

Hornsea Offshore Wind Farm

Project Two

Applicant's response to GE3 – Extended response

Appendix W to the Response submitted for Deadline I
Application Reference: EN010053

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Appendix W: Applicant's response to GE3 – Extended response - Summary of assessment associated with named Frameworks, Acts and Convention Articles

GE3 (a): The European Marine Strategy Framework

With regard to the European Marine Strategy Framework, the Applicant assumes the Ex. A refers to maintaining Good Environmental Standards (GES) through an ecosystem-based approach within sub-regions of the North East Atlantic. UK waters lie within the Greater North Sea and Celtic Sea sub-regions and are required to coordinate with other member states in this region under the auspices of the OSPAR Convention. This is achieved specifically through the designation of Marine Protected Areas (MPAs), recognition of species or habitats in need of protection, and more generally through the adoption of measures that seek to achieve GES (for which there are 11 high level descriptors (<http://jncc.defra.gov.uk/page-5231#GES1>)).

Consideration of GES has been implemented throughout the EIA process. Firstly, during the scoping phase the Applicant considered the full range of potential effects on ecological resources that may affect GES, and that have been listed in the 11 high-level descriptors for maintaining GES. Secondly, the baseline assessment considers the conservation status of species and habitats, European designated areas (Natura 2000) and the potential for designations of MPAs (in the UK these are Marine Conservation Zones (MCZs)). Finally, the impact assessment has considered potential impacts on species, habitats and protected sites from the development of the Project both in isolation and cumulatively with other offshore industries both in the UK and in other member states.

GE3 (b): The National Parks and Access to the Countryside Act 1949, the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006

The National Parks and Access to the Countryside Act 1949

The National Parks and Access to the Countryside Act 1949 established the National Parks (NP) and Areas of Outstanding Natural Beauty (AONB) and is concerned with matters therein. No part of the proposed Project lies within a NP or AONB, or any other designated landscape. However, the potential for views to be gained from the Lincolnshire Wolds AONB of the cable installation and the onshore HVDC converter/HVAC substation, as well as the offshore HVAC reactive compensation substations has been considered. The Lincolnshire Wolds AONB was consulted with regards to Project Two as set out in Table 5.4 of Volume 3, Chapter 5: Landscape and Visual Resources of the ES (Doc ref No 7.3.5) under the consultation with Natural England. Mr Jack from the AONB Joint Advisory Committee was invited to the Phase 2 public consultation events by email on the 25th June 2014. No representative from the AONB attended the events. No Relevant Representations have been received from the Lincolnshire Wolds AONB.

Details of the consultation with regard to the onshore development of the Project are found in Table 5.4 of Volume 3 and Chapter 5 (Part 1) of the ES. The effects on the landscape and visual resources of the Lincolnshire Wolds AONB have been assessed. The key characteristics of the AONB are set out in Annex 6.5.2: Nationally Designated Landscapes and Landscape Character Areas: Key Characteristics, of Volume 6 of the ES (Doc ref No 7.6.5.2). A description of the AONB is summarised at paragraphs 5.6.16 to 5.6.20 of Volume 3 and Chapter 5 (Part 2) of the ES.

A Zone of Theoretical Visibility (ZTV) was generated for the onshore HVDC converter/HVAC substation (Figure 5.2 of Volume 3 and Chapter 5 (Part 1) of the ES

and a photomontage generated from within the AONB (Figure 5.45 of Volume 3 and Chapter 5 (Part 3) of the ES). The temporary effects of construction of the cable route on the AONB are assessed at paragraphs 5.7.60 to 5.7.63 of Volume 3 and Chapter 5 (Part 6) of the ES. The temporary effects of the construction of the onshore HVDC converter/HVAC substation on the AONB are assessed at 5.7.98 to 5.7.101 of Volume 3 and Chapter 5 (Part 2) of the ES. During the operation and maintenance phase there will be no effects on the AONB from the cable, as it is underground and the subtle changes in the landscape planting would not be discernible from the AONB (paragraph 5.7.349 of Volume 3 and Chapter 5 (Part 2) of the ES). The effects of the onshore HVDC converter/HVAC substation are assessed at paragraphs 5.7.378 to 5.7.381 of Volume 3 and Chapter 5 (Part 2) of the ES. None of the effects are considered to be significant. The effects of decommissioning on the AONB are considered at paragraphs 5.7.529 to 5.7.532 and paragraphs 5.7.559 to 5.7.562 of Volume 3 and Chapter 5 (Part 2) of the ES.

Details of the consultation with Natural England with regard to the offshore elements of the Project development are found in Table 10.6 of Volume 2, Chapter 10: Seascape and Visual Resources of the ES (Doc ref No. 7.2.10). A ZTV was also generated for the offshore HVAC reactive compensation substations (Figure 10.16 of Volume 2 and Chapter 10 of the ES) and the impact described at paragraph 11.6.161 of Volume 2 and Chapter 10 of the ES. Although visible in theory, wirelines that were generated from the Lincolnshire Wolds AONB of the offshore HVAC reactive compensation substation did not show any part of the structure, therefore these were not included in the ES.

The effects of the Project on regionally and locally designated and undesignated landscapes have been properly considered. These landscapes are described in paragraphs 5.6.36 to 5.6.38 of Volume 3 and Chapter 5 (Part 1) of the ES and paragraphs 5.6.53 to 5.6.77 of Volume 3 and Chapter 5 (Part 2) of the ES and illustrated on Figures 5.9 to 5.14 of Volume 3 and Chapter 5 (Part 1) of the ES.

The effects during the construction phase on locally designated and undesignated resources are considered at paragraphs 5.7.78 to 5.7.94 and 5.7.169 to 5.7.129 of Volume 3 and Chapter 5 (Part 2) of the ES. The effects during the operation and maintenance phase on these resources are considered at paragraphs 5.7.366 to 5.7.373 and paragraphs 5.7.395 to 5.7.401 of Volume 3 and Chapter 4 (Part 2) of the ES. The effects of decommissioning on locally designated and undesignated landscapes are considered at paragraphs 5.7.539 to 5.7.555 and paragraphs 5.7.577 to 5.7.590 of Volume 3 and Chapter 4 (Part 2) of the ES.

The Wildlife and Countryside Act 1981 (as amended) and The Natural Environment and Rural Communities Act 2006

With regard to ecology and nature conservation, the Wildlife and Countryside Act (WCA) 1981 (as amended by the Countryside and Rights of Way Act 2000) and the Natural Environment and Rural Communities (NERC) Act 2006 have been considered with regard to all Valued Ecological Receptors (VERs) (i.e., Sites of Special Scientific Interest (SSSI) and protected habitats and species (flora and fauna)) assessed in:

- Paragraphs 2.5.57 to 2.5.63 and Table 2.13 of Volume 2, Chapter 2: Benthic Subtidal and Intertidal Ecology of the ES (Doc ref No. 7.2.2);
- Paragraphs 3.5.65 to 3.5.67 and Table 3.11 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the ES (Doc ref No. 7.2.3);
- Paragraphs 4.5.94 to 4.5.95 and Table 4.8 and Table 4.16 of Volume 2, Chapter 4: Marine Mammals of the ES (Doc ref No. 7.2.4);
- Paragraphs 5.5.66 to 5.5.70 and Table 5.7 of Volume 2, Chapter 5: Ornithology of the ES (Doc ref No. 7.2.5);

- Paragraphs 3.5.222 to 3.5.233 of Volume 3, Chapter 3: Ecology and Nature Conservation of the ES (Doc ref No 7.3.3) (paragraphs 3.3.22, and 3.3.26 to 3.3.33 of Volume 3, Chapter 3 of the ES summarise the requirements of the Acts, and covering legislation relating to each VER is listed in Table 3.12 of Volume 3, Chapter 3 of the ES); and
- Section 4.7 of Volume 3, Chapter 4: Intertidal Ornithology of the ES (Doc ref No. 7.3.4).

In addition, a description of the requirements of legislation with regard to each VER species in Volume 3 and Chapter 3 of the ES and Volume 3 and Chapter 4 of the ES is provided in section 2.3 of the Outline Ecological Management Plan (OEMP) (Doc ref No. 12.5).

The requirements of these Acts have been taken into account in the designed in mitigation strategy:

- Table 2.18 of Volume 2 and Chapter 2 of the ES;
- Table 3.16 of Volume 2 and Chapter 3 of the ES;
- Table 4.21 of Volume 2 and Chapter 4 of the ES;
- Table 5.20 of Volume 2 and Chapter 5 of the ES;
- Table 3.16 of Volume 3 and Chapter 3 of the ES and described in sections 4, 5 and 6 of the OEMP; and
- Table 4.15 of Volume 3 and Chapter 4 of the ES.

As required by the WCA 1981 (as amended), the mitigation strategy includes measures to help ensure the protection of species against intentional killing, injury, damage or taking, intentional or reckless damage, destruction or obstruction of access to any place used by these animals for shelter or protection and against significant disturbance. Measures include the realignment of the cable route corridor and use of Horizontal Directional Drilling (HDD) to avoid more sensitive areas (i.e., where protected sites, habitats and species are present); the establishment of protective buffer zones for habitats and species of nature conservation concern; pre-construction surveys to identify potential changes in baseline conditions and inform on-going working methods; sensitive work schedules at the landfall to minimise the disturbance to wintering wetland birds in the Humber Estuary Special Protected Area (SPA); and the monitoring of works by an Ecological Clerk of Works (ECoW). Surveys and monitoring prior to, during and post construction will also be undertaken by appropriately qualified and experienced ecologists in order to inform on-going working methods and ecology mitigation and enhancement measures.

Flexibility to adapt mitigation as required to ensure adherence to relevant legislation and policy has been incorporated into the proposals (section 8 of the OEMP).

No onshore licences under the WCA 1981 (as amended) or other legislation are currently required. However, licences relating to cetaceans are required; see the Draft European Protected Species Licence: Method Statement and Supporting Information (Doc ref No. 12.2)). If pre-construction surveys confirm the need for any licence under the WCA 1981, the Protection of Badgers Act 1992 or the Conservation of Habitats and Species (Amendment) Regulations 2012, a licence will be obtained from Natural England prior to the commencement of relevant works (Table 3.16 of Volume 3 and Chapter 3 of the ES and sections 4, 5 and 6 of the OEMP). Licences will require detailed method statements and mitigation strategies to ensure adherence to the requirements of the legislation.

Collectively, Requirement 7 (Ecological management plan landward of mean low water springs) and Article 17 (Authority to survey and investigate the land) of the draft DCO serve to secure these mitigating actions requirements.

The Countryside and Rights of Way Act 2000

The development does not cross any areas of Access Land as defined in Part 1 of the Countryside and Rights of Way Act 2000, nor can the development be viewed from Access Land. This Act is therefore not considered relevant in the context of this application.

GE3 (c) The United Nations Environment Programme (UNEP) Convention on Biological Diversity, with particular reference to Articles 8, 9 and 10

The UK Biodiversity Action Plan (UK BAP) lists of Priority species and habitats for conservation were compiled in response to the requirements of the UNEP Convention on Biological Diversity (CBD), in particular those listed under Article 7 of the Convention. This list guides the implementation of other Articles of the Convention, in particular Articles 8 to 10. The Convention has been taken into account in the onshore and offshore ecology and nature conservation impact assessments, with the BAP status of ecological features taken into account when valuing its importance and, therefore, assessing the significance of any potential effects of development:

- Paragraphs 2.5.57 to 2.5.63 and Table 2.13 of Volume 2 and Chapter 2 of the ES;
- Paragraphs 3.5.65 to 3.5.67 and Table 3.11 of Volume 2 and Chapter 3 of the ES;
- Paragraphs 4.5.94 to 4.5.95 and Table 4.8 and Table 4.16 of Volume 2 and Chapter 4 of the ES;
- Paragraphs 5.5.66 to 5.5.70 and Table 5.7 of Volume 2 and Chapter 5 of the ES;
- Paragraphs 3.5.222 to 3.5.233 and Table 3.12, Volume 3 and Chapter 3 of the ES; and
- Section 4.7 of Volume 3 and Chapter 4 of the ES.

Article 8

Article 8 of the CBD relates to in-situ conservation and includes reference to the need to protect areas for nature conservation; ensure the sustainable management of biological resources; ensure the maintenance of viable populations of species in natural surroundings; ensure the undertaking of environmentally sound and sustainable development; ensure the rehabilitation and restoration of ecosystems and species; control alien species; maintain legislation for the protection of threatened species; and regulate activities that could cause a significant adverse effect to biodiversity.

The impact assessment methodology is based on best practice guidelines produced by the Institute of Ecology and Environmental Management (IEEM, 2006; IEEM, 2010):

- Paragraphs 2.6.3 to 2.6.13 of Volume 2 and Chapter 2 of the ES;
- Paragraphs 3.6.3 to 3.6.14 of Volume 2 and Chapter 3 of the ES;
- Paragraphs 4.6.2 to 4.6.8 of Volume 2 and Chapter 4 of the ES;
- Paragraphs 5.6.5 to 5.6.39 of Volume 2 and Chapter 5 of the ES;
- Paragraph 3.6.2 to 3.6.9 of Volume 3 and Chapter 3 of the ES; and
- Paragraph 4.9.1 to 4.9.12 of Volume 3 and Chapter 4 of the ES.

The assessment of the magnitude of a likely impact takes into account the likely impact on the viability and conservation status of a population, species or feature of concern, including its BAP status.

Where practicable, various measures have been incorporated into development proposals in order to address the requirements of Article 8, as summarised below.

Where applicable, best practice guidelines and recommendations have been, and will be, incorporated into construction works and mitigation strategies for the protection of sites, habitats and species. Wherever practicable, in-situ conservation has been the preferred approach (in preference to ex-situ conservation) to minimise the likely ecology and nature conservation impacts of development.

Taking into account the results of baseline ecology surveys, designed-in mitigation measures include various measures to enable in-situ conservation of the BAP habitats and species, classed as VERs (see above). These designed in measures are presented in each of the onshore and offshore ecology ES chapters:

- Table 2.18 of Volume 2 and Chapter 2 of the ES;
- Table 3.16 of Volume 2 and Chapter 3 of the ES;
- Table 4.21 of Volume 2 and Chapter 4 of the ES;
- Table 5.20 of Volume 2 and Chapter 5 of the ES;
- Table 3.16 of Volume 3 and Chapter 3 of the ES and described in sections 4, 5 and 6 of the OEMP; and
- Table 4.15 of Volume 3 and Chapter 4 of the ES.

Measures include the restriction of working areas and timings to ensure impacts on biological resources (including BAP features) are minimised where ever possible. These include (but are not limited to):

- Setting the maximum working distance between two installation vessels to 20 km during piling operations, to limit the extent over which underwater noise related impacts on marine fauna (i.e., marine mammals and fish and shellfish) (see Table 3.16 of Volume 2 and Chapter 3 of the ES, and Table 4.21 of Volume 2 and Chapter 4 of the ES);
- A 30 minute soft/slow start will be used for all piling activities, with Marine Mammal Observers and Passive Acoustic Monitoring to reduce the risk of injury to marine mammals (see Table 3.16 of Volume 2 and Chapter 3 of the ES, and Table 4.21 of Volume 2 and Chapter 4 of the ES);
- Mitigation will be applied for construction within the section of cable route that lies within 4 NM (7.4 km) of the Humber Estuary SAC (i.e., Donna Nook grey seal breeding colony) (see Table 4.21 of Volume 2 and Chapter 4 of the ES);
- Undertaking of Horizontal Directional Drilling beneath the coastal sand dune and saltmarsh habitats and watercourses supporting water vole colonies and a possible otter resting place (see Table 3.16 of Volume 3 and Chapter 3 of the ES);
- The restriction of the works period at the landfall in order to minimise the impact on wintering birds in the intertidal zone of the Humber Estuary SPA (see Table 4.15 of Volume 3 and Chapter 4 of the ES);
- Realignment of the cable route corridor in order to avoid some sensitive features (i.e., active badger setts and a known bat roost) (see Table 3.16 of Volume 3 and Chapter 3 of the ES);
- Establishment of habitat and species buffer zones (e.g., around retained woodlands, mature trees and ponds, breeding bird nests, roosting bats, resting otters, water voles and ponds with GCNs) (see Table 3.16 of Volume 3 and Chapter 3 of the ES); and
- Use of artificial hedgerows to temporarily replace lost hedgerows of high value to foraging and commuting bats (see Table 3.16 of Volume 3 and Chapter 3 of the ES).

Pre-construction surveys (habitats and species), the supervision of works by an Ecological Clerk of Works and monitoring during and post-construction will also be undertaken by appropriately qualified and experienced professionals where necessary

to inform detailed work methodologies and help minimise the impact of development on BAP Priority habitats and species in-situ:

- Table 3.16 of Volume 3 and Chapter 3 of the ES;
- Paragraphs 4.2.8 to 4.2.9, 5.3.4 to 5.3.8, and 6.2.4 to 6.2.12 and section 8 of the OEMP; and
- Table 2.18 and Paragraph 2.6.21 of Volume 2 and Chapter 2 of the ES.

It is recognised that some Priority habitats will be lost, disturbed or damaged as a result of construction, although work areas have been minimised where practicable in order to limit this impact area (discussed above).

Habitat restoration following construction will include the restoration of saltmarsh (i.e., *Salicornia* and other annuals colonising mud and sand), sand dune and hedgerow habitats. Restoration works will be subject to monitoring and replacement of failed plants or undertaking of additional measures in order to ensure success (section 8 of the OEMP). Once established, management control of restored and enhanced habitats, including hedgerow enhancement planting, will be returned to existing land owners so as to help ensure the long-term sustainable retention and management of these habitats as part of the existing landscape (paragraph 7.2.7 of the OEMP).

Article 9

Article 9 of the CBD relates to ex-situ conservation and includes reference to the need to consider ex-situ conservation as measure to complement in-situ conservation; and for ex-situ conservation to be designed so as not to threaten ecosystems and in-situ populations of species except in special circumstances.

Taking into account results of baseline ecology surveys, designed-in mitigation measures (summarised above) were developed so as to help prevent the need for ex-situ measures wherever practicable (as described above). However, as described above, the displacement of some species is expected as a result of construction works. Mitigation measures to be employed to help minimise the impact of development on ex-situ habitats and displaced species include (but are not limited to):

- Restricting the extent of working areas as much as practicable (discussed above);
- Timing operations to avoid key life stages of BAP species (e.g., at the landfall, the timing of works will be restricted to minimise the impact on wintering intertidal birds, discussed above);
- Ex-situ enhancement planting of hedgerows within a 100 m wide corridor encompassing the cable route corridor will be carried out as soon as practicable with the agreement of the relevant landowner (Table 3.16 of Volume 3 and Chapter 3 of the ES); and
- Best practice measures relating to light spill and wind farm lighting and the control of pollutants will also be set in place to minimise (Table 3.16 of Volume 3 and Chapter 3 of the ES and Table 5.20 of Volume 2 and Chapter 5 of the ES).

It is possible that pre-construction surveys to identify any changes in baseline conditions may identify the need to translocate/displace species from working areas, or remove habitats of use to Priority species (e.g., fell a tree containing a previously unrecorded bat roost). Should this occur, applications for relevant required protected species licences will be submitted to Natural England along with detailed method statements and additional mitigation strategies to ensure the appropriate and successful ex-situ conservation of the affected species concerned. All works requiring a licence will not commence until relevant licences have been obtained from Natural

England (Table 3.16 of Volume 3 and Chapter 3 of the ES and section 4 of the OEMP).

Article 10

Article 10 of the CBD relates to the sustainable use of components of biodiversity. The Article includes reference to the use of cultural practices that are compatible with conservation or sustainable use requirements; the support of local populations to implement remedial action in degraded areas; and the encouragement of cooperation between government authorities and the private sector in developing methods for sustainable use of biological resources.

Various measures have been incorporated into development proposals in order to address these requirements including (but not limited to) the following:

- Working areas will be restricted as much as practicable (discussed above);
- Onshore and offshore habitats will be reinstated to their original use where practicable (e.g., through burial of cables);
- Enhancement planting of hedgerows within a 100 m wide corridor encompassing the cable route corridor will be undertaken as soon as practicable with the agreement of the relevant landowner (discussed above);
- Management control of reinstated and enhanced onshore habitats will be returned to existing land owners (with the exception of reinstated/replacement planting associated with the HVDC converter/HVAC substation, which will be managed by the offshore transmission owner) so as to ensure the long-term retention and sustainable management of the habitats as part of the existing landscape (Table 3.16 of Volume 3 and Chapter 3 of the ES); and
- Method statements for the construction of construction vehicle access routes over the sea defence and coastal sand dunes into the intertidal area are subject to on-going communications with Natural England in order to ensure they minimise the likely impact on the habitats (paragraph 5.3.4 to 5.3.5 of the OEMP). With regard to the potential need for heavy vehicle access to the intertidal zone for maintenance works, the method of access will be assessed separately on an ad hoc basis prior to the commencement of related maintenance works, in order to help ensure the sustainable conservation and maintenance of restored sand dune habitats (Table 3.13 of Volume 3 and Chapter 3 of the ES).