

Hornsea 4

Environmental Impact Assessment (EIA)

The purpose of EIA is to identify and reduce the potential for significant environmental effects arising from the construction, operation and decommissioning of a development. This information is then presented in an Environmental Statement, which will be published in Q1 2020 and submitted as part of our Development Consent Order (DCO) application. This will assist regulators in the decision-making process.

What is the proportionate approach?

To ensure a robust EIA, the 'maximum design scenario' has been assessed for potential construction methodologies and infrastructure design.

This approach is referred to as the 'Rochdale Envelope' and is well established for large scale infrastructure projects. It ensures that the maximum design scenario is assessed, and no adverse environmental effects will occur other than those predicted in the EIA.

How have the environmental impacts been identified and assessed?

Hornsea Four has taken a proportionate approach to the EIA, which began with submission of an EIA Scoping Report to the Planning Inspectorate in October 2018. A response to this (the 'Scoping Opinion') was received from the Planning Inspectorate in November 2018 which included comments from a range of stakeholders.

The Scoping Opinion has formed the basis of the EIA by identifying and confirming what topics require assessment. Consultation with the public, stakeholders, landowners and statutory bodies has also been undertaken throughout the EIA process to inform the approach to each assessment.

For each topic, a description of the environmental baseline has been identified through a combination of desk-based study, environmental surveys and consultation.

Impacts Register

As part of our approach to delivering a proportionate EIA process for Hornsea Four, we have developed an 'impacts register'.

This register presents all potential significant impacts of the construction, operation and decommissioning of the project which have been identified.

An assessment has been made of the severity of each potential impact. Where associated significant environmental effects are predicted, mitigation measures are proposed to reduce impacts to acceptable levels, where possible.

Commitments Register

Hornsea Four has taken a proactive approach to avoid or minimise environmental effects. All mitigation measures (commitments) are presented within a Commitments Register.

These mitigation measures include avoidance, best practice and design commitments. They are classified as primary, secondary or tertiary measures in accordance with the Institute of Environmental Management and Assessments' (IEMA) definitions:

- **Primary (inherent) mitigation:** measures that form an intrinsic part of the design, are described in the design evolution narrative and included within the project description, e.g. reducing development heights to reduce visual impact.
- **Secondary (foreseeable) mitigation:** measures that require further activity in order to achieve the anticipated outcome, e.g. development of the optimal reinstatement measures for restoring a disturbed sensitive natural habitat.
- **Tertiary (inexorable) mitigation:** measures which will be required regardless of the EIA process as they are imposed, e.g. as a result of legislative requirements and/or standard industry practices (such as a Construction Environment Management Plan or a Code of Construction Practice or similar).

Summary of our key Environmental Assessments

Below is a summary of our key studies and assessments as part of our EIA.

Full detail of our Environmental Assessments can be found in our PEIR and non-technical summary, which can be found at: <https://hornseaprojects.co.uk/Hornsea-Project-Four/Documents-Library/Formal-Consultation>



Offshore and Intertidal Ornithology

The assessment has considered impacts from disturbance and displacement of birds, and from effects on their prey species during the construction phase. Operational effects that have been assessed include collision risk and barrier effects (i.e. blocking of flight paths) from the wind turbines.

We have committed to increasing the gap between the sea and the lowest blade tip height to 35m above Lowest Astronomical Tide, on order to reduce the risk of bird collisions.



Hydrology and Flood Risk

Hornsea Four onshore infrastructure will be located within two main surface water drainage catchments: the Barmston Sea Drain, and the River Hull. The flood risk assessment undertaken concludes that landfall is at low risk from flooding by rivers or the sea, as is the majority of the onshore cable corridor and onshore substation.

We have committed to crossing main rivers and internal Drainage Board maintained drains by drilling underneath, via Horizontal Directional Drilling (HDD). Post-construction, we have committed to reinstating the working area to pre-construction conditions wherever possible.



Ecology and Nature Conservation

Surveys are being undertaken to characterise the ecology of the area (including surveys for habitats, badgers, birds, bats, water voles, otters and Great crested newts). In order to coincide with accepted survey timings for these species, these surveys are currently ongoing.

We have avoided designated ecological sites where possible through the route planning and site selection process.



Landscape and Visual

No significant effects have been identified as a result of construction of the cable corridor or at the landfall area, with the exception of localised effects of the landfall works on views experienced by the local community and visitors to the beach.

Construction works at the substation are likely to have significant effects on the local landscape within the immediate vicinity of the site. A landscape plan and a design vision document have been produced to reduce landscape and visual effects and to help integrate the substation into the local landscape.



Traffic and Transport

Assessments into the potential impacts associated with an increase in construction traffic take into account forecast construction traffic generation (e.g. HGVs and construction personnel) and the proposed access locations required to construct Hornsea Four.

We have committed to developing a Construction Traffic Management Plan (CTMP) in addition to adherence to the core working hours.



Noise and Vibration

A series of noise surveys were undertaken in April 2019 at landfall, along the onshore cable route and at the onshore substation site to determine the baseline noise environment.

A key part of the route planning and site selection work ensured that the onshore cable route avoided all noise sensitive properties by at least 50m, with construction access roads along the cable route taking access from the highway network at least 150m from such properties.

We have committed to limiting the operational noise of the onshore substation to be no greater than 5 dB above the representative background noise levels during daytime and night.