside Act 1949 (as amended) does not contain a legal definition of 'natural beauty'. However, references to conservation of natural beauty include conservation of flora, fauna and geological and physiographical features. In Wales, the range of landscape attributes which contribute to an understanding of natural beauty are substantially similar to the factors that influence value in GLVIA 3 (see below and Box 5.1). These include scenic quality, sense of place, landscape quality, integrity, perceptual qualities (including wildness and tranquillity), cultural associations, rarity or representativeness, historic and nature conservation interest. The defined special qualities of designated areas set out in their management plans can also assist in an understanding of the natural beauty of a given area.

## 2.3. An Approach to Seascape Character Assessment, (NECR105), 2012

This document sets out the principles of seascape character assessment (SCA), an overview of the process, terms and definitions and relevant data. It is focused on baseline seascape studies and does not cover sensitivity or visibility issues.

## 2.4. Guidelines for Landscape and Visual Impact Assessment, Edition 3, (GLVIA 3) LI and IEMA, 2013.

This guidance is the most up-to-date guidance on carrying out Landscape and Visual Impact Assessment (LVIAs). It defines landscape as including seascapes and marine areas in line with the European Landscape Convention. It states that any assessment of landscape and visual effects should carefully consider the relationship between land and sea in coastal areas and also take account of possible requirements to consider the open sea (2.9).

## 2.5. Guidance on the Assessment of the Impact of Offshore Windfarms: seascape and visual impact report, DTI, 2005.

This is the most comprehensive guidance focused on the seascape and visual impact of offshore windfarms. As such, it should be taken into consideration in scoping and preparing SVIAs to inform the location of offshore wind farms. The most relevant section to this guidance is Section 6 which considers siting, layout and design. It should be noted that the guidance was completed prior to the two documents above and the baseline information has changed so it is dated to an extent. Where there is a conflict between this and GLVIA 3, the latter should be used as the more up-to-date guidance.

The main differences are that the methods for defining the extent of a seascape area are significantly different and the means for assessing sensitivity (value and susceptibility) and magnitude of effect have been refined. In addition, the height of wind turbines have significantly increased with associated implications for various factors such as seaward limits of visual significance. The Stage 1 ready reckoner report addresses the magnitude of effect of various turbine heights.



A key principle which is reflected in this guidance is that the single most important consideration when seeking to avoid adverse seascape and visual effects is the siting or choice of location of an offshore windfarm (DTI, 2005, page 48, 6.2). It discusses a series of principles which are refined and updated in the light of more recent experience in local seascape character assessments and Wales in Chapter 4.

## 3. The seascape of Wales

### 3.1. Overview

Wales lies on the exposed western seaboard of the UK with a long coastline of 2,120km<sup>1</sup>. The coast is varied, ranging from coastal cities and settlements on flat coastal plains, such as Cardiff and Rhyl, through to remote rocky peninsulas and islands such as off Pembrokeshire and Llŷn. Between the headlands are wide sweeping bays and intimate coves. Many coasts are rocky with cliffs which give elevated views out to sea, extending the distance to the horizon. Some stretches of coast are overlooked by mountains such as Snowdonia. A significant proportion of landscapes on or near the coast are designated as National Park or Area of Outstanding National Beauty (AONB). Offshore to the south west, lie the exposed Celtic Sea and North Atlantic Ocean. To the north, the Irish Sea runs from west of Cardigan Bay and Anglesey to the English coast. Existing offshore windfarm developments in Welsh waters are concentrated off the north coast and include Gwynt y Mor, Rhyl Flats and North Hoyle, with Burbo Bank and its extension visible to the east. There are ferry and/or commercial shipping routes across the Irish Sea and the Bristol Channel and there are other users of the sea include the Ministry of Defence (MOD), such as off south Pembrokeshire.

### 3.2. Seascape Character Assessments

There are two levels of seascape character assessment in Wales. National Marine Character Areas (NMCAs)<sup>2</sup> cover the draft Welsh National Marine Plan inshore area. 29 NMCAs are spatially defined, each with a useful broad brush profile setting out the key characteristics, natural influences, cultural influences, aesthetic and perceptual qualities and a visibility analysis. The assessment does not address their sensitivity to change.

There are three local seascape character assessments so far completed. These are for Snowdonia National Park and Anglesey, Pembrokeshire Coast, and Carmarthen Bay, Gower and Swansea Bay. These are carried out at a greater level of detail, defining key characteristics, natural influences, cultural influences, aesthetic and perceptual qualities and forces for change. They also list factors that contribute to, or detract from, an area's sensitivity. This information may be helpful to inform what attributes may be sensitive to offshore wind farms if these are intervisible.

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<sup>1</sup> Draft Welsh National Marine Plan, Welsh Government, December 2017, para 5,

<sup>2</sup> National Seascape Assessment for Wales, NRW Evidence Report No: 80, LUC, November 2015

### 3.3. National Parks and AONBs

Many of these designations in Wales are located on the coast and some of their most important special qualities relate to the setting provided by the sea. For instance, Anglesey AONB's special qualities include expansive views/seascapes, islands, peace and tranquillity. Pembrokeshire Coast's qualities include its coastal splendour, islands, remoteness, tranquillity and wildness. In the Llŷn AONB qualities include the connection between land, coast and sea. Visual receptors within these areas, such as users of the Coast Path, are likely to be particularly sensitive to views out to sea. The waters of the Bristol Channel form part of the setting for designated landscapes in England- including Exmoor National Park and the North Devon Coast AONB.

### 3.4. Heritage Coasts

Heritage coasts are stretches of outstanding undeveloped coast in England and Wales that were substantially defined through agreement between the Countryside Commission and local authorities. Most of them fall within National Parks or AONBs, at Anglesey, Llŷn, Pembrokeshire Coast and Gower, while three lie outside- the Great Orme, Ceredigion and Glamorgan. The protection and management of the Gower Heritage Coast, for example, is considered as integral to the AONB and the management plan. Visual receptors within these areas, such as users of the Coast Path, are likely to be particularly sensitive to views out to sea.

### 3.5. World Heritage Sites

World heritage sites are international designations. There are four coastal examples in Wales – the castles at Caernarfon, Conwy, Beaumaris and Harlech. These have relatively small defined areas of essential setting but still benefit from their much wider landscape and seascape settings. They also act as historic landmarks contributing to seascape character and sensitivity. Views to and from these castles need to be carefully considered.

### 3.6. Other designations

Other designated areas of historic or nature conservation value can contribute to landscape and seascape sensitivity, and their characteristics can add to sense of place. Scheduled monuments such as coastal forts are often located on remote promontories with wide sea views whilst others, like St Govan's Chapel, have views sharply defined by headlands. Conservation Areas and listed buildings may be located in more developed coasts but have historic character and may have important sea views.

### 3.7. LANDMAP

LANDMAP is an all-Wales GIS resource which describes and evaluates the landscape in terms of different aspects or layers, including- geological landscapes, landscape habitats, visual and sensory, historical landscape and cultural landscape. The visual and sensory is the most useful aspect for considering the potential effect of offshore windfarms as it is concerned with intervisibility, views and scenic quality. The overall evaluation is particularly useful to identify areas of outstanding value

(equivalent to international/national level) which are intervisible with the sea. The historic landscapes layer is also a useful indicator of potential sensitivity, describing key features and, where relevant, the relationship between the coast and the sea.

### 3.8. Landscape Character Assessments

At a broad scale, equivalent to England's National Character Areas, Wales has 48 National Landscape Character Areas (NLCAs). Their descriptive profiles highlight what distinguishes one landscape from another, with reference to their regionally distinct natural, cultural and perceptual characteristics.

Local landscape character assessments describe the landscape on a local authority basis but there is not full coverage of Wales. These assessments are usually derived from LANDMAP, with added information. They are useful to understand the perceptual qualities of coastal related areas and some may include landscape sensitivity assessments to particular types and scales of development. Many of these assessments have been adopted as local Supplementary Planning Guidance.

### 3.9. Special Landscape Areas

Outside nationally designated areas local authorities may have commissioned studies to identify Special Landscape Areas (SLAs). These are based primarily on LANDMAP evaluations and information, and are verified on site. Some go further with additional information which may pick up relevant perceptual qualities which may be relevant for coastal SLAs. Sometimes these areas lie on the edges of national designations and complement their qualities and help protect their settings. These are at a county level of importance, and policies relate usually only to development within an SLA. However, they are a further indicator of landscape value. Relevant SLAs include those around the Great Orme, Gwynedd e.g. Llŷn, on the Ceredigion Coast and in the Vale of Glamorgan.

## 4. Key objectives and principles

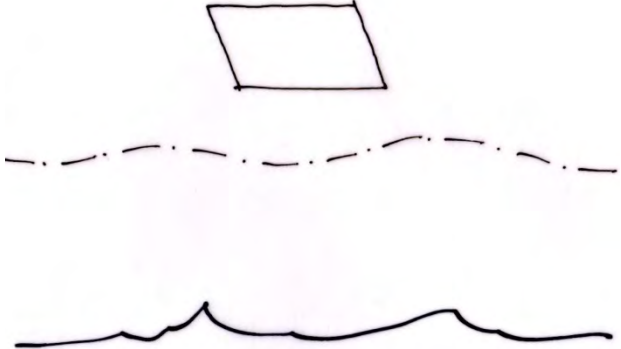
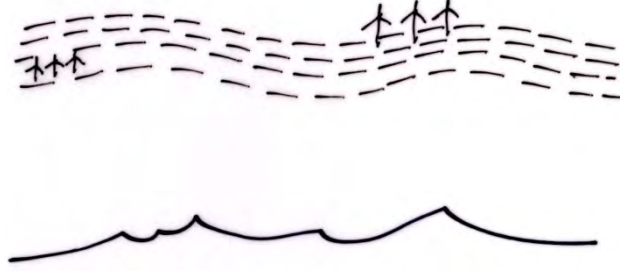
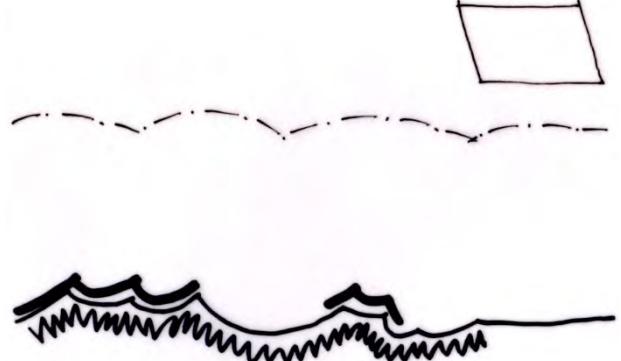
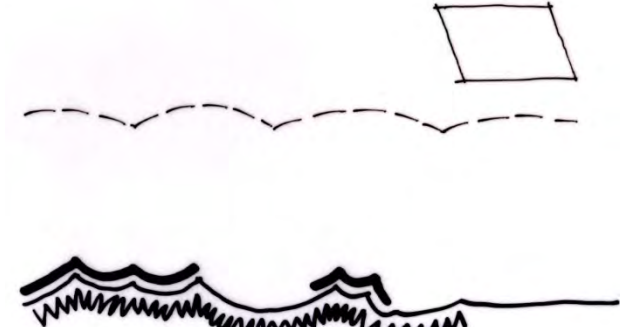
The key objectives underpinning this guidance are:

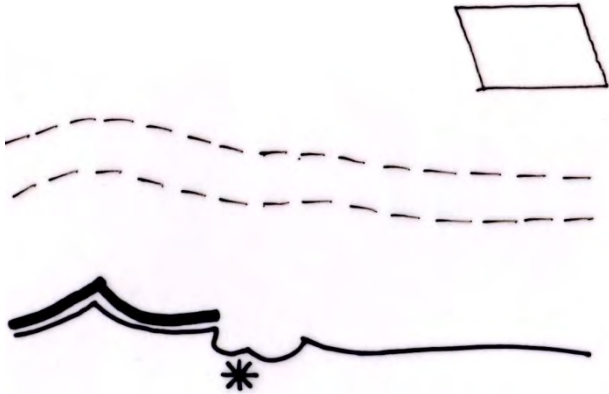
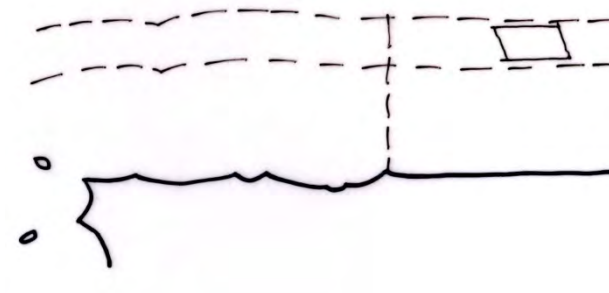
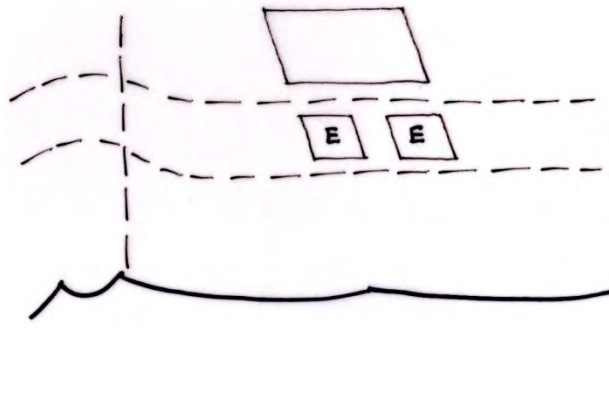
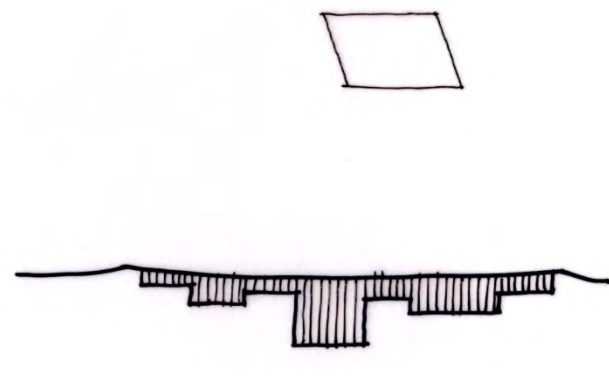
- Maintain the integrity and quality of landscape character within National Parks and AONBs.
- Avoid, or at least minimise, significant effects on sensitive seascape and visual receptors.

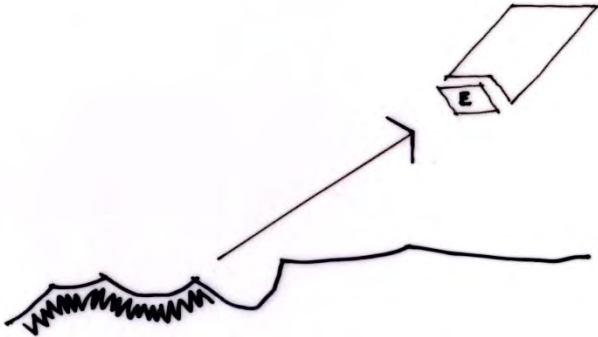
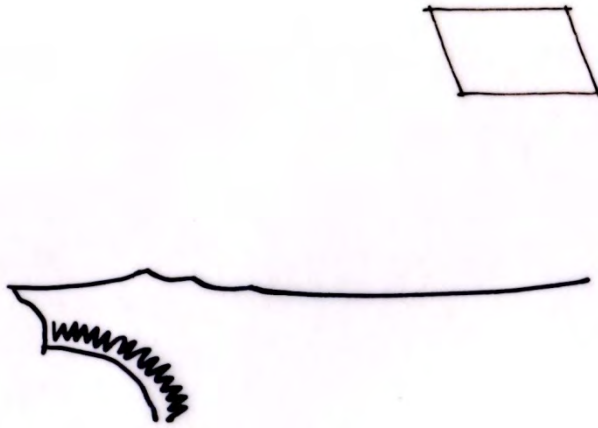
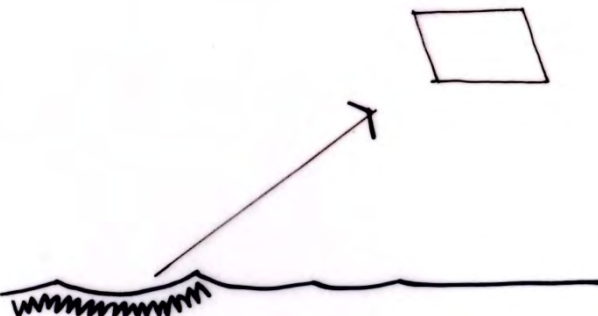
The following principles set out the approach to achieve the above objectives. All principles are important and should be taken into account and should be read together. For instance, if a proposed location is off an industrialised coast but also close to a sensitive designated coast, the latter must be taken into account. Most weight is attached to the effects on national landscape designations (National Parks and AONBs).

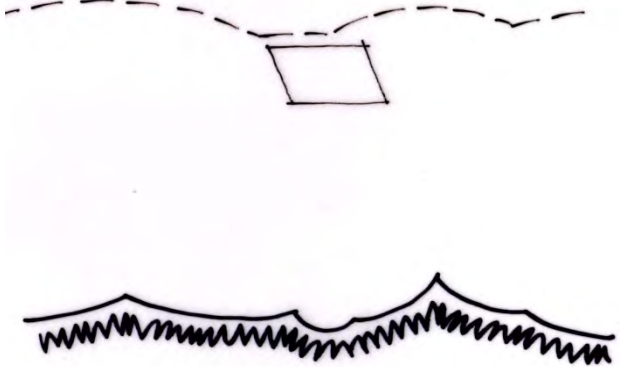

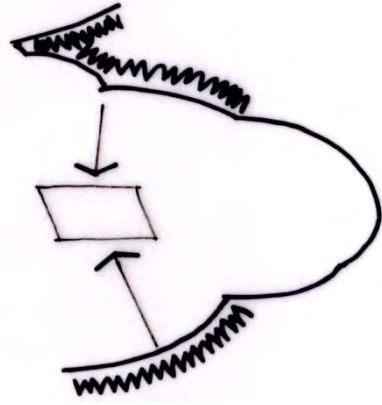
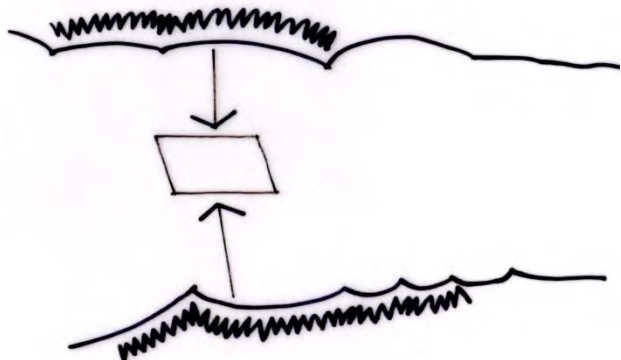
It is assumed that, at a substantial distance offshore, natural and cultural constraints can be dealt with by micrositing turbines. It is also assumed that views from passing mariners are less sensitive than from coastal receptors. Therefore, there is an emphasis on the perceptual and visual effects on coastal receptors.

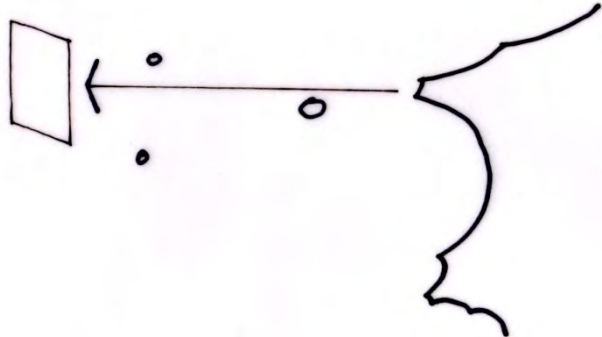
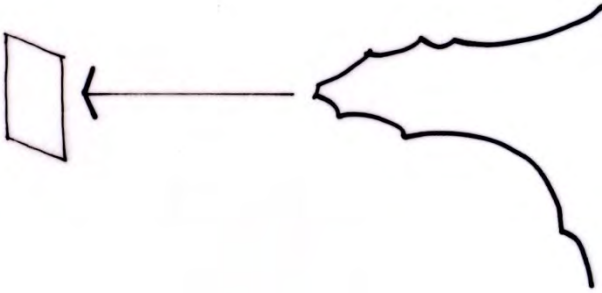
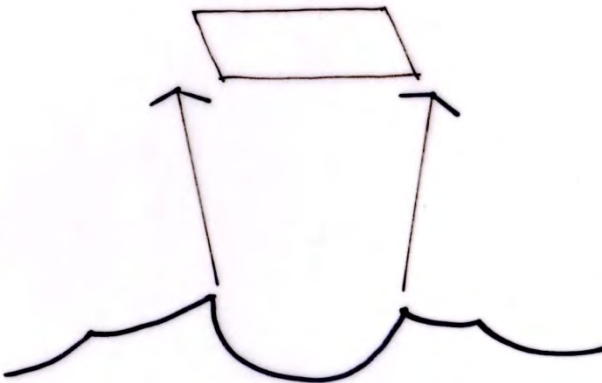
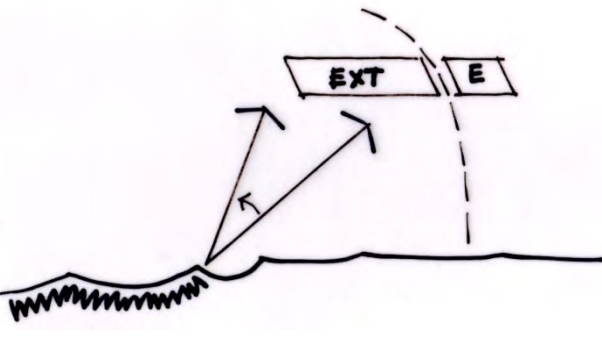
Table 4.1 Measures to avoid or minimise seascape and visual effects

Headline principle	Principle	Illustration
<p>Locate development as far away from the coastline as possible</p>	<p><b>1. Locate</b> developments beyond the limit of negligible visual effects.</p>	<p>DO's</p> 
	<p><b>2.</b> If above not possible, <b>locate</b> using visual buffer distances in Stage I report to inform distances for the highest potential turbine proposed from high sensitivity receptors (low magnitude of effect) and other receptors (medium magnitude of effect).</p>	
<p>Locate development particularly away from coastal landscape designations.</p>	<p><b>3. Locate</b> developments beyond the limit of negligible visual effects, particularly for the highest sensitivity National Parks/AONBs overlaid with Heritage Coasts.</p>	
	<p><b>4.</b> If above not possible, <b>locate</b> developments beyond the Stage I report low magnitude buffer distances for the highest potential turbine proposed from National Parks and AONBs.</p>	



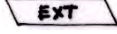
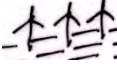


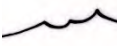




Headline principle	Principle	Illustration
		DO's
	<p><b>5. Locate</b> developments as far away from Heritage Coasts and World Heritage Sites as possible- use the low magnitude of effect buffer distances for the highest potential turbine proposed.</p>	
Locate development in lower sensitivity seascapes.	<p><b>6. Locate</b> developments in areas identified as lower sensitivity in the Stage 3 report.</p>	
	<p><b>7. Locate</b> developments in areas offshore from local seascape character areas identified as having lower inherent sensitivity characteristics (see <b>Table 7.1</b> factors affecting the sensitivity of seascape character areas).</p>	
Locate development off already industrialised or developed coastlines	<p><b>8. Providing above principles followed.</b></p>	

Headline principle	Principle	Illustration
Locate development in areas with existing offshore wind farms	<b>9. Locate</b> developments so as not to cause undue combined cumulative impact on existing landscape and visual receptors.	
Use headlands and development siting to minimise visibility	<b>10. Use headlands</b> in particular to screen development from more sensitive coasts and receptors.	
Design windfarms to minimise effects on sensitive receptors using DTI, 2005 guidance	<b>11. For example:</b> Orientate the windfarm to expose the narrowest part of the array to the most sensitive receptors.	

Headline principle	Principle	Illustration
Locate development away from coastal landscape designations	<b>12. Avoid</b> developments directly off shore from coastal designations.	<p style="text-align: center;"><b>DON'TS</b></p> 
	<b>13. But avoid</b> developments being visible in juxtaposition with sensitive views to headlands	
	<b>14. Particularly avoid</b> developments within buffer distances of several separate designations- Example 1	
	<b>15. Particularly avoid</b> developments within buffer distances of several separate designations- Example 2	

Headline principle	Principle	Illustration
<b>DON'TS</b>		
<p>Locate development away from higher sensitivity seascapes and receptors.</p>	<p><b>16. Avoid</b> locating developments in areas offshore from local seascape character areas identified as having higher inherent sensitivity characteristics (see <b>Table 7.1</b> factors affecting the sensitivity of seascape character areas)  <b>Example 1- avoid</b> locations offshore from islands</p>	
	<p><b>17. Example 2- avoid</b> locations offshore from remote headlands/peninsulas</p>	
	<p><b>18. Example 3- avoid</b> locations filling or almost filling framed views</p>	
<p>Avoid significant cumulative impacts.</p>	<p><b>19. Avoid</b> potential cumulative impact by extending width of arrays visible through extensions for additional wind farms</p>	



Key	
	Proposed offshore wind farm
	Existing offshore wind farm
	Extension to existing offshore wind farm
	Indicative proposed wind farm array
	Likely limit of negligible visual effect
	Minimum visual buffer distance for turbine height or zone boundary
	Coastline
	National Park or AONB on the coast
	Heritage Coast
	Heritage feature
	Urban area

## 5. Checklist to minimise seascape and visual effects

The following checklist of questions should be followed to confirm if the principles in Section 4 have been applied successfully. It also links the principles with key documents.

Table 5.1 Checklist to minimise seascape and visual effects

Factor	Document/source	Test
Visual effects of offshore turbine size	Offshore windfarms in Wales Stage 1 report: Visual Effects Ready Reckoner, 2019 Figure 3	Is the proposed development beyond the low magnitude buffer distance for the maximum expected turbine height to blade tip eg beyond 22.6km for turbines up to 145m high, beyond 28.5km for turbines 176–225m high or beyond 44km for turbines 301-350m high?
Seascape and visual sensitivity to offshore wind farms	Offshore windfarms in Wales Stage 3 report: Sensitivity and visual assessment, 2019 Part 2	Is the proposed development in a zone or part of a zone which has a low enough sensitivity to accommodate the height of turbines and extent of development?
Seascape and visual sensitivity to offshore wind farms	Offshore windfarms in Wales Stage 2 report: Guidance for siting, 2019 Table 4.1	Does the proposed development comply with the principles?
National Parks and AONBs	National Parks and AONBs management plans, relevant planning policies (and Lle)	Does the proposed development avoid adversely affecting the purposes of the designations and their special qualities?
Heritage Coasts	Heritage Coasts locations (Lle)	Does the proposed development avoid adversely affecting National Parks and AONBs overlaying Heritage coasts?
	Heritage Coasts locations and policies	Does the proposed development avoid adversely affecting the enjoyment of the Heritage Coasts?
Heritage designations	Cadw, Coflein and Lle	Does the proposed development avoid adversely affecting visual setting of World Heritage Sites and other historic designations such as scheduled monuments and Conservation Areas?
LANDMAP Visual and Sensory	Lle and NRW websites	Does the proposed development avoid adversely affecting areas of Outstanding or high value intervisible with the sea?
Recreation and access	Lle	Does the proposed development avoid significant adverse effects on the Wales Coast Path, identified important viewpoints and areas of open access

Factor	Document/source	Test
Cumulative effects	The Crown Estate website	Does the proposed development complement and take into account the size and arrangement of existing or consented developments?
	The Crown Estate website	Does the proposed development avoid significant combined cumulative effects with existing or consented developments?

In relation to the seascape and visual impact assessment (SVIA) process it is important that a series of location and size options are considered at the site search stage and seascape and visual impact is taken fully into account before preferred options are firmed up. The following table suggests the involvement of NRW and other authorities in the process.

Table 5.2 EIA/SVIA process

EIA/SVIA process <sup>3</sup>	Notes
Screening	A statutory EIA is likely to be required
Scoping	Early consultation with NRW <sup>4</sup> and relevant national landscape designations authorities on seascape and visual matters.  Consider a series of alternative locations and arrangements for assessment- avoid taking forward one option only.  Sometimes a 'Rochdale Envelope' approach is helpful (where the nature and extent of the development is defined as parameters or limits rather than as an exact proposal). This allows principles to be considered while still allowing for some flexibility for different layout options and micro-siting to evolve further through the development process.
Establishing the baseline	NRW can assist in setting out the key baseline evidence sources to be taken into consideration as context.
Identify and describe likely effects	Preliminary Environmental Information Report should include effects of windfarm against baseline of existing development and combined cumulative effects- consultation with NRW and relevant consultees
Mitigation proposals	Consider relocating to avoiding effects or, if this is not possible, to minimise effects through an iterative siting and design process
Environmental Statement/SVIA	Prepare SVIA including cumulative effects and send to NRW and other relevant landscape consultees for comment.  Finalise design of development and SVIA.

<sup>3</sup> See Guidelines for Landscape and Visual Impact Assessment, Edition 3, LI/IEMA, 2013. Figure 3.1 page 29.

<sup>4</sup> Note that, at the time of publication, NRW have a limit on the number of hours that can be spent on non-statutory advice before charges are payable.

## Appendices

# Appendix A: Policy Context

## 6. Policy Context

### 6.1. Wales Policies

The Well-being of Future Generations (Wales) Act 2015 aims to improve the long term social, economic and environmental and cultural well-being of Wales. It covers all of Wales and the inshore marine planning region.

Planning Policy Wales (PPW10) states that NRW is responsible for ensuring that statutorily designated sites are properly protected and managed. It states that great weight should be given to the purposes of National Parks and AONBs including conserving and enhancing their natural beauty and their special qualities in development planning. This applies to both activities that lie within, or in the setting, of the designated area (6.3.5-6.3.9).

PPW10 indicates that the character of undeveloped coastlines should be protected or enhanced. While Heritage Coast itself is not a statutory designation, local planning authorities do recognise and attach local policies to such areas. The features which contribute to their recognition as Heritage Coast will be important considerations in development management decisions.

The Marine and Coastal Access Act (2009) provides the framework for marine planning in Wales and across the UK. It sets Welsh Ministers as the Marine Plan authority for the Welsh Inshore and Offshore regions. The UK Marine Planning Policy Statement (MPS) provides the framework for preparing marine plans including the Welsh National Marine Plan.

### 6.2. Draft Welsh National Marine Plan

The Welsh National Marine Plan is currently at a draft stage. It has a policy on Seascapes which states that, in order of preference, proposals should avoid adverse impacts on seascapes, minimise impacts where they cannot be avoided and mitigate impacts where they cannot be minimised. Appropriate siting is stated as the first priority. National Marine Character Areas which divide up and describe the seascape of the inshore region are referenced.

The Designated Landscapes policy states that proposals that demonstrate they are compatible with the purposes and special qualities for which National Parks and AONBs have been designated are encouraged. The Historic Assets policy concerns the early consideration of the potential impacts on historic assets and their settings.

The draft Welsh National Marine Plan supports (where appropriate) further commercial development of offshore wind over the next 5 to 10 years (page 179) but does not allocate specific resource areas for wind. The Low Carbon Energy policy states that proposals for wind energy are strongly encouraged. In order to understand future opportunities relevant public authorities should, in liaison with the sector and other interested parties, collaborate to:

- Collect evidence to support understanding of environmental constraints and opportunities.

- Support understanding of optimal sites and offshore wind developments across Wales.

### 6.3. UK National Policy Statements

The UK Government produces National Policy Statements (NPSs) under the Planning Act (2008) which sets out Government policy for the development of Nationally Significant Infrastructure Projects (NSIPs). National policy statements EN-1 and EN-3 address national infrastructure planning in relation to renewable energy including offshore wind farms with an output above 100MW but are a material consideration for smaller projects.

**EN-1** states that virtually all nationally significant energy infrastructure projects will have effects on the landscape/seascape. Projects need to be designed carefully taking account of the potential impacts. The aim should be to minimise harm, providing reasonable mitigation where possible and appropriate (5.9.8). It reasserts that National Parks and AONBs have been confirmed as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help to ensure their continued protection and which the decision-maker should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the decision-maker in deciding on applications for development consent in these areas. The same test applies to projects outside the designation boundaries which may have impacts within them (5.9.12). Therefore both offshore wind farms and associated land-based infrastructure need to take this into consideration. The aim should be to avoid compromising the purposes of designations whether within England or Wales.

Outside nationally designated areas, landscapes may be highly valued locally and protected by local landscape designation. However, these factors in themselves should not be used to refuse consent. The decision maker should judge whether any adverse impact is so damaging that it is not offset by the benefits of the project.

**EN-3** considers the seascape and visual effects of offshore windfarms in more detail. It sets out three principal considerations on the likely effect of offshore windfarms on the coast:

- Limit of visual perception from the coast
- Individual characteristics of the coast which affect its capacity to absorb a development
- How people perceive and interact with the seascape (2.6.203).

In terms of mitigation, it states that neither the design or scale of individual wind turbines can be changed without significantly affecting the output of the development so, instead, the layout of the turbines should be designed appropriately to minimise harm (2.6.210).

For smaller projects (below 100 MW) the Marine and Coastal Access Act (2009) indicates that decisions are made by the Marine Plan Authority (MPA) – in this case, Welsh Ministers. When considering the impact of an activity it states that the MPA

should take into account existing character and quality, how highly it is valued and its capacity to accommodate change (2.6.5.3).

#### 6.4. National Parks and AONBs

The 1949 National Parks and Access to the Countryside Act, formed the basis for designating National Parks and AONBs. The Environment Act 1995 revised the original legislation and set out two statutory purposes for national parks in England and Wales:

- Conserve and enhance the natural beauty, wildlife and cultural heritage
- Promote opportunities for the understanding and enjoyment of the special qualities of national parks by the public

When national parks carry out these purposes they also have the duty to:

- Seek to foster the economic and social well-being of local communities within the national parks

For AONBs, the primary purpose of the designation is to conserve and enhance natural beauty. In pursuing the primary purpose of the designation, account should be taken of the needs of agriculture, forestry and other rural industries and of the economic and social needs of local communities.



# Appendix B: Factors influencing seascape sensitivity

## 7. Factors influencing seascape sensitivity

The factors or indicators which make seascape character areas more or less sensitive to specific offshore windfarm developments when considered at a detailed scale are explored below. These are developed from Guidance on the Assessment of the Impact of Offshore Windfarms: seascape and visual impact report, DTI, 2005, and local seascape character assessments in Pembrokeshire and Carmarthen Bay, Gower and Swansea Bay.

Table 7.1 Factors affecting the sensitivity of seascape character areas

Criteria	Indicators of higher sensitivity	Indicators of lower sensitivity
Contribution to the setting of a coast or seascape character area	Is perceived from, and forms the setting of, a sensitive coast or seascape character area within the limits of visual perception. (See sensitivity criteria below).	Is perceived from a less sensitive coast or seascape character area.  Is beyond the limits of visual perception.
Heritage features	Substantial presence of wrecks and other submerged historic features.  Presence of coastal and island historic features such as forts, castles, chapels, monasteries, other buildings and structures and other heritage features which have a strong relationship with the coast and sea visually, physically or culturally.	Limited number or no heritage features
Nature Conservation features	Presence of marine habitats with high biodiversity.  Presence of intertidal and coastal edge habitats with high biodiversity.  Presence of BAP species or habitats.	Limited range and extent of biodiverse areas.
Cultural associations	Where there are strong collective cultural associations with the sea and coast through people and events and their expression through literature, art, music or other media. These can include religious connections, military connections, legends, books and poems, pictures, music, films, plays and other cultural media.	Where there are limited cultural associations.
Scale	Small scale, enclosed, views to horizon limited by landform  Introduction of an element of scale into previously un-scaled area	Large scale views
Openness and enclosure	Where openness is a key characteristic and introduction of built elements would compromise this.	Unframed open views unimpeded by natural elements or features.

Criteria	Factors that add to sensitivity	Factors that detract from sensitivity
Coastal and hinterland form	<p>Intricate, complex, rugged forms and dramatic headlands/ends of peninsulas</p> <p>Where great simplicity is the key characteristic and introduction of structures into very horizontal composition would compromise this.</p>	<p>Flat, horizontal or gently undulating or largely straight coast.</p> <p>Simple forms</p> <p>Plateau or flat hinterland.</p>
Settlement/ Development pattern and foci	<p>Small scale, traditional, historic settlements, harbours and monuments. Small clustered villages.</p> <p>Lack of infrastructure</p>	<p>Modern ports, industrial facilities, with larger scale infrastructure, urban form, linear settlements</p>
Seascape pattern and foci	<p>Complex or unified pattern which would be disrupted by development.</p> <p>Important focal points eg islands, islets, headlands, distinctive sweeping beaches, and high hills.</p> <p>Open unspoilt views of the sea with no signs of development offshore.</p>	<p>Lack of intact pattern</p> <p>Lack of natural focal points</p> <p>Presence of existing vertical or other elements at sea including shipping/ferries.</p>
Movement	<p>Where stillness is a key feature either naturally (eg through aspect or tidal conditions) or due to lack of movement associated with transport, development or people.</p> <p>Where/when movement is highly natural, irregular or dramatic (currents, tidal streams, waves crashing on exposed coastlines) and regular mechanical movement or presence of development would detract.</p>	<p>In busier areas where development movement relates to other forms of mechanical movement present e.g. commercial shipping, ferries, boats, cars, lorries, aircraft or to a lesser extent other movement eg crowded swimming and surfing beaches</p> <p>Where/when waves are gentler and slow, regular movement of development could complement lapping of waves.</p> <p>Where clear current gives meaning/purpose to tidal renewable energy.</p>

Criteria	Factors that add to sensitivity	Factors that detract from sensitivity
Dark skies/ Lighting	<p>Where the area is unlit at night and is classified as such in a dark skies study.</p> <p>Little impact of lights from sea and land traffic.</p> <p>Where lighting is from scattered small settlements, lighthouses etc, and is minimal and isolated, and where larger scale, more geometric patterns of lighting from marine development would change this character</p>	<p>Coast is already well lit at night</p> <p>Lights of sea and land traffic or installations present.</p>
Aspect	<p>Development would interfere with notable views of sunrises and particularly sunsets.</p> <p>Where turbines would be highlighted in contrast to their background by sun light or be highlighted in silhouette from backlighting, thereby increasing visual prominence.</p> <p>Development seen from higher level views, particularly where viewer elevation results in development, and its geometric layout pattern, being seen much closer than on the horizon line.</p>	<p>Development located away from sunrise and sunset positions</p>
Visual and sensory: How seascape is experienced	<p>From remote or little used stretch of sea with little shipping or boat use.</p> <p>From secluded coastline, intimate coastal roads and footpaths.</p> <p>From important viewpoints and elevated positions where the focus is the view and not the activity.</p> <p>Popular beaches where the focus is fully or partly on seascape views, qualities and character.</p>	<p>From ferry/shipping.</p> <p>From main coastal, busy roads.</p> <p>Crowded beaches where focus is on beach activities,(rather than enjoyment of seascape character) .</p>
Visual and sensory: Remoteness, Tranquillity, Wildness	<p>Undeveloped seascape</p> <p>Wild character</p> <p>Highly natural, unmanaged</p> <p>Remote or isolated</p> <p>Tranquil</p>	<p>Highly developed seascape</p> <p>Highly modified / managed.</p> <p>Not remote</p> <p>Lacking in tranquillity</p>
Exposure	<p>Sheltered and calm seascapes</p> <p>Where seascape is extremely exposed such that the perceived wild, elemental nature is a key characteristic and development would significantly change this perception.</p>	<p>Open, exposed seascapes which does not provide a perception of elemental or wild seascape character and development would be perceived as relating to these characteristics.</p>

## Appendix C: Bibliography

## 8. Bibliography

The most relevant guidelines and reports taken into consideration in this guidance are as follows:

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