# DOGGER BANK D WIND FARM

Statutory consultation 10 June to 5 August 2025





www.doggerbankd.com

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# Introduction

# Dogger Bank D is a proposed fourth phase of the Dogger Bank Wind Farm, the world's largest offshore wind farm in construction.

With a capacity of up to 1.5 gigawatts (GW), Dogger Bank D is being developed in the North Sea, over 210km from the Yorkshire coast.

We've made a lot of progress in developing our plans. Through our two previous consultation phases, we've listened to many different stakeholders representing the local community to ensure that our proposals have been shaped by both technical expertise and local views.

Thank you to everyone who has already provided their opinions and thoughts on the plans. We now want your feedback on our updated proposals as part of the statutory consultation.

This document explains our current proposals, the work done to identify, assess and address potential environmental impacts, and how you can take part in the consultation. Your feedback, along with technical and environmental studies, will help shape our final plans before we submit them for approval.

We invite you to give feedback, join our events and webinars, and visit our website.

Scan the QR code to visit our website >>>



Statutory consultation will start on Tuesday 10 June 2025 and close at 11:59pm on Tuesday 5 August 2025.

### **Introducing Dogger Bank D**



**Up to 1.5GW**Electricity exported by offshore wind



Enough to power the equivalent of up to **2.5 million** homes\* in the UK



Up to 113 turbines



Up to **800km** of offshore export cables

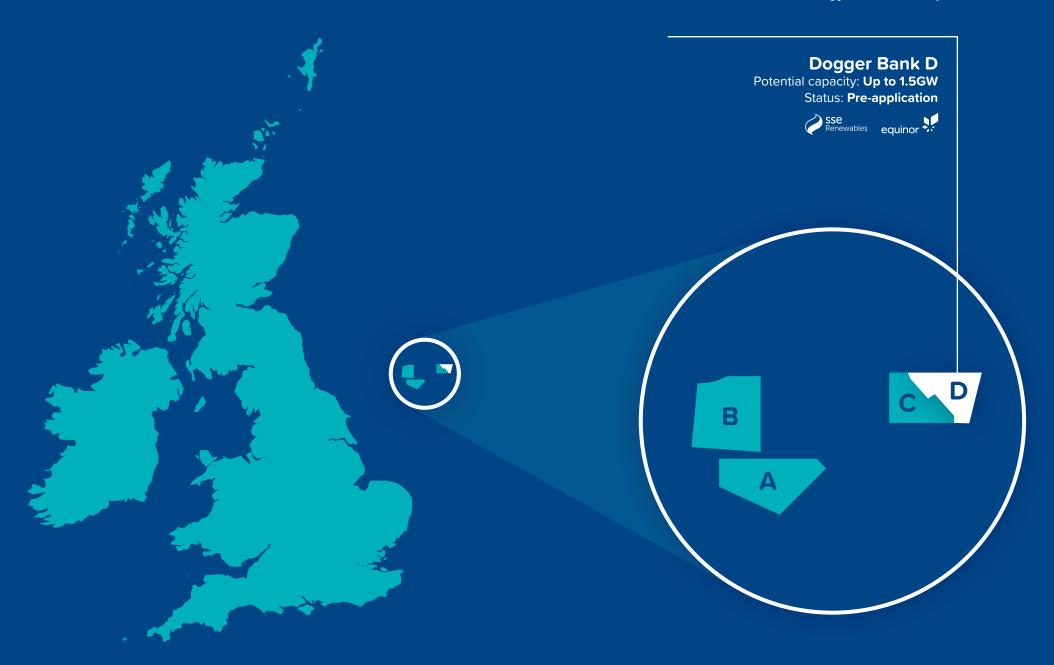


Up to **400km** of offshore inter-array cables



Up to **55km** of onshore export cables

\*Up to 2.5 million homes powered per annum based on mean domestic annual electricity consumption in Great Britain 2023, 3,301kWh per household; DESNZ 2024, assumed offshore wind load factor of 62.3%, DESNZ 2024 (Contracts for Difference Standard Terms Notice), and projected installed capacity of up to 1.5GW.



Map of Dogger Bank A. B. C & D

# **Background**

# Historically, most of the UK's electricity has been generated by fossil fuels, which has had a sizeable impact on carbon emissions.

Renewable energy sources (such as wind, solar, biomass and hydroelectricity) emit lower or no emissions and are vital to the future of energy security. In 2024, 50.8%\* of UK electricity generation was produced by renewable technologies.

\*Department for Energy Security & Net Zero, Energy Trends report for 2024.

### The team behind Dogger Bank D

Dogger Bank D is being developed as a 50 / 50 joint venture between SSE Renewables and Equinor, two of the world's leading companies in the development and operation of offshore wind energy.

SSE Renewables is leading the development of Dogger Bank D on behalf of the joint venture, with both companies having been involved in designing and securing planning consent for Dogger Bank Wind Farm, the world's largest offshore wind farm in construction.



#### **About SSE Renewables**

SSE Renewables is a leading developer and operator of renewable energy generation, focusing on onshore and offshore wind, hydro, solar and battery storage. Part of energy infrastructure company SSE plc. UK-listed in the FTSE100, it is delivering clean power assets to increase SSE's operational renewable generation capacity as part of a fiveyear clean energy plan to 2027, the "£17.5bn Net Zero Acceleration Programme (NZAP) Plus. This includes delivery of the world's largest offshore wind farm in construction, the 3.6GW Dogger Bank Wind Farm. SSE Renewables has a team of around 2.000 renewable energy professionals with a passion for championing clean energy delivery, each based across the markets in which it operates. It operates across its core UK and Ireland markets, as well as in carefully selected international markets in Continental Europe and Japan.



### **About Equinor**

Equinor has been a reliable energy partner to the UK for over 40 years, providing a stable supply of oil and gas, developing the UK's offshore wind industry, and pioneering solutions to decarbonise the UK economy. Equinor has a long track record of developing offshore wind farms in the UK, having built and commissioned into operation the Sheringham Shoal Offshore Wind Farm, Dudgeon Offshore Wind Farm and Hywind Scotland Pilot Park, the world's first floating offshore wind farm. Equinor has been operating in the UK for more than 40 years and possesses over 50 years of offshore experience in the North Sea area. Equinor aims to power seven million homes from its UK windfarms by 2030.

### **Dogger Bank Wind Farm**

Dogger Bank Wind Farm is an offshore wind farm being constructed in three phases – Dogger Bank A, B and C – located between 130km and 190km from the North East coast of England at their nearest points. Collectively they will become the world's largest offshore wind farm.

Each phase will have an installed generation capacity of 1.2GW and represents a multi-billion-pound investment. Combined, they will have an installed capacity of 3.6GW and will be capable of powering up to six million homes annually.\*

Construction began in 2020, and Dogger Bank A started to generate renewable energy for the first time in October 2023.

The Dogger Bank Wind Farm is a joint venture partnership between SSE Renewables (40%), Equinor (40%) and Vårgrønn (20%).

SSE Renewables is leading on the development and construction of Dogger Bank Wind Farm, and Equinor will operate the wind farm on completion and during its expected operational life of around 35 years.

Dogger Bank D is a proposed fourth phase of Dogger Bank Wind Farm. This exciting new phase aims to unlock the full potential of the eastern portion of the original Dogger Bank C area. It is a Nationally Significant Infrastructure Project (NSIP) which will require a new Development Consent Order (DCO) to facilitate its construction and operation.

\*6 million homes powered per annum based on Typical Domestic Consumption Values (Medium Electricity Profile Class 1, 2,900kWh per household; OFGEM, January 2021), typical 55% wind load factor, and projected installed capacity of 3.6GW.







# Why we need offshore wind and Dogger Bank D

Climate change caused by greenhouse gases which have increased over the past 200 years, is a global issue affecting weather, nature, and health. To address this, the UK aims to balance the emissions we produce with those we reduce or remove, reaching net zero emissions by 2050. Offshore wind is a key part of this plan.

Offshore wind can make a significant contribution to the UK Government's plans to fully decarbonise our power system.

Dogger Bank D supports this energy transition by unlocking the full potential of the eastern portion of the original Dogger Bank C area.



# **Energy security**

The UK has the world's second-largest offshore wind market, with 15.9GW of grid connected offshore wind capacity and a pipeline of 95GW (includes operational, committed, under development, pre-planning and identified potential). The Climate Change Committee estimates the UK requires 125GW of offshore wind capacity to meet Net Zero/their Balanced Pathway recommendation.\*

Dogger Bank D will have a capacity of up to 1.5GW of renewable energy - enough to power up to 2.5 million homes each year\*\*. It will also boost energy security by providing reliable, homegrown electricity, reducing dependence on imported oil and gas, and protecting against global energy price changes.

Offshore wind can help lower electricity prices by providing a stable, homegrown source of energy that reduces reliance on imported fossil fuels. As more offshore wind farms generate electricity, the increased supply can help bring down costs, especially when compared to volatile oil and gas prices. Additionally, once built, wind farms have low operating costs, which can contribute to more predictable and potentially lower energy prices over time.

\*Source The Crown Estate Offshore Wind Report.

\*\*Up to 2.5 million homes powered per annum based on mean domestic annual electricity consumption in Great Britain 2023, 3,301kWh per household; DESNZ 2024, assumed offshore wind load factor of 62.3%, DESNZ 2024 (Contracts for Difference Standard Terms Notice), and projected installed capacity of up to 1.5GW.

# Our ambitions for Dogger Bank D

As developers, we have a solid track record in delivering responsibly and innovatively, and we're confident that Dogger Bank D can make a big impact on the UK's renewable energy mix.

With ambitious Net Zero goals and major upgrades to the grid, it's crucial we explore opportunities to unlock the full potential of offshore wind in the North Sea and help the UK move to a more secure and resilient energy system.

# Reducing impacts on local communities through coordination

We are actively engaging with neighbouring Nationally Significant Infrastructure Projects (NSIP) such as other offshore wind farms to identify potential opportunities for coordination. If feasible coordination opportunities are identified, they may enable the Project to reduce impacts on local communities and the environment, and to propose coordinated development solutions.

Dogger Bank A and Dogger Bank B have shared survey data with us as part of our coordination efforts, as well as the proposed Dogger Bank South Offshore Wind Farms Projects.



# The consenting process

As Dogger Bank D would generate more than 100 megawatts (MW) of power, it is classed as a NSIP and requires approval under the Planning Act 2008.

This requires us to submit a Development Consent Order (DCO) to the Planning Inspectorate, the agency responsible for examining and making recommendations to the Secretary of State on NSIP applications.

The Planning Inspectorate will oversee the DCO process. If our application is accepted for examination, an independent Panel will examine the proposals and make a recommendation to the Secretary of State for Energy Security and Net Zero. The Secretary of State will then consider the Panel's recommendation and decide whether to grant the DCO.

PRE-APPLICATION

#### STAGE 1: PRE-APPLICATION

Responsibility of Dogger Bank D

Timescale
Approx 2 years

This stage involves consultation and engagement with statutory consultees, those with an interest in the affected land, the local community and the public (in accordance with sections 42, 47 and 48 of the Act) to gather feedback and inform the application.

#### **Activities**

Site selection, design, surveys, consultation, Environmental Impact Assessment, land referencing

2 ACCEPTANCE

#### STAGE 2: ACCEPTANCE

Responsibility of Planning Inspectorate

Timescale 28 days

After the application is submitted, the Planning Inspectorate will decide whether it is suitable for examination.

#### Activities

Adequacy of consultation representations by local authorities

Consistency of documents

PRE-EXAMINATION

#### STAGE 3: PRE-EXAMINATION

Responsibility of Planning Inspectorate/ Dogger Bank D

Timescale
3-5 months

If accepted for examination, people can register with the Planning Inspectorate for updates and comment on the application, with the Panel confirming the examination timetable after a preliminary meeting.

#### **Activities**

Registration as an Interested Party, appointment of Examining Authority, examination timetable, preliminary meeting, Relevant Representations

#### Stakeholder engagement

We have included a diagram of the application process above. You can find out more information about the DCO process by visiting the Planning Inspectorate's website: **Nationally Significant Infrastructure Projects:** 

The stages of the NSIP process and how you can have your say - GOV.UK

Scan the QR code for more information





#### STAGE 4: **EXAMINATION**

Responsibility of Examining Authority

Timescale 6 months

The Panel reviews the application, gathers evidence, and considers feedback from interested parties.

#### **Activities**

Questions, Representations, Hearings, Local Impact Reports, updates to key documents



#### STAGE 5: RECOMMENDATION

Responsibility of Examining Authority

Timescale

3 months

The Panel submits its findings and a recommendation to the Secretary of State.

#### **Activities**

Recommendation made to Secretary of State



#### STAGE 6: **DECISION**

Responsibility of Secretary of State for the Department for Energy Security and Net Zero

Timescale 3 months

The Secretary of State reviews the recommendation and decides whether or not to grant the DCO.

#### Activities

Consideration of recommendation

Decision made

### Stakeholder engagement

A DCO application involves extensive consultation and local involvement. We are currently conducting a statutory consultation which is required to meet the legal requirement for nationally significant projects, as outlined in the Planning Act 2008. This stage is crucial for gathering feedback from local communities to help shape the project proposals.

The Project will remain in the pre-application stage until the DCO application is submitted in 2026.



# **Consulting Landowners**

We aim to move forward with the Project with the agreement of landowners. However, for projects such as Dogger Bank D, it's common to seek powers of compulsory acquisition within the DCO to ensure the project can proceed. The Planning Inspectorate will decide if granting these powers is appropriate. Therefore, we are working to identify and consult with individuals who may be affected by the development before submitting our application for the DCO.

We will seek to permanently acquire the land for the Onshore Converter Station (OCS) and Energy Storage and Balancing Infrastructure (ESBI). For the onshore export cable route, we will only require temporary access during construction, and after that, we will seek an easement to allow access to the underground cables when maintenance is needed.

# **Dogger Bank D statutory consultation**

### **Purpose of this consultation**

Statutory consultation is a formal process required under the Planning Act 2008 for Nationally Significant Infrastructure Projects such as Dogger Bank D. It gives local communities, stakeholders, and statutory bodies a chance to provide feedback on the proposals before an application for a DCO is submitted. As part of this process, we have published a Preliminary Environmental Information Report (PEIR), explaining the Project, its possible environmental effects, and ways to reduce them.

Stakeholders, including local residents, businesses, landowners, and environmental groups, are encouraged to get involved in the consultation process. They can do this by reading the PEIR and other consultation materials, which outline the proposals, potential mitigation measures, proposed enhancements, and project commitments.

Stakeholders can also attend consultation events and webinars to learn more and ask questions, submit feedback online or by post, and speak directly with the project team. All comments received will play an important role in shaping the final plans before they are submitted for approval.

See page 59 for more information about how to provide your feedback.

### **Statement of Community Consultation**

We have published a Statement of Community Consultation (SoCC), which explains how we plan to conduct our statutory consultation with the local community living near our onshore proposals.

This statutory consultation will start on Tuesday 10
June 2025 and close at
11:59pm on Tuesday 5
August 2025.

# What is a Statement of Community Consultation?

A SoCC is a formal document that outlines how the Project plans to engage with the local community during the consultation process. It provides details on who will be consulted, how they will be consulted, and what opportunities the public will have to share their views on the proposed project. This includes outlining events, online resources, and methods for gathering feedback.

You can read our SoCC, which is available on our website, at local deposit locations or at our events.



### Attend a consultation event

Feel free to drop in at any of the events listed below. These sessions are a great chance to learn more about our proposals, meet the project team, read consultation materials (which are available to take home), and ask any questions you may have.

TUESDAY

24

JUNE

**Skipsea Village Hall**Bridlington Road, Skipsea
YO25 8TJ

3pm to 6.30pm

26
JUNE

Walkington Village Hall 17 East End, Walkington HU17 8RX

3pm to 6pm

25

**Leven Sports Hall** North Street, Leven HU17 5NF

2pm to 7pm

PRIDAY

27

JUNE

**Toll Gavel Church Hall** 27 Toll Gavel, Beverley HU17 9AA

10am to 2pm

THURSDAY

26

JUNE

**Cottingham Civic Hall**Market Green, Cottingham
HU16 5QG

10am to 2pm

28
JUNE

**Beverley Memorial Hall** 73-75 Lairgate, Beverley HU17 8HN

10am to 2pm

# Sign up for a webinar

Our webinars provide a convenient way to learn more and ask questions for those who prefer or need to join remotely. Each webinar will be held on a secure platform and will include a presentation from the Project team, followed by a question-and-answer session.



**Online** 

6pm to 7pm



**Online** 

12pm to 1pm

Visit <u>www.doggerbankd.com</u> to sign up up, email **contact@doggerbankd.com** or call **0800 254 5029**.









#### Read our consultation materials

We have published the following materials to support the statutory consultation:

- This consultation brochure which outlines the Project's proposals and consultation activities.
- The PEIR which includes detailed information and assessments completed to date.
- A Non-technical Summary (NTS) of the PEIR which provides a clear and accessible overview of the Project's proposals, including the likely environmental impacts, proposed mitigation measures, and the results of initial assessments to date.
- Documents associated with the Habitats Regulations Assessment in relation to potential impacts on nature conservation areas with European conservation status.
- Book of Maps covering offshore and onshore development.
- The SoCC which outlines how we will engage with and consult the local community
- Feedback form for consultees to provide their comments.

# Where to access information and materials



Email contact@doggerbankd.com



Call **0800 254 5029** 



Send a letter
FREEPOST DOGGER BANK D



**Search the interactive map** on the website



Visit our website www.doggerbankd.com

You can download the consultation materials, PEIR, complete the feedback form and view the interactive map via our website.

The onshore proposals cover an area from Skipsea on the coast to Cottingham in the southwest. Search our interactive map to see what part of the proposals are closest to you and leave us comments on specific locations.

Get in touch by phone or email to request a printed copy of the consultation brochure, Book of Maps (A3), feedback form with FREEPOST envelope and the NTS of the PEIR. We will post one copy of each free of charge.

You can also view or pick up a copy of the key documents at the following locations (please check opening hours with the venue before visiting):

Location	Opening Times	
Beverley Customer Service Centre Champney Treasure House, Champney Road Beverley, HU17 8HE	Mon to Weds: 9.30am to 4.30pm Fri: 9.30am to 4.30pm	Thurs, Sat and Sun: Closed
Bridlington North Library Marton Gate, Bridlington, YO16 6YD	Tues: 9.30am to 5.00pm Thurs: 9.30am to 7.00pm Fri: 9.30am to 2.00pm	Sat: 9.30am to 1.00pm Mon, Weds and Sun: Closed
Cottingham Library and Customer Service Centre Market Green, Cottingham, HU16 5QG	Mon and Tues: 9.30am to 4.30pm Thurs: 9.30am to 6.30pm Fri: 9.30am to 1.00pm	Sat: 9.30am to 12.30pm Weds and Sun: Closed
Driffield Centre Cross Hill, Driffield, YO25 6RQ	Mon: 9.30am to 6.30pm Tues to Fri: 9.30am to 4.30pm	Sat: 9.30am to 12.30pm Sun: Closed
Hornsea Library and Customer Services Broadway, Hornsea, HU18 1PZ	Mon: 9.30am to 4.30pm Tues: 12.30pm to 6.30pm Thurs: 9.30am to 1.30pm	Fri: 9.30am to 4.30pm Sat: 9.30am to 12.30pm Weds and Sun: Closed
<b>Leven Library</b> 74 East Street, Leven, HU17 5NG	<b>Weds:</b> 10.30am to 12.30pm, 3.30pm to 7.00pm	Mon, Tues, Thurs, Fri, Sat and Sun: Closed
Market Weighton Wicstun Centre 14 Beverley Road, Market Weighton, YO43 3JP	Mon and Fri: 9.30am to 4.30pm Weds: 9.30am to 6.30pm	Sat: 9.30am to 12.30pm Tues, Thurs and Sun: Closed

# How have we got to the current plans?

Site selection has been an ongoing process throughout the development of the Project. This process has taken into account technical requirements, ongoing environmental surveys, and feedback from stakeholders and the community.

A detailed site selection exercise has been undertaken to identify the proposed locations for the Project's infrastructure. This has determined the Offshore and Onshore Development Areas which have been assessed in the PEIR.

### **Offshore Array Area**

The offshore Array Area, where the turbines will be located, was identified after advancements in turbine technology enabled additional capacity in the eastern part of the original Dogger Bank C area to be unlocked. As a result, Dogger Bank D was identified as a fourth phase of the Dogger Bank Wind Farm to be developed.

# The Project Design Envelope

At this stage, flexibility is required for the project design, such as the final layout or size of buildings and equipment within the Onshore Converter Station zone or the exact route of the offshore and onshore export cables. Therefore, for the purposes of the PEIR, we have assessed a range of possibilities based on maximum design parameters and a realistic 'worst-case scenario'.

This approach, known as a 'Project Design Envelope' or 'Rochdale Envelope,' is standard practice for nationally significant infrastructure projects. It allows for necessary design flexibility whilst ensuring that the worst-case of potential environmental effects are properly assessed.



### **Establishing a grid connection**

Offshore wind farms need a high-voltage electricity transmission system to handle the large amounts of electricity they produce. In England and Wales, National Grid Electricity Transmission (NGET) owns and maintains the network, while the National Energy System Operator (NESO) manages energy planning. Therefore, the Project's grid connection point is determined by NESO as part of its national network planning.

In February 2024, NESO identified a new grid connection point for the Project at a planned substation near the existing Creyke Beck Substation in East Riding of Yorkshire. This new substation, called Birkhill Wood Substation, is part of NGET's Great Grid Upgrade initiative and is not included in the Project or the DCO application.

### Developing our offshore export cable corridor

A detailed site selection exercise has been undertaken to identify the route of the offshore export cable corridor. Through this process, we've considered environmental constraints, including marine protected areas such as Special Areas of Conservation (SAC), Special Protection Areas (SPA), and Marine Conservation Zones (MCZ), locations of other offshore infrastructure and other key constraints.

We have followed key principles including avoiding and minimising impacts to designated sites, protected wrecks, other users of the sea and shipping and navigation activities.

The offshore export cable corridor will connect the offshore Array Area to the landfall to allow the transmission of the electricity. The offshore export cable corridor exits the offshore Array Area from the northern boundary of the Array Area and then travels north-west until it reaches the northern boundary of the Dogger Bank Special Area of Conservation where the offshore export cable corridor widens. The widening of the offshore export cable corridor in the area is to enable future flexibility in the routing of the offshore export cable corridor due to current uncertainty over a potential future Marine Protected Area extension in this area. The offshore export cable corridor then narrows to an approximately 1km wide route which continues to the landfall, noting that it was not possible to maintain an exact 1km width for the entire route on account of a number of constraints, particularly in the nearshore region.

# **Identifying landfall options**

Selecting a landfall location depended on several key factors such as the suitability of the land for cable installation, and avoidance where possible of environmental constraints and maintaining appropriate distances from existing offshore infrastructure. We also sought to avoid coastal areas with cliffs over 30m, as they would limit cable depth, reduce power output, and make the cable installation challenging.

The landfall southeast of Skipsea was selected because it has a suitable cliff height, lower environmental and engineering risks, and is on the northern edge of the Holderness Inshore and Offshore MCZ enabling impacts to these protected areas to be minimised.

### Developing the onshore export cable corridor

In addition to identifying locations for the Onshore Converter Station zone and landfall, we also considered various 'corridor sections' for the cables that will connect them. These were chosen based on key principles, including finding the most direct route, avoiding urban, industrial areas and high flood-risk areas, protecting ecological and heritage sites, and considering early landowner feedback.

We presented the corridor section options at our 2024 non-statutory consultation and took into account the feedback received, as well as environmental considerations, before selecting a single cable corridor.

# Identifying the zones to locate a converter station and ESBI

We started with a broad 'area of search' based on a constraints mapping to create a 'longlist' of potential zones. We subsequently identified the zones with fewer constraints ultimately narrowing the longlist down to two zones, which we presented at the 2024 non-statutory consultation. The key criteria we considered included:

- Being within a 3km radius of Birkhill Wood Substation to efficiently transfer power;
- Having adequate space for the converter station and ESBI, and areas for environmental mitigation;
- · Having easy access from existing roads; and
- Avoiding or minimising impacts on the environment, heritage sites, homes, flood-prone areas, and Public Rights of Way.

Since the 2024 non-statutory consultation we have been gathering additional environmental and engineering data for the two zones, and we are continuing to evaluate the feasibility of each. We are now presenting more detailed information on each and would like to hear feedback from the local community.

# **Assessing impacts**

Dogger Bank D is required to undertake an Environmental Impact Assessment (EIA) under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations). The EIA provides an assessment of the likely significant effects of the Project.

Our EIA evaluates the potential environmental effects of the Project, including both positive and negative impacts. The purpose of the EIA process is to ensure that we take steps to avoid, minimise and offset effects where possible. Mitigation is described in the form of Project commitments which are summarised in a Commitments Register. The EIA covers a wide range of environmental topics and considers potential impacts through the construction, operation and maintenance and decommissioning phases of the Project.

We have completed a large range of site visits and surveys to get to know the land which has been crucial in shaping the design of the Project.

We are now ready to share the initial findings of our EIA in a document called the PEIR, which forms part of this consultation.

The PEIR is comprised of two document volumes, along with a Non-Technical Summary (NTS). Volume 1 includes introductory chapters, offshore and onshore environmental assessment topics. Volume 2 contains technical appendices which provide supporting information for relevant chapters. The NTS provides a concise and easy to understand summary of the PEIR in accessible and non-technical language. It also includes references to relevant PEIR documents for more technical details, making it useful for both specialist and non-specialist readers.

Details on how to access the PEIR can be found on pages 14 and 15. A Guide to the PEIR has been produced as a quick reference to help readers navigate the structure and content of the PEIR.

Feedback from this consultation will inform our ongoing EIA. We will submit a document called an Environmental Statement (ES) setting out the final results of our assessments as part of our DCO application.

# **Commitments Register**

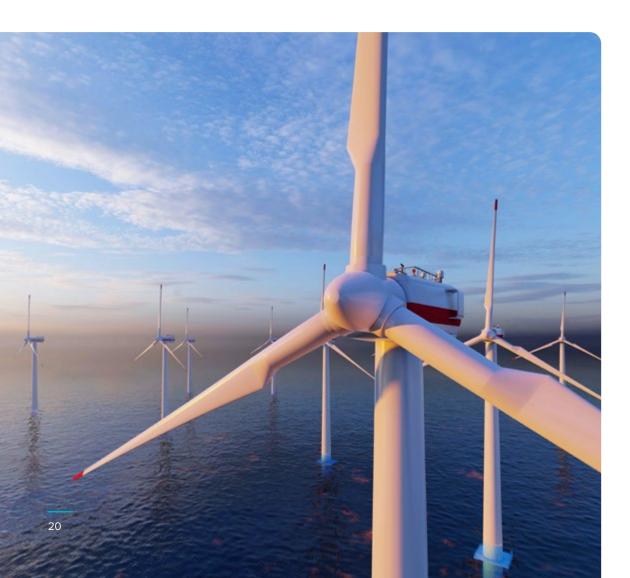
We have produced a Commitments Register which lists all mitigation, enhancement, and monitoring measures (referred to as "commitments") identified during design development, stakeholder engagement, and the EIA process.

The Commitments Register will be updated throughout the pre-application stage incorporating feedback from stakeholders and new environmental and design information. We encourage comments on our proposed commitments and ideas for mitigation and opportunities to enhance local wildlife habitats. Recommendations we adopt will be added to the final Commitments Register and submitted with the DCO application



# **About the Dogger Bank D Project**

The Project involves offshore and onshore infrastructure to generate electricity at sea and transport it to the National Grid substation at Birkhill Wood in East Riding of Yorkshire.



### What we propose offshore

We expect that the Project will include the following key offshore elements:



**Up to 113 wind turbines** 



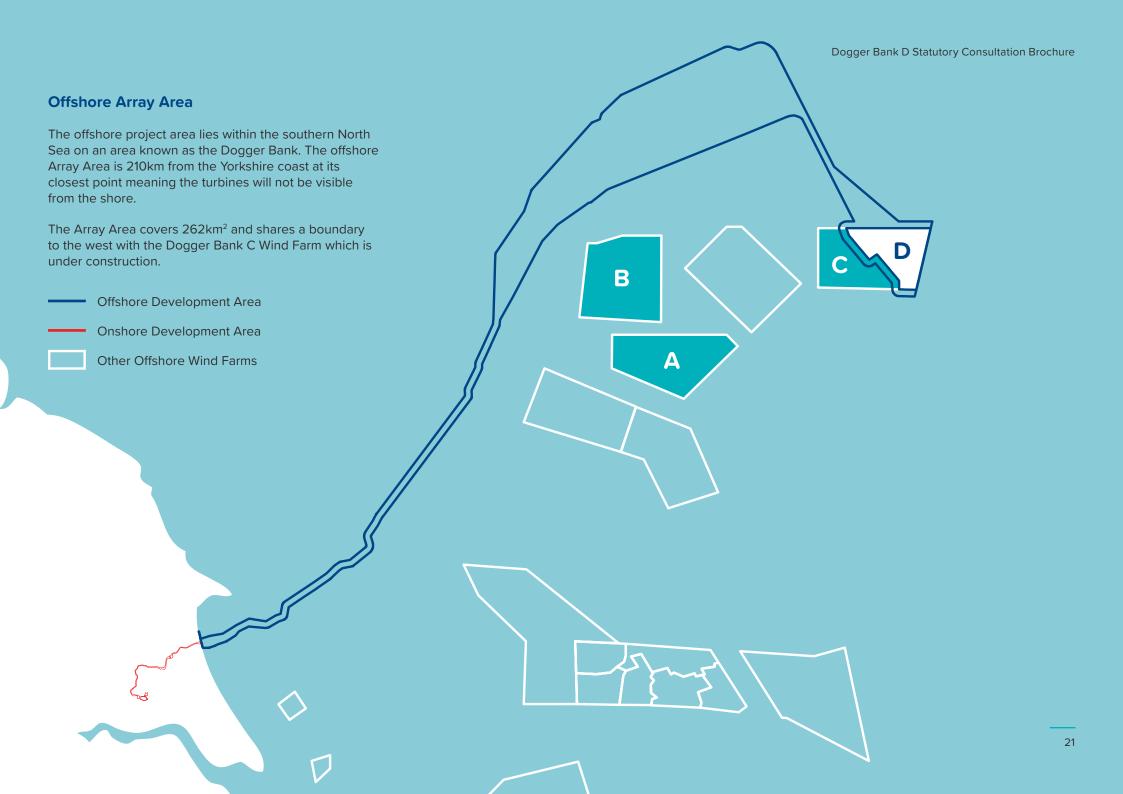
Up to two offshore platforms



Offshore cables linking the turbines to the offshore platform (known as inter-array cables)



Offshore export cables transmitting electricity from the offshore platform to landfall



#### **Turbines and foundations**

The final layout of the wind turbines within the Array Area will be determined by wind resources, turbine size, turbine selection, seabed conditions, existing infrastructure, and requirements for navigational safety. The exact wind turbine layout will be decided after consent.

The wind turbines will have foundations fixed to the seabed. The final type(s) of wind turbine foundation will be selected post-consent and will ultimately depend on the final detailed site investigations, engineering design studies and the procurement process.





#### Offshore platform(s)

We propose up to two offshore platforms, one of which will convert the electricity generated by the turbines to a higher voltage, making it suitable for efficient transmission to shore. This platform will likely feature transformers, switchgear, a helicopter landing pad, cranes, navigation, aviation, and safety marking and lighting and communication antennas.

The second platform will be used as a switching station for the purposes of facilitating coordination with an interconnector. It would operate at a single voltage level, collecting electricity from multiple sources and linking Dogger Bank D's transmission system to a potential secondary connection point, in addition to the UK grid. This secondary connection does not form part of Dogger Bank D's proposals.

#### **Inter-array cables**

Inter-array cables carry the electricity generated by the individual turbines and transport it to the offshore platform(s).

If electricity needs to be transmitted between the two platforms, inter-platform cables will be required, however, these are considered the same as the interarray cables in terms of design and scope.

#### Offshore export cables

Up to two offshore export cables will carry the electricity generated by the wind farm from the offshore platform to the landfall point with both cables installed within the offshore export cable corridor. These cables are generally larger in diameter than the inter-array cables because they transport a greater amount of electricity.

The preferred installation method is burial however, in certain areas, it may not be possible to fully bury the cables due to challenges such as hard geology, dense boulder fields, or other existing cables and pipelines. In these areas, the cables will be placed on the surface, with cable protection added to reduce the risk of cables getting caught or damaged.

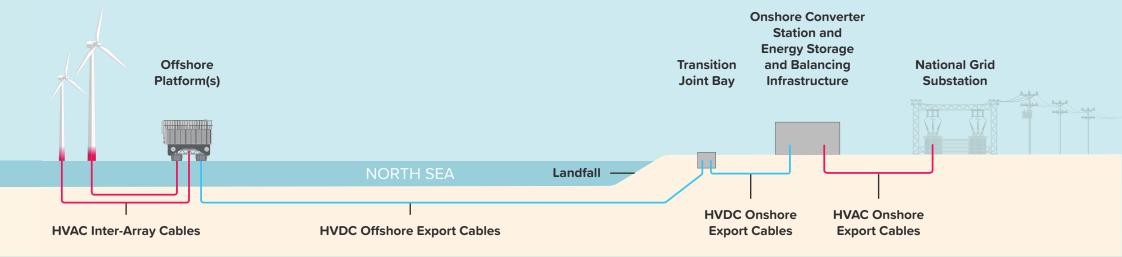
### A typical connection to the UK power grid

High Voltage Alternating Current (HVAC)

High Voltage Direct Current (HVDC)

The diagram below shows a typical connection of an offshore wind farm to the UK power grid and how electricity is generated and reaches homes and businesses.

#### **Offshore Wind Turbines**



### How electricity from an offshore wind farm gets to homes and businesses



- Each turbine has blades that rotate when the wind blows, turning a rotor connected to a generator.
- The generator converts the kinetic energy of the spinning rotor into electrical energy.

- 2 Electricity is collected
- The electricity
  generated by each
  turbine is transferred
  via cables to an
  offshore substation.
- The offshore substation collects electricity from multiple turbines and converts the voltage to HVDC.

# Transmission to shore

- High-voltage subsea cables carry the electricity from the offshore substation to shore to a landfall point.
- These cables are typically buried under the seabed to protect them from damage.

# 4 Underground onshore export cables

- The cables are buried underground with the land reinstated after construction.
- They reach the converter station where the electricity is converted back to HVAC so that it is suitable for integration into the national grid.

# Connection to the substation

- The electricity is then transmitted from the converter station to a National Grid substation.
- Once integrated into the national grid, the electricity can be distributed to homes, businesses, and industries.

# Grid integration and distribution

- Grid operators manage the distribution of electricity, ensuring a stable and reliable supply.
- The electricity generated by the offshore wind farm becomes part of the overall energy mix available to consumers.

#### **Construction offshore**

If a DCO is granted in 2028, we plan to install the foundations, turbines, offshore platform(s) and offshore cables between 2029 and 2034. The offshore installation process involves constructing the wind farm infrastructure and laying sections of offshore export cables. We will likely start working from the landfall and then move seawards to the Array Area.

Specialist installation and support vessels will be used for offshore construction. Before the installation can begin, we will need to conduct detailed surveys of the seabed, identify whether unexploded ordnance and boulder clearance is required, remove out-of-service cables along the route, and determine the final layout of the turbines. Offshore export cables will be buried wherever possible to protect them and prevent disruption to other activities, such as fishing.

We understand the importance of coordinating the cable laying process carefully and safely with the relevant authorities, such as the Marine Management Organisation and the Maritime and Coastguard Agency, as well as other marine users.





# Preliminary assessment of offshore impacts

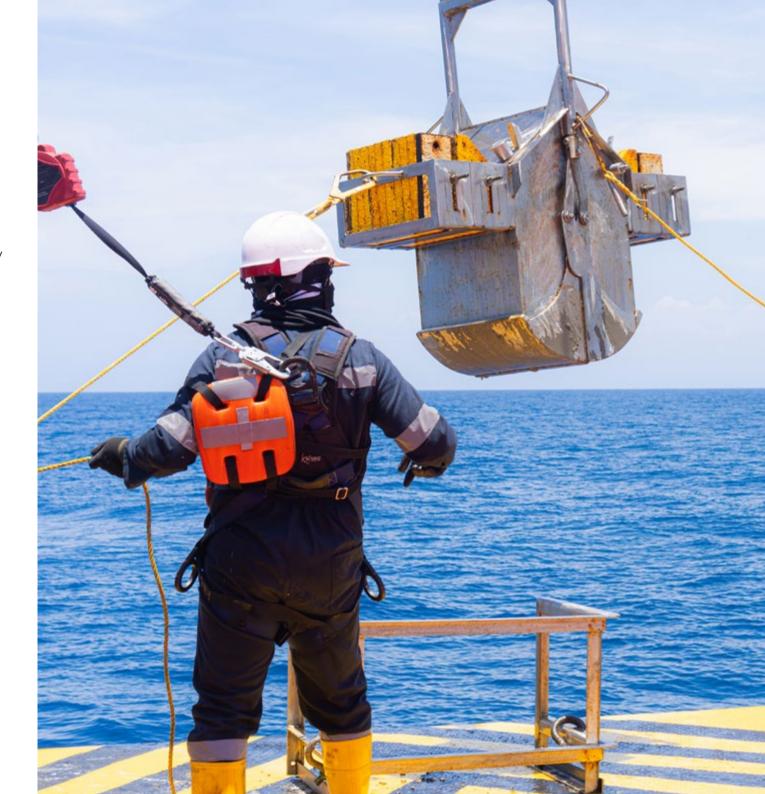
We have conducted a range of offshore studies and surveys as part of our EIA and have engaged with relevant statutory bodies such as Natural England and the Marine Management Organisation to inform our assessments.

This section provides a high-level summary of the key environmental topics that are relevant to the offshore elements of the Project. It outlines potential effects from construction, operation and maintenance, and decommissioning and sets out proposed commitments to avoid, minimise, or mitigate impacts. For further detail, please refer to the relevant chapters and appendices of the PEIR, which are signposted in this section.

#### **Benthic and Intertidal Ecology**

Site-specific and intertidal surveys, as well as desk-based research, supported the assessment of potential impacts. Impacts considered include temporary habitat loss, increased suspended sediment during construction, noise and vibration disturbance, interactions with electromagnetic fields (EMF), colonisation of new structures, and effects during both the operation and maintenance, and decommissioning phases.

Where possible, the Project's cables will be buried beneath the seabed to protect marine habitats and reduce the need for extra protective materials. A Project Environmental Management Plan will also be implemented to prevent and manage any accidental pollution (Commitment ID CO25).



#### **Marine Physical Processes**

Geophysical seabed surveys, sediment sampling, and modelling were carried out to assess potential impacts. Impacts considered include possible changes during the construction and decommissioning phases in suspended sediment, seabed levels, and sediment movement caused by installing foundations and cables, as well as from levelling sand waves and indentations to the seabed.

Mitigation measures include burying cables where feasible (Commitment ID CO24) and using trenchless installation methods at landfall (Commitment ID CO23).



#### **Marine Water and Sediment Quality**

The surveys already mentioned are also used in the assessment of potential impacts to marine water and sediment quality. Key impacts considered during construction are changes to levels of suspended sediment as well as the possibility of disturbing contaminated sediments. During the operation and maintenance and decommissioning phases, the main potential effect is the disturbance and movement of contaminated sediments in the Offshore ECC.

Best practice methods such as using a Project Environmental Management Plan will be followed to tightly control any potential release of pollutants (Commitment ID CO25).



#### Fish and Shellfish Ecology

Our assessment identified commercially important fish such as haddock, whiting, plaice, herring, and sandeel, and potential spawning and nursery grounds for herring and sandeel.

Impacts considered include temporary habitat loss and physical disturbance to the seabed, increased levels of suspended sediment and its settling, potential release of previously buried contaminants in the offshore cable corridor, underwater noise and vibration, and changes in fishing activity due to the Project.

To protect fish and shellfish, the Project will: minimise the use of cable protection; use trenchless installation methods at landfall to help avoid sensitive habitats of importance to spawning herring (Commitment ID CO23); follow a Project Environmental Management Plan to prevent pollution (Commitment ID CO25); and apply a Marine Mammal Mitigation Protocol (MMMP) which will manage noise impacts on sound-sensitive species (Commitment ID CO22).





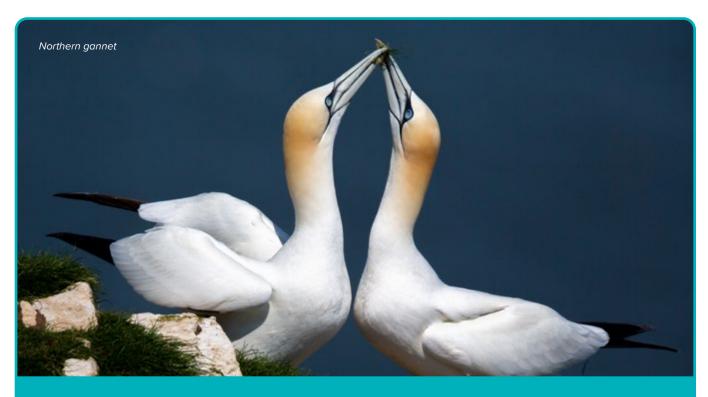
#### **Marine Mammals**

Two years of site-specific aerial surveys in addition to data from other offshore wind farms and other available information for the region identified the presence of harbour porpoise, bottlenose dolphin, common dolphin, white-beaked dolphin, minke whale, grey seal and harbour seal.

Impacts assessed include physical or auditory injury from noise, barrier disturbance at seal haul-out sites, collision risks from vessels, and changes to prey resources and water quality.

Mitigation measures include the development and implementation of a MMMP to reduce impacts from piling and, if necessary, unexploded ordnance clearance (Commitment ID CO22). Additionally, a Vessel Traffic Management Plan will be put in place to minimise disturbance and the risk of collisions between marine mammals and vessels (Commitment ID CO18).





### Offshore and Intertidal Ornithology

We carried out two years of site-specific aerial surveys over offshore areas to identify key seabird species, including puffin, guillemot, gannet, kittiwake, and several types of gull and diver.

The assessment considered potential direct impacts such as collision with the turbines and the potential for birds to be disturbed or displaced. It also considered indirect effects, such as changes to habitats or prey availability.

To reduce impacts, the Project includes careful route planning to avoid areas protected for birds, height limits for turbine blades (Commitment ID CO13), and a best-practice Vessel Traffic Management Plan (Commitment ID CO18).

There is still a risk that, when considered cumulatively with other developments, there could be significant impacts to some species and increase the risk of collisions for gannet and kittiwake. These potential impacts will be investigated in more detail with ongoing input from Natural England and other stakeholders.



### **Relevant PEIR chapters**

**Volume 1, Chapter 11.** Fish and Shellfish

Ecology

**Volume 1, Chapter 12.** *Marine Mammals* 

**Volume 1, Chapter 13.** Offshore and Intertidal

Ornithology



#### **Commercial Fisheries**

The main species caught and landed in the study area include lobsters, brown crabs, king scallops, herring, and plaice, using a variety of fishing methods such as pots, dredges, and trawls.

The assessment considered the potential impacts of reducing or restricting access to established fishing grounds, displacing fishing activity to other areas and increasing pressure on nearby grounds, and causing economic effects, particularly for the UK potting fleet, which may need to relocate gear and could experience income loss.

To help manage these effects, a Fisheries Liaison Officer will be appointed during construction and a Fisheries Liaison and Coexistence Plan will be developed to work with affected fishing fleets (Commitment ID CO15).

In addition, offshore export cables will be buried where possible, with cable protection used only where needed to reduce the risk of gear snagging (Commitment ID CO24). Additional safety measures, such as marking and lighting of offshore infrastructure, and clear communication, will help minimise risks to other sea users (Commitment ID CO9).

#### **Shipping and Navigation**

We carried out vessel traffic surveys in 2024 using ship tracking, radar, and visual observations to understand how busy the area is and how it's used. These surveys identified cargo vessels, tankers, fishing boats, and seven main shipping routes.

The surveys and desk-based research helped assess the potential impacts of construction and decommissioning. These include changes to vessel routes, increase of collision risks, potential for strikes with offshore infrastructure, and reduced emergency response capability, either due to more incidents or limited access for Search and Rescue operations.

To help keep vessels safe, the Project includes clear marking of obstacles, safe clearance for tall-masted boats, and making all offshore structures highly visible (Commitment ID CO16).

There is still potential for significant cumulative impacts on shipping and navigation from this Project and other projects, which will be explored further.







#### **Aviation, Radar and Military**

The study area has no licensed airfields or radars, but includes Beverley Airfield and nearby military airspace, with part of the offshore export cable corridor overlapping military danger zones and a helideck also located within nine nautical miles of the offshore export cable corridor.

The Project may impact aviation and radar systems, as wind turbines, offshore platforms, and cranes could create obstacles for low-flying aircraft, including military planes, Search and Rescue and offshore helicopters. Increased air traffic, particularly from project-related helicopters, may raise collision risks. Additionally, cable installation vessels may affect military exercises in the Staxton Danger Area.

The Project will provide aviation authorities with obstacle details so flight maps can be updated for safety, mark and light turbines for visibility, apply appropriate separation distances for safety (Commitment ID CO8), coordinate with the Ministry of Defence to avoid the Staxton Danger Area during military exercises, and implement an Emergency Response Plan to support Search and Rescue throughout all phases (Commitment ID CO7).

**Relevant PEIR chapters** 



**Volume 1, Chapter 14.** *Commercial Fisheries* 

**Volume 1, Chapter 15.** *Shipping and Navigation* 

**Volume 1, Chapter 16.** *Aviation, Radar, and* 

Military



#### Offshore Archaeology and Cultural Heritage

Marine geophysical surveys conducted in 2024 and desk-based research, identified the presence of unexploded ordnance, wrecks, and debris of archaeological interest. The area includes various historical sites, such as ancient, maritime, and aviation-related sites, some of which may be buried under the seabed. However, no sites in the offshore area are legally protected.

Potential effects from the Project's activities, such as preparing the seabed, installing turbine foundations, and laying cables, and cable installation at the landfall, could disturb or damage underwater heritage sites. Changes in water and sediment movement may also affect buried historical sites, either exposing or burying them further.

Mitigation measures will include the use of archaeological exclusion zones (Commitment ID CO6), analysis of pre-construction survey data, and micro-siting where necessary to avoid sensitive areas (Commitment ID CO26). A Protocol for Archaeological Discoveries will be put in place to manage any unexpected finds during works (Commitment ID CO1).

The approach to implementing mitigation measures will be set out in an Offshore Written Scheme of Investigation, with an outline to be submitted alongside the DCO application (Commitment ID CO1).

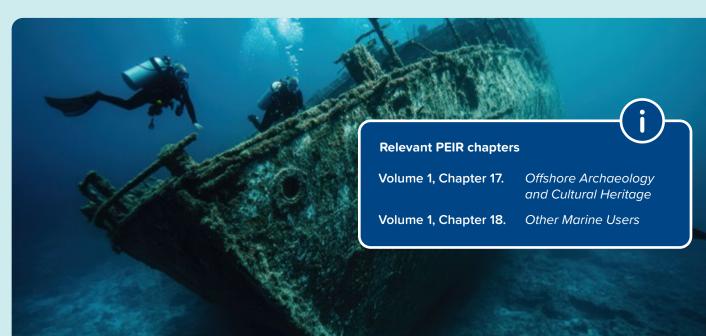


#### **Other Marine Users**

Other marine users include nearby offshore wind farms, oil and gas sites, undersea cables, pipelines, and carbon storage areas.

To reduce risks to marine users, the Project has identified measures such as a Cable Specification and Installation Plan (Commitment ID CO24), and a Navigational Safety Plan with weekly Notices to Mariners to inform sea users of any hazards during construction.

We will work closely with other marine users to coordinate with infrastructure owners to establish arrangements before construction. We will also consult with Trinity House on lighting, marking, and turbine alignment to ensure safe navigation and access for Search and Rescue services.





# **Onshore Development Area**

We expect that the Project will comprise the following key elements, located onshore:



Landfall where the offshore export cables join the onshore export cables.



**Converter station and associated infrastructure.** 



Onshore export cables laid underground within a corridor up to 55km in length.



Energy Storage and Balancing Infrastructure co-located with the converter station.



Link boxes for access to the cables during operation, located alongside the cable route.

#### **Onshore cables**

#### Developing the onshore export cable corridor

In selecting our preferred onshore export cable corridor, we have taken into account consultation feedback to date, environmental constraints, engineering and construction requirements, and current land use.

The preliminary assessments conducted so far are based on this corridor.

We welcome feedback on the onshore export cable corridor presented. Following consultation, we will further refine the route to narrow the corridor width which will define the boundaries for the DCO application. Stakeholder comments and ongoing environmental and technical studies will inform this refinement process.

For the purposes of this consultation brochure, we present the proposed onshore export cable corridor divided into six separate sections:



**Landfall** – From the cliff to Hornsea Road (B1242)



Section A – from Hornsea Road (B1242) to Carr Lane by Beverley Airfield



Section B – from Carr Lane to Miles Lane



Section C – from Miles Lane to Walkington Heads

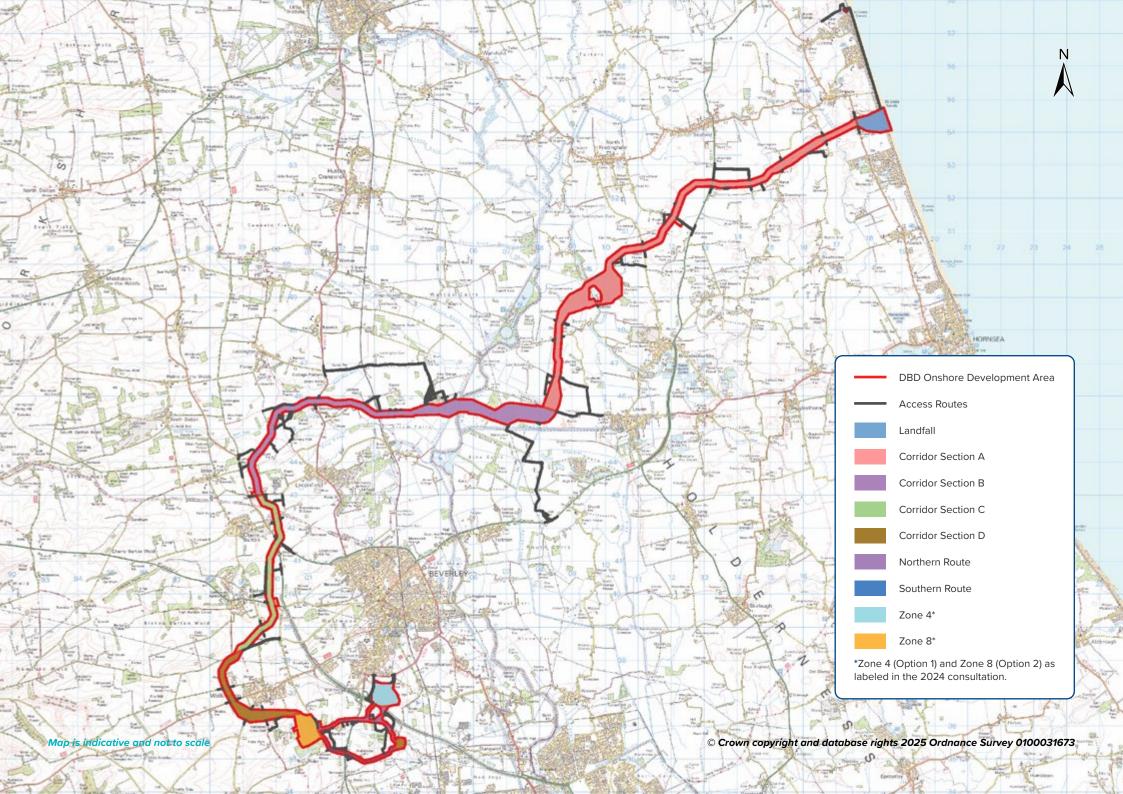


**Section D** – from Walkington Heads to Coppleflat Lane



**Section E** – from two zones to the grid connection point at Birkhill Wood Substation (note there are two sub-options along this section).

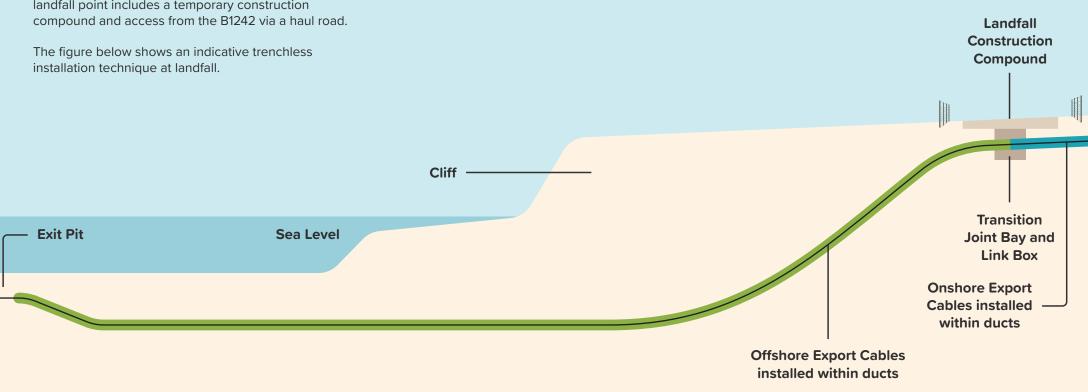
The Onshore Development Area crosses several public and recreational routes, including footpaths, bridleways, the King Charles III England Coast Path National Trail, and National Cycle Network routes. Construction of the onshore export cables will require us to cross these routes in up to 11 places, though this number may change as the route is refined. Details on how each crossing will be managed will be set out in a Public Rights of Way Management Plan.





### From the cliff to Hornsea Road (B1242)

The offshore export cables are proposed to come ashore at a landfall point southeast of Skipsea. The landfall point includes a temporary construction compound and access from the B1242 via a haul road.





The landfall construction works are expected to take around three years, including one year for trenchless installation, based on the planned schedule.

The beach will remain open during construction. Access to the beach would only be required in the event of an emergency (such as a frac-out, where drilling fluid accidentally leaks to the surface through cracks in the ground). In this event, we may need to temporarily close off a small area. While this risk can't be entirely eliminated, the Project will be designed to significantly reduce the chances of it occurring. Emergency access will be routed south from a laydown area (where equipment and materials are stored) at the end of North Turnpike Road.

The landfall installation will be routed beneath the cliff and beach, ensuring that the approved King Charles III England Coast Path National Trail remains unaffected.

The Project has committed that no heavy vehicle traffic would travel to the landfall access from the south, i.e. from the direction of Atwick and Hornsea (Commitment ID CO111). All heavy vehicle traffic travelling to the landfall access will be routed via the B1242 from the north and the B1259 from the west.

#### How we could install the landfall

Because of the cliff height, coastal erosion rates, and environmental sensitivities at the landfall, the cable ducts will be installed using trenchless techniques under the seabed and shoreline (Commitment ID CO23). The offshore export cables will be pulled from a subtidal exit point on the seabed, located below the Mean Low Water Spring (MLWS) level towards land through pre-installed ducts and will be joined underground to the onshore cables within the transition joint bay. The use of a jack-up barge will be required where we are working near the shore.

The transition joint bay will be set back a sufficient distance from the cliff top to allow space for temporary construction activities and to account for natural coastal erosion and climate change impacts. A link box, which allows the cable joints to be accessed for inspection and maintenance, will be placed underground with a cover. Marker posts will indicate the location of the buried infrastructure.

Refer to the Book of Maps to view large scale maps of the landfall area.





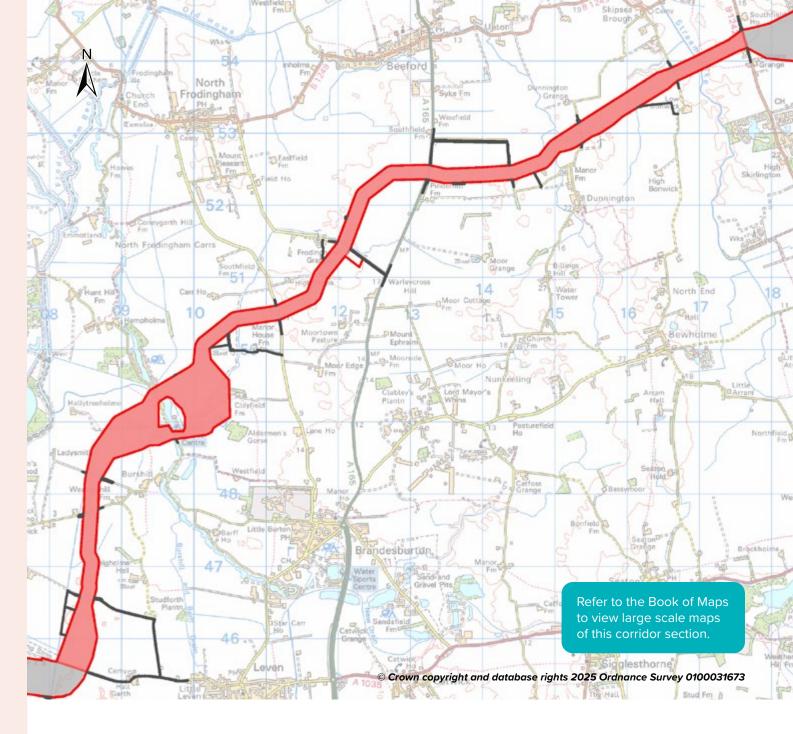
#### From Hornsea Road (B1242) to Carr Lane by Beverley Airfield

#### **Section description**

Starting at Hornsea Road (B1242), Corridor Section A runs north of Dunnington before turning south-west after crossing Beverley Road (A165). It then continues south of Hempholme, passing on both sides of the Billabong Water Sports and Caravan Park located next to Hempholme Pumping Station.

From there, the corridor heads south, passing north-west of Burshill. It continues from New Road, moving further south until it reaches Carr Lane, to the east of Beverley Airfield.

Maps not to scale and for indicative purposes only



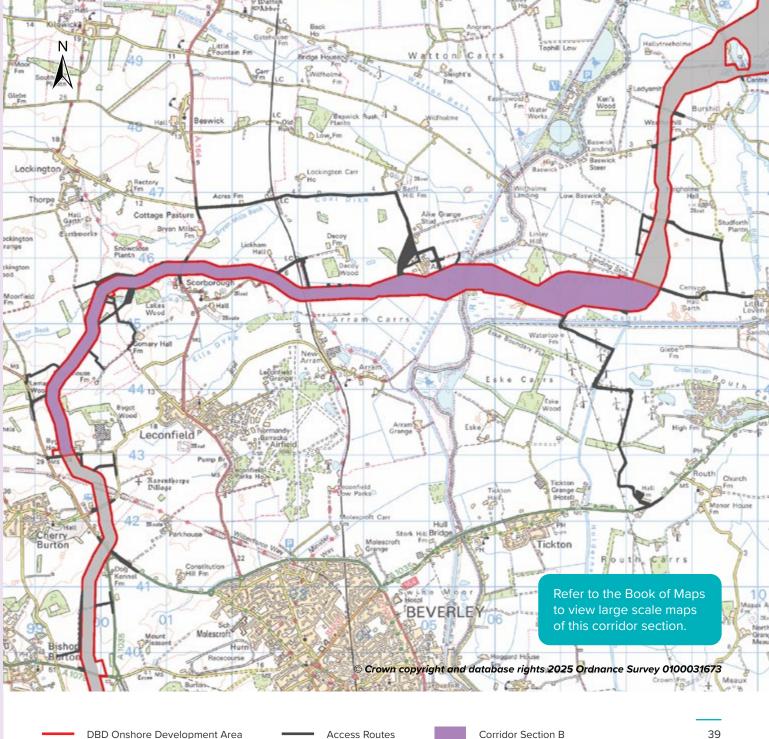
## **Corridor Section B**

#### From Carr Lane to Miles Lane

#### **Section description**

Corridor Section B begins at Carr Lane, east of Leven, and runs westward, staying north of the Leven Canal. It crosses the River Hull and the Beverley and Barmston Drain, passing south of Aike.

It continues beneath the Hull-Scarborough railway line and Driffield Road (A164) before turning south-west near Scorborough. East of Leman Wood, the corridor stays to the east of the B1248 and ends at Miles Lane west of Leconfield.

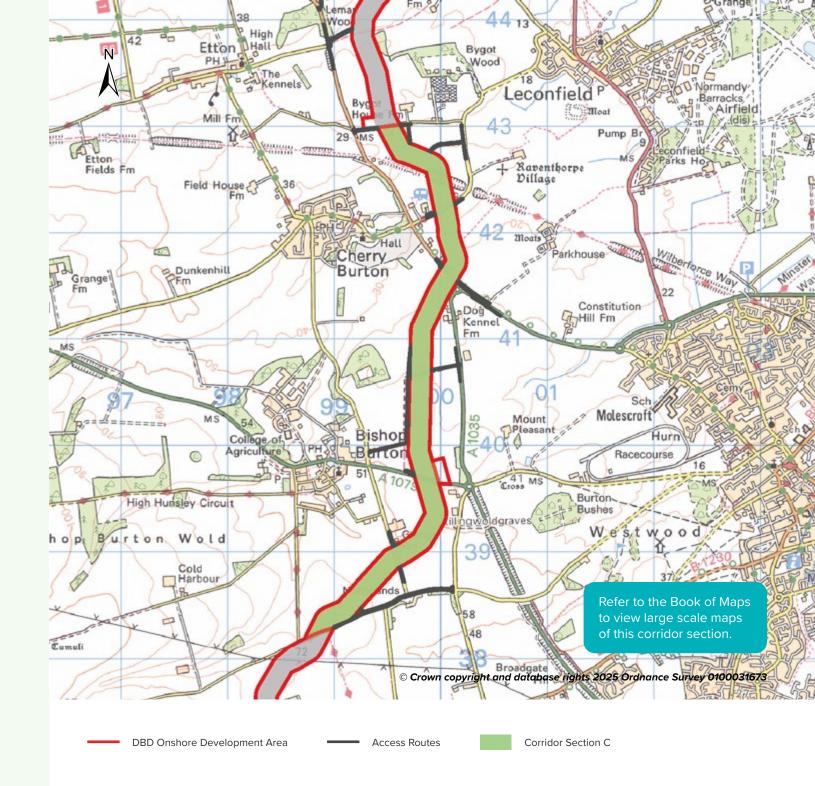




### From Miles Lane to Walkington Heads

#### **Section description**

Corridor Section C begins at Miles Lane, then crosses the Ravensthorpe Embankment Local Wildlife Site and heads south. From there it continues east of Cherry Burton and crosses Cherry Burton Golf Course, heads south, running west of the A1035 and east of Bishop Burton. After crossing Beverley Road (A1079), the corridor curves west, north of Walkington and ends at Walkington Heads.





#### From Walkington Heads to Onshore Converter Station Zone 8

#### **Section description**

After crossing Walkington Heads, Corridor Section D continues south-west, curving around the western side of Walkington and crosses Hunsley Road (B1230). It then turns east, crosses Little Weighton Road and continues through Walkington Playing Fields to reach Onshore Converter Station Zone 8.

Corridor Section D includes an area around the new National Grid substation proposed at Birkhill Wood near to the existing Creyke Beck Substation. Birkhill Wood Substation is being developed by National Grid Electricity Transmission and does not form part of the proposals for Dogger Bank D.





#### **Corridor Section E**

From Coppleflat Lane, the cable corridor splits into two routes – a northern and a southern corridor.

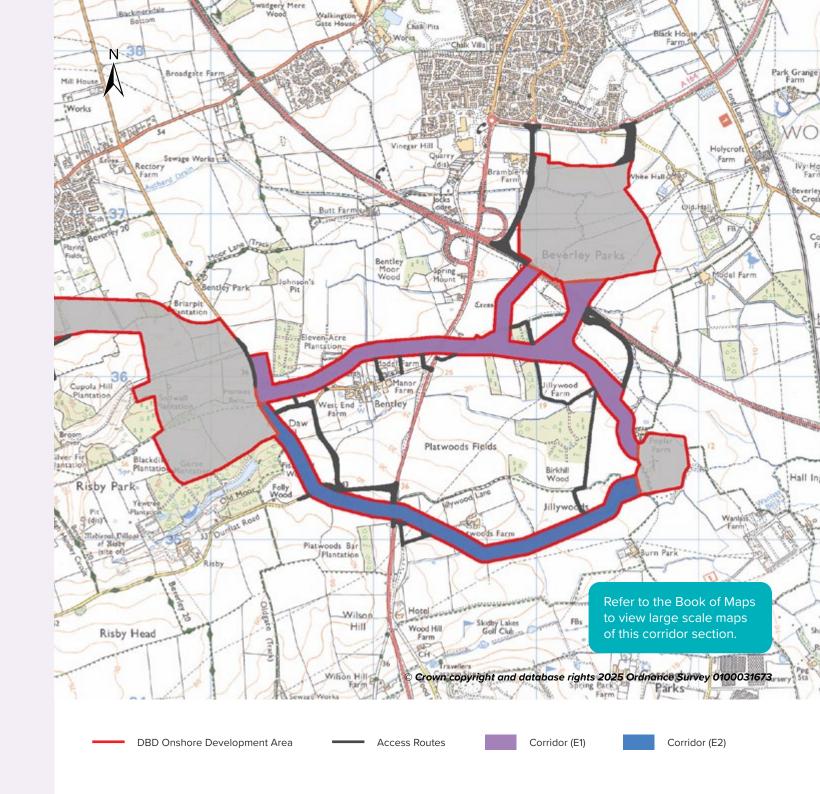
#### **Section description**

- The northern corridor section (E1) crosses Beverley Road (A164) to the east of Bentley and continues southwest to Birkhill Wood Substation.
- The southern corridor section (E2) crosses the Skidby Bypass (A164) further south of Bentley before also terminating at Birkhill Wood Substation.

Both sections have been kept through the site selection process to allow flexibility in how the onshore export cables are routed into and out of the proposed zones.

For Zone 4, only the northern corridor section is being considered. This section includes two potential crossing points of the Beverley Bypass (A1079) to allow for the routing of onshore export cables into and out of Zone 4.

For Zone 8, both the northern and southern corridor sections are being considered.



#### **Onshore export cables**

We will install the onshore export cable system in two trenches along a 55km corridor from the transition joint bay at the landfall to the National Grid substation at Birkhill Wood.

Most of the export cable works within the Onshore Export Cable Corridor will use open cut trenching. Where this method isn't suitable, trenchless installation techniques such as horizontal directional drilling (HDD), as shown on the right, will be used instead.

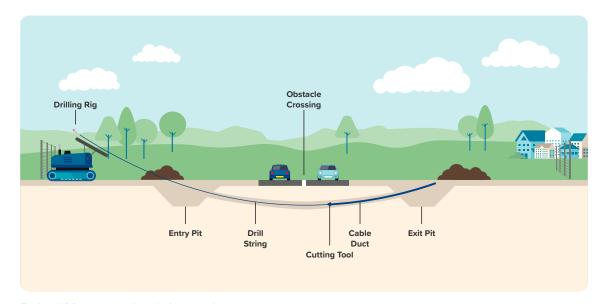
The width of the construction corridor will vary depending on the type of cable installed and the installation technique employed, but will typically be 32 metres for HVDC or 55m for HVAC cables where open cut trenching is used.

At trenchless crossing locations and where additional land is required for engineering flexibility, the construction corridor width may increase.

Once the installation of the underground cables is complete, the land would be reinstated to its previous use and condition.

We have prepared an Outline Construction Traffic Management Plan (CTMP) setting out how we will manage vehicle and people movements to and from onshore construction sites (Commitment ID CO73). This sets out agreed routes for accessing the converter station site, hours for deliveries, and activities to reduce our impact such as wheel-washing.

The proposed core working hours for onshore construction are Monday to Saturday, 7am to 7pm, with no working on Sundays, bank holidays, or outside normal working hours, unless necessary (Commitment ID CO69). For example, we may need to move a large item such as a transformer overnight or early in the morning. Where required, work would be agreed in advance with local authorities and communicated to residents ahead of time.



Typical HDD trenchless installation technique





#### The converter station and ESBI

A converter station will be needed to convert electricity from the HVDC carried by the onshore export cables into Alternating Current which is required to connect into the National Grid system. HVDC electricity is more efficient for transmission of electricity over long distances, but it can't be used without conversion in our laptops, kettles and televisions.

The equipment which would convert the electricity would be housed in a weatherproof building called a valve hall.

Outside of the valve hall, there would typically be a variety of equipment, such as transformers, switchgears, lightning protection masts and emergency diesel generators.

The Onshore Converter Station zone would include buildings to support operation and maintenance activities and store critical spares, along with the landscaping and vehicle parking. The ESBI will be co-located with the Onshore Converter Station and will supply electricity to the transmission system when it's needed most, for example, to help balance supply and demand, support peak-time usage, and provide backup services. This helps make the Project's power supply more reliable and resilient.

The ESBI will be connected to the Onshore Converter Station by electrical cables and to the National Grid through underground export cables to Birkhill Wood Substation.

The equipment would likely include battery blocks, equipment for various systems, a substation, buildings to support operation and maintenance activities, storage, lightning protection masts, and firefighting water tanks and pumps.

#### **Developing our design further**

Some aspects of the Onshore Converter Station design such as the shape and layout of the buildings, as well as the external materials and finishes, will need to be developed in collaboration with the equipment manufacturers. These details can only be finalised at a later stage in the design process, once technical specifications are confirmed.

To ensure high-quality design outcomes, these elements will be subject to review by a Design Panel, which will provide expert, independent input as the detailed design progresses. This process helps to ensure the Onshore Converter Station integrates appropriately into its surroundings.

We will submit a 'Design Vision' with our DCO application, setting out the design principles which will ensure good design (Commitment ID CO63).



#### **Onshore Converter Station Zone 4**

Zone 4 is located adjacent to the urban southern edge of Beverley, bordered by the A164 to the north and west and the A1079 to the south. The landscape is largely flat or gently undulating, made up of large-scale fields edged by hedgerows and occasional trees.

The site is influenced by the presence of existing energy infrastructure, including overhead power lines, the Dogger Bank A and B converter stations, and several individual wind turbines. This area is also part of a wider energy corridor, with growing demand for infrastructure such as solar farms, battery energy storage systems, and connections related to other grid projects.

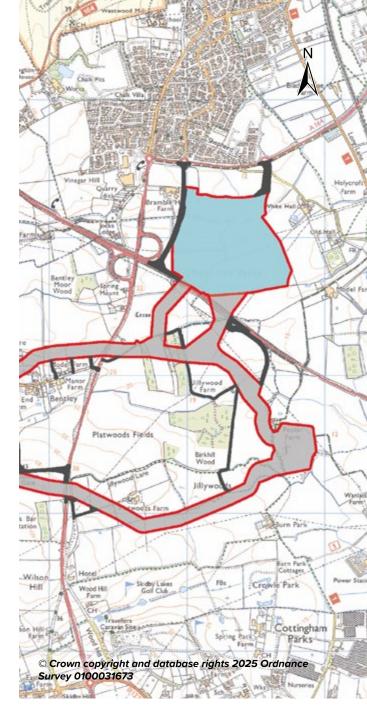
Nearby heritage features include woodland around Low Hall and Old Hall Farm, listed buildings at Woodmansey Old Hall and White Hall, and the Beverley Parks Nature Reserve located to the northeast.

Beverley Minster is visible from certain locations, such as Shepherds Lane and the A1079, though often only in glimpses through gaps in the landscape and there is therefore potential for impacts on the heritage setting of Beverley Minster. Homes in Beverley could also experience some landscape and visual impacts.

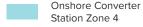
The site contains drainage ditches and partially overlaps with Flood Zones 2 and 3, as well as areas at high risk of surface water flooding. The land is currently used for arable farming and no impacts are expected on designated ecological sites.

Development within the zone must also account for high-voltage overhead lines and the national high-pressure gas pipeline, requiring careful micro-siting to avoid these constraints.

Rowley Bridleway No. 13 and Woodmansey Bridleway No. 30 may be affected by the northern corridor section leading into or out of Zone 4. Woodmansey Bridleways No. 31, 32, 33, and 34 also lie along potential access routes and may be affected.



DBD Onshore Development Area



#### **Onshore Converter Station Zone 8**

Zone 8 lies southeast of Walkington and is bordered by Coppelflat Road and surrounding Grade 2 agricultural land. The site sits between a valley to the north and higher ground to the south, offering potential to lower infrastructure into the landscape to help reduce its visibility.

The area features small, irregular fields, with woodland blocks and plantations linked by hedgerows. To the south is the historic Risby Hall Registered Park and Garden, which forms part of the former deer park setting and Risby Park Fishing Ponds.

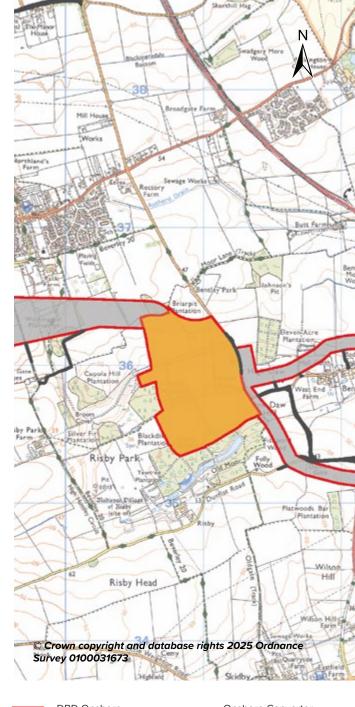
Two converter stations proposed as part of the Dogger Bank South project, currently under development, would be located to the northeast of Zone 8, and a high-pressure gas main runs through the site. However, because there are fewer other utilities in the area, there are generally fewer restrictions when deciding where to place infrastructure.

There is potential for direct views from designated heritage assets, as well as landscape and visual impacts due to the site's location within the Yorkshire Wolds Important Landscape Area and its proximity to homes in Bentley and Walkington.

The site is located within Flood Zone 1 and partially overlaps with areas at high risk of surface water flooding. The site also overlaps with a Mineral Safeguarding Area and areas under Environmental Land Management Schemes.

Rowley Footpath No.9, which runs through the area, may need to be permanently rerouted. Any changes will ensure the path remains accessible to everyone, and we will consult with relevant stakeholders as part of this process. Details will be set out in a Public Rights of Way Management Plan with an outline submitted as part of the DCO application.

Rowley Footpath No.8 runs alongside the southwest corner of Zone 8 and may be affected by the southern corridor section and potential access routes.



DBD Onshore Development Area Onshore Converter Station Zone 8

**Access Routes** 

### Preliminary assessment for onshore impacts

This section provides a high-level summary of the key environmental topics that are relevant to the onshore elements of the Project. It outlines potential effects from construction, operation and maintenance, and decommissioning and sets out proposed commitments to avoid minimise, or mitigate impacts. For further detail, please refer to the relevant chapters and appendices of the PEIR, which are signposted throughout.





#### **Geology and Ground Conditions**

The Study area mainly consists of clay, sand, and gravel from glaciers, with features such as streams, drainage ditches, and the River Hull. Protected geological sites at Withow Gap Site of Special Scientific Interest (SSSI) and Skipsea Drain SSSI are also within the Study Area, along with potential contamination spots, including farmland, disused railway land, pumping stations, and former landfills.

Potential impacts on geology and ground conditions include soil disturbance, groundwater contamination, and damage to geological features, mineral deposits, buildings, utilities, or agricultural land, which could affect human health or the environment.

Mitigation measures will involve using trenchless techniques to install the cable in sensitive areas, such as river crossings and landfall, to minimise surface disturbance (Commitment IDs CO23 and CO32). All water crossings will be carefully planned and approved by the relevant authorities.

A Code of Construction Practice (CoCP) will be followed throughout construction to prevent pollution, to responsibly manage soil, to protect human health, water, and the environment, and to address any unexpected contamination discovered (Commitment ID CO39). An Outline CoCP has been provided for consultation and outlines how construction will be managed to minimise impacts on the environment, local communities, and human health.

#### Water Resources and Flood Risk

The Study Area is mostly flat and low-lying, making it prone to flooding from rivers, surface water, or, in one small area, from the nearby Tophill Low reservoir. Water in the area drains through Main Rivers and local watercourses, with the River Hull being the main drainage feature. The Onshore Development Area also crosses two protected sites: Withow Gap SSSI and the Leven Canal SSSI.

Potential impacts include disturbing water bodies, increasing sediment in the water, spreading pollutants into surface or groundwater, and changing how water flows - which could affect flood risk.

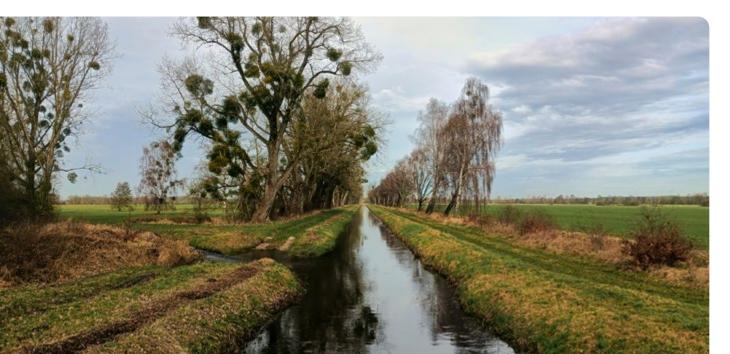
To minimise impacts on water resources and flood risk, the Project includes design measures such as using trenchless installation techniques for river crossings, burying cables deep to avoid high flows, and following best practices at trenched crossings (Commitment IDs CO32 and CO35). The Outline CoCP sets out measures for managing water flow, pollution, and drainage. A Soil Management Plan will guide soil handling, and drainage plans will be developed by a land drainage consultant to ensure safe water and soil management (Commitment ID CO46).



#### **Air Quality and Dust**

The assessment looked at how the Project could affect air quality, particularly from construction dust, emissions from vehicles, vessels, equipment, and the use of emergency generators at the Onshore Converter Zone. These activities could temporarily affect local air quality and generate dust, especially near sensitive areas.

To reduce these effects, best-practice measures such as dust suppression, wheel washing systems, proper storage of materials such as sand and aggregates, and reducing engine idling will be implemented during construction and maintenance. These are set out in the Outline CoCP.



#### **Relevant PEIR chapters and documents**

**Volume 1, Chapter 19.** *Geology and Ground* 

Conditions

Volume 1, Chapter 20. Air Quality

**Volume 1, Chapter 21.** Water Resources and

Flood Risk

Document reference

8.9

Outline Code of Construction Practice



#### Soils and Land Use

Surveys have confirmed the area is primarily used for agriculture, with some land managed for biodiversity and sustainability. It includes Public Rights of Way (PRoW) such as footpaths, bridleways, cycle routes, and the planned route of the King Charles III England Coast Path National Trail at the landfall. Essential utilities, including electricity, gas, water, and telecoms, are present, along with major transmission infrastructure.

The Project may temporarily disrupt soils and land use during construction and decommissioning, affecting agricultural drainage, soil quality, and farmland. Land under environmental schemes, existing utilities, and public paths may also be impacted, with possible access restrictions at times.

To manage these impacts, mitigation measures have been set out in the Outline CoCP and an Outline Public Rights of Way Management Plan provided for consultation. A Soil Management Plan will be put in place (Commitment ID CO46). Any effects on soils are expected to be temporary, with conditions returning to normal once work is complete.

#### **Onshore Ecology and Ornithology**

Studies have identified that there are 53 designated ecological sites within 2km of the Onshore Development Area, this includes 44 Local Wildlife Sites, two Yorkshire Wildlife Trust Reserves, one Local Nature Reserve, five SSSIs and one Special Protection Area (offshore). The habitats are largely agricultural, with fields of crops, hedgerows, modified grassland and areas of woodland found throughout.

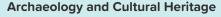
Preliminary surveys also identified 10 Priority habitats and have recorded suitable habitats for protected and notable species, including great crested newts, badgers, bats, otters and birds. The Project could

lead to temporary or long-term loss of habitats as well as disturbance to nearby ecological sites. Construction may cause noise, light, and other disruption, potentially harming protected species or spreading invasive non-native plants and animals.

To protect relevant species and habitats, the Project will follow best practice by implementing an Ecological Management Plan (EcoMP) and a Landscape Management Plan (LMP), which will include restoring and enhancing habitats, replanting trees, fencing sensitive areas, and carrying out surveys (Commitment IDs CO81 and CO65). Wildlife protections are set out in the Outline CoCP, and an Arboricultural Method Statement will set out how to minimise impacts on trees (Commitment ID CO109).







A range of heritage studies have been undertaken including walkovers, geophysical, and setting surveys, as well as a desk-based geoarchaeological assessment. Further surveys are ongoing to better understand the area's archaeological potential.

There are 114 designated heritage sites within 1km of the Onshore Development Area, however, none are located within it. There are 79 non-designated sites located within the Onshore Development Area. Assessment of relevant data has identified further locations of potential buried archaeology within the Onshore Development Area.

The Project will likely change the setting of designated heritage assets during the operation phase of the Onshore Converter Station and ESBI. There may also be cumulative effects when considered alongside other nearby projects.

Mitigation will include identifying and recording any heritage or archaeological finds during construction. This approach will be detailed in an Onshore Written Scheme of Investigation (Commitment ID CO62). In addition, the CoCP (Commitment ID CO39) will set out measures to ensure that construction is carried out with care in relation to heritage assets.





Volume 1, Chapter 22. Soils and Land Use

**Volume 1, Chapter 23.** Onshore Ecology and Ornithology

**Volume 1, Chapter 24.** Onshore Archaeology and Cultural Heritage

Document reference Outline Code of Construction Practice

Appendix A to Outline Outline Public Rights of Code of Construction Way Management Plan
Practice

Volume 2, Appendix Preliminary Ecological Appraisal Report



#### **Noise and Vibration**

Maps and satellite images were used to identify areas sensitive to noise or vibration, followed by a sound survey to measure current noise levels in those areas. This work was coordinated with the DBS (Dogger Bank South) Offshore Wind Farms project, with relevant data shared between both projects.

Potential effects include noise and vibration impacts caused by construction activities from construction vehicles utilising the road network and noise impacts from the operation and maintenance of the Onshore Converter Station and ESBI. Once the site for the Onshore Converter Station and ESBI is chosen, detailed noise assessments will be undertaken.

To reduce noise and vibration during construction, the Outline CoCP includes measures such as

installing noise barriers and scheduling noisy activities at times to avoid sensitive periods where possible. A Construction Noise and Vibration Management Plan will be developed to ensure noise and vibration are controlled to appropriate levels throughout the Project (Commitment ID CO70).

The site layout will be designed to screen noise between the site and nearby sensitive areas where possible. Operational noise from the Onshore Converter Station and ESBI will be controlled by implementing a noise limit at sensitive receptors such as nearby homes and workplaces (Commitment ID CO71).

Most construction will happen during the day, but some night-time work may be required for trenchless crossings. This could cause noticeable disturbance in more sensitive areas.

#### **Landscape and Visual Impact Assessment**

The landscape and visual impact Study Area lies within several nationally recognised landscape types, known as National Character Areas (NCAs).

Most of the Study Area is rural, with low, gently rolling land, and falls within the Holderness landscape type (NCA 40). The south-west part of the Study Area lies in the Yorkshire Wolds (NCA 27), which features higher ground with smooth, rolling hills. A small part in the south-east sits within the Humber Estuary area (NCA 41) which includes the Humber.

There are no protected landscapes such as National Parks within the Study Area. However, the southern part lies on the edge of the Yorkshire Wolds Important Landscape Area.

The assessment examined potential changes to the landscape, including physical elements, overall character, designations, and visual amenity. It also considered how the Project might affect local views and how it could interact with other nearby developments, identifying cumulative impacts from other relevant projects.

Mitigation measures incorporated within the Project design include burying all onshore export cables underground for the entire length of the cable corridor (Commitment ID CO60) and reinstating land temporarily disturbed during construction to preexisting conditions as far as reasonably practicable once work in each area is completed (Commitment ID CO100). The Outline CoCP includes measures to minimise the visibility of construction activities, such as managing soil storage, reducing site lighting, and restoring temporarily disturbed areas. These actions will help reduce visual disruption and preserve the surrounding landscape character.

The Onshore Converter Station and ESBI are likely to have noticeable effects on the local landscape, no matter their final location. An Outline Landscape Management Plan will be included at ES stage (Commitment ID CO65). It will set out how landscape elements affected by construction will be replanted and measures to help screen the infrastructure into the existing landscape.

A Design Vision is also being developed to set out clear design principles for the Project. This will be updated as the design progresses. The Project is also engaging with an independent Design Panel and will use their feedback to help shape the Design Vision.



#### **Traffic and Transport**

The Study Area focuses on routes for construction, operation and maintenance, and decommissioning, with an emphasis on expected construction traffic volumes and routes. Information from desk studies and traffic counts, along with estimates of materials and workforce numbers, was used to predict vehicle trips. These trips were mapped onto local roads to assess potential impacts on traffic levels.

The assessment identified potential impacts including increased traffic during construction, which could cause delays, road safety risks, disruptions to local communities, and the effects of offshore-related traffic. Delays could be due to road capacity issues, narrow roads, or temporary closures.

The Project has identified measures to reduce traffic impacts, such as using a construction haul road within the onshore export cable corridor to limit heavy vehicle traffic on local roads (Commitment ID CO75), and using trenchless techniques to cross beneath main roads, minimising the need for road closures (Commitment ID CO77).

An Outline CTMP sets out measures to manage and monitor traffic during construction. It covers the design of access points, necessary offsite roadworks, and how traffic movements will be controlled. A full traffic and transport strategy, including heavy vehicle movement controls and enforcement, will be detailed in the Outline CTMP, which will be submitted with the DCO application (Commitment ID CO73).



#### **Relevant PEIR chapters and documents**

**Volume 1, Chapter 25.** *Noise and Vibration* 

**Volume 1, Chapter 26.** *Traffic and Transport* 

Volume 1, Chapter 27. Landscape and Visual Impact Assessment

Document reference

8.9

Draft Outline Code of Construction Practice

Document reference 8.15

Outline Construction Traffic Management

Plan

### Preliminary assessment for project-wide impacts

This section provides a high-level summary of key environmental topics relevant to both the onshore and offshore elements of the Project. It highlights the potential effects during construction, operation and maintenance, and decommissioning, and outlines proposed commitments for how these impacts could be avoided, minimised or mitigated. For further detail, please refer to the relevant chapters and appendices of the PEIR, which are signposted in this section.





#### **Major Accidents and Disasters**

The assessment focused on the ESBI which will be co-located with the Onshore Converter Station. The Study Area comprised a 1km buffer zone around the two Onshore Converter Station zones under consideration. It looked at what might happen if an incident occurred at the ESBI and how that could affect people, the environment, or the Project site. It also considered how accidents from existing major hazards at the ESBI, or natural hazards such as extreme weather, could impact it.

Several key management plans will address potential risks at the ESBI. These include a Battery Safety Management Plan to establish design, construction, and operational standards (Commitment ID CO79), and a Project Emergency Response Plan to ensure safety during construction, operation and maintenance (Commitment ID CO94). Health, safety and environmental risks will be identified and managed in accordance with the latest relevant regulatory requirements and best practice methods (Commitment ID CO50).

The ESBI will be built using modern engineering methods and durable materials to cope with future climate impacts. Once operational, regular inspections during the Project's operation to check for and repair damage, will help ensure safe and effective performance.

#### **Human Health**

We reviewed existing health data to understand the current health of communities near the Project. The assessment looked at how the Project might affect health and well-being through changes in factors such as access to open spaces, air quality, noise, transport, job opportunities, and people's perception of risk.

Potential effects on human health during construction were examined from social, economic, and environmental perspectives.

Social impacts include changes to open spaces, leisure, and transport access. Economic impacts relate to opportunities for education, training, and employment, both onshore and offshore. Environmental considerations include potential changes in air and water quality, noise and vibration from construction, climate change impacts, and concerns about electromagnetic fields.

Several mitigation measures are built into the Project to manage potential health impacts. These include a protocol on workforce access to health and social services (Commitment ID CO68), an Electromagnetic Field Compliance Statement to demonstrate that the Project meets public health standards for EMF emissions, and a Battery Safety Management Plan to assess and address risks at the ESBI (Commitment ID CO79).

An Employment and Skills Plan (ESP) will be developed to maximise local economic benefits by supporting opportunities for UK workers and suppliers, with a focus on vulnerable groups (Commitment ID CO67).



#### **Socio-Economics, Tourism and Recreation**

We carried out a desk-based review to assess how the Project could affect local communities and the economy at local, regional, and national levels. The assessment also looked closely at specific areas likely to be affected by tourism and recreation, including the local electoral wards of Beverley Rural, Dale, East Wolds and Coastal, Minster and Woodmansey, North Holderness, and St Mary's.

The Project is expected to bring positive economic benefits, particularly during construction, through local job creation and supply chain opportunities. An

ESP will be developed to maximise these benefits, support training, and opportunities for UK workers and suppliers (Commitment ID CO67).

Potential negative impacts include pressure on local infrastructure and services, disruption to tourism and recreational activities, and impacts on community services. These effects are expected to be managed through measures such as the PRoW Management Plan and the CTMP, which will help reduce disruption to access, tourism, and recreation throughout the Project's construction and operation and maintenance phases.



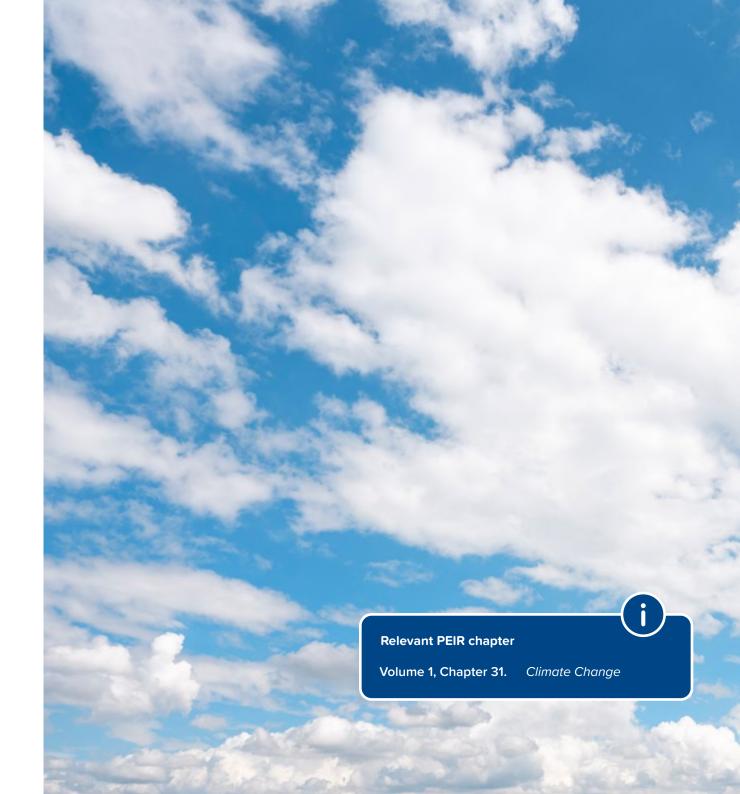
#### **Climate Change**

The Climate Change assessment looked at two main areas: the Project's potential greenhouse gas emissions and its ability to reduce emissions by generating clean energy instead of relying on fossil fuels, as well as how climate change might impact the Project and its resilience.

Although the Project will produce some emissions during construction, operation and maintenance, and decommissioning - mainly from machinery and transport - the clean energy it generates will far outweigh these emissions. The ESBI will help reduce emissions by storing clean electricity and supplying it to the grid when needed, while a Carbon Management Plan will be developed to minimise emissions at every stage of the Project (Commitment ID CO98). Depending on how energy would otherwise be generated, the Project could avoid up to 102 million tonnes of carbon emissions.

This Project is expected to significantly contribute to the UK's net zero goals by reducing greenhouse gas emissions.

The Project will be designed to remain resilient to future climate conditions, with key measures to manage risks from extreme weather included in construction and environmental management plans.



### **Enhancing the local environment**

We have put protecting and enhancing the local environment at the heart of our proposals. Overall, we plan to deliver a net gain in biodiversity through the work we do in the area.

Enhancement measures will be explored to maximise positive outcomes for both the environment and local communities. Where required under emerging regulatory requirements, the Project will develop a Biodiversity Net Gain (BNG) Strategy to deliver at least 10% BNG. This Strategy will assess onshore impacts, set out the approach to achieving measurable biodiversity gains, and detail how enhancement measures will be secured, managed, and monitored over a minimum period of 30 years.

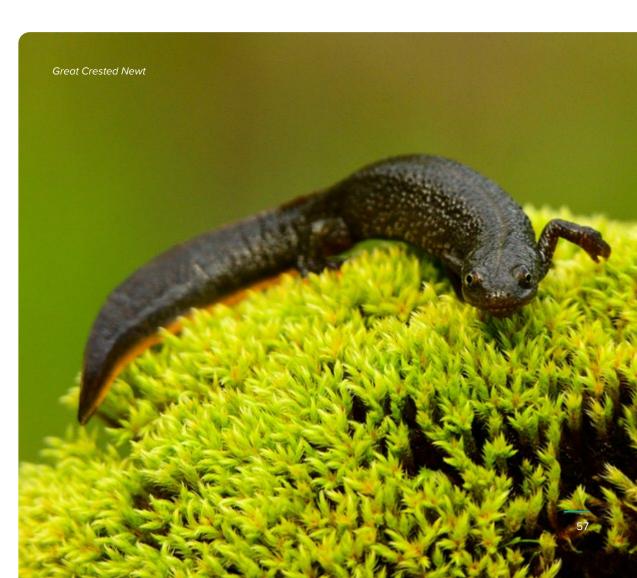
In addition, we will develop an Outline Landscape Management Plan (LMP) which will set out in more detail how we will create and improve local habitats to encourage biodiversity.

Measures we could employ in the Outline LMP include:

- Strengthening existing hedgerow and field boundaries
- Replacing or reinstating hedgerows on a like-for-like basis where these are impacted by the cables
- Planting new areas of habitat including scrub and species-rich grassland
- Using native and locally appropriate plant species.

We would very much welcome feedback through the consultation about what you currently value about the local environment and any opportunities you feel exist for enhancing it.

We will include more information about our plans to enhance the local environment, as part of our DCO application (Commitment ID CO65).



### Jobs, skills and investment

We aim to be an integral player in, and to fully contribute to, the social and economic development of the communities in which we operate.

A detailed ESP will be submitted as part of the DCO application, setting out how the Project aims to maximise socio-economic benefits (Commitment ID CO67).

This plan will focus on working with the supply chain to create opportunities for UK suppliers and workers, ensuring local communities benefit from Dogger Bank D.

We will support job creation in the area by offering skilled employment opportunities in construction, operation, and maintenance, as well as providing training and apprenticeships to develop the workforce for future renewable energy projects.



### **Next steps**

We will consider all the feedback that we receive at this stage of consultation, along with outputs from technical assessments, and environmental surveys to help us refine our proposals.

Once our proposals are finalised, we plan to submit our DCO application to the Planning Inspectorate in 2026. An independent Examining Authority will then review the application and make a recommendation to the Secretary of State, who will decide whether to grant development consent.

#### **Share your views**



Completing an online questionnaire at: **www.doggerbankd.com** 



Submitting your comments by email to: **contact@doggerbankd.com** 



Submitting your questionnaire or comments by post (no stamp required) to:

FREEPOST DOGGER BANK D

#### Responding to the consultation

Your views are important, and we welcome your feedback. Please respond by 11:59pm on Tuesday 5 August 2025 through the methods above.

#### Other contact details

If you are a landowner with related queries, please contact our land agents **Dalcour Maclaren**.

**Address:** Unit 1, Staplehurst Farm, Wester on the Green,

Bicester OX23 3QU

Contact: Rachel Maxwell

**Email:** dbd@dalcourmaclaren.com

**Telephone:** 07423 633 408

If you are from the fisheries industry please contact our fisheries consultants **Brown & May Marine Ltd**.

Address: Progress Way, Mid Suffolk Business Park, Eye,

Suffolk IP23 7HU

**Contact:** Zoe Lawrence Alex Winrow-Giffin

**Email:** zoe@brownmay.com Alex@brownmay.com

**Telephone:** 07923 138 175 07760 160 039

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