Welcome

Our Autumn Consultation

Welcome to our Autumn Consultation public exhibition for the Outer Dowsing Offshore Wind Project. We wish to share with you our updated plans in preparation for our DCO application.

The aim of this autumn consultation is to provide key information on the Project's development and so that members of the community and other consultees can make an informed contribution to the pre-application consultation process under the Planning Act 2008.

Our proposal is for an offshore windfarm, approximately 33 miles (54 kilometres) off the coast of Lincolnshire, England. The project comprises a 1.5GW offshore generating station, along with the transmission infrastructure (both onshore and offshore) required to get the electricity to consumers.





Who we are

The project partners are committed to delivering a brighter future for the Greater Lincolnshire area. Further afield, the wind farm will help form the backbone of the UK's net-zero energy system, delivering opportunities and empowering transformational environmental change.



The project is being developed by Corio Generation, TotalEnergies and Gulf Energy Development who have put together a team of experts with decades of experience in offshore wind to ensure that we deliver the project to the highest standard.







Max 50%



own from 300m

(Typical) Onshore

Footprint

Up from

14.5 hectares

Onshore AIS

IIn from 12m

Onshore AIS Max

Equipment

GIS Substation Max. Building Height

own from 19m

Grid Substation
Connection Location

19m Down tro

Down from

Search zones



*The Project has committed to utilising a maximum of 50% gravity bases foundation types for turbines and offshore platforms (not including Artificial Nesting Structures (ANS)).

Our Project Refinements

The above graphic illustrates the key refinements and changes to our project parameters since our previous Consultation Phase (Phase 2). These updates are described in more details on each of our Panels – ask someone form the Project Team to take you on our "Panel Journey". We have also provided an "Environmental Update Report" that looks at these parameter changes in relation to our PEIR assessments, this is available on the tables and on our website.

Updates on the Grid Connection

Following the appraisal by National Grid ESO (NGESO) in collaboration with the Transmission Owner, National Grid Electricity Transmission we are no longer progressing the Lincolnshire Node connection option. We have been progressing development activities at the Surfleet Marsh area (previously referred to as Weston Marsh North). The assessment methodology used by National Grid ESO considered the four network design objectives used within the Holistic Network Design analysis: economic and efficient, deliverable and operable, minimise environmental impact, minimise community impact. See our onshore substation Panel for more information.

Investing in the UK



Economic and Employment opportunities

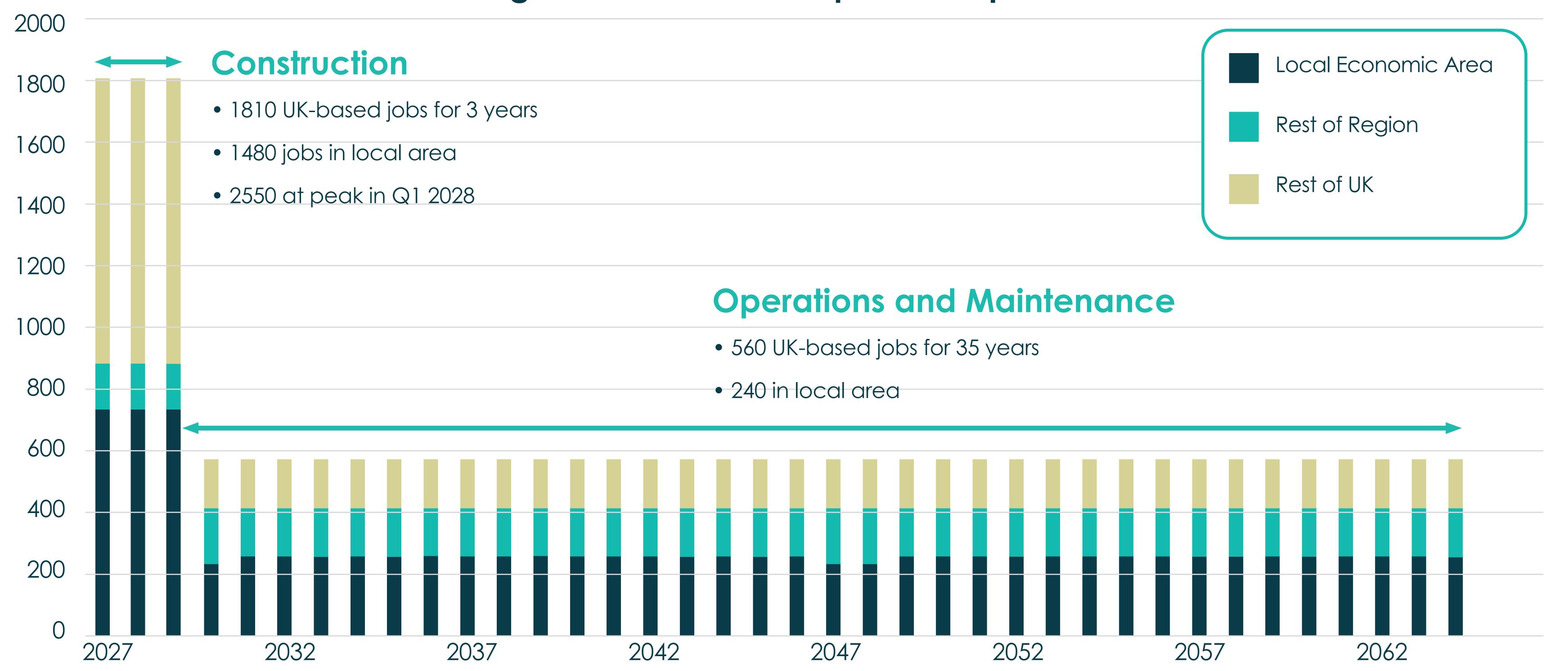
As part of our PEIR we undertook a socioeconomic assessment that estimated the minimum spend and number of jobs that might be created by our project. The estimations are based on current supply chain capability and trends. With the UK supply chain gearing up to support the energy transition, alongside ambitions by the project to increase UK content, we hope to improve on these estimates as we work towards the construction phase projected to start in 2026/2027.



Estimated spend over the lifetime of the project:

Total investment of £5-7 billion, of which 45-60% could be spent in the UK

Estimated number of UK-based jobs supported* by the project during construction and operations phases



*'supported' refers to direct, indirect and induced jobs.

Supply chain challenges

There are currently a limited number companies that make wind turbines globally – at present none of these are based in the UK. This means that, at present, our estimated spend during the construction phase is predominantly overseas as turbine supply forms a large part of the project cost. An increasing number of components for offshore wind projects are made in the UK and it is hoped that opportunities for UK content will continue to grow. More details about our estimated spend can be found in Chapter 29 of the PEIR document.

Notes:

- Source: PEIR Chapter 29:
 Socio-economics, Recreation &
 Tourism
- Local Economic Area is defined in the PEIR as: Greater Lincolnshire, Hull and East Yorkshire Local Enterprise Partnership Areas
- Regional Area is defined as: the rest of Yorkshire, the Humber and East Midlands
- Employment figures are estimates and are calculated as yearly averages over the project phases

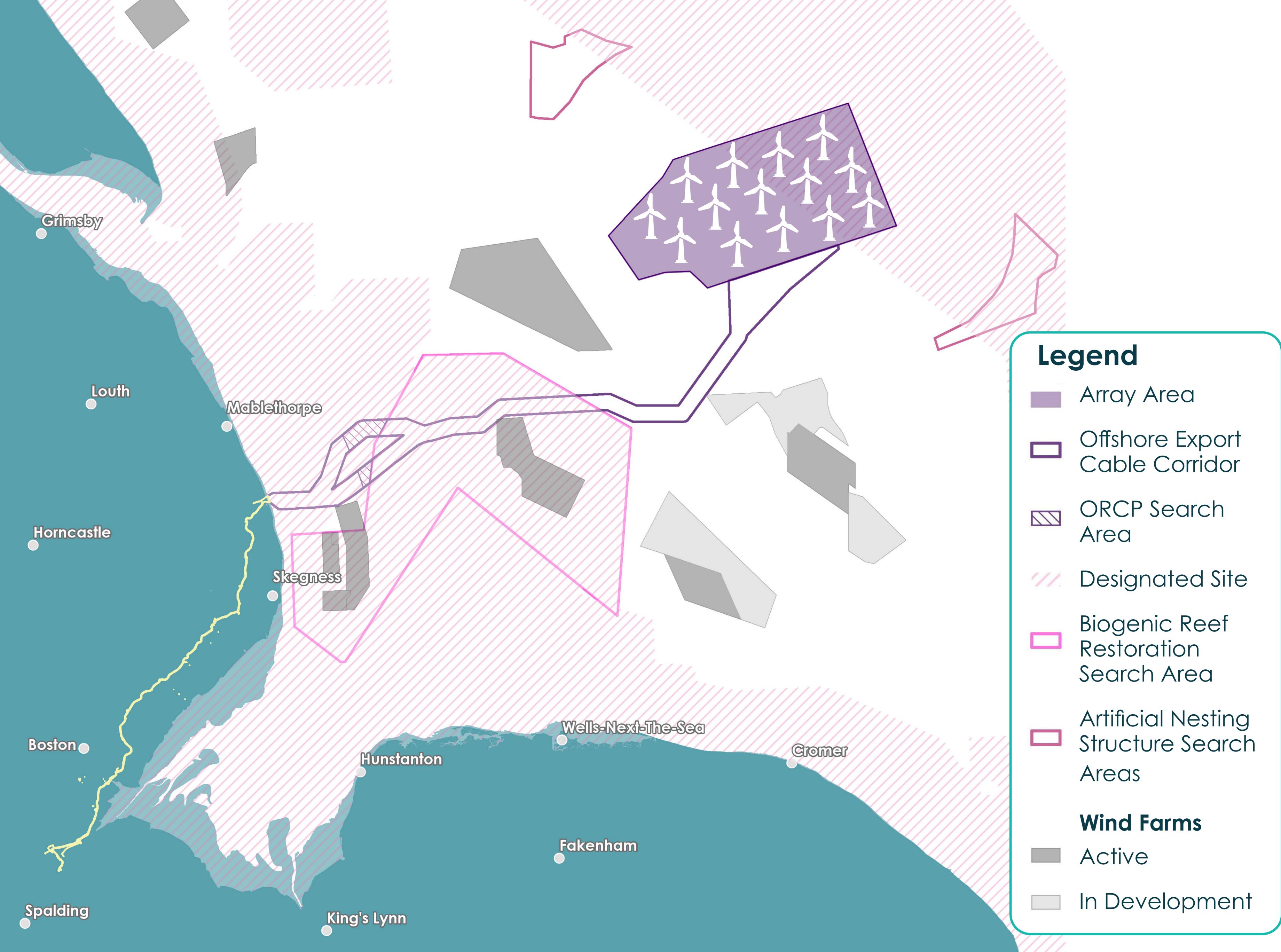


Community Benefit Fund

An Outer Dowsing Offshore Wind community benefit fund will be launched after consent is granted, providing significant opportunities for local groups to fund projects in their communities. Prior to the launch of the community benefit fund, Outer Dowsing Offshore Wind will work with local organisations to develop the terms of the proposed community fund and will invest in selected projects focused on themes that align with the project and local needs.

Harnessing wind power from the southern North Sea

The offshore elements of the Project consist of an offshore wind turbine array, area located approximately 33 miles (54 km) east of the Lincolnshire coast, along with offshore platforms, and export cables and array cables to connect the electricity generated to the National Grid.



40mMinimum
Turbine Tip

Up to 100 Wind Turbines

Max 50%
Gravity Base
System
Foundations*

ORCP closest distance to shore

Up from 6km **Key Offshore Project Refinements**

See our "Autumn Consultation Environmental Update Report" for further information.



*The Project has committed to utilising a maximum of 50% gravity bases foundation types for turbines and offshore platforms (not including Artificial Nesting Structures (ANS)).

The key offshore components are:

W Up to 100 wind turbines

Wind turbines minimum tip height of 40m

W Up to four offshore platforms

Up to two offshore reactive compensation platforms

W Up to two Artificial Nesting Structures (if required)

Array and interlink cables; and

Offshore export cables.

Offshore Cable Corridor

The offshore export cable corridor is the area where the offshore export cables will be installed. The offshore export cables will bring the power generated by the windfarm ashore. The offshore export cables will predominately be buried below the seabed.

Offshore Reactive Compensation Platforms (ORCPs)

ORCPs can be used to reduce electricity lost due to resistance in the cables over long distances for windfarms further offshore. The search area under consideration for the Project's ORCPs has been reduced, with the closest areas to shore now 12km away, to reduce potential visual impacts.

Artificial Nesting Structures & Biogenic Reef Restoration

We are investigating the feasibility of environmental compensatory measures on a "without prejudice" basis and this includes an area of search for potential Artificial Nesting Structures for birds and an area of search for potential locations for biogenic reef restoration.

Wind Turbine Array Area

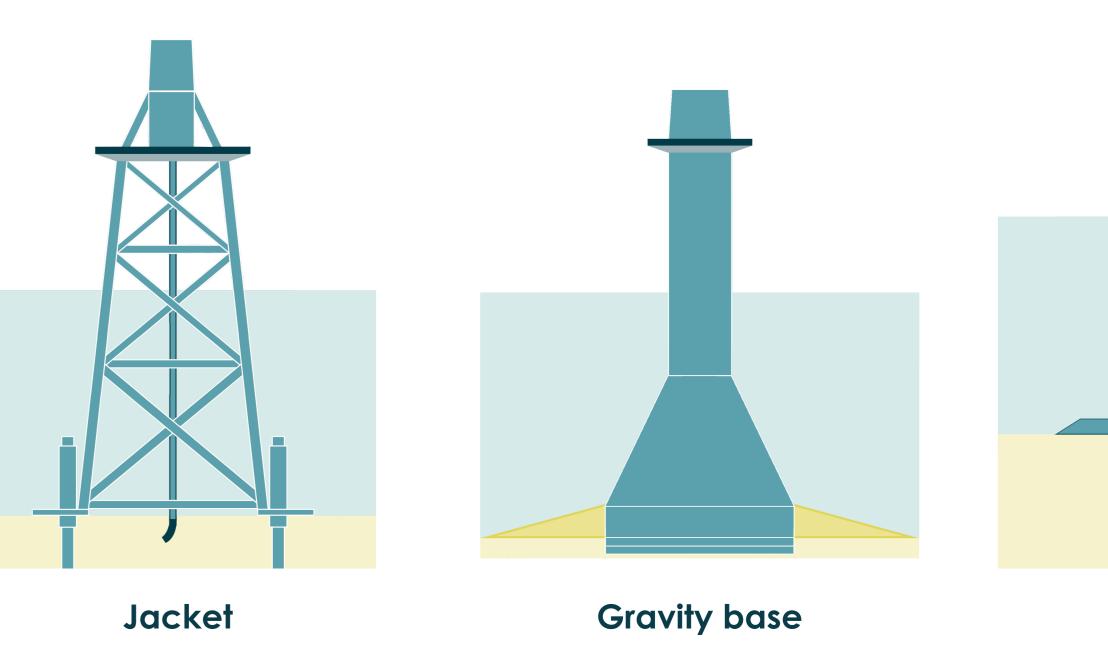
The array area is where the wind turbines will be located, as well as additional infrastructure including offshore substations and electrical cables to connect wind turbines and offshore substations.

The array area will be further refined to reduce potential environmental impacts and to meet minimum power density requirements prior to the Project submitting an application for a Development Consent Oder (DCO).

The final wind turbine layout will be determined once the design optimisation process has been completed. This process will balance a range of key considerations including wind turbine design, foundation structure, turbine spacing, seabed characteristics, metocean conditions, wind direction, benthic habitats, navigational safety and fisheries considerations amongst other factors.

The Wind Turbine Foundations

A number of different foundation types are being considered, including monopiles, pin pile, jackets, suction bucket jackets and gravity base foundations, examples shown here. To reduce possible impacts of the larger gravity base foundation the project has committed to a maximum of only 50% of foundations to be gravity bases at this stage.





20 km

Bringing the electricity ashore and to the connection zone



Our Landfall and Onshore Cable Route



The Onshore Underground Cables

Since our last consultation (Phase 2 – held in June) we have refined our indicative c.80m width cable route search corridor and now have a more detailed proposed cable route. This route has been informed by the feedback we received from the Phase 2 Consultation as well as from additional survey data and optimisation studies.

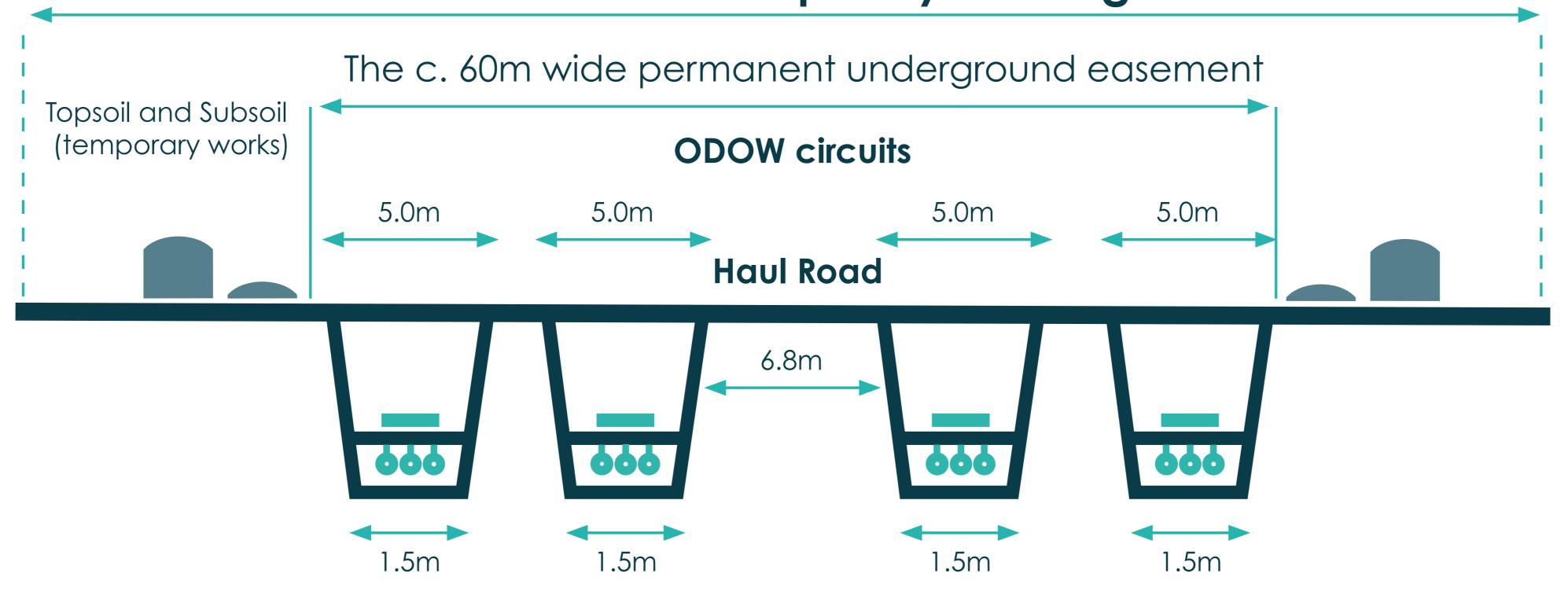
Whilst the width of the cable corridor may fluctuate along the route to account for specific environmental or engineering constraints, the Project will ultimately require a typical working width of 80m during cable construction, reducing to a typical 60m wide corridor post construction.

We have committed to burying our cables from the landfall to our onshore substation. This means no pylons along the cable route from Landfall to our onshore substation.

Once the cable route has been constructed, land will be reinstated and agricultural activities will be able to resume.

The onshore cables will be placed in up to four trenches to transfer the power generated across Lincolnshire to the Project's Onshore Substation. The onshore cable route will also include temporary compounds, temporary access routes and a temporary haul road.

The c. 80m wide temporary working width



Bringing the cables ashore - Our Landfall, Wolla Bank

Underground cables would continue from Wolla Bank to connect to a substation in **Surfleet Marsh** that will connect to a new National Grid substation in the vicinity of Weston Marsh to enable connection to the existing overhead lines.

The cables at the Landfall at Anderby Creek will be facilitated through the use of **Horizontal Directional Drilling (HDD)** to install ducts within which the offshore power cables can be installed and joined to the onshore cables at a transition joint bay onshore.

To avoid impacts to the local communities and tourism, we have committed to **no beach access** for construction activities for the duration of the construction of the Project.

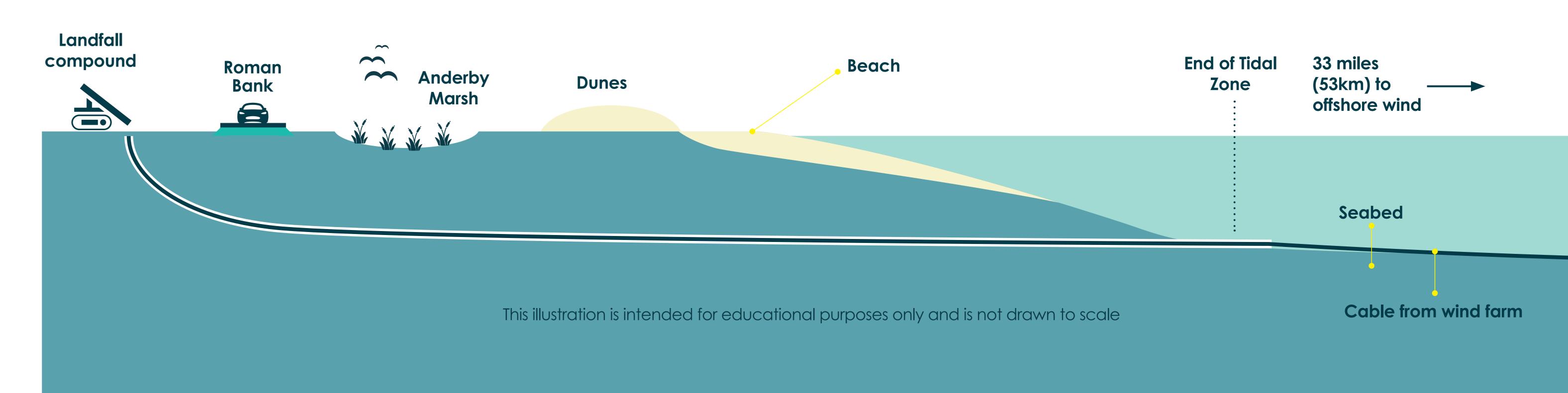
How will we do this?

The project will be drilling underneath the beach, the dunes, Anderby Marsh Local Nature Reserve (LNR) and the coastal (Roman Bank) road. The drill compound will be located on the western side of the coastal road (Roman Bank).

Given our landfall site is in the vicinity of the **Anderby Marsh LNR**, following a full season of wintering and breeding bird surveys, we have been refining our proposals to work with the ornithological receptors (birds) that utilise the Marsh, minimising impacts as much practicable and ensuring the integrity of the nature in the surrounding area.

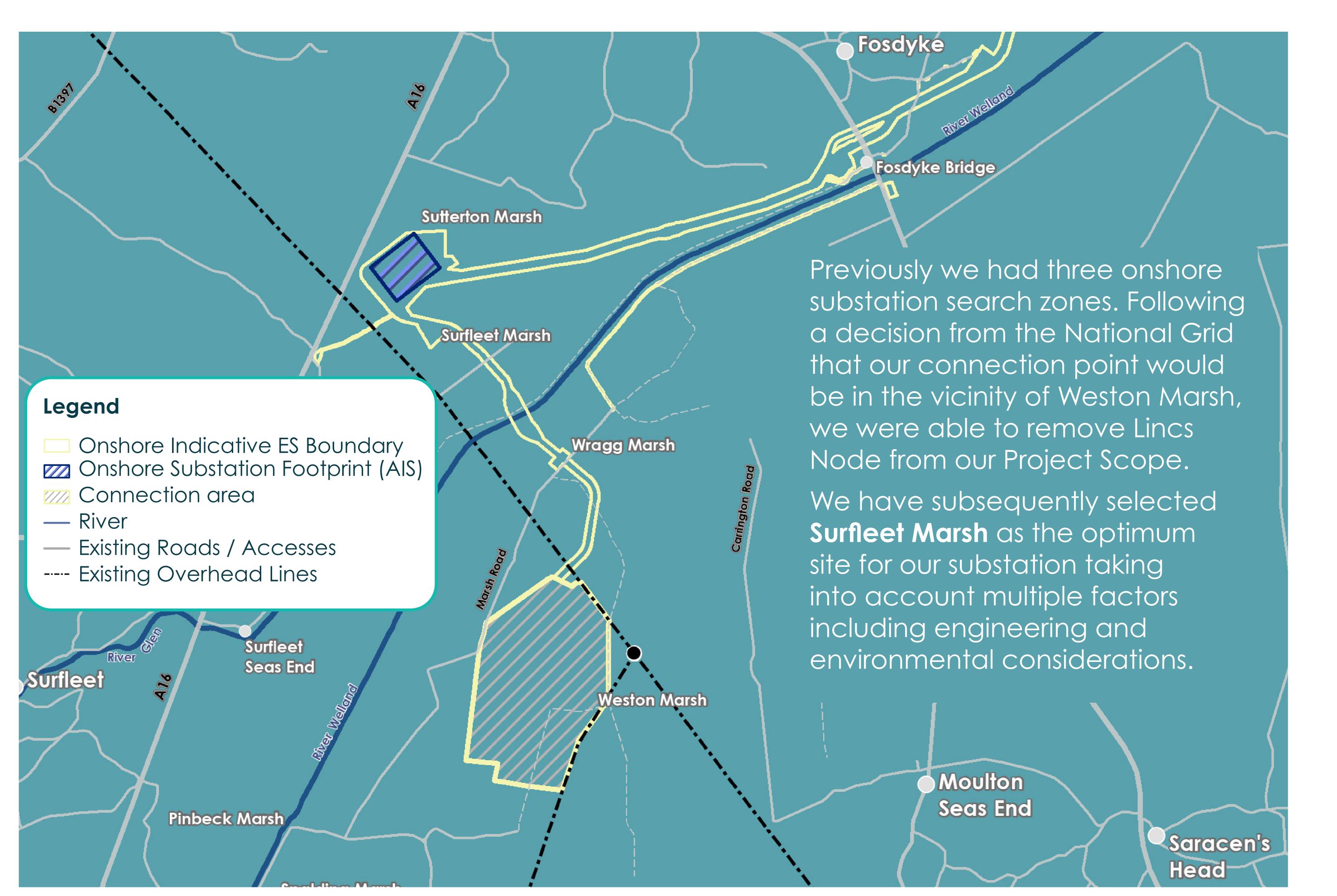
What Mitigation Measures are we taking?

We have set the "noisier" equipment further back to the western end of the compound, committed to adopting quieter piling techniques such as rotary or silent piling, and included a 4m high earth bund for noise attenuation.



Getting the electricity into the Grid

Our Onshore Substation



Take a closer look at our new visualisations and planting proposals – they are available on the tables, or you can follow the QR code, ask a member of the team if you're unsure!









Planting

Our Visualisations

The visualisations shown here illustrate a computer-generated indicative model based upon the maximum design envelope for a GIS substation (shown right). This is the largest the structures could be, but they could be smaller. The full set of visualisations for each location are available on the tables in the hall and on our website.

Key Onshore Project Refinements

See our "Autumn Consultation Environmental Update Report" for further information.





The Onshore substation

The onshore substation will contain the electrical components that are needed to transform and convert the power from the wind turbines to match the power in the National Grid Transmission System. The power will be transferred to the substation via the offshore and onshore underground cables. There will also be a need for a National Grid substation and associated enabling works within the vicinity of the project's onshore substation which we will connect to using 400kV underground cables which will run between our project substation and that which will be developed by National Grid Electricity Transmission. The "connection area" is an indicative search area for this National Grid infrastructure.

We have committed to adopting High Voltage Alternating Current (HVAC) technology, this means a smaller onshore substation will be required, reducing the visual impacts associated with the permanent above ground infrastructure.

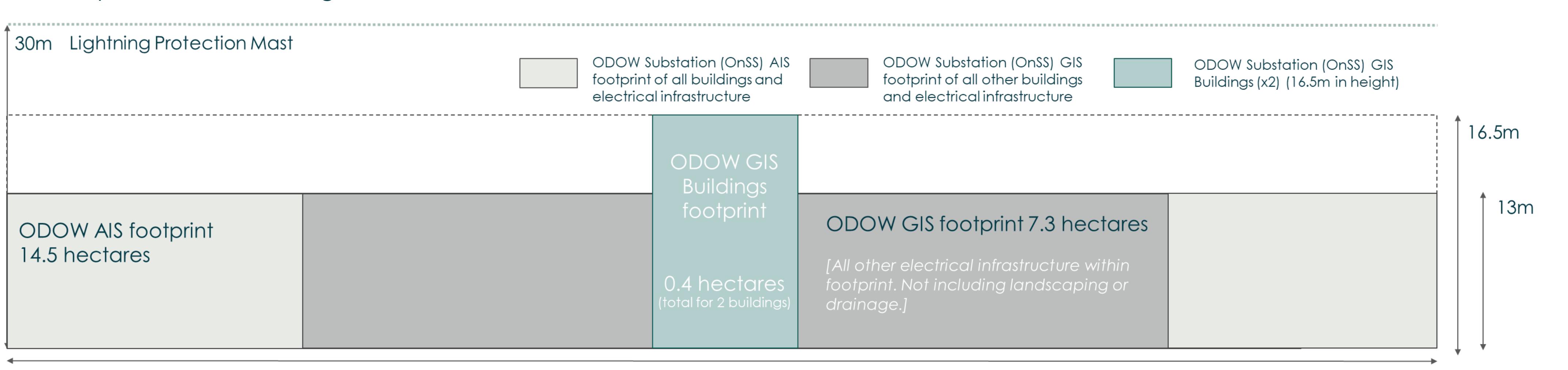
The Onshore Substation Design & Community Consultation

We are dedicated to working with the local community to develop the design of the onshore substation. While there are certain areas of the design that are driven by technical or other key considerations, there are a number of key elements that will significantly influence the design, look and presence of the onshore substation that the project propose to design in consultation with the local community. The project have initiated the development of a design panel in line with their established Community Liaison Groups and feedback from consultees.

We are keen to hear your thoughts on our proposals to date. Do you have any local knowledge on plant and tree species to share that would help ensure our planting establishes well and is reflective of the surrounding area?

The 'Maximum Design Scenario'

The Maximum Design Scenario is what we use to be able to assess a "worst case scenario". For the project's onshore substation, the maximum parameters have been defined based on two potential technologies still under consideration, Air Insulated Switchgear (AIS) and Gas Insulated Switchgear (GIS), the type of technology adopted has an impact on the maximum footprints and heights of the onshore substation as can be seen on the drawing below.



Working with the environment

By undertaking detailed survey work we can better understand the current environment. This helps us to design and develop the project with the environment in mind, avoiding or minimising impacts from the outset.

Delivering Transformational Environmental Change

As well as minimising any adverse environmental impacts of the Project through innovative and environmentally sensitive design, we are exploring opportunities for delivering Biodiversity Net Gain as part of our project.

Working with stakeholders and local communities we will seek to identify opportunities to improve the environment at a local level. For example, by implementing measures to create an improved environment for species and habitats, for the benefit of people and nature. We welcome any feedback or ideas you may have on possible environmental gain in the local area.

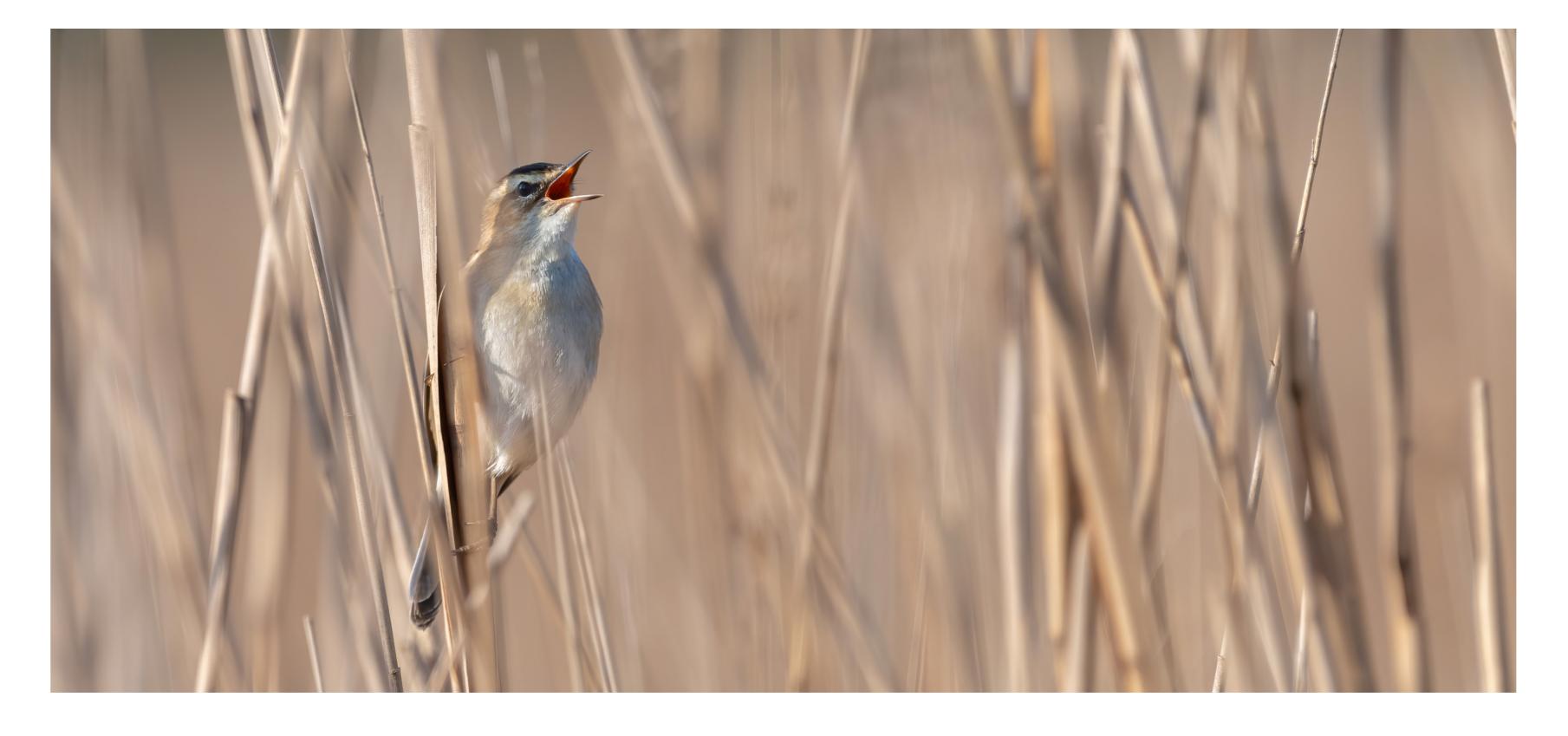
Minimising and Mitigating Environmental Impacts

Environmental Impact Assessment (EIA) is a process which identifies and assesses the potential environmental effects of a development. It informs the design of the Project from both an environmental and social perspective and identifies mitigation measures to minimise and manage the impacts of the project on the surrounding people and environment.

The Project has made a number of further key commitments (since our previous consultation phase) that have been incorporated into the Project's development, such as:

- **Drainage** We have appointed a Local Drainage Contractor to undertake initial surveys and help inform drainage designs.
- ** Traffic The Project has taken on feedback and refined traffic routes to avoid or limit the use of, where possible, key local pinch points such as Skegness and Wainfleet. Have a look at our A1 plans to see our updated traffic and access routes.
- **Grade 1 Land** Following consultation and assessment of the proposed cable routes to the Weston Marsh connection option, the cable route south of the A52 was removed from the project's scope, thereby **reducing the Project's impact on grade 1 land**. The Project is also designing its onshore substation planting scheme to limit severance of the land as much as practicable.





Traffic flows & Access Surveys

We have been undertaking "Swept Path Analysis" work to help identify mitigation requirements such as passing bays. Have a look at our A1 Plans to see our updated traffic plans.

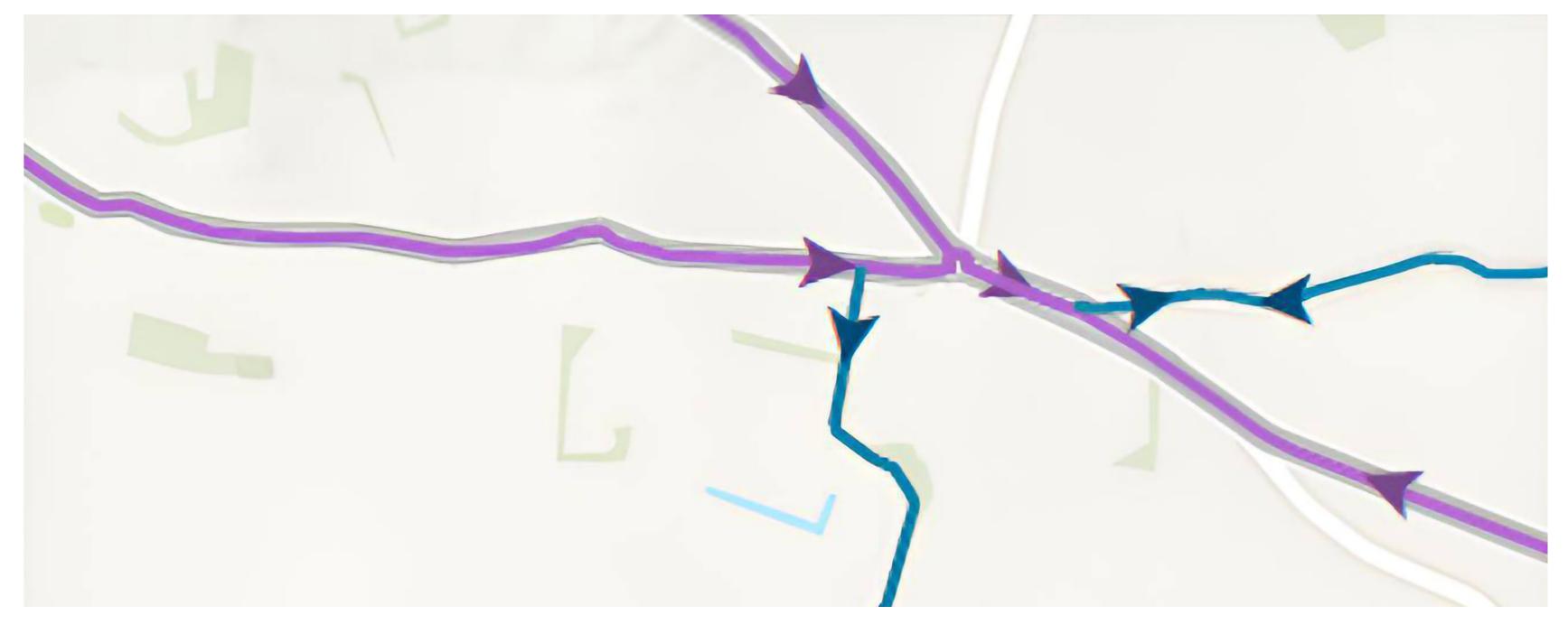


Geophysical Surveys - Archaeology

We have been undertaking geophysical surveys across our project footprint to better understand how we might avoid or mitigate any potential impacts on Archaeology. The geophysics helps us to understand where there are areas of potential archaeology and is used to inform our "trial trenching" campaign which we will undertake next year.



These surveys are ongoing and we now have a full year of breeding and wintering bird survey data. The more survey data the better, which is why our ornithologists are back out again undertaking our second year of wintering bird surveys. See our Landfall panel for more details on how our bird survey data has refined our designs.



Geotechnical and Engineering surveys

Throughout the Spring/ Summer we have been undertaking surveys to help us understand the ground conditions at locations along the cable route, we used this information to help refine our proposals and ensure our trenchless crossings are designed in line with the geology we will encounter.



Project need

The UK Government has ambitious plans to have 50GW of operating offshore wind capacity installed by 2030 – enough to potentially power every home in the UK, delivering home-grown renewable energy and providing increased energy security for the nation.

At 1.5GW, Outer Dowsing Offshore Wind will be one of the UK's largest offshore wind farms upon completion. It is anticipated to generate renewable electricity equivalent to the annual electricity consumption of over **1.6 million households** and will play a critical role in achieving the UK Government's ambition to deliver 50GW of offshore wind by 2030 and **achieve net zero by 2050**.

The Project will displace the equivalent of nearly 2 million tonnes CO₂ emissions per year of operations through the generation of renewable electricity. This is the equivalent of removing over 650,000 petrol cars from the road for the duration of the Project.

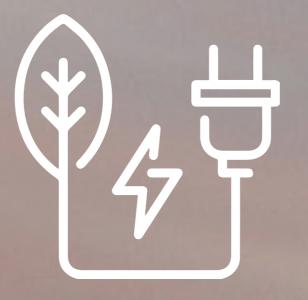
Innovation and economies of scale within the offshore wind industry have helped to significantly drive down costs whilst supporting the regeneration of a number of local coastal communities and economies through both the construction and ongoing maintenance of projects.

The offshore wind sector is already making a major contribution to the UK economy, **supporting over 31,000 UK jobs**, both directly in the offshore wind industry, or indirectly through the supply chain companies which manufacture products for the offshore wind industry. By 2030, the offshore wind sector could employ over **97,000 people in the UK**¹.

Once operational, Outer Dowsing Offshore Wind will be a major part of the Government's plans for providing secure and affordable home-grown energy to British households and industry, accelerating the growth of the UK economy, and eliminating carbon emissions.

The offshore wind industry has a strong track record of innovation, delivery and cost reduction. In the seven years from 2015 to 2022 the cost of electricity from offshore wind farms securing Government-backed production contracts fell by almost 70 per cent. Offshore wind is now among the cheapest forms of new electricity generation in the GB market, along with onshore wind and large-scale solar.²





Up to 1.5GW of clean electricity



Powering over 1.6 million UK households



Displacing nearly 2 million tonnes of CO2 per year



Let us know your views.

^{1:} OWIC Press Release, 13 June 2022 (https://www.renewableuk.com/news/608235/New-report-shows-jobs-in-UK-offshore-wind-industry-to-grow-to-100000.htm)

^{2:} Electricity Generation Costs, BEIS, August 2020 (p.27)

The application process

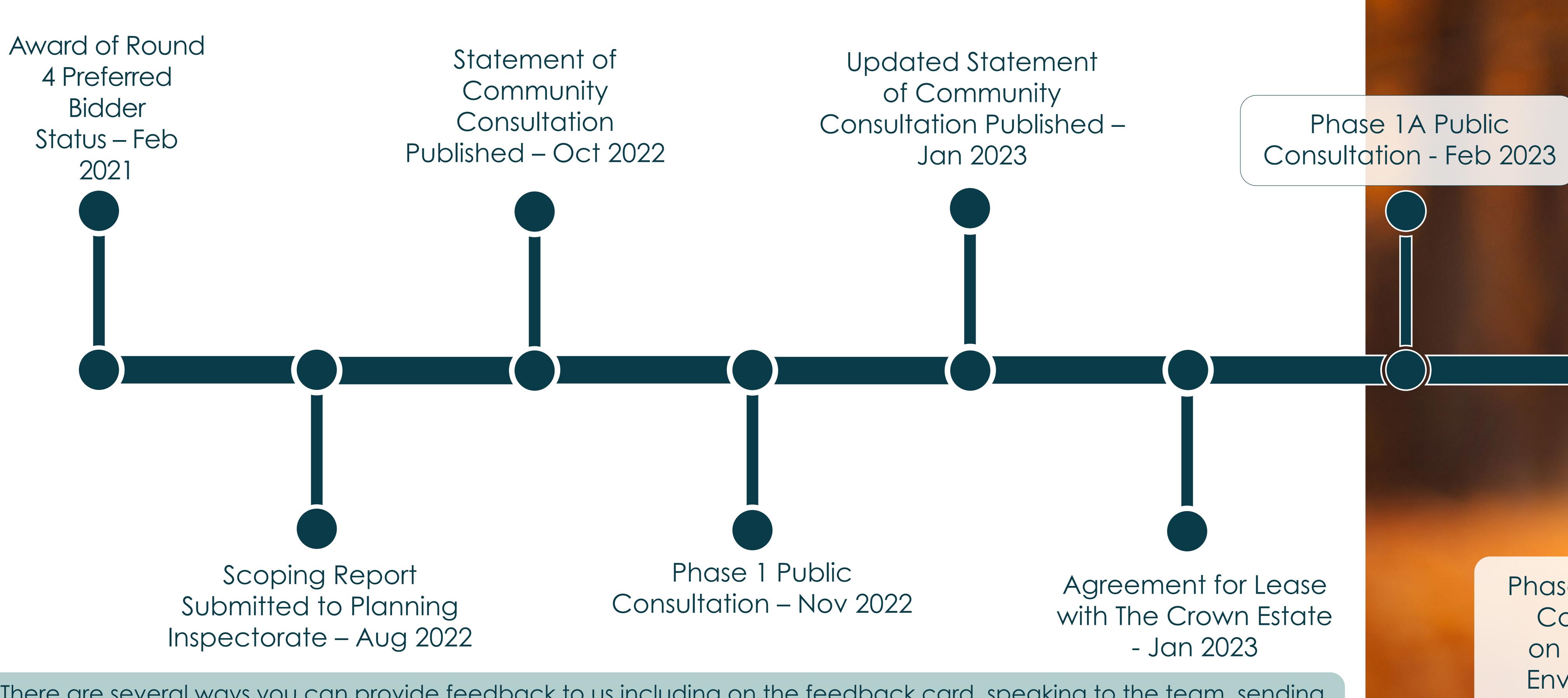
Offshore wind developments of more than 100MW are considered Nationally Significant Infrastructure Projects and require a Development Consent Order (DCO) to build and operate.

The DCO process was created to streamline the consenting of large infrastructure projects and to ensure transparency and facilitate public participation.

The DCO application process will be managed by the Planning Inspectorate and examined by an Examining Authority, which will produce a recommendations report, before a decision is made by the Secretary of State.

The Local Planning Authorities and Marine Management Organisation play an important consultative role in the process.

If granted, the DCO will consent: the offshore wind farm; the cables; any associated electrical infrastructure; any other associated development included in the application; and, the onshore grid connection works required for the Project to connect into the National Grid substation (the National Grid substation and any works required to connect into the overheadline network will be consented by the National Grid).



There are several ways you can provide feedback to us including on the feedback card, speaking to the team, sending us an email (contact@outerdowsing.com), leaving a message on our Freephone number (0808 175 2970) or writing to us free of charge (FREEPOST ODOW)



Our Consultation Approach

We are dedicated to consulting in the best way possible. We really appreciate the feedback we've had from previous consultations, and we are fully committed to continue open communications and hear your views:

- Over the past year of our consultation, we have communicated with over 23,000 households as well as locally elected councillors and community representatives.
- We have had over 1,200 visitors attend our previous public exhibitions.
- We have hosted 20 Community Liaison Group Meetings.

Confirmation of Grid

Connection Location

Submission of
Development
Consent Order
(DCO) application to
Planning Inspectorate
- Q1 2024

Consent
Decision
from Secretary
of State

Phase 2 Statutory
Consultation
on Preliminary
Environmental
Information Report June 2023

Autumn consultation - Oct/Nov 2023

DCO Examination