



Dudgeon and Sheringham Shoal Offshore Wind Farm Extensions

Preliminary Environmental Information Report

Volume 3

Appendix 27.1 - Seascape and Visual Impact
Assessment Annexes

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Dudgeon and Sheringham Shoal Offshore Wind Farm Extensions

Annexes to Chapter 27 Seascape and Visual Impact Assessment
April 2021

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Annexes to Chapter 27 Seascape and Visual Impact Assessment

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Annex 27.1. Seascape and Visual Impact Assessment Methodology

1.1. Introduction

This appendix contains additional detail regarding the assessment methodology, supplementing the information provided within Chapter 27 of the Preliminary Environmental Information Report (PEIR) for SEP and DEP. This appendix sets out a standard approach – specific matters in terms of the scope of assessment, study area and modifications to the standard approach for this assessment are set out within the SVIA.

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

- **Baseline** – includes the gathering of documented information at an appropriate scale; scoping of the assessment and agreement of that scope with the EIA coordinator, relevant consultees and local planning authorities; site visits; and, initial reports to the EIA coordinator of issues that may need to be addressed within the design.
- **Design** – review of initial layout/ options, turbine choice(s), and mitigation options.
- **Assessment** – includes an assessment of the seascape, landscape and visual effects of the development requiring site based work and the completion of a report and supporting graphics.
- **Cumulative Assessment** – assesses the effects of the proposal in combination with other wind farm developments.

1.2. Baseline

The baseline study establishes the scope of the assessment and the key seascape, landscape and visual receptors. It typically includes the following key activities:

- A desk study of relevant current national and, where relevant, local planning policy for the site and the surrounding areas.
- Agreement of the main study area radius with the key consultees.
- A desk study of nationally and regionally designated landscapes within the agreed study area, including any areas of defined Heritage Coast and World Heritage Sites as appropriate.
- A desk study of existing seascape and landscape character assessments for the site and surrounding areas.
- A desk study of historic landscape or seascape character assessments (where available) and other information sources required to gain an understanding of the contribution of heritage assets to the present day landscape.
- Draft Zone of Theoretical Visibility (ZTV) studies to assist in identifying potential viewpoints and indicate the potential visibility of the proposed development, and therefore the scope of receptors likely to be affected. The methodology used in the preparation of ZTV studies is described within Annex 2.

- The identification of and agreement upon, through consultation, the scope for assessment of potential cumulative effects.
- The identification of and agreements upon, through consultation, the number and location of representative and specific viewpoints within the study area.
- Identification of the range of other visual receptors (e.g. people travelling along routes, or within open access land, on beaches or on the sea) within the study area.
- Site visits to become familiar with the study area, the seascape and landscape; to verify the documented baseline environment; and to identify viewpoints and receptors.
- Input into the design process.

The information gathered during the baseline assessment is drawn together and summarised in the baseline section of the report and reasoned judgements are made as to which receptors have potential to be significantly affected. Only these receptors are then taken forward for the detailed assessment of effects, with others 'scoped out' (GLVIA3, (Landscape Institute and EIMA,2013 para 3.19)).

1.3. Design

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

Beyond design changes to site layouts, including number and size of turbines, opportunities for significant mitigation measures are inevitably limited due largely to the nature of the proposed development.

1.4. Assessment

The assessment of potential effects includes desk and site based work, consisting the following key activities:

- The preparation of ZTV plans based on the realistic worst case scenario for the offshore wind farm development.
- The preparation of computer generated wireframes showing the proposed layout of the project from a range of agreed viewpoints.
- An assessment, based on both desk study and site visits, of the magnitude and significance of effects upon seascape character; landscape character; designated landscapes; and visual receptors, arising from the proposed development during construction, operation and maintenance, and decommissioning stages.
- An informed professional judgement as to whether each identified effect is positive, neutral or adverse.
- A clear description of the effects identified, with supporting information setting out the rationale for judgements.

- Identification of which effects are judged to be significant is based on the significance thresholds established for this SVIA in Section 1.4.
- The production of photomontages from a selection of the agreed viewpoints showing the anticipated view following construction of the proposed wind farm development.

1.4.1. Night-time Impact Assessment

A separate night-time assessment may also be required, depending on the distance of the proposed development from the nearest coastline and the specification/ performance of lighting for the permanent installations (turbines and offshore substations/platforms). The assessment may also extend to construction stage effects where night-time operations, such as the deployment of construction vessels and use of temporary construction/ safety lighting, may give rise to visual effects from the coastline, albeit this will be of a temporary and intermittent nature. Night-time assessment will require additional professional photography and the preparation of photomontages; input from qualified engineers will also be required to advise on lighting specification and performance.

1.5. Seascape and Landscape Character Considerations

The European Landscape Convention (2000) provides the following definition:

“Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.”

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

The UK Marine Policy Statement (HM Government, Northern Ireland Executive, Scottish Government and Welsh Assembly Government, 2011: 21) 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”*. This definition of seascape is confirmed by MMO1204 A (Marine Management Organisation, 2019).

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

An Approach to Seascape Character Assessment (Natural England, 2012) states that:

“Seascape Character Assessment principally applies to coastal and marine areas seaward of the low water mark.

Landscape Character Assessment principally applies to areas lying to the landward side of the high water mark.

The assessment of intertidal areas (located between the high water mark and the low water mark) can follow either Landscape Character Assessment or Seascape Character Assessment approaches, the selection of the appropriate approach being dependent on the scope and purpose of the assessment being undertaken. In some cases it will be necessary to refer to both approaches. ...”

The SVIA should identify whether the intertidal areas are included within the seascape character areas or the landscape character areas, or if they are included in both.

Seascape and landscape character assessments usually define Key Characteristics of seascape or landscape character areas. Page 51 of An Approach to Landscape Character Assessment (Natural England, 2014) describes the function of Key Characteristics in landscape assessment, as follows:

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

It follows from the above that in order to assess whether landscape character is significantly affected by a development, it should be determined how each of the key characteristics would be affected. The judgement of magnitude therefore reflects the degree to which the key characteristics and elements which form those characteristics will be altered by the proposals. The same principle applies to assessing whether seascape character is significantly affected.

1.5.1. Seascape character

Seascape characterisation is principally informed by ‘An Approach to Seascape Character Assessment’ (Natural England, 2012) (ASCA). ASCA shares common principles, structure and ways of working with landscape character assessment.

It is important to recognise the interrelationship between, and interdependency of, the sea and land. The character of seascape character areas will often be defined by both seaward and landward elements.

The approach to assessing the susceptibility, value and sensitivity of seascape character areas to a proposed development is described in Section 1.4 of this SVIA following the following guidance documents:

- An approach to seascape sensitivity assessment, Marine Management Organisation, 2019. (MMO1204 A); and
- Seascapes sensitivity assessment: Technical Report, Marine Management Organisation, 2019. (MMO1204 B).

Seascape character susceptibility – considerations

The susceptibility of seascape character types or areas is judged based on both the attributes of the receiving environment and the characteristics of the proposed development. Thus, the key characteristics of the seascape character types/areas are considered, along with natural factors (form, topography and character of the coast (comprising the hinterland and coastal edge)); cultural/social factors (human use of the sea, coast and hinterland, historic features); quality/condition (intactness and state of repair); aesthetic and perceptual factors (scale, openness and enclosure, exposure (e.g. sheltered and calm or exposed), aspect (visual relationship with the sun e.g. when viewed from the

coast); seascape pattern and foci (features and elements on/above sea level or on the coast or hinterland), and visual characteristics (key views, intervisibility with coast, type and number of typical receptors, how the seascape is experienced). The likelihood of material effects on the seascape character types or areas can be judged based on the scale and layout of the proposal and how this relates to the characteristics of the receiving seascape. Further detail on criteria which affect seascape character susceptibility to offshore wind farm development can be seen in Annex 3.

Issues associated with visibility are considered within seascape character assessment. Clarity of visibility is determined by prevailing weather conditions including such aspects as air moisture content and air pressure. Visibility influences the visual receptor's perception of distance and there are inherent difficulties in judging both scale and distance when looking across expanses of sea. Perspective can often be condensed and misread due to an absence of reference points to provide a sense of scale. Moreover, where the immediate coastline shelves gently, a further dynamic is introduced into the view, varying according to the state of the tide and the resultant extent of exposed foreshore. This can change the character of local areas on a regular basis and alter visual judgments.

Seascape value - considerations

With regards to value, it is acknowledged that while there are no 'seascape' designations as such, landscape designations which extend up to/lie on the coastline adjoining seascape character areas or types (such as National Parks and AONBs) or Heritage Coasts which extend on land and offshore will have a bearing on the overall value, and therefore sensitivity of a seascape receptor. However, it should be noted that these will not automatically infer a high value to the overall seascape character area or type.

MMO1204 B (section 5.3) states:

"The degree of influence [of a designated landscape] is likely to be determined by a number of factors including the defined special qualities of the designation, distance from the designation, intervisibility and the relationship between the designation and character area.

Value will also derive from other factors equivalent to those explored in 'An Approach to Landscape Sensitivity Assessment' (Natural England, 2019, p 18). These include:

- *other designations e.g. nature conservation designations, heritage designations such as World Heritage Sites and local landscape designations*
- *character and sense of place*
- *valued attributes such as coastal form, perceptual qualities, cultural and natural features and associations, special qualities*
- *community values- these may be ascertained by engagement with communities who engage with seascape in various ways*
- *recreational value*
- *other intrinsic value.*

Community values may be ascertained by community engagement or other evidence. This information is important as it relates to people's quality of life. Communities' views may contrast with, or reinforce, 'expert' opinion."

Further detail criteria which affect seascape character value can be seen in Annex 3.

1.5.2. Landscape character

Landscape character susceptibility – considerations

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

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

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

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

Landscape value – considerations

Paragraph 5.19 of GLVIA3 states that *"A review of existing landscape designations is usually the starting point in understanding landscape value, but the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape- such as trees, buildings or hedgerows -may also have value. All need to be considered where relevant."*

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

- Information about areas recognised by statute such as National Parks, Areas of Outstanding Natural Beauty;
- Information about Heritage Coasts, where relevant;
- Local planning documents for local landscape designations;
- Information on features such as Conservation Areas, listed buildings, historic or cultural sites;

- Art and literature, identifying value attached to particular areas or views; and
- Material on landscapes of local or community interest, such as local green spaces, village greens or allotments.

A range of factors that can help in the identification of valued landscapes is outlined in Box 5.1 of GLVIA3: Landscape quality (condition); scenic quality; rarity; representativeness; conservation interest; recreational value; perceptual aspects; and associations.

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

1.6. Viewpoints and Visual Receptors - considerations

A wide variety of visual receptors can reasonably be anticipated to be affected by the proposed development. Within the baseline assessment, the ZTV study and site visits are used to determine which visual receptors are likely to be significantly affected and therefore merit detailed assessment. In line with guidance (GLVIA3); both representative and specific viewpoints may be identified to inform the assessment. In general, the majority of viewpoints will be representative – representing the visual receptors at the distance and direction in which they are located and of the type(s) that would be present at that location. The representative viewpoints have generally been selected in locations where significant effects would be anticipated; though some may be selected outside of that zone – either to demonstrate the reduction of effects with distance; or to specifically ensure the representation of a particularly sensitive receptor.

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

- Users of walking routes or accessible landscapes including Public Rights of Way, National and Regional Trails and other long distance routes, Common Land, Open Access Land, permissive paths, land held in trust (e.g. Woodland Trust, National Trust) offering free public access, and other regularly used, permitted walking routes;
- Visitors to and residents of settlements;
- Visitors to specific valued viewpoints;
- Visitors to attractions or heritage assets for which landscape and views contribute to the experience;
- Users of roads or identified scenic routes;
- Recreational sailors;
- Ferry passengers;
- Outdoor workers including those engaged in marine surface-based activities such as fishing or operation and maintenance of oil and gas platforms and offshore wind farms.

With the exception of specific viewpoints, each route, settlement or location will encompass a range of possible views, which might vary from no view of the development to very clear, close views. Therefore effects are described in such a way as to identify where

views towards the development are likely to arise and what the scale, duration and extent of those views are likely to be. In some cases this will be further informed by a nearby viewpoint and in others it will be informed with reference to the ZTV, aerial photography and site visits. Each of these individual effects are then considered together in order to reach a judgement of the effects on the visual receptors along that route, within that area or in that place.

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

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

1.7. Visual Receptor Sensitivity – typical examples

		Susceptibility		
		High	Medium	Low
Value	National/International	1	4	8
	Local/District	2	5	8
	Community	3	6	9
	Limited		7	10
1)		Visitors to valued viewpoints or routes which people might visit purely to experience the view, e.g. promoted or well-known viewpoints, routes from which views that form part of the special qualities of a designated landscape can be well appreciated; key designed views; panoramic viewpoints marked on maps.		
2)		People in locations where they are likely to pause to appreciate the view, such as from local waypoints such as benches; or at key views to/from local landmarks. Visitors to local attractions, heritage assets or public parks where views are an important contributor to the experience, or key views into/out of Conservation Areas. Recreational sailors who have travelled (in large numbers) from further than the local community and whose appreciation of the view is likely to be an important part of their recreational experience.		
3)		People in the streets around their home, or using public rights of way, navigable waterways or accessible open space (public parks, open access land). Areas where recreational sailing is mostly undertaken by the local community.		
4)		Users of promoted scenic rail routes.		
5)		Users of promoted scenic local road routes.		
6)		Users of cycle routes, local roads and railways.		
7)		Outdoor workers including commercial offshore fishermen. Ferry passengers.		
8)		Users of A-roads which are nationally or locally promoted scenic routes.		
9)		Users of sports facilities such as cricket grounds and golf courses.		

- 10) Users of Motorways and A-roads; shoppers at retail parks, people at their (indoor) places of work. Offshore workers constructing, maintaining or operating offshore wind farms, gas and oil rigs.

1.8. Preparation and use of Visuals

The ZTVs are used to inform the field study assessment work, providing additional detail and accuracy to observations made on site. Photomontages may also be produced in order to assist readers of the assessment in visualising the proposals, but are not used in reaching judgements of effect. The preparation of the ZTVs (and photomontages where applicable) is informed by the Landscape Institute's Technical Guidance Note 06/19: Visual Representation of Development Proposals (17 September 2019) and Scottish Natural Heritage's (SNH) Visual Representation of Wind Farms Best Guidance (SNH, 2017,).

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

- Onshore areas shown as having potential visibility may have visibility of the development obscured by local features such as trees, hedgerows, embankments or buildings.
- Since only the turbine hubs and blade tips have been modelled, this may be all that is visible – rather than the turbine tower. This is particularly true of onshore areas near the edges of potential visibility.

The following points should be borne in mind in respect of visualisations, as identified in Annex A of Visual Representation of Wind Farms: Guidance (SNH, 2017):

- A visualisation can never show exactly what the wind farm will look like in reality due to factors such as: different lighting, weather and seasonal conditions which vary through time and the resolution of the image;
- The images provided give a reasonable impression of the scale of the turbines and the distance to the turbines, but can never be 100% accurate;
- A static image cannot convey turbine movement, or flicker or reflection from the sun on the turbine blades as they move;
- The viewpoints illustrated are representative of views in the area, but cannot represent visibility at all locations;
- To form the best impression of the impacts of the wind farm proposal these images are best viewed at the viewpoint location shown;
- The images must be printed at the right size to be viewed properly (260mm by 820mm);
- The printed images should be held flat at a comfortable arm's length. If viewing these images on a wall or board at an exhibition, you should stand at arm's length from the image presented to gain the best impression.
- It is preferable to view printed images rather than view images on screen. If you do view images on screen you should do so using a normal PC screen with the image enlarged to the full screen height to give a realistic impression. Do not use a tablet or

other device with a smaller screen to view the visualisations described in this guidance.

A detailed description of the methods by which ZTVs and visualisations are prepared is included in Annex 2.

In addition to the main visualisations, illustrative views are used as appropriate to illustrate particular points made within the assessment. These are not prepared to the same standard as they simply depict existing views, character or features rather than forming the basis for visualisations.

1.9. Cumulative Assessment

Cumulative assessment relates to the assessment of the effects of more than one development. A search area from the proposal site (typically of a similar scale to the study area) is agreed with the Planning Authority. For each of the identified cumulative schemes agreement is reached with the Planning Authority as to whether and how they should be included in the assessment.

Only operational and consented developments are considered, unless specific circumstances indicate that a development in planning should be included, with progressively decreasing emphasis placed on those which are less certain to proceed. Typically, operational and consented developments are treated as being part of the baseline. i.e. it is assumed that consented schemes will be built except for occasional exceptions where there is good reason to assume that they will not be constructed.

The cumulative assessment examines the same groups of seascape, landscape and visual receptors as the assessment for the main scheme, though different viewpoints may be used in order to better represent the likely range of effects arising from the combination of schemes. The assessment is informed by cumulative ZTVs as necessary, showing the extent of visual effects of the schemes in different colours to illustrate where visibility of more than one development is likely to arise. Cumulative wirelines or photomontages may also be prepared.

In addition, the effects on users of routes through the area, from which developments may be sequentially visible as one passes through the landscape are also considered, if appropriate. This assessment is based on the desk study of ZTVs and aerial photography, and site visits to travel along the routes being assessed.

In relation to seascape, landscape and visual cumulative assessment, it is important to note the following:

- For each assessed receptor, combined cumulative effects may be the same as for the application scheme, or greater (where the influence of multiple schemes would increase effects, or where schemes in planning other than the application scheme would have the predominant effects).
- For each assessed receptor, incremental cumulative effects may be the same as for the application scheme, or reduced (where the influence of other schemes in planning would be such that were they consented and considered to be part of the baseline, the

incremental change arising from the addition of the application scheme would be less).

- Subject to the distance and degree of intervening landform, vegetation and structures there may be no cumulative effects.

The way in which the assessment is described and presented is varied depending on the number and nature of scenarios which may arise. This variation is needed in order to convey to the reader the key points of each assessment. For example, the three different cumulative combinations that may arise for an assessment in which there are two existing undetermined applications each can be assessed individually. A situation in which there are 10 applications cannot reasonably be assessed in this way and the developments may need to be grouped for analysis.

Annex 27.2. Visualisations and Zone of Theoretical Visibility Studies Methodologies

1.10. Zone of Theoretical Visibility (ZTV) Studies

ZTV studies are prepared using the ESRI ArcGIS Viewshed routine. This creates a raster image that indicates the visibility (or not) of the points modelled. LDA Design undertake a ZTV study that is designed to include visual barriers from settlements and woodlands (with heights derived from NEXTMAP 25 surface mapping data). If significant deviations from these assumed heights are noted during site visits, for example young or felled areas of woodland, or recent changes to built form, the features concerned will be adjusted within the model or the adoption of a digital surface model will be used to obtain actual heights for these barriers.

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

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

For all plan production LDA Design will produce a ZTV that has a base and overlay of the 1:50,000 Ordnance Survey Raster mapping or better. The ZTV will be reproduced at a suitable scale on an A1 template to encompass the study area in accordance with SNH guidance (2017). For printing purposes all A1 figures will be produced at 600 dpi to allow interpretation of the base map.

1.11. Ground model accuracy

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

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

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

1.12. Photomontages and Wirelines

Verified / verifiable photomontages are produced in seven stages. Photowires are produced using the same overall approach, but only require some of the steps outlined below.

- 1) Photography is undertaken using a digital SLR camera and 50mm equivalent lens. A tripod is used to take overlapping photographs which are joined together using an industry standard application to create a single panoramic image for each viewpoint. These are then saved at a fixed height and resolution to enable correct sizing when reproduced in the final images. The photographer also notes the GPS location of the viewpoint and takes bearings to visible landmarks whilst at the viewpoint.
- 2) Creation of a ground model and 3D mesh to illustrate that model. This is created using NextMap25 DTM point data (or occasionally other terrain datasets where required, such as site-specific topographical data or Photogrammetrically Derived Heights) and ground modelling software.
- 3) The addition of the turbine wirelines to the 3D model. The turbines are correctly proportioned to match the nacelle height and blade lengths proposed for the development. They are also modelled to resemble the proposed turbine type if this has been determined. The turbines are then inserted into the 3D model at the proposed locations and elevations.
- 4) Wireline generation – The viewpoints are added within the 3D CAD model with each observer point being inserted at 1.5m above the modelled ground plane. The location of the landmarks identified by the photographer may also be included in the model. Before wireline generation, the turbines are rotated so that they face in the direction of the viewpoint from the centre of the site, with blade tips upwards. The view from the viewpoint is then replicated using virtual cameras to create a series of single frame images, which also include bearing markers. For cumulative sites, each proposed wind farm will be shown in a different colour, with consented and existing sites shown in black and green respectively. As with the photographs, these single frame images are joined together using an industry standard application to create a single panoramic image for each viewpoint. These are then saved at a fixed height and resolution.
- 5) Wireline matching – The photographs are matched to the wirelines using a combination of the visible topography, bearing markers and the landmarks that have been included in the 3D model.
- 6) These matched images then form the baseline panorama and are presented as determined by the 2017 SNH standards.
- 7) In order to produce the main wireline, a wireline is created in the same way as above, but without the cumulative sites. This image is then cropped both horizontally and vertically and re-projected (around the centre of the cropped image) using an image processing application to create a ‘planar projection’ as required by the 2017 SNH standards.
- 8) For the photomontage, an industry standard 3D rendering application is used to produce a rendered 3D view of the proposed development from the viewpoint. The rendering uses materials to match the intended surface finishes of the development and lighting conditions according to the date and time of the viewpoint photograph.
- 9) The rendered development is then added to the photograph in the position identified by the wireline (using an image processing application) to ensure accuracy. The

images are then layered to ensure that the development appears in front of and behind the correct elements visible within the photograph. As for the main wireline, this matched image is then cropped and re-projected around the same centre as the main wireline, to create a 'planar projection' as required by the 2017 SNH standards.

Annex 27.3. Seascape Character Area Sensitivity Criteria Assessment

Susceptibility to offshore wind farms

Main criteria – long list	Sub-criteria	SCA7: East Midlands Coastal Waters	SCA9: Norfolk Coastal Waters	SCA3: East Midlands Offshore Gas Fields
Natural				
Hinterland	Form/ topography/ character (relevant landscape character area).	Low	Low	Low
Coastal edge	Cliffs, rocky coasts, upper beach, dunes etc	Low	Low	N/A
Coastal edge	Intertidal	Low	Low	N/A
Tidal range / streams	Tidal range, direction and speed of tidal streams	Low	Low	N/A
Cultural / social				
Use of the sea	Navigation, fishing, leisure, energy production, mineral extraction etc.	Medium	Medium	Low
Use of the coast/ hinterland if relevant	Settlement, industry, marine related development such as ports or harbours, industry, leisure/tourism, agriculture, dunes etc.	Medium	Medium	N/A
Historic features on coast (if relevant) or at sea surface	For example, coastal forts, castles, lighthouses	Medium	Medium	N/A
Cultural associations	For example, former use of the sea or coast, boatmaking, former trade routes, associations with artists and writers, food traditions, spiritual connections, education and interpretation etc	Medium	Medium	Low
Quality / Condition				
Intactness	Degree of completeness or fragmentation visually,	Medium-Low	Medium-Low	Medium-Low

Main criteria – long list	Sub-criteria	SCA7: East Midlands Coastal Waters	SCA9: Norfolk Coastal Waters	SCA3: East Midlands Offshore Gas Fields
	functionally or ecologically of area character or elements, presence of detractors.			
State of repair	Condition of coastal natural and built features/ elements, maintained or not maintained.	Medium	Medium	Medium
Aesthetic and Perceptual				
Scale	Of sea in relation to coastal form or offshore.	Low	Low	Low
Openness and enclosure	Degree and nature of enclosure of sea by land, framing of views.	Low	Low	Low
Exposure	Sheltered, calm, exposed	Low	Low	Low
Aspect	Relationship with sun	Low	Low	Low
Seascape pattern and foci	Features and elements on/ above the sea surface	Low	Low	Low
Seascape pattern and foci – coast and hinterland (if relevant)	E.g. headlands, cliffs, high hills, mountains or landmarks such as forts or castles	Low	Low	N/A
Tranquillity	Presence of man-made movement	Low	Low	Low
Tranquillity	Presence of man-made structures	Low	Low	Low
Tranquillity	Dark skies / artificial lighting	Medium	Medium	Medium
Naturalness Wildness	Sense of natural/ semi-natural character uninfluenced by humans	Medium-Low	Medium-Low	Medium-Low
Remoteness	Perceived distance from centres of population and human interventions	Medium-Low	Medium-Low	Medium-Low
Visual characteristics				
Key views-Land to sea	Including nature of views and elevation, perhaps including iconic features.	Medium	Medium	Medium

Main criteria – long list	Sub-criteria	SCA7: East Midlands Coastal Waters	SCA9: Norfolk Coastal Waters	SCA3: East Midlands Offshore Gas Fields
Sea to land Sea to sea	Views from within and from outside.			
Intervisibility of the area with important receptors	Amount/ length/ extent/ nature of intervisibility and distance away from unit/ development. E.g. relationship in terms of angle of view, topography influences e.g. elevation and form – plateau, slopes etc.	High	High	Medium-Low
Typical receptors – type and number	e.g. coast walkers, visitors to coast / attractions / beach, residents, leisure sailors, ferries, shipping, settlements etc	High	High	High
Relationship between seascape area and adjacent coast or character area				
Relationship between components of seascape character (if relevant)	Key relationships between hinterland, coastal edge, intertidal area and sea	High	High	Low
Contribution to setting	Contribution of seascape to the setting of an important coast/ hinterland. Contribution to the setting of an adjacent seascape character area.	High	High	Medium
Overall susceptibility		Medium-Low	Medium-Low	Low

Seascape value criteria and indicators

Main criteria	Sub-criteria	East Midlands Coastal Waters	Norfolk Coastal Waters	East Midlands Offshore Gas Fields
Landscape designations- National, regional, local	E.g. National Parks, AONBs, Heritage Coast, local landscape designations,	High	High	Low

Main criteria	Sub-criteria	East Midlands Coastal Waters	Norfolk Coastal Waters	East Midlands Offshore Gas Fields
	(distance, relationship, extent of role as setting).			
Nature conservation designations	Marine and coastal e.g. MCZ, RAMSAR, SAC, SPA, SSSI etc (if relevant).	High	High	High
Heritage designations	Marine and coastal- e.g. WHS, listed buildings, historic parks and gardens, Conservation Areas, and their settings (if relevant).	Medium	Medium	Low
Relevant special qualities	If landscape/ coastal designation overlooks area. (List and define the degree to which the area contributes to these).	High-Medium	High-Medium	Medium
Other valued attributes	Scenic quality	High-Medium	High-Medium	Medium
Other valued attributes	Perceptual aspects - For example, wildness, tranquillity	Medium	Medium	Medium
Other valued attributes	Non-designated cultural or natural features	Low	Low	Low
Other valued attributes	Cultural associations	Medium	Medium	Low
Other valued attributes	Rarity, representativeness	Low	Low	Low
Strength of character and sense of place	Distinctiveness of area, features or elements.	Medium	Medium	Low
Community values	Value associated with area or features/elements by people- communities of interest and place,	Medium	Medium	Low

Main criteria	Sub-criteria	East Midlands Coastal Waters	Norfolk Coastal Waters	East Midlands Offshore Gas Fields
	public attitudes.			
Recreational value	Use for leisure or sport on sea, intertidal, coast.	Medium	Medium	Low
Overall value		High-Medium	High-Medium	Low

Annex 27.4. Viewpoint Descriptions

Viewpoint descriptions describe the panoramic view from the location, not necessarily just the angle of view shown on the Figures.

Viewpoint References	Distance & Directions	Scale of Effect			Viewpoint Description – Existing View
		SEP	DEP	SEP + DEP	
<p>Viewpoint 1 Wells-next-the-Sea (Figure 27.21)</p>	<p>SEP: SW, 26.7km DEP: SW, 44.7km</p>	Small	Negligible	Small	<p>This view looks northwards from the beach adjacent to a row of beach huts, approximately 1.8km to the north of Wells-next-the-Sea.</p> <p>The view comprises an open panorama across a coastal landscape with tidal sands extending from the foreground to the middle-distance, where the sands meet the North Sea. The photograph shows the view when the tide is out. When the tide is in, the sea covers much of the extensive sands.</p> <p>To the far left and right of the view, coniferous woodland at High Cape is visible on raised dunes inland, with beach huts extending along the coast at the toe of the dunes. The Coastguard Lookout and Lifeboat Station is visible adjacent to the beach huts to the right of the view. A series of timber groynes extend along the beach in front of the dunes and beach huts. To the centre-right of the view, woodland north-west of Lodge Marsh is visible in the middle-distance. Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>The majority of the SEP turbines would be seen within the context of existing turbines at Sheringham Shoal and Dudgeon wind farms, with a small number of proposed turbines located to the left and right of the existing schemes. There would be a discernible difference in turbine size (being larger) and density (being more widely spaced) that the existing turbines. The scale of effect would be Small.</p> <p><u>Effects due to DEP</u></p> <p>DEP would be barely perceptible in views, being mostly located behind the existing wind turbines. Where views to DEP turbines are possible to either side of the existing turbines, DEP would marginally spread the presence of turbines across the horizon, although they would appear to be similar in size to the existing turbines. The scale of effect would be Negligible.</p>

<p>Viewpoint 2 Morston Quay (Figure 27.22)</p>	<p>SEP: SW, 22.9km DEP: SW, 37.9km</p>	<p>Medium – Small</p>	<p>Negligible</p>	<p>Medium – Small</p>	<p>This view looks northwards from the Peddars Way and Norfolk Coast Path National Trail on a raised embankment, adjacent to Morston Quay boat information centre and car park.</p> <p>The view looks across flat, open and expansive Morston Salt Marshes comprising tidal salt marshes, channels and creeks. Small boats can be seen in the foreground channel and in a larger area of water south of Blakeney Point in the distance.</p> <p>Long-distance views to the sea are available to the left of the view at Blakeney Harbour. Views to the open North Sea are obscured to the centre and right of the view by a spit of shingle and sand dunes at Blakeney Point.</p> <p>Views along the coastline are to possible to both the right and left of the view. To the left, woodland north of Wells-next-the-Sea is visible. To the right, the settlement of Blakeney can be seen. The tower of St Nicholas’ Church in Blakeney is visible on rising landform out of the photograph view.</p> <p>Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms, extending the spread of turbines either side of these existing wind farms. There would be a noticeable difference in turbine size (being larger) and density (being more widely spaced) that the existing turbines. The scale of effect would be Medium – Small.</p> <p><u>Effects due to DEP</u></p> <p>DEP would extend the presence of wind turbines across the horizon to the right of the existing turbines, and be more widely spread. However, where visibility to the DEP turbines is possible, the proposed turbines would appear of a similar size to the existing turbines. The scale of effect would be Negligible.</p>
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<p>Viewpoint 3 Sheringham Promenade (Figure 27.23)</p>	<p>SEP: S, 16.1km DEP: S, 28.6km</p>	<p>Large-Medium</p>	<p>Medium</p>	<p>Large-Medium</p>	<p>The view looks northwards from a raised sea front promenade which runs along the northern edge of Sheringham.</p> <p>The view comprises an expansive panorama to the open sea, across the beach protected by rock groynes. Development is visible along the coast to the left and right of the view, and inland. Offshore wind farms and a gas platform are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal, Dudgeon and Race Bank wind farms. There would be a noticeable difference in size and spacing, SEP turbines being larger and more widely spread in comparison to the existing wind turbines, and SEP would extend the presence of turbines across the horizon. The eastern SEP wind turbines (to the right of the view) would be up to approximately 1km closer to the settlement than the existing wind turbines, appearing to be even closer due to their larger size. The scale of effect would Large – Medium.</p> <p><u>Effects due to DEP</u></p> <p>Views to DEP would be possible within the context of the existing turbines at Sheringham Shoal, Dudgeon and Race Bank wind farms. DEP would extend the spread of turbines across the horizon to the right of the view and there would be a noticeable difference in size and spacing – being larger and more widely spread in comparison to the existing Dudgeon wind farm turbines. The eastern DEP turbines would appear as a separate wind farm to the existing Dudgeon wind farm due to the discernible wider spacing and larger turbine size. The northern DEP turbines would appear to be of similar size as existing Dudgeon and Sheringham Shoal turbines. The scale of effect would Medium.</p>
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<p>Viewpoint 4 Incleborough Hill (Figure 27.24)</p>	<p>SEP: S, 17.1km DEP: S, 28.3km</p>	<p>Large – Medium</p>	<p>Medium</p>	<p>Large – Medium</p>	<p>This view looks northwards from elevated Open Access land at Incleborough Hill, located between the settlements of East and West Runton. The view comprises an open panorama across a gently rolling coastal landscape and the sea. Development at East and West Runton and mobile home parks are visible along the coastline.</p> <p>There are expansive views of the sea above foreground gorse vegetation and the coastal landscape.</p> <p>To the left of the view along the coast the distinctive landform of ‘Beeston Bump’ adjacent to Sheringham can be seen in the middle distance and sand dunes at Blakeney Point in the far distance.</p> <p>To the right of the view along the coast Cromer and a church tower are visible enclosed by woodland.</p> <p>Offshore wind farms and an offshore gas platform are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal, Dudgeon, Race Bank and Triton Knoll wind farms. There would be a noticeable difference in size and spacing, SEP turbines being larger and more widely spread in comparison to the existing wind turbines, and SEP would extend the presence of turbines across the horizon between the existing Sheringham Shoal and Dudgeon wind farms. The eastern SEP wind turbines (to the right of the view) would be up to approximately 1.5km closer to the viewpoint than the existing wind turbines, appearing to be even closer due to their larger size. The scale of effect would Large – Medium.</p> <p><u>Effects due to DEP</u></p> <p>Views to DEP would be possible within the context of the existing turbines at Sheringham Shoal, Dudgeon, Race Bank and Triton Knoll wind farms. DEP would extend the spread of turbines across the horizon to the right of the view and there would be a noticeable difference in size and spacing – being larger and more widely spread in comparison to the existing Dudgeon wind farm turbines. The eastern DEP turbines would appear as a separate wind farm to the existing Dudgeon wind farm due to the discernible wider spacing and larger turbine size. The northern DEP turbines would appear to be of similar size as existing Dudgeon and Sheringham Shoal turbines. The scale of effect would Medium.</p>
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<p>Viewpoint 5 Cromer Pier (Figure 27.25)</p>	<p>SEP: S, 17.4km DEP: S, 27.1km</p>	<p>Large – Medium</p>	<p>Medium</p>	<p>Large – Medium</p>	<p>This view looks northwards from the England Coast Path on the elevated section of the Esplanade Road, along the northern edge of Cromer.</p> <p>The view comprises an open panorama looking out to sea over Cromer Pier and the beach protected by timber groynes.</p> <p>Development in Cromer is visible along the coast to the left and right of the view, and inland. Offshore wind farms and an offshore gas platform are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal, Dudgeon and Race Bank wind farms. There would be a noticeable difference in size and spacing, SEP turbines being larger and more widely spread in comparison to the existing wind turbines, and SEP would extend the presence of turbines across the horizon between existing Sheringham Shoal and Dudgeon wind farms. The eastern SEP wind turbines (to the right of the view) would be up to approximately 2km closer to the settlement than the existing wind turbines, appearing to be even closer due to their larger size. The scale of effect would Large – Medium.</p> <p><u>Effects due to DEP</u></p> <p>Views to DEP would be possible within the context of the existing turbines at Sheringham Shoal, Dudgeon and Race Bank wind farms. DEP would extend the spread of turbines across the horizon to the right of the view and there would be a noticeable difference in size and spacing – being larger and more widely spread in comparison to the existing Dudgeon wind farm turbines. The eastern DEP turbines would appear as a separate wind farm to the existing Dudgeon wind farm due to the discernible wider spacing and larger turbine size. The northern DEP turbines would appear to be of similar size as existing Dudgeon and Sheringham Shoal turbines. The scale of effect would Medium.</p>
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<p>Viewpoint 6 Trimingham (Figure 27.26)</p>	<p>SEP: SE, 22.6km DEP: SE, 29.1km</p>	<p>Medium</p>	<p>Medium</p>	<p>Medium</p>	<p>This view looks northwards from the England Coast Path on the cliff-top located to the north of the settlement of Trimingham, with expansive views out to sea. Views offshore from Trimingham itself are largely obscured by vegetation.</p> <p>Within the foreground, herbaceous vegetation and brambles extend from the viewpoint location to the cliff edge. Views along the coast to the left and right are obscured by woodland and scrub. Offshore wind farms and an offshore gas platform are visible on the horizon.</p> <p>Views to SEP and DEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms. There would be a noticeable difference in size and spacing of both SEP and DEP relative to the existing Sheringham Shoal and Dudgeon wind farms, being larger and more widely spread in comparison to the existing wind turbines, particularly, those turbines located to the south-east (right of the view) of SEP and DEP. Both SEP and DEP would also extend the presence of turbines across the horizon. The scale of effect for both SEP and DEP would be Medium.</p>
<p>Viewpoint 7 Horsey Gap beach (Figure 27.27)</p>	<p>SEP: SE, 45.8km DEP: SE, 46.4km</p>	<p>Small – Negligible</p>	<p>Small – Negligible</p>	<p>Small – Negligible</p>	<p>This view looks northwards from raised sand dunes near to Horsey Gap car park.</p> <p>The view looks over a sandy beach protected by groynes, backed by the sand dunes covered by marram grass. There are expansive views out to sea, along the coast and across the flat, inland landscape.</p> <p>Wind turbines at Scroby Sands are visible to the south.</p> <p>To the north a series of navigation warning posts are visible at the rock sea defences at Sea Paling. Partial views to SEP and DEP would be possible on the horizon, albeit that visibility of both Projects would be restricted to the hubs and blades of the proposed turbines. They would form minor elements in the view. The scale of effect for both SEP and DEP would be Small – Negligible.</p>

<p>Viewpoint 8 Brancaster Beach (Figure 27.28)</p>	<p>SEP: SW, 35.5km DEP: SW, 54.0km</p>	<p>Small</p>	<p>Negligible</p>	<p>Small</p>	<p>This view looks northwards from Brancaster beach, at the end of the access road to the coast adjacent to the golf club house and car park.</p> <p>The photograph shows the view when the tide is partially out. When the tide is in the sea covers much of the extensive sands.</p> <p>The view is across a flat open beach to the sea beyond, with expansive views out to sea and along the coast. Inland views are obscured by sand dunes and development.</p> <p>Slightly raised sand dunes at Scolt Head Island are visible in the distance to the east.</p> <p>Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>The majority of the turbines proposed for SEP would be seen within the context of the existing turbines of Sheringham Shoal and Dudgeon wind farms, with a small number of proposed turbines located on either side of the existing schemes. There would be a discernible difference in turbine size (being larger) and density (being more widely spaced) than the existing turbines, although they would be seen within the context of other existing wind farms including Lynn, Inner Dowsing, Lincs and Race Bank to the left of the view, which are closer to this viewpoint than SEP. The scale of effect would be Small.</p> <p><u>Effects due to DEP</u></p> <p>DEP would be barely perceptible, being predominantly located beyond the existing wind turbines of Sheringham Shoal. Due to distance and the earth's curvature, views would be limited to blades and hubs of some DEP turbines. The scale of effect would be Negligible.</p>
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<p>Viewpoint 9 Ingoldmells Point (Figure 27.29)</p>	<p>SEP: W, 45.5km DEP: W, 57.4km</p>	<p>Negligible</p>	<p>Negligible</p>	<p>Negligible</p>	<p>This viewpoint looks eastwards from the promenade at Ingoldmells Point, at the eastern edge of the settlement of Ingoldmells.</p> <p>The view looks over a low sea wall to the open beach and sea beyond. Development extends along the coast to the left and right of the view. Existing wind farms are prominent relatively close offshore.</p> <p>The North Norfolk coast is visible in the far distance.</p> <p>SEP and DEP would be barely perceptible in views, being largely seen beyond other wind sites within the intervening seascape. Due to distance and the earth's curvature, views of SEP and DEP would be limited to blades and hubs of some turbines. The scale of effect for both SEP and DEP would be Negligible.</p>
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<p>Viewpoint 10 Gramboroug h Hill (Figure 27.30)</p>	<p>SEP: SW, 18.1km DEP: SW, 32.4km</p>	<p>Medium</p>	<p>Small</p>	<p>Medium</p>	<p>This viewpoint looks northwards from a raised landform above the beach, with extensive views out to sea, along the flat, open coastline and inland.</p> <p>Flat salt marshes extend along the coastline and inland. Beyond the flat coastal landscape the landform rises, covered by trees, woodland and arable fields, obscuring views further inland. Settlements are visible at the base of the rising landform, such as at Salthouse where the church tower provides a landmark.</p> <p>Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms, and Race Bank to the left of SEP. There would be a noticeable difference in size and spacing, being larger and more widely spread in comparison to the existing wind turbines. The scale of effect would Medium.</p> <p><u>Effects due to DEP</u></p> <p>Views to DEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms, and Race Bank to the left of Sheringham Shoal. DEP would extend the spread of turbines across the horizon to the right of the view. The south-easterly turbines would appear as a separate wind farm to Dudgeon wind farm due to the noticeable difference in spacing and size – being larger and more widely spread in comparison to the existing turbines. The scale of effect would Small.</p>
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<p>Viewpoint 11 Peddars Way National Trail, Brancaster (Figure 27.31)</p>	<p>SEP: SW, 38.2km DEP: SW, 56.8km</p>	<p>Small- Negligible</p>	<p>Negligible</p>	<p>Small- Negligible</p>	<p>This viewpoint looks northwards from the Peddar's Way and Norfolk Coast Path where it crosses Chalkpit Road on elevated land to the south west of Brancaster.</p> <p>Long-distance views to the North Sea are available across arable fields sloping gently towards the coast. The view out to sea is through a gap in hedgerows. Hedgerows partially obscure the long-distance views into the wider landscape and out to sea to the left and to the right of the view.</p> <p>Landform also obscures views out to sea to the left and of the view.</p> <p>Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views of parts of some SEP turbines would be possible, where intervening vegetation and landform do not obscure seaward views. The majority of SEP would be screened by intervening vegetation and landform. SEP would be seen within the context existing turbines at Sheringham Shoal, Dudgeon and Race Bank (and Triton Knoll in the far distance). SEP turbines would extend across the horizon west of existing turbines at Sheringham Shoal, with a discernible difference in size and spacing, being larger and more widely spread in comparison to the existing wind turbines. The scale of effect would be Small – Negligible.</p> <p><u>Effects due to DEP</u></p> <p>Views of parts of some DEP turbines would be possible, where intervening vegetation and landform do not obscure seaward views. The majority of DEP would be screened by intervening vegetation and landform. DEP would be seen within the context existing turbines at Sheringham Shoal, Dudgeon and Race Bank (and Triton Knoll in the far distance). DEP turbines would extend across the horizon west of existing turbines at Sheringham Shoal, and appear of a similar in size to existing turbines, albeit more widely spread. The scale of effect would be Negligible.</p>
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<p>Viewpoint 12 Burnham Harbour (Gun Hill) (Figure 27.32)</p>	<p>SEP: SW, 29.3km DEP: SW, 48.1km</p>	<p>Small</p>	<p>Negligible</p>	<p>Small</p>	<p>The view looks northwards from the beach adjacent to Peddar's Way and Norfolk Coast Path, approximately 2km to the north east of Burnham Overy Staithe.</p> <p>The view comprises an open panorama across flat tidal sands that extend to the middle-distance and sea with expansive views out to sea. The photograph shows the view when the tide is out. When the tide is in the sea covers much of the extensive sands.</p> <p>Raised sand dunes can be seen extending along the coast to the left and right of the view, obscuring views inland. To the right of the view, dunes in the foreground obscure views along the coast to the east.</p> <p>To the left of the view dunes at Scolt Head Island are visible in the distance.</p> <p>Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>SEP would be seen within the context existing turbines at Sheringham Shoal, Dudgeon and Race Bank. SEP turbines would extend across the horizon to the left and right of existing turbines at Sheringham Shoal, with a discernible difference in size and spacing, appearing slightly larger and more widely spread in comparison to the existing wind turbines. The scale of effect would be Small.</p> <p><u>Effects due to DEP</u></p> <p>DEP would be seen within the context existing turbines at Sheringham Shoal, Dudgeon and Race Bank. The proposed turbines would extend across the horizon to the left and right of existing turbines at, appearing similar in size to the existing turbines. The scale of effect would be Negligible.</p>
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<p>Viewpoint 13 Gallow Hill (South of Wells) (Figure 27.33)</p>	<p>SEP: SW, 30.2km DEP: SW, 46.6km</p>	<p>Small</p>	<p>Negligible</p>	<p>Small</p>	<p>This viewpoint looks northwards from the Market Lane, on elevated land approximately 1.2 km to the south west of Wells-next-the-Sea.</p> <p>The long-distance views to the sea are available across arable fields sloping gently towards the coast. The view out to sea is through a gap in hedgerows. Flat, open salt marshes are visible in the distance near the coast in the foreground to the sea. Hedgerows and woodland partially obscure views of the wider landscape and sea to the left and to the right of the view.</p> <p>Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms, extending the spread of turbines either side of these existing wind farms. There would be a discernible difference in turbine size (being larger) and density (being more widely spaced) than the existing turbines. The scale of effect would be Small.</p> <p><u>Effects due to DEP</u></p> <p>DEP would extend the presence of wind turbines across the horizon to either side of the existing Sheringham Shoal and Dudgeon wind turbines, being more widely spread. However, DEP turbines would appear of a similar size to the existing turbines. The scale of effect would be Negligible.</p>
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<p>Viewpoint 14 Blakeney Car Park (Figure 27.34)</p>	<p>SEP: SW, 21.6km DEP: SW, 36.3km</p>	<p>Medium-Small</p>	<p>Negligible</p>	<p>Medium-Small</p>	<p>This viewpoint looks northwards from the Peddars Way and Norfolk Coast Path on a raised flood / sea defence embankment, adjacent to a car park along the northern edge of Blakeney. The view looks towards the coast across flat wetlands. Views of the sea beyond the wetlands are obscured by low landform adjacent to coast. Offshore wind farms are visible beyond the wetlands and low coastal landform. Sand dunes at Blakeney Point are visible to the left of the view. The car park, coast path and a duck pond can be seen in the foreground. Boats moored in a creek are visible beyond the car park.</p> <p><u>Effects due to SEP</u> Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms, extending the spread of turbines either side of these existing wind farms. There would be a noticeable difference in turbine size (being larger) and density (being more widely spaced) that the existing turbines. The scale of effect would be Medium – Small.</p> <p><u>Effects due to DEP</u> DEP would extend the presence of wind turbines across the horizon to the right of the existing turbines, and be more widely spread. However, the proposed turbines would appear of a similar size to the existing turbines. The scale of effect would be Negligible.</p>
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<p>Viewpoint 15 Peddars Way, Norfolk Coast Pathand, England Coast Path, Blakeney (Figure 27.35)</p>	<p>SEP: SW, 20.1km DEP: SW, 34.9km</p>	<p>Medium</p>	<p>Small- Negligible</p>	<p>Medium</p>	<p>This viewpoint looks northwards from on a raised flood / sea defence embankment. The view north is of an expansive flat, open landscape of coastal marshes and inter-tidal habitat and sea. The view north looks across the intertidal coastal habit towards a low ridge along the coast and the sea beyond. Offshore wind farms are visible on the horizon. Flat marshes extend along the coastline and inland before the land rises away from the coast. The rising landform covered by trees, woodland and fields obscures views further inland. Settlements are visible at the base of the rising landform, such as at Cley-next-the-Sea to the south-east where a windmill provides a landmark, and at Blakeney to the south-west. Sand dunes at Blakeney Point are visible to the left of the view.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms. There would be a noticeable difference in size and spacing, being more widely spread and larger to the right of view in comparison to the existing wind turbines, and they would extend the spread of turbines either side of the existing turbines at Sheringham Shoal and Dudgeon. The scale of effect would Medium.</p> <p><u>Effects due to DEP</u></p> <p>Views to DEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms. DEP would extend the spread of turbines across the horizon to the right of the view . DEP turbines would appear of similar scale to existing Sheringham Shoal turbines, albeit more widely spaced. The scale of effect would Small.</p>
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<p>Viewpoint 16 Bard Hill (Salt House Heath) (Figure 27.36)</p>	<p>SEP: SW, 19.6km DEP: SW, 33.9km</p>	<p>Medium</p>	<p>Small-Negligible</p>	<p>Medium</p>	<p>This view looks northwards from elevated Open Access land at Bard Hill, an area of dry coastal heathland, approximately 0.5km to the south of the settlement of Salthouse. Landform falls steeply away from the viewpoint towards the coast.</p> <p>The view is thorough a narrow gap in gorse vegetation. The view looks out through this gap to a coastal landscape and the sea beyond. Views along the coast and inland are obscured by vegetation.</p> <p>Views of the sea from the majority of the Open Access land are obscured by vegetation. The foreground includes fields enclosed by hedgerows and trees, and the village of Salthouse. A church in Salthouse is a distinctive landmark. Beyond the arable landscape and Salthouse, flat salt marshes extend to the open coastline and sea.</p> <p>Offshore wind farms are visible on the horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal, Dudgeon, Race Bank and Triton Knoll wind farms. There would be a noticeable difference in size and spacing, being more widely spread and larger in comparison to the existing wind turbines. The scale of effect would Medium.</p> <p><u>Effects due to DEP</u></p> <p>Views to DEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms. The northern DEP turbines would be beyond existing turbines at Sheringham Shoal and Dudgeon wind farms and appear to be part of existing wind farms on the horizon. The south-eastern DEP turbines would extend the spread of turbines across the horizon to the right of the view and there would be a noticeable difference in size and spacing – being slightly larger and more widely spread in comparison to the existing turbines. The scale of effect would Small.</p>
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<p>Viewpoint 17 Oak Wood, Sheringham Hall (Figure 27.37)</p>	<p>SEP: S, 17.9km DEP: S, 31.1km</p>	<p>Medium</p>	<p>Small</p>	<p>Medium</p>	<p>This view looks northwards from within Sheringham Park. The view looks across a gently undulating parkland (pasture) enclosed by woodland. The sea is visible through a gap between landform and woodland. Landform and woodland prevents more open, panoramic views of the sea.</p> <p>Offshore wind farms are visible on the sea horizon.</p> <p><u>Effects due to SEP</u></p> <p>Views to SEP would be possible within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms, where intervening vegetation and landform do not obscure seaward views. Only some of the south-eastern SEP turbines would be visible, the majority of the wind farm being obscured by existing landform and vegetation. There would be a noticeable difference in size and spacing between SEP and existing turbines, being larger in comparison to the existing wind turbines. The scale of effect would Medium.</p> <p><u>Effects due to DEP</u></p> <p>Views to DEP would be possible to the right of existing turbines at Sheringham Shoal and Dudgeon wind farms. DEP would extend the spread of turbines across the horizon to the right of existing wind farms, and there would be a noticeable difference in size and spacing between DEP and existing turbines – being larger and more widely spread in comparison to the existing wind turbines. The south-eastern DEP turbines would appear as a separate wind farm to the existing Dudgeon wind farm. The western-most turbine would be obscured by landform and vegetation. The scale of effect would Small.</p>
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<p>Viewpoint 18 Coast Path (Cromer- Overstead) (Figure 27.38)</p>	<p>SEP: S, 18.8km DEP: S, 27.5km</p>	<p>Large- Medium</p>	<p>Medium</p>	<p>Large- Medium</p>	<p>This view looks northwards from the Peddars Way, Norfolk Coast Path and England Coast Path, from the cliff-top between Cromer and Overstrand adjacent to Royal Cromer Golf course, with expansive views out to sea. Landform falls steeply down to the beach protected by groynes. Cromer pier can be seen projecting out to sea to the left of the view. Offshore wind farms and an offshore gas platform are visible on the horizon. <u>Effects due to SEP</u> Views to SEP would be possible within the context of the existing turbines which spread across the horizon. The eastern SEP turbines would spread across the horizon between the existing Sheringham Shoal and Dudgeon wind turbines. There would be a noticeable difference in size and spacing, being larger and more widely spread in comparison to the existing wind turbines. The scale of effect would Large – Medium. <u>Effects due to DEP</u> Views to DEP would be seen in part within the context of the existing turbines at Sheringham Shoal and Dudgeon wind farms, although DEP would extend the spread of turbines across the horizon to the right of the view, and to the left of the existing Dudgeon turbines. The northern DEP turbines would appear to be of similar size to existing turbines. The south-eastern DEP turbines would appear to be of a different size and spacing – being larger and more widely spread in comparison to the existing. The scale of effect would Medium.</p>
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Annex 27.5. Summary of Potential Impacts during the Construction and Decommissioning Phases

Effects due to the construction and decommissioning of the SEP and DEP wind turbines and offshore substations are summarised in Table 1. Construction and decommissioning activities would be temporary involving the movement of vessels and the use of large cranes to erect or dismantle the offshore infrastructure.

It is judged that the only seascape or landscape receptors likely to experience construction and decommissioning effects that are markedly different to the operational effects would be within the extent of the wind farm sites themselves and their immediate localities. Within these areas, during these phases, the seascape character would be influenced by the construction / decommissioning activities, including lighting.

With regards to potential effects on visual receptors during construction and decommissioning, visibility of the vessel movements, crane operations, wind turbine construction or removal and lighting would be experienced by people on boats and ships and by receptors onshore. These potential effects would be different in nature to those experienced once the wind farm sites are constructed and in operation, albeit similar or lower (due to shorter duration) in terms of their magnitude and significance.

Construction and decommissioning effects are assumed to be similar.

SEP would, in general, cause greater or the same effects as DEP, on all landscape, seascape or visual receptors, except on the seascape character area '3 East Midlands Offshore Gas Fields', which is where DEP would be located, and result in greater effects than SEP.

Effects on all landscape and visual, if SEP and DEP were both implemented, would be the same significance as assessed for SEP on its own, except on the seascape character area '3 East Midlands Offshore Gas Fields, where effects arising from DEP would be greater than SEP.

Table 1. Summary of Potential Impacts during the Construction and Decommissioning Phases

Potential impact	Receptor	Sensitivity	Scale of Effect	Extent	Duration	Magnitude	Pre-mitigation impact	Mitigation measures proposed	Residual impact
SEP									
Seascape character	SCA7 East Midlands Coastal Waters	Medium	Medium reducing to Small and to Negligible with distance	Localised	Medium – term	Low reducing to negligible with distance	Slight, adverse	None	Slight, adverse
Seascape character	SCA9 Norfolk Coastal Waters	Medium	Medium reducing to Small and to Negligible with distance	Localised	Medium – term	Low reducing to negligible with distance	Slight, adverse	None	Slight, adverse
Seascape character	SCA3 East Midlands Offshore Gas Fields	Medium - Low	Medium reducing to Small and to Negligible with distance	Localised	Medium – term	Low reducing to negligible with distance	Slight, adverse	None	Slight, adverse
Landscape character	LCA OCM1 Open Coastal Marshes	High-Medium	Small	Localised	Medium – term	Negligible	Minimal, adverse	None	Minimal, adverse
Landscape character	LCA DCM2 Drained Coastal Marshes	High-Medium	Small	Localised	Medium – term	Negligible	Minimal, adverse	None	Minimal, adverse

Potential impact	Receptor	Sensitivity	Scale of Effect	Extent	Duration	Magnitude	Pre-mitigation impact	Mitigation measures proposed	Residual impact
Landscape character	LCA CS1 Coastal Shelf	High-Medium	Small	Localised	Medium – term	Negligible	Minimal, adverse	None	Minimal, adverse
Landscape character	LCT A Open Coastal Marshes	High-Medium	Negligible	Localised	Medium – term	Negligible	Minimal, adverse	None	Minimal, adverse
Visual amenity	Marine: recreational boaters	High-Medium	Large-medium reducing to negligible with distance	Localised	Medium – term	Medium	Moderate, adverse	None	Moderate, adverse
Visual amenity	Marine: workers on boats/ships, ferry passengers	Medium-Low			Medium – term	Medium	Moderate-slight, adverse	None	Moderate-slight, adverse
Visual amenity	Settlement: Cromer	High-Medium	Large-medium	Limited	Medium – term	Medium – Low	Moderate, adverse	None	Moderate, adverse
Visual amenity	Settlement: Sheringham	High-Medium	Large-medium	Limited	Medium – term	Medium – Low	Moderate, adverse	None	Moderate, adverse
Visual amenity	Settlement: Mundesley	High-Medium	Medium-small	Limited	Medium – term	Low - Negligible	Slight, Adverse	None	Slight, Adverse
Visual amenity	Settlement: Wells-next-the-Sea	High-Medium	Small	Limited	Medium – term	Negligible	Minimal, Neutral	None	Minimal, Neutral
Visual amenity	Roads and Rail	Medium	Negligible	Limited	Medium – term	Negligible	Minimal, Neutral	None	Minimal, Neutral
Visual amenity	Peddars Way, Norfolk Coast Path and England Coast Path	High-Medium	Large-medium reducing to negligible with distance	Localised	Medium – term	Medium	Moderate, adverse	None	Moderate, adverse

Potential impact	Receptor	Sensitivity	Scale of Effect	Extent	Duration	Magnitude	Pre-mitigation impact	Mitigation measures proposed	Residual impact
Visual amenity	National and Regional Cycle Routes	Medium	Negligible	Limited	Medium – term	Negligible	Minimal, Neutral	None	Minimal, Neutral
Visual amenity	Receptor group: Old Hunstanton to Wells-Next-The-Sea	High-Medium	Small	Intermediate	Medium – term	Low – Negligible	Slight, neutral	None	Slight, neutral
Visual amenity	Receptor group: Wells-Next-The-Sea to Blakeney	High-Medium	Medium / Medium - Small	Intermediate	Medium – term	Low	Slight, neutral	None	Slight, neutral
Visual amenity	Receptor group: Blakeney to Mundesley	High-Medium	Large-medium / medium	Localised	Medium – term	Medium	Moderate, adverse	None	Moderate, adverse
Visual amenity	Receptor group: Mundesley to Winterton-on-Sea	High-Medium	Medium	Limited	Medium – term	Low-negligible	Slight-minimal, neutral	None	Slight-minimal, neutral
Visual amenity	Specific Viewpoint: viewing gazebo at Oak Wood	High-Medium	Large-medium	Limited	Medium – term	Medium – Low	Moderate, adverse	None	Moderate, adverse
Visual amenity	Dark Sky Discovery Sites	High	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Character and views	Norfolk Coast Area of Outstanding Natural Beauty	High	Medium-small	Localised	Medium – term	Low	Moderate, adverse	None	Moderate, adverse
Character and views	North Norfolk Heritage Coast	High	Small-negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral

Potential impact	Receptor	Sensitivity	Scale of Effect	Extent	Duration	Magnitude	Pre-mitigation impact	Mitigation measures proposed	Residual impact
DEP									
Seascape character	SCA7 East Midlands Coastal Waters	Medium	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Seascape character	SCA9 Norfolk Coastal Waters	Medium	Medium reducing to Small and to Negligible with distance	Localised	Medium – term	Low reducing to negligible with distance	Slight, adverse	None	Slight, adverse
Seascape character	SCA3 East Midlands Offshore Gas Fields	Medium - Low	Medium reducing to Small and to Negligible with distance	Localised	Medium – term	Low reducing to negligible with distance	Slight, adverse	None	Slight, adverse
Landscape character	LCA OCM1 Open Coastal Marshes	High-Medium	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Landscape character	LCA DCM2 Drained Coastal Marshes	High-Medium	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Landscape character	LCA CS1 Coastal Shelf	High-Medium	Small	Localised	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Landscape character	LCT A Open Coastal Marshes	High-Medium	Negligible	Localised	Medium – term	Negligible	Minimal, adverse	None	Minimal, adverse

Potential impact	Receptor	Sensitivity	Scale of Effect	Extent	Duration	Magnitude	Pre-mitigation impact	Mitigation measures proposed	Residual impact
Visual amenity	Marine: recreational boaters	High-Medium	Large-medium reducing to negligible with distance	Localised	Medium – term	Medium	Moderate, adverse	None	Moderate, adverse
Visual amenity	Marine: workers on boats/ships, ferry passengers	Medium-Low			Medium – term	Medium	Moderate-slight, adverse	None	Moderate-slight, adverse
Visual amenity	Settlement: Cromer	High-Medium	Medium	Limited	Medium – term	Low	Slight, adverse	None	Slight, adverse
Visual amenity	Settlement: Sheringham	High-Medium	Medium	Limited	Medium – term	Low	Slight, adverse	None	Slight, adverse
Visual amenity	Settlement: Mundesley	High-Medium	Medium / Medium-small	Limited	Medium – term	Low	Slight, adverse	None	Slight, adverse
Visual amenity	Settlement: Wells-next-the-Sea	High-Medium	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Visual amenity	Roads and Rail	Medium	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Visual amenity	Peddars Way, Norfolk Coast Path and England Coast Path	High-Medium	Medium reducing to negligible with distance	Localised	Medium – term	Medium – Low	Moderate, adverse	None	Moderate, adverse
Visual amenity	National and Regional Cycle Routes	Medium	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral

Potential impact	Receptor	Sensitivity	Scale of Effect	Extent	Duration	Magnitude	Pre-mitigation impact	Mitigation measures proposed	Residual impact
Visual amenity	Receptor group: Old Hunstanton to Wells-Next-The-Sea	High-Medium	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Visual amenity	Receptor group: Wells-Next-The-Sea to Blakeney	High-Medium	Small-negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Visual amenity	Receptor group: Blakeney to Mundesley	High-Medium	Medium	Localised	Medium – term	Low	Slight, adverse	None	Slight, adverse
Visual amenity	Receptor group: Mundesley to Winterton-on-Sea	High-Medium	Medium	Limited	Medium – term	Low-negligible	Slight-minimal, neutral	None	Slight-minimal, neutral
Visual amenity	Specific Viewpoint: viewing gazebo at Oak Wood	High-Medium	Medium	Limited	Medium – term	Low	Slight, adverse	None	Slight, adverse
Visual amenity	Dark Sky Discovery Sites	High	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Character and views	Norfolk Coast Area of Outstanding Natural Beauty	High	Small	Localised	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral
Character and views	North Norfolk Heritage Coast	High	Negligible	Limited	Medium – term	Negligible	Minimal, neutral	None	Minimal, neutral

