



Overview - Transboundary screening undertaken by the Secretary of State	
Project name:	Hornsea Offshore Wind Farm (Zone 4) - Project Two
Address/Location:	Offshore site: Central region of the North Sea, 89km off the East riding of Yorkshire coast. Onshore connection point: Killingholme North substation, Lincolnshire Landfall: Horseshoe Point, Humber Estuary
Planning Inspectorate Ref:	EN010053
Date(s) screening undertaken:	First screening – 25 January 2013 following the applicant's request for a scoping opinion Second screening – 22 April 2015 following submission of the application documents
EEA States identified for notification:	First screening: Netherlands, Denmark, Germany, Iceland, Norway, France, and Belgium Second screening: Netherlands, Denmark, Germany, Iceland, Norway, France, and Belgium

FIRST TRANSBOUNDARY SCREENING UNDERTAKEN BY THE SECRETARY OF STATE	
Document(s) used for transboundary Screening:	Hornsea Project Two, Environmental Impact Assessment Scoping Report, October 2012
Date	25 January 2013
Screening Criteria:	Secretary of State Comments:
Characteristics of the Development	<p>The proposed development is for an offshore generating station (wind farm) comprising between 80 & 360 turbines with an overall generating capacity of up to 1.8GW.</p> <p>Turbine capacity will be in the range of 5MW to 15MW with a maximum rotor diameter of 250m and maximum hub height of 200m and blade tip height of 325m. Foundation design has not yet determined, with options under consideration including steel monopile, steel jackets supported on piles or suction piles and concrete gravity based systems. Scour protection including rock and gravel dumping, protective aprons, mattresses and flow energy dissipation devices is being considered as part of the project design.</p> <p>Offshore platforms will be installed, supporting collector and converter substations or a reactive compensation substation. Platforms supporting accommodation facilities for operation and maintenance will also be required. The exact number of platforms to be installed is yet to be determined. Subsea inter-array cables and subsea export cables will be installed to connect the turbines to the substations and to connect the substations to the onshore transition pits at the landfall. Cable protection (type not specified) will also be installed.</p> <p>Onshore transition pits will connect the wind farm to an onshore substation. An onshore cable route, with jointing pits will then connect the substation to the grid connection point at Killingholme North 400kV substation. The Scoping Report states that the route will be similar to that proposed for Hornsea Project One, which has been identified as 40km in length.</p>

Geographical area	The Scoping Report states that the development is approximately 49.7km west of the median line between UK and Dutch waters.
Location of Development (including existing use)	<p>The Hornsea Project Two Zone is located within the Hornsea Zone, which covers approximately 4735km². The area where the project lies is referred to as Subzone 2. Subzone 2 is approximately 400km² and lies approximately 89km east of the Yorkshire coastline and 49.7km west of the median line between UK and Dutch waters.</p> <p>Landfall is at Horseshoe Point in the Humber Estuary Special SAC, SPA, Ramsar and SSSI with the cable route extending to Killingholme North substation. The onshore zone is within the administrative area of East Lindsey Council. The area contains a number of residential towns and villages as well as agricultural and tourist areas.</p>
Cumulative impacts	At paragraph 4.7.1, the Scoping Report refers to cumulative impacts being addressed within a cumulative impact assessment and lists the development types to be included. Paragraph 4.7.7 lists the specific projects to be considered in the cumulative impact assessment including Hornsea Project One, Dogger Bank Offshore Wind Farm, and Killingholme North Substation Extension as well as a number of other onshore proposals.
Carrier	<ul style="list-style-type: none"> • Impacts (e.g. disturbance, displacement, barrier effects, collision mortality) to highly mobile designated/protected species. • Impacts to foreign commercial fishing fleets and to international shipping. • Commercial impacts linked to the supply chain for construction and operation of the proposals.
Environmental Importance	<p>Offshore:</p> <p>Erosional/Depositional Processes/Swell</p> <p>The Holderness and Lincolnshire coastlines are experiencing erosion and the North Norfolk coastline is a barrier coastline with features resulting from longshore drift. In many places the coastline is undefended and has been allowed to evolve naturally. The Scoping Report also states that the concentrations of a number of metals recorded in sediment samples have been found to be above relevant guideline values.</p> <p>Marine Species</p> <p>The following species have been identified in the Scoping Report as being present in or around the site:</p> <ul style="list-style-type: none"> • Section 6.2 onwards identifies those species that were recorded during surveys including: whiting, dab, sprat, herring, European common squid, bass, grey gurnard, plaice, lesser weaver, mackerel, lemon sole, cod, haddock, ling, cuckoo ray, greater and lesser sandeel and poor cod. • Diadromous fish species present at the site include: European smelt, Atlantic salmon and twaite shad. Paragraph 6.2.21 lists other diadromous species likely to

be found in the area.

- Table 6.2 identifies a number of spawning and nursery grounds located within and around the Hornsea Zone and cable route.
- Species rich benthic communities are found within the area (including Sabellaria spinulosa reef). The site is in an area of mosaic habitat and contains potential Annex I reef of which some areas are assessed as being of medium and high reefiness. Artica islandica was recorded at the site and is listed by OSPAR as a threatened and/or declining species.
- Elasmobranchs, including thornback ray and spotted ray have been recorded in the scoping area. Basking sharks have also been identified in the area.
- A number of pinnipeds and cetaceans are likely to be present at the site including harbour seal, grey seal, harbour porpoise, white-beaked common dolphin, bottlenose dolphin, and minke whale.

There are a number of MCZ in proximity to the site. These are identified in Table 6.8 of the Scoping Report.

European Sites & Bird Species

The cable landfall point is within the Humber Estuary Special SAC, SPA, Ramsar and SSSI. The Northcoates Point saline lagoon is listed as a qualifying feature of the Humber Estuary SAC. The closest SPAs or Ramsar sites are Flamborough Head and Bempton Cliffs SPA, Humber Estuary SPA, North Norfolk coast SPA, Broadland SPA and The Wash SPA.

Table 6.7 and Figures 6.20, 6.21, and 6.22 of the Scoping Report identify international and European designated sites in proximity to the site. The closest non-UK European designated sites to the proposals are:

- Doggersbank SCI (Netherlands)
- Klaverbank SCI (Netherlands)

European sites along the coastlines of France, Belgium, Germany, and Denmark as well as the Netherlands are included within the scope of potential impacts within the Scoping Report. Table 6.4 of the Scoping Report lists the main bird species recorded within the area. The nearest breeding colonies are found approximately 38km from the site at Flamborough Head and Bempton Cliffs SPA.

Impacts of the proposals on highly mobile species groups such as marine mammals and birds may result in significant impacts on other EEA states.

Commercial Fisheries & Shipping

A number of species are fished commercially both within and around the site by demersal trawlers, beam trawlers, seiners and gillnetters. Fishing vessels have been identified from the UK, the Netherlands, Norway, Belgium, Denmark, France and Germany.

Main ports in the area are Hull, Immingham and Grimsby. Entry

	<p>to the Humber is through the IMO routing TSS known as Rosse Reach which runs along the northern edge of the cable route at the estuary mouth. An anchor zone is located just north of the cable route and Spurn Point MEHRA is within the cable route. The area has a medium to high level of shipping and a number of medium and dense traffic routes cross the site including some destined for the Humber and ferries from the UK to Europe.</p> <p>Onshore:</p> <p>The proposed landfall, cable route and substation areas include a number of designated sites within 5km of the onshore elements of the proposal. These are identified in Paragraph 8.5 of the Scoping Report. The Applicant’s Scoping Report does not anticipate transboundary impacts associated with the onshore development. Onshore impacts have not been considered further within this screening matrix.</p>
<p>Extent</p>	<p>Erosional/Depositional Processes/Swell</p> <p>The Scoping Report states that it is unlikely that effects on these processes will impact on other EEA states due to the development being located approximately 40km from international boundaries. This will not be considered further in this document.</p> <p>Marine Species</p> <p>The Scoping Report identifies a number of migratory species including basking shark. The Scoping Report identifies that marine mammals present in the area may include qualifying features of the Klaverbank SCI and the Doggerbank SCI.</p> <p>European Sites & Bird Species</p> <p>The extent of potential impacts has not been identified within the Scoping Report. A number of migratory avian species have been identified. Pink footed geese, which migrate from Greenland, Iceland and Spitsbergen, can be found on areas near to and may traverse the site. A number of European sites along the coastlines of France, Belgium, the Netherlands, Germany, and Denmark have been highlighted in the report as having the potential to be subject to transboundary effects.</p> <p>Commercial Fisheries & International Vessels</p> <p>The Scoping Report identifies that nations which are known to fish regularly within and around the Hornsea Zone include the Netherlands, Germany, Norway, France, Belgium and Denmark. Shipping traffic trading between UK east coast ports and European ports, such as Esbjerg in Denmark, and Rotterdam and Amsterdam in the Netherlands pass through the area. Offshore support vessels may also pass through coming from European ports. Ferry routes from the Netherlands and Denmark to ports in the East of the UK may also be affected.</p>

Magnitude	The magnitude of impacts has not been determined at this stage. The Scoping Report states that these will be subject to assessment in the EIA.
Probability	<p>Marine Species</p> <p>The probability of impacts occurring on marine ecology during construction and decommissioning is high. The operational phase is considered less likely to result in significant impacts.</p> <p>European Sites & Bird Species</p> <p>The probability of impacts occurring to birds is high due to disturbance/displacement and potential barrier and collision risks during operation. Impacts on other EEA states are likely due to the proximity of the site to international boundaries and the high mobility and range of some bird species.</p> <p>Commercial Fisheries & International Vessels</p> <p>The Scoping Report considers that due to the possible constraints that Project Two may have on demersal trawling, beam trawling, demersal seining and other gears, fishing effort may be displaced to other fishing grounds including into the Dutch EEZ. Other EU member state fishing fleets may also be displaced from the Project Two area. The Scoping Report considers that there is the potential for transboundary impacts relating to ports, shipping and navigation.</p>
Duration	<p>The Applicant's Scoping Report discusses the importance of considering the duration of impacts, and refers to impacts as 'short term' and 'long term'. However, these terms are not defined and the duration of impacts has not been specifically identified.</p> <p>Marine Species</p> <p>Short term impacts will be experienced during construction and decommissioning, and long term impacts are anticipated throughout the operational life of the development.</p> <p>European Sites & Bird Species</p> <p>Short term impacts are predicted to occur during construction and decommissioning, and long term impacts will be experienced throughout the operational life of the development.</p> <p>Commercial Fisheries & International Vessels</p> <p>Short term impacts are anticipated during construction and decommissioning, and long term impacts are anticipated throughout the operational life of the development.</p>
Frequency	<p>Marine Species</p> <p>Potential impacts from disturbance/displacement likely to be intermittent during construction and decommissioning, when associated with particular activities. Impacts could become</p>

	<p>permanent during operation due to loss of habitat, permanent displacement from operational noise, and EMF.</p> <p>European Sites & Bird Species</p> <p>Potential impacts likely to be based on natural patterns of use/migration during construction, operation and decommissioning. Frequency will vary with individual species' seasonal use/migration patterns.</p> <p>Commercial Fisheries & International Vessels</p> <p>Impacts on commercial fisheries and international vessels are likely to be most frequent during construction and decommissioning due to safety exclusion zones around construction vessels and installation activities. Intermittent impacts may be experienced during operation when maintenance is required and safety zones are applied.</p>
<p>Reversibility</p>	<p>Marine Species</p> <p>Impacts during construction and operation, including displacement and disturbance, may be reversible after decommissioning however, barrier effects may still remain if foundations are not removed and there could be further effects on colonising species and their predators if they are removed. The populations of some species may take considerable time to recover from certain impacts.</p> <p>European Sites & Bird Species</p> <p>Displacement and disturbance would be reversible after decommissioning. Collision risk and barrier effect would cease upon decommissioning due to the removal of above sea level structures although further effects on predators of colonising species may occur. The populations of some species may take considerable time to recover from certain impacts.</p> <p>Commercial Fisheries & International Vessels</p> <p>If foundations are not removed during decommissioning they would remain permanent obstructions.</p>
<p><u>Transboundary screening undertaken by the Secretary of State</u></p> <p>Under Regulation 24 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) (the EIA Regulations) and on the basis of the current information available from the Applicant, the Secretary of State is of the view that the proposed development is likely to have a significant effect on the environment in another EEA State.</p> <p>In reaching this view the Secretary of State has applied the precautionary approach (as explained in the Planning Inspectorate's Advice Note 12: Transboundary Impacts Consultation); and taken into account the information currently supplied by the Applicant.</p> <p>Action:</p> <p>Transboundary issues notification under Regulation 24 of the EIA Regulations is required.</p>	

States to be notified:

Netherlands, Denmark, Germany, Iceland, Norway, France, and Belgium (potential impacts to Natura 2000 sites; potential impacts to fishing activities and navigation).

Date 25 January 2015

Note: The Secretary of State's duty under Regulation 24 of the EIA Regulations continues throughout the application process.

SECOND TRANSBOUNDARY SCREENING UNDERTAKEN BY THE SECRETARY OF STATE

Document used for transboundary Screening:

Environmental Statement January 2015 (ES) and Habitats Regulation Assessment January 2015 (HRA)

Date

Re-screened on 22 April 2015 on receipt of application documents

Transboundary re-screening undertaken by the Secretary of State

Following **submission of the DCO application which included the Environmental Statement and the Applicant's HRA report** the Secretary of State has reconsidered the transboundary screening decision undertaken on 25 January 2013.

The Secretary of State has identified the following matters that differ from those considered at the time of the previous transboundary screening decision:

- change in the description of the proposed development
- identification of likely significant effects (LSE) on European Sites relating to marine mammals in other EEA States, and
- other potential LSE on EEA States.

Change in the description of the proposed development

The original description in the applicant's scoping report, Chapter 3, stated that the spacing of the turbines could range between 720m and 3km. The ES, Chapter 3, paragraph 3.2.4 now states that no wind turbine generator (WTG) will be positioned closer than 810m away from the nearest neighbouring WTG. The minimum spacing of each turbine has been increased by 90m.

Similarly, Chapter 3 of the applicant's scoping report stated that cable jointing pits will be positioned along the on shore cable routes at intervals of 600m to 1000m, Chapter 3 of the ES now states that cable jointing pits along the onshore cable route are expected to be at intervals of approximately 750m to 2500m. The greater distances for cable jointing pit intervals quoted in the ES indicate that there are likely to be fewer cable jointing pits along the onshore cable route.

The significant effects of the project on the environment in another European Economic Area (EEA) Member States are not anticipated to alter from those identified in the original screening as a result of these design changes.

Identification of likely significant effects (LSE) on European Sites relating to marine mammals in other EEA States

The applicant's Scoping Report (October 2012) identified designated European sites in Belgium, Germany, Denmark and the Netherlands which might be relevant to the

assessment of potential impacts of the proposed development.

The HRA Report (Document 12.6) (dated January 2015) presents the results of the LSE screening for all European sites. Table 4.3 summarises the results of the screening for LSE and concludes that LSE cannot be excluded for European sites within the following EEA States: Belgium, Germany, Denmark the Netherlands; and France.

Other potential LSE on EEA States

Table 4.2 in Annex 4.5.2 of the ES (Transboundary Impacts Screening Note) considers whether the proposed development may result in an effect on the environment or the interests of another EEA state. The EEA States considered are: Belgium; Germany; Denmark; the Netherlands; France; Norway and Iceland, although the applicant has not made it clear which of these States are likely to be effected in terms of the below topics:

Marine processes: no transboundary impacts identified.

Benthic and subtidal ecology: no transboundary impacts identified.

Fish and shellfish ecology: potential for transboundary impacts due to construction, operational and decommissioning impacts, which have the potential to affect fish spawning and nursery habitats in the North Sea. Annex II fish species listed as features of Natura 2000 sites in other EEA states or species that are of commercial importance for fishing fleets of other EEA states.

Marine mammals: potential for transboundary impacts due to the mobile nature of Annex II marine mammal species listed as qualifying features of Natura 2000 sites in other EEA states and the distance of the proposed development from the border of other EEA states. Potential impacts directly resulting from underwater noise during construction piling and from vessels, and indirectly due to disturbance to prey (fish) species.

Ornithology: potential for transboundary impacts on bird species, wide foraging and migratory ranges of bird species and as qualifying features of Natura 2000 sites in other EEA states.

Commercial fisheries: potential for transboundary impacts on foreign commercial fishing activities operating in the area, including demersal trawling, beam trawling, demersal seining and other gears. Fishing effort may also be displaced from the proposed project area to alternative fishing grounds in other EEA states, with implications on those fishing grounds.

Shipping and navigation: potential for transboundary impacts due to physical presence of the turbines causing deviation of some shipping routes. Potential impact on navigation aids and radar of commercial vessels of other EEA states.

Aviation, military and communication: no transboundary impacts identified.

Marine archaeology and ordnance: no transboundary impacts identified.

Seascape and visual resources, and historic landscape: no transboundary impacts identified.

Infrastructure and other marine users: no transboundary impacts identified.

Socio economics: potential transboundary impacts due to foreign shipping and navigation and foreign commercial fishing and on the economies of other EEA states through the purchase of project components, equipment and the sourcing of labour from companies based outside the UK.

Secretary of State's comments

Under Regulation 24 of the Infrastructure Planning (Environmental Impact Assessment)

Regulations 2009 (as amended) (the EIA Regulations) and on the basis of the current information available from the Applicant, there is no change to the previous conclusion, and the Secretary of State remains of the view that the proposed development **is likely** to have a significant effect on the environment in another EEA State.

In reaching this view the Secretary of State has applied the precautionary approach (as explained in the Planning Inspectorate's Advice Note 12: Transboundary Impacts Consultation); and taken into account the information currently supplied by the Applicant.

Action:

No new EEA States have been identified as being likely to have significant effects on their environment.

Those EEA States that have already been identified include the Netherlands, Denmark, Germany, Iceland, Norway, France, and Belgium.

On a precautionary basis, notification letters will be re-sent to those States who did not respond or responded negatively to the previous Regulation 24 notification.

Consultation letters will be sent to States who respond to the Regulation 24 notification indicating a wish to be consulted.

Date 22 April 2015

Note: The Secretary of State's duty under Regulation 24 of the EIA Regulations continues throughout the application process

Note:

1. The Secretary of State's screening of transboundary issues is based on the relevant considerations specified in Annex 4 to Planning Inspectorate Advice Note 12 available on the Planning Inspectorate's website at <http://infrastructure.planningportal.gov.uk/legislation-and-advice/advice-notes/>