



<b>Transboundary screening undertaken by the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State (SoS) for the purposes of Regulation 32 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 2017 EIA Regulations)</b>	
<b>Project name:</b>	Dogger Bank D Wind Farm ('the Proposed Development')
<b>Address/Location:</b>	Array area located approximately 210km off the north-east coast of England on the Dogger Bank in the southern North Sea. Linked by export cables to landfall in the East Riding region of Yorkshire. Onshore components would be located within the East Riding of Yorkshire or the far south-eastern part of Hull City Council area.
<b>Planning Inspectorate Ref:</b>	EN010144
<b>Date(s) screening undertaken:</b>	First screening – 19 January 2024 following the Applicant's request for a Scoping Opinion

<b>FIRST TRANSBOUNDARY SCREENING</b>	
<b>Document(s) used for transboundary Screening:</b>	Environmental Impact Assessment Scoping Report – Dogger Bank D Offshore Wind Farm (21 April 2023) ('the Scoping Report') Email correspondence from Applicant on 11 January 2024
<b>Screening Criteria:</b>	<b>The Inspectorate's Comments:</b>
<b>Characteristics of the Development</b>	<p>The Scoping Report describes the Proposed Development as an offshore windfarm with a technical capacity of approximately 1.8GW, with associated transmission and onshore infrastructure. A subsequent update from the Applicant in January 2024 has confirmed that the offshore windfarm would now be circa 2000MW in capacity.</p> <p>There are two options for how the electricity from the Proposed Development will be used, referred to in the Scoping Report as the 'National Grid (NG) Option' and the 'Hydrogen Option'. The Hydrogen Option includes a Hydrogen Production Facility (HPF), the production output of which is currently unknown.</p> <p>The offshore components broadly comprise:</p> <ul style="list-style-type: none"> <li>• up to 100 wind turbines;</li> <li>• inter-array cabling (up to 550km total length);</li> <li>• offshore platform structures (up to 4 - an offshore substation platform, offshore collector platform, offshore</li> </ul>

	<p>High Voltage Alternating Current (HVAC) booster station and offshore convertor station); and</p> <ul style="list-style-type: none"> <li>• offshore export cables to landfall of either High Voltage Direct Current (HVDC) or HVAC (up to 4 cables for the Hydrogen Option (including two separate fibre optic cables) and up to 6 cables for the NG Option (including six fibre optic cables)), with a total approximate length of 300km.</li> </ul> <p>Potential foundation types for offshore structures include monopiles, mono suction bucket/ suction bucket jacket, piled jacket and gravity base. Scour protection would be required at the base of the foundations.</p> <p>Each offshore export cable would be installed in a separate trench. Potential cable protection methods include rock placement, grout/ sand/ rock bags, concrete mattresses or frond mattresses.</p> <p>The onshore components broadly comprise:</p> <ul style="list-style-type: none"> <li>• landfall electrical infrastructure;</li> <li>• onshore export cable (up to 15 cables and 5 separate fibre optic cables buried in up to 5 trenches), up to approximately 18km in cable length; and</li> <li>• HPF infrastructure, including: <ul style="list-style-type: none"> <li>○ hydrogen production system;</li> <li>○ water supply and treatment system;</li> <li>○ hydrogen export infrastructure; and</li> <li>○ power infrastructure including onshore converter station and/ or onshore substation.</li> </ul> </li> </ul> <p>Table 3-1 of the Scoping Report shows that if the Hydrogen Option is taken forward, the required landfall electrical infrastructure, onshore export cable and onshore converter station/ substation would form part of the Proposed Development. However, if the NG Option is pursued, those elements would instead be developed by NG Electricity Transmission.</p> <p>Construction of the Proposed Development is anticipated to begin no earlier than 2027, with operation in 2029. The Proposed Development assets would have an operational life of a minimum of 35 years after which the Proposed Development would be decommissioned.</p>
<p><b>Location of Development (including existing use) and Geographical area</b></p>	<p>The site location is shown on Figure 1-1 of the Scoping Report.</p> <p><b>Offshore</b></p> <p>The array area would be located approximately 210km off the north-east coast of England (immediately to the east of the Dogger Bank C Offshore Wind Farm). The nearest landfall</p>

	<p>point in the UK is Flamborough Head. The array area is approximately 249km<sup>2</sup>.</p> <p>The offshore export cables extend in a south-westerly direction to the landfall options in Aldbrough, Saltend and Easington, on the East Yorkshire coast of England.</p> <p>The Scoping Report identifies a number of existing uses within and in proximity to the Offshore Scoping Area, including:</p> <ul style="list-style-type: none"> <li>• existing and planned offshore windfarms;</li> <li>• marine users;</li> <li>• commercial fishing;</li> <li>• oil and gas infrastructure;</li> <li>• subsea cables and pipelines including the Langeded gas pipeline (UK to Norway) which crosses the offshore export cable corridor;</li> <li>• commercial shipping activities;</li> <li>• recreational activities such as sailing and fishing; and</li> <li>• Ministry of Defence activities.</li> </ul> <p><b>Onshore</b></p> <p>The onshore components would be located within the jurisdiction of East Riding of Yorkshire Council and Hull City Council. Figure 4-1 of the Scoping Report displays the onshore export cable corridor areas of search and the landfall areas of search for Aldbrough, Saltend and Easington. The areas of search for the HPF for Aldbrough, Saltend and Easington are also shown on Figure 4-1.</p> <p>Existing land uses within the Onshore Scoping Area include urban development, areas of industry and agricultural land.</p> <p><b>Distance to EEA States</b></p> <p>The Scoping Report states that the eastern border of the array area is the maritime border between the UK and the Netherlands. This border separates the North Sea into UK and Dutch international waters and delineates the edge of the UK Exclusive Economic Zone (EEZ)/ Renewable Energy Zone.</p>
<p><b>Environmental Importance</b></p>	<p><b>Offshore</b></p> <p>The Scoping Report identifies the following UK European sites within the Offshore Scoping Area:</p> <ul style="list-style-type: none"> <li>• Dogger Bank Special Area of Conservation (SAC);</li> <li>• The Humber Estuary SAC;</li> <li>• The Humber Estuary Special Protection Area (SPA) and Ramsar site;</li> <li>• Southern North Sea SAC; and</li> <li>• Greater Wash SPA.</li> </ul> <p>The Scoping Report also identifies non-UK Natura 2000 sites - the array area borders directly with the Dutch and German Dogger Bank European sites to the east. Approximately 70km south lies the Dutch Klaverbank Natura 2000 site.</p> <p><i>Benthic and intertidal ecology</i></p>

Scoping Report Table 7-9 identifies European sites designated for benthic and intertidal features within the Benthic and Intertidal Ecology Study Area (Dogger Bank SAC, Humber Estuary SAC and Ramsar site) along with their qualifying features. As shown on Figure 7-10 of the Scoping Report, instances of Annex I habitat Sandbanks which are slightly covered by sea water all the time are located throughout the study area. Patches of Annex I reef are located at the nearshore.

River lamprey and sea lamprey (qualifying features of Humber Estuary SAC and Ramsar) are migratory species.

#### *Fish and shellfish ecology*

The Scoping Report identifies a number of fish spawning and nursery areas within the Fish and Shellfish Ecology Study Area. These include spawning areas for plaice, sandeel, sole, whiting, cod, herring, lemon sole, mackerel and sprat. These also include nursery areas for plaice, sandeel, sole, whiting, cod, spurdog, tope shark, European hake, ling, anglerfish, herring, lemon sole, blue whiting, mackerel and sprat.

Elasmobranch species known to be present in the study area include small-spotted catshark, spurdog and thornback ray. Species which may be present in the study area include tope, cuckoo ray and common skate.

Migratory species known to have populations within the study area include Atlantic salmon, sea trout, European eel and smelt.

Shellfish species found within the region include European lobster, edible crab, Norway lobster and brown shrimp. Presence of European lobster and edible crab is associated with areas of rocky reef and exposed coastline within the study area.

#### *Marine mammals*

The Scoping Report identifies harbour porpoise (qualifying feature of the Southern North Sea SAC) as the most abundant marine mammal species present in the area of the Proposed Development. Other marine mammal species found to be present in the area are minke whale, white-beaked dolphin, common dolphin, bottlenose dolphin, grey seal and harbour seal.

The offshore ECC would traverse the Southern North Sea SAC (seasonal designated area of the SAC that has higher densities of the qualifying feature harbour porpoise during summer months) and the Offshore Scoping Area overlaps with the Humber Estuary SAC, where grey seal is a qualifying feature.

The Dutch Dogger Bank and Klaverbank Natura 2000 sites are designated for harbour porpoise, grey seal and harbour seal, whereas the German Dogger Bank is only designated for harbour porpoise and harbour seal.

The Scoping Report notes that populations of marine mammals are highly mobile.

*Intertidal and offshore ornithology*

The Scoping Report identifies seabird species likely to be present within the array area and/ or the wider Offshore Scoping Area. Species identified include gannet, guillemot, razorbill, fulmar, kittiwake, great black-backed gull, lesser black-backed gull, puffin, red-throated diver and Manx shearwater. These species include qualifying features and assemblage component species of the Flamborough and Filey Coast SPA, Farne Islands SPA and Forth Island SPA. The seabirds identified include a number of migratory species.

Within the intertidal area, bird species identified include cormorant, gulls, red-throated diver, eider, teal, wigeon and Brent goose and dunlin. These species include qualifying features of the Greater Wash SPA and Humber Estuary SPA and Ramsar.

*Commercial fisheries*

Key commercial fishing fleets operating across the study area identified in the Scoping Report include vessels from the UK and EEA States, primarily the Netherlands, Denmark, Belgium, Germany, France and Sweden. Norwegian ports receive landings from the study area.

*Shipping and navigation*

The Scoping Report identifies that cargo vessels, tankers and passenger vessels (cruise liners) traverse the study area. German military vessels were also recorded traversing the array area. There is potential for shipping routes to EEA States to be affected, although the Scoping Report does not identify specific EEA States in this regard.

*Aviation and radar*

The Scoping Report identifies that the airspace around the study area is used by international civil aviation. The array area is immediately adjacent to airspace delegated to the Netherlands.

*Archaeology and cultural heritage*

The Scoping Report identifies potential for wrecks, wreck remains, aircraft and aircraft remains to be present within areas likely to be affected by the Proposed Development. This could include wrecks or aircraft of non-British nationality, which may fall within the jurisdiction of another country, for example, foreign warships lost in UK waters. Additionally, the potential presence of palaeolandscape features which may cross international boundaries is identified in the Scoping Report.

*Seascape, landscape, and visual impact*

	<p>The array area is adjacent to the limit of UK waters and the study area extends beyond this into Dutch waters.</p> <p><b>Onshore</b></p> <p>Table 8-4 of the Scoping Report identifies the Greater Wash SPA and Humber Estuary SPA and Ramsar within the Onshore Scoping Area.</p>
<p><b>Potential impacts and Carrier</b></p>	<p>Impact pathways to EEA States have been identified within the Scoping Report as follows:</p> <p><b>Offshore</b></p> <p><i>Benthic and intertidal ecology</i></p> <ul style="list-style-type: none"> <li>• underwater noise from sources such as piling and clearance of unexploded ordnance during construction;</li> <li>• sediment plumes; and</li> <li>• spread of Invasive Non-Native Species (INNS).</li> </ul> <p><i>Fish and shellfish ecology</i></p> <ul style="list-style-type: none"> <li>• underwater noise from sources such as piling and clearance of unexploded ordnance during construction;</li> <li>• sediment plumes resulting in smothering of demersal eggs and altering habitats of importance; and</li> <li>• impacts of changes in fishing pressures.</li> </ul> <p><i>Marine mammals</i></p> <ul style="list-style-type: none"> <li>• underwater noise from sources such as piling and clearance of unexploded ordnance during construction;</li> <li>• indirect impacts through changes to prey resource;</li> <li>• vessel interaction/ collision; and</li> <li>• disturbance at seal haul out sites.</li> </ul> <p><i>Intertidal and offshore ornithology</i></p> <ul style="list-style-type: none"> <li>• direct habitat loss; disturbance and displacement; collision risk; and</li> <li>• indirect impacts through changes to prey availability and habitat.</li> </ul> <p><i>Commercial fisheries</i></p> <ul style="list-style-type: none"> <li>• loss of, or restricted access to, fishing grounds and potential displacement of fishing activity; presence of infrastructure leading to gear snagging; and</li> <li>• indirect impacts through displacement of commercially important fish and shellfish resources.</li> </ul> <p><i>Shipping and navigation</i></p> <ul style="list-style-type: none"> <li>• vessel displacement; increased vessel to vessel collision risk; reduction in under keel clearance; interaction with subsea cables; interference with vessel navigation and communication equipment; and reduction of emergency response capability.</li> </ul> <p><i>Aviation, radar and military</i></p>

	<ul style="list-style-type: none"> <li>• potential effects on international airspace from creation of aviation obstacles and increased air traffic.</li> </ul> <p><i>Offshore archaeology and cultural heritage</i></p> <ul style="list-style-type: none"> <li>• direct damage to archaeological receptors;</li> <li>• direct impacts to palaeolandscapes;</li> <li>• indirect impacts to heritage assets associated with potential changes to marine physical processes; and</li> <li>• changes to setting of heritage assets and changes to historic seascape character.</li> </ul> <p><i>Climate change</i></p> <ul style="list-style-type: none"> <li>• greenhouse gas (GHG) emissions.</li> </ul> <p><b>Onshore</b></p> <p>The Scoping Report states that transboundary effects are not considered to be relevant to onshore environmental topics.</p>
<p><b>Extent</b></p>	<p><b>Offshore</b></p> <p><i>Benthic and intertidal ecology</i></p> <p>The Scoping Report identifies potential for transboundary impacts on benthic ecology receptors, noting that the Dutch Dogger Bank European site lies adjacent to the array area and could be impacted.</p> <p><i>Fish and shellfish ecology</i></p> <p>There is potential for transboundary impacts on fish and shellfish ecology given the wide ranges and movements of some species. However, specific European sites in EEA States that include fish or shellfish as a qualifying feature which might be affected by the Proposed Development have not been identified in the Scoping Report.</p> <p><i>Marine mammals</i></p> <p>There is potential for transboundary impacts on marine mammals given the wide range and movements of these species and susceptibility to noise disturbance. Marine mammal qualifying features of the Dutch Dogger Bank and Klaverbank European sites and the German Dogger Bank European site could potentially be impacted, from the Proposed Development alone or cumulatively with other developments.</p> <p><i>Intertidal and offshore ornithology</i></p> <p>There is potential for transboundary impacts on offshore ornithological receptors due to long-distance foraging, movement into the area during non-breeding seasons or migration through the area. The Scoping Report references (unnamed) SPAs in Ireland, France, the Netherlands and "<i>potentially other countries</i>" which include Manx shearwater, fulmar, or lesser black-backed gull as qualifying features and states that the breeding foraging ranges of these species could result in potential connectivity between individuals breeding at the SPAs and the array area. The Scoping Report also</p>

acknowledges that individuals from locations including Norway and Iceland may bolster the UK populations of seabirds using the waters in and around the array area.

The Applicant has subsequently stated (email correspondence on 11 January 2024) that the Proposed Development would not have connectivity with SPAs in Ireland, explaining this has been concluded in the Habitats Regulations Assessment (HRA) screening exercise for the Proposed Development (which supersedes the statement in the Scoping Report).

#### *Commercial fisheries*

There is potential for transboundary impacts on commercial fisheries. Key commercial fishing fleets operating across the study area identified in the Scoping Report include vessels from the UK and EEA States, primarily Netherlands, Denmark, Belgium, Germany, France and Sweden. Norwegian ports receive landings from the study area.

#### *Shipping and navigation*

There is potential for transboundary impacts on shipping routes which transit to/ from EEA States, although the Scoping Report does not identify specific EEA States in this regard.

#### *Aviation, radar and military*

There is potential for transboundary impacts from effects on international civil aviation airspace and from the array area being immediately adjacent to airspace delegated to the Netherlands.

#### *Offshore archaeology and cultural heritage*

There is potential for transboundary impacts if wrecks or aircraft of non-British nationality are subject to impacts from the development and fall under the jurisdiction of another country. Transboundary impacts could also occur where palaeolandscapes within the North Sea cross international boundaries. Indirect transboundary impacts associated with changes to marine physical processes could also occur.

The Scoping Report does not identify specific EEA States that could be impacted in this regard.

#### *Climate change*

The Scoping Report identifies potential transboundary impacts resulting from GHG emissions from the Proposed Development, stating that the effects of climate change are experienced globally, irrespective of where GHG emissions occur.

#### **Onshore**

The Scoping Report states that transboundary impacts are not expected to be relevant to onshore topics. On the basis of the information provided in the Scoping Report, the Inspectorate has not identified any potential effects on EEA States as a result of the onshore works.



<b>Magnitude</b>	The magnitude of potential transboundary impacts has not been evaluated in the Scoping Report.
<b>Probability</b>	The probability of potential transboundary effects occurring has not been evaluated in the Scoping Report.
<b>Duration</b>	<p>The duration of potential transboundary effects has not been evaluated in the Scoping Report.</p> <p>Construction of the Proposed Development is expected to begin no earlier than 2027. Based on a commencement date of 2027, first power is expected to be generated in 2029 giving an approximate construction works duration of 2 years.</p> <p>The Proposed Development assets would have an operational life of a minimum of 35 years after which the Proposed Development would be decommissioned.</p>
<b>Frequency</b>	The frequency of potential transboundary impacts has not been evaluated in the Scoping Report.
<b>Reversibility</b>	The reversibility of potential transboundary impacts has not been evaluated in the Scoping Report.
<b>Cumulative impacts</b>	<p>A specific list of other developments to be included within the cumulative impact assessment has not been included within the Scoping Report. The types of plans or projects that may be considered are listed in paragraphs 203 and 204 of the Scoping Report.</p> <p>The Applicant's cumulative impact assessment has not yet been undertaken so the Applicant has not identified any likely significant transboundary cumulative effects at this stage. However, the Scoping Report does identify potential transboundary effects on ecological receptors through the cumulation of underwater noise emissions.</p>

**Transboundary screening undertaken by the Inspectorate on behalf of the SoS**

Under Regulation 32 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 2017 EIA Regulations) and on the basis of the current information available from the Applicant, the Inspectorate is of the view that the Proposed Development **is likely** to have a significant effect on the environment in an EEA State.

In reaching this view the Inspectorate has applied the precautionary approach (as explained in its Advice Note Twelve: Transboundary Impacts) and taken into account the information currently supplied by the Applicant.

**Action:**

Transboundary issues notification under Regulation 32 of the 2017 EIA Regulations is required.

States to be notified:

- Denmark, Belgium and Sweden (potential impacts on commercial fisheries);
- France (potential impacts on commercial fisheries and offshore ornithology);
- The Netherlands (potential impacts on commercial fisheries, benthic and intertidal ecology, marine mammals, aviation and radar, and offshore ornithology);

- Norway (potential impacts on commercial fisheries, existing infrastructure (Langeled gas pipeline) and offshore ornithology);
- Germany (potential impacts on commercial fisheries, marine mammals, and shipping and navigation); and
- Iceland (potential impacts on offshore ornithology).

**Date:** 19 January 2024

**Note:** The SoS' duty under Regulation 32 of the 2017 EIA Regulations continues throughout the application process.

**Note:**

The Inspectorate's screening of transboundary issues is based on the relevant considerations specified in the Annex to its Advice Note Twelve, available on our website at <http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>