

Welcome

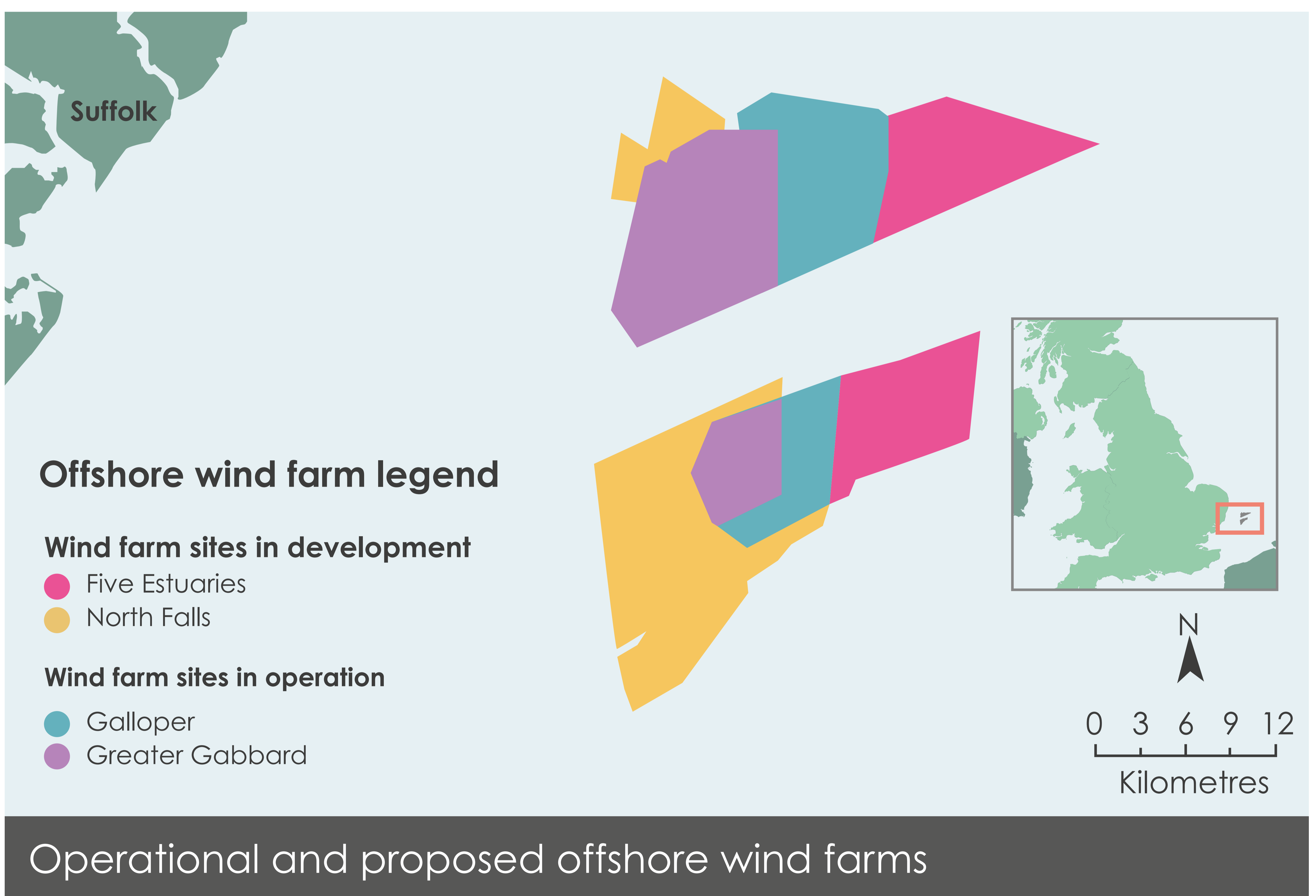
Welcome to this public event for the Five Estuaries Offshore Wind Farm Project. This event is part of our second stage of public consultation.

We appreciate you taking the time to join us today. These banners summarise key information about the Project. The event also includes large scale plans of the proposals, our Preliminary Environmental Information Report, and visualisations from key viewpoints. The Project team is on hand to help answer your questions.

The Project

The Project is a proposed extension to the existing Galloper Offshore Wind Farm. It includes:

- An offshore wind farm located approximately 37km off the coast of Suffolk at its closest point;
- Up to 79 wind turbine generators and up to two offshore substations;
- Landfall between Frinton-on-Sea and Holland-on-Sea;
- Underground cables from landfall to National Grid's proposed East Anglia Connection Node substation near Lawford; and
- A project-specific onshore substation in the vicinity of Little Bromley.



Who we are

The Project is being proposed by Five Estuaries Offshore Wind Farm Limited. The Five Estuaries Project partners are RWE (25%), a Macquarie-led consortium (25%), Siemens' financing arm, Siemens Financial Services (25%), ESB (12.5%) and Sumitomo Corporation (12.5%). RWE is leading the development of the Project on behalf of the project partners.

Need for the project

The Government has set an ambitious target to deploy up to 50GW of offshore wind by 2030.

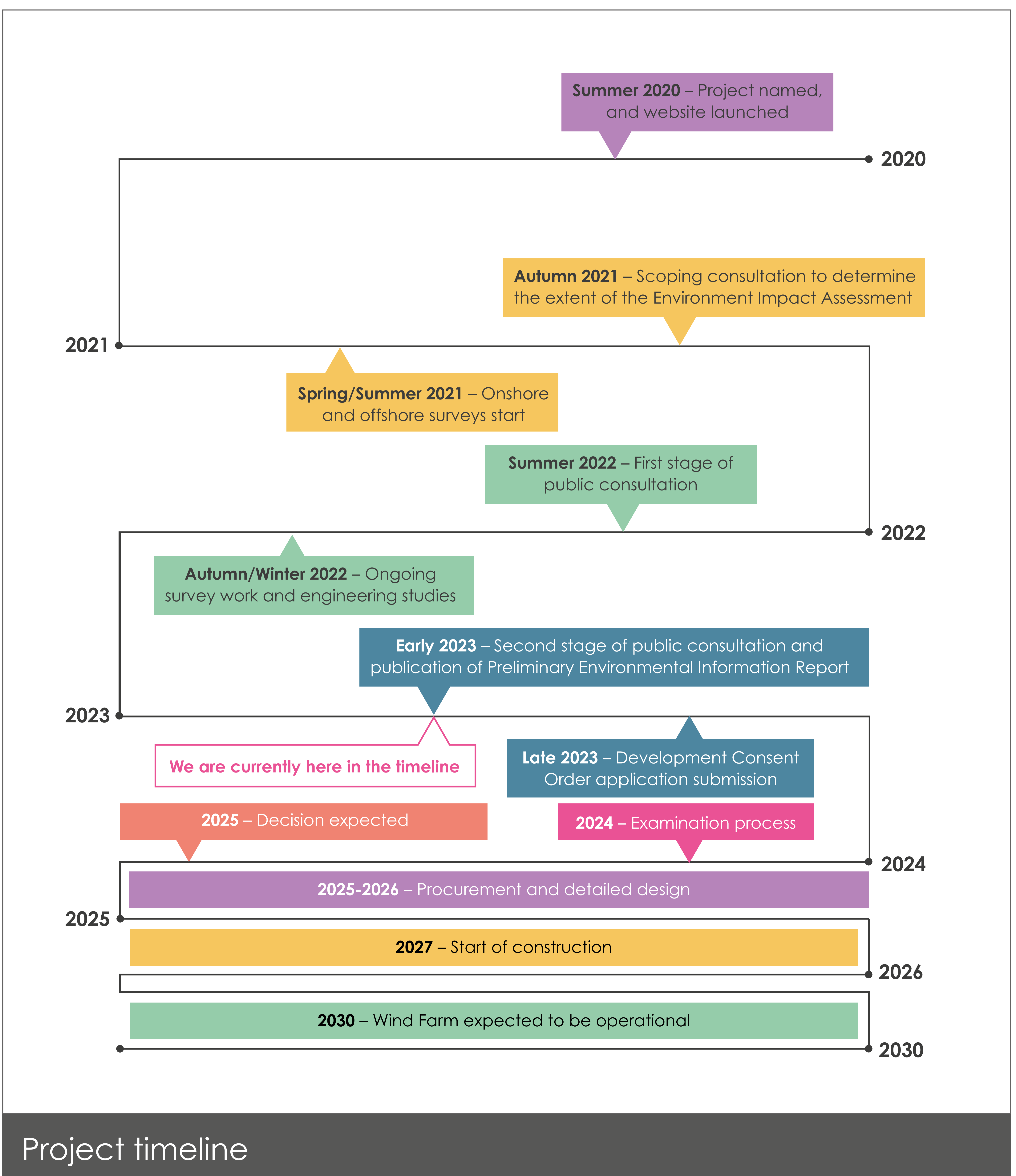
This is five times more than the 10GW we currently produce and enough to power every home in the UK at current electricity usage levels.

Offshore wind power will play an essential role in our future electricity generation as we work to tackle climate change and reduce emissions.

Offshore wind energy can:

- Provide national energy security
- Reduce greenhouse gas emissions
- Maximise the economic opportunities from energy infrastructure investment for the UK
- Produce affordable energy

Once operational, the Five Estuaries project will produce enough electricity to power hundreds of thousands of homes.



Project timeline

The wind farm

The offshore wind farm itself is called the 'array'. This area makes up around 128km² across two areas in the southern North Sea. These two areas are separated by a shipping traffic separation scheme. The array is made up of the following components:

- Up to 79 turbines, split across two areas, up to 420m at the tallest point of the blade tip above sea level
- Up to four electrical circuits to connect to the national electricity transmission network
- An offshore export cable corridor to the coast of Essex

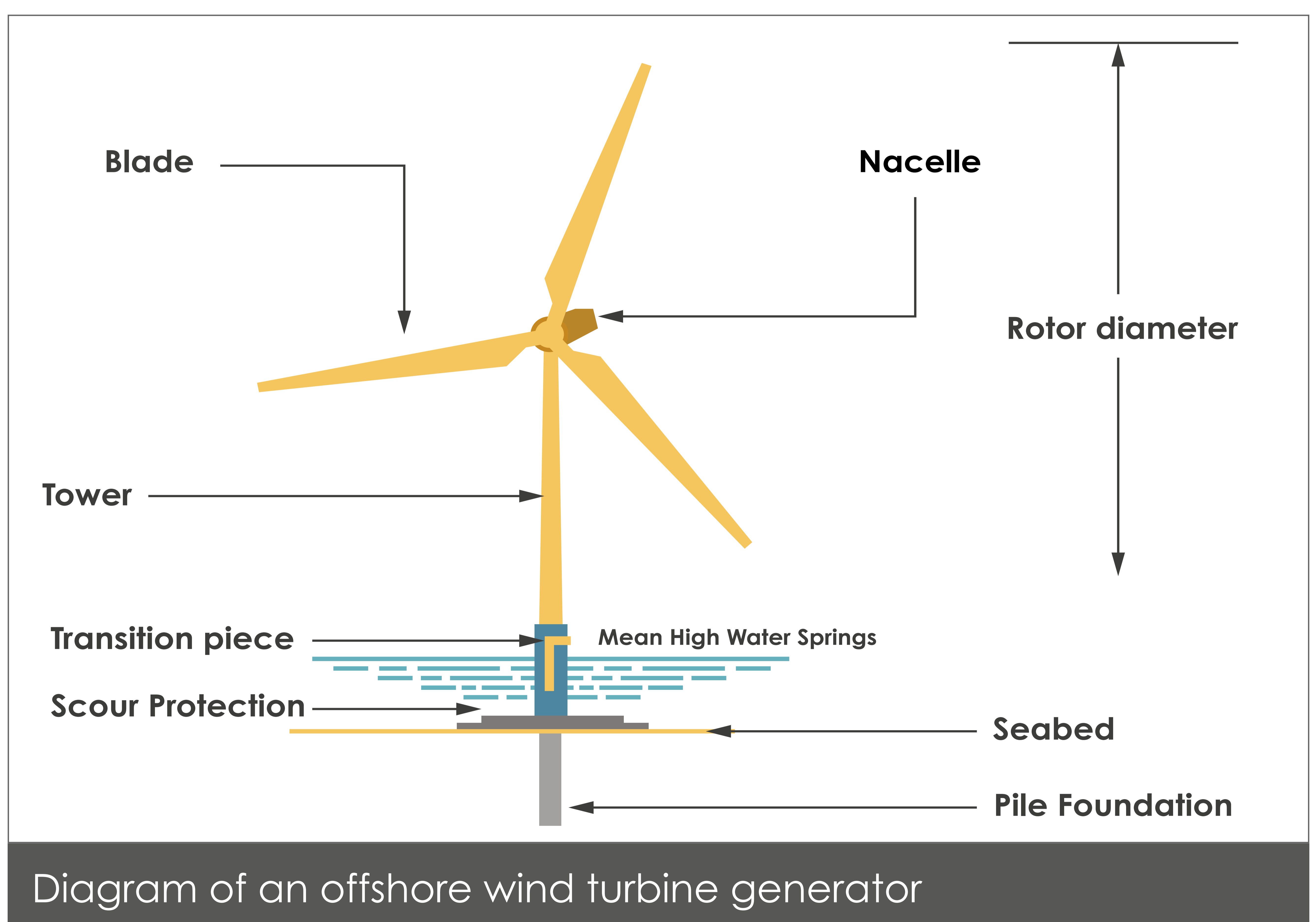
The specific locations of wind turbines and other offshore infrastructure will be confirmed once the Project has received consent.

Views

The closest point of the array to shore is approximately 37km to the coast of Suffolk. From the majority of viewpoints, turbines for the Five Estuaries project would be behind existing wind farms. Although our proposed turbines would be taller (up to 420m) than the existing turbines (which have a maximum tip height of 180.5m), they are unlikely to be visible frequently due to the distance, weather conditions and curvature of the earth.

Export route cable corridor

The offshore cable route is approximately 84km at its maximum length. The export cable corridor is currently up to 2km wide, although the actual diameter of each cable will be approximately 310mm (around 12 inches). This corridor width provides the opportunity for micro siting around obstructions and coordination with North Falls cable routing.



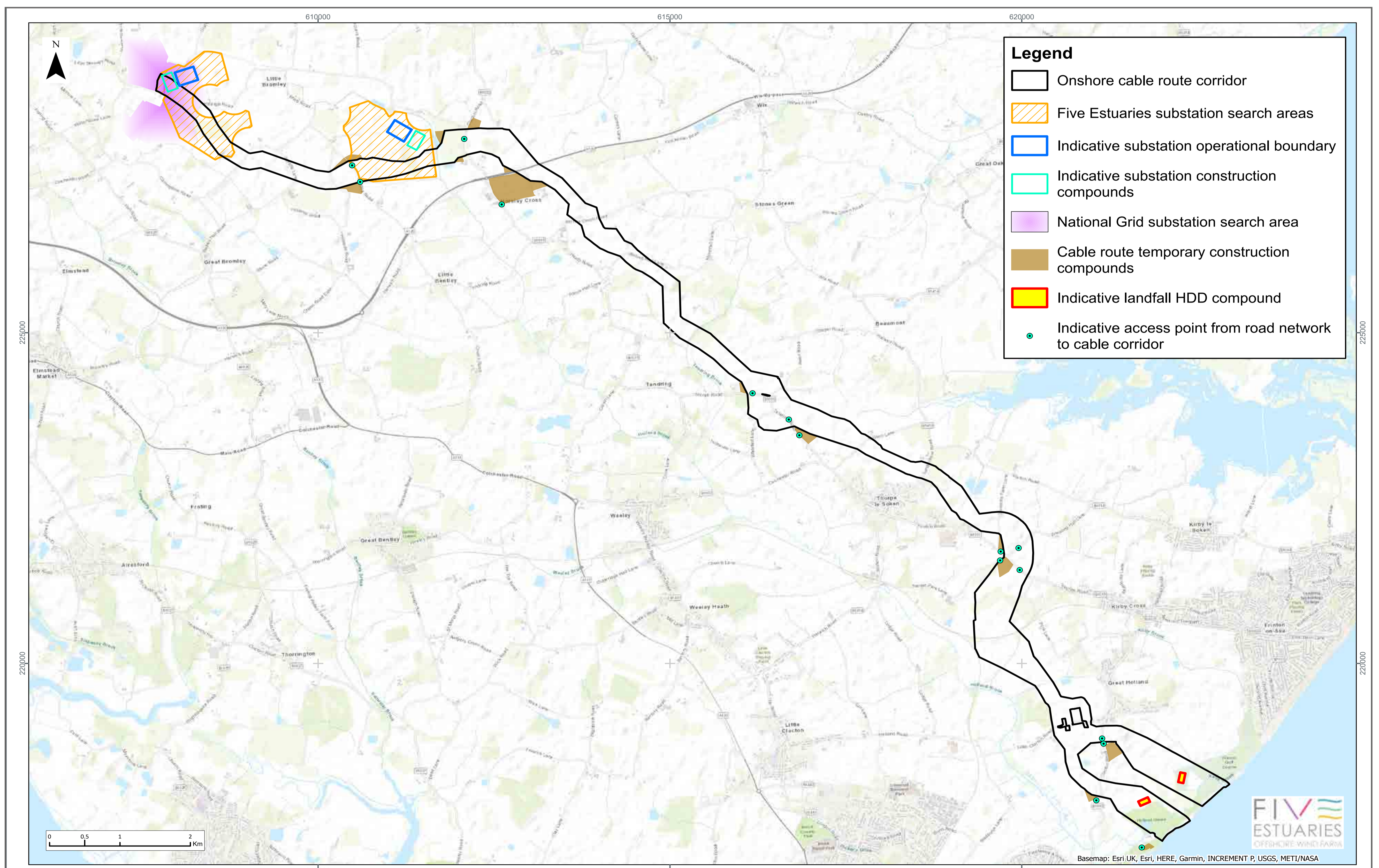
Onshore connection

- The wind farm will connect to the national electricity transmission network via National Grid's proposed East Anglia Connection Node substation.
- A separate Five Estuaries project-specific substation in the vicinity of Little Bromley is also required.
- Up to four electrical circuits will be installed along an approximately 22km long corridor. All cables would be placed underground.
- The cable corridor has been chosen and refined on the basis of environmental surveys, engineering assessments, avoiding residential properties and feedback from our first stage of consultation.
- The cable route corridor is wider than the actual space required to lay the cables. This allows for flexibility at obstacles and coordination with the North Falls project on alignment.

Connection point

One of the first requirements for a wind farm development is to establish where the power generated can be exported to the national electricity transmission network from. National Grid has advised us that they anticipate Five Estuaries will connect to the East Anglia Connection Node substation, near Lawford, Essex, which is part of a wider network reinforcement project.

Five Estuaries is also engaged in the Offshore Transmission Network Review, which is a government-led initiative looking at the opportunities to streamline how offshore wind farms are connected to the network.



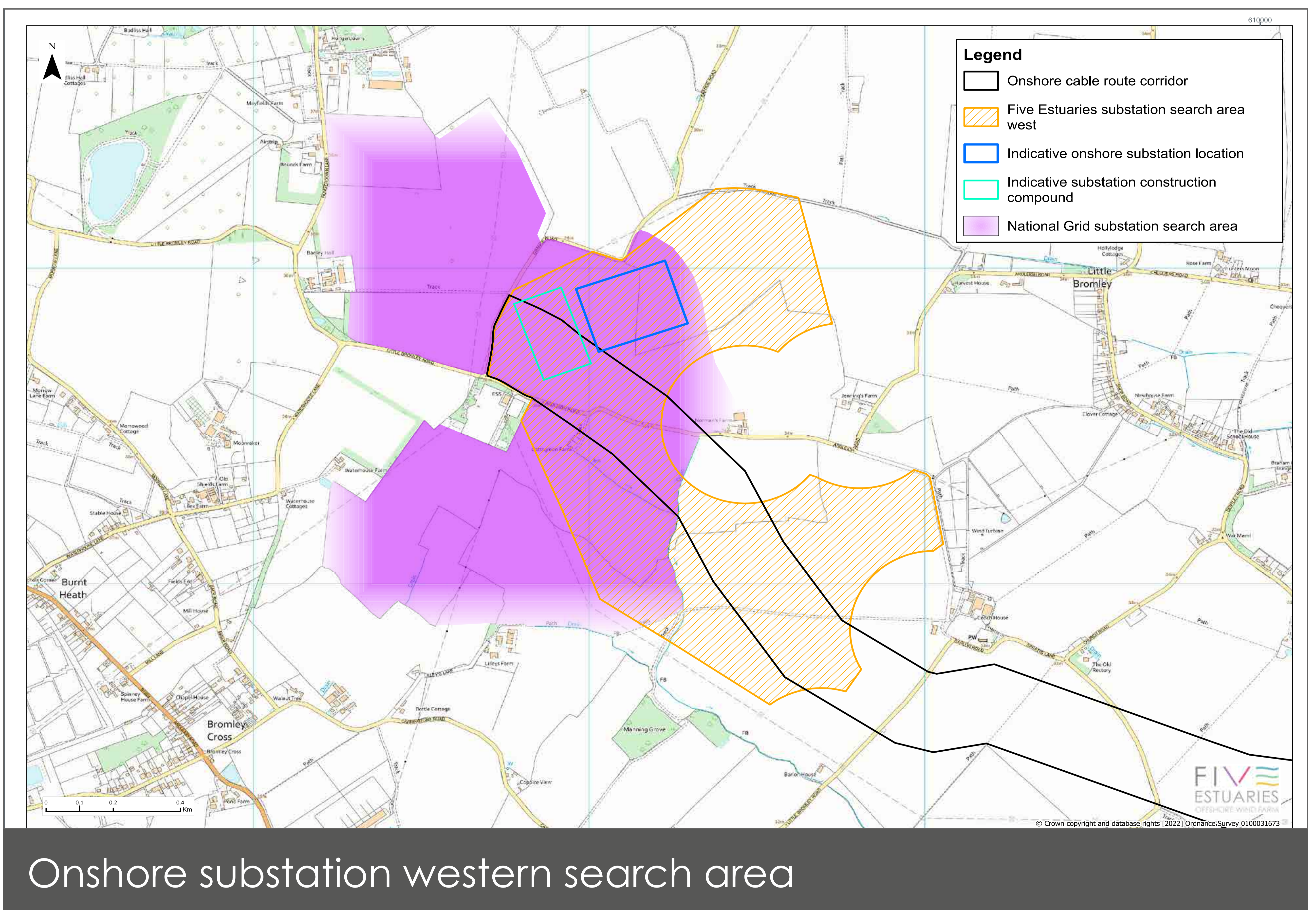
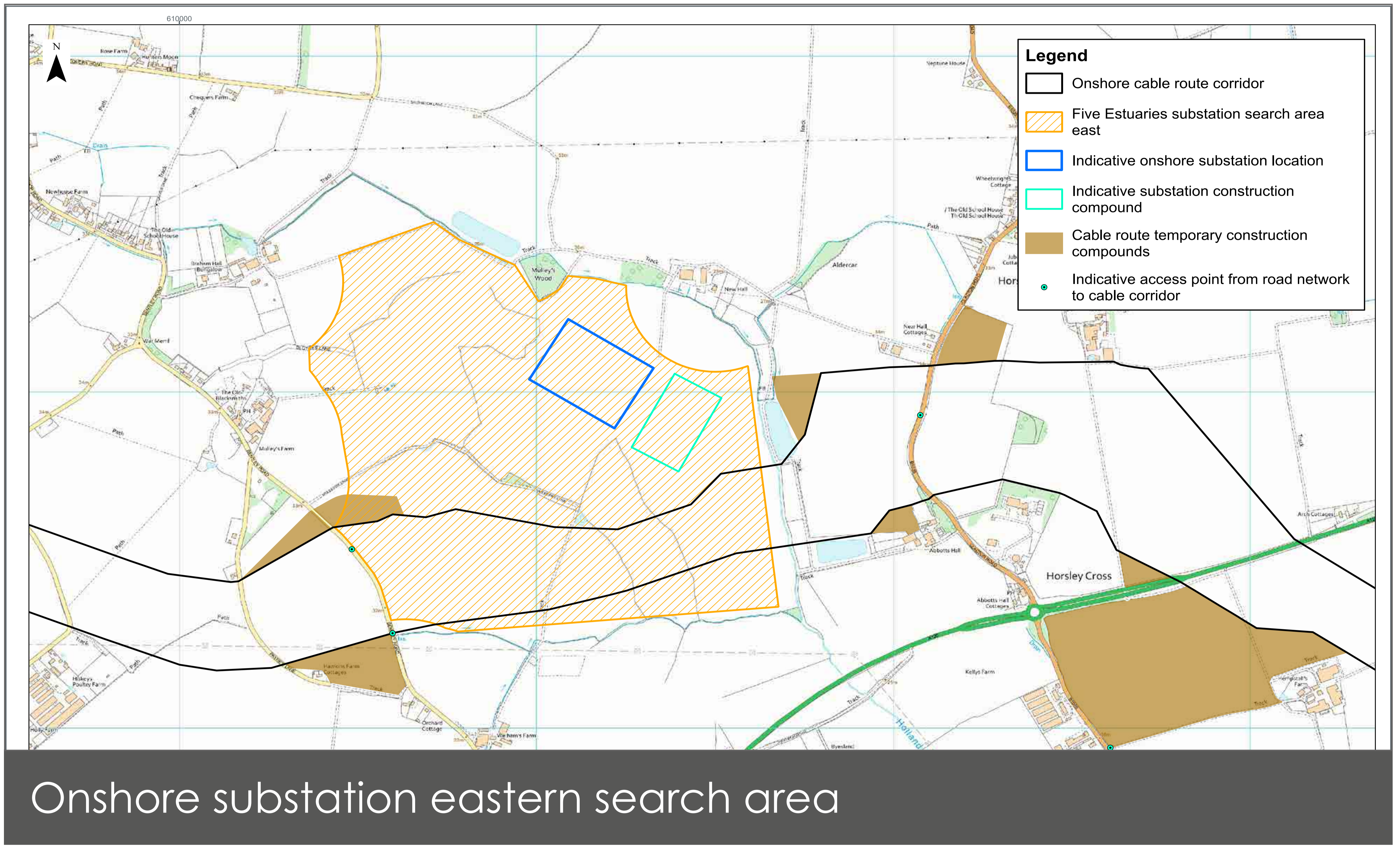
Onshore infrastructure search areas

Onshore substation

In order to connect to the national electricity transmission network, the electricity exported from the wind farm needs to be ‘stepped up’ to increase the voltage. To do this, a new onshore substation is required before the Project connects to National Grid’s proposed East Anglia Connection Node substation near Lawford.

Two search areas have been identified, although only one is needed. Both are larger than the amount of space needed for the new substation and mitigation around it.

Heavy goods vehicle traffic will be required during the construction of the onshore substation for the wind farm. However, only occasional traffic movements are expected at the substation during the operational phase of the wind farm. The operational substation would not be manned full time.



Constructing the onshore connection

Construction of the onshore cable route would take around 18 months to two years. Each of the four onshore circuits required to connect the wind farm are made up of three power cables. These are laid in plastic ducts. Two approaches will be used to lay the ducts; open cut trenching and trenchless techniques such as horizontal directional drilling.

Trenching

Where the land is suitable, open cut trenching will be used to lay ducts for the cables. This process will involve removing the topsoil, excavating a trench for each circuit, laying the ducts, backfilling, and then drainage and land restoration. The corridor needed to construct the cable route is normally up to 60m wide, but in some locations more width may be needed. Each of the four trench excavations (one for each circuit) is likely to be around 3.5m wide and 2m deep.

Horizontal directional drilling

Horizontal directional drilling (HDD) is a trenchless technique that is used where there are constraints that would make it impractical to carry out trenching. An HDD rig is used to bore a hole through which the duct is then placed. Construction compounds at either end of the HDD sections are required to manage equipment and soil. The corridor for HDD is normally wider than for trenching, because of electrical and engineering requirements.

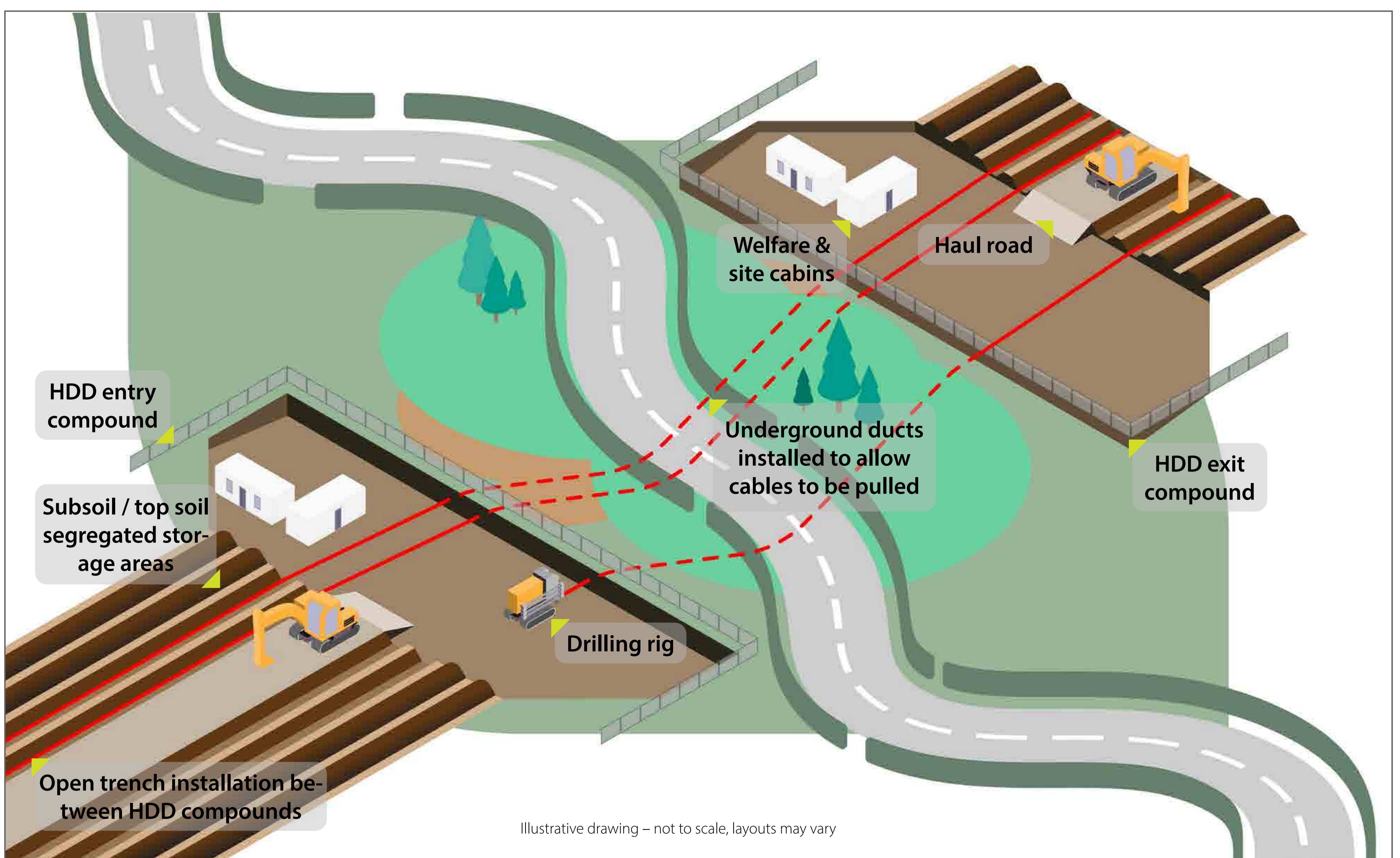


Illustration of horizontal directional drilling

Building the Project onshore

Construction compounds

Temporary construction compounds are needed along the corridor route. Most of these compounds will be relatively small and only used for parking and welfare facilities for staff, set down areas for materials, and access points to haul roads. Compounds are needed where drilling is carried out. They would not include overnight accommodation for workers.

Traffic and haul roads

Construction will generate additional traffic in the area. To minimise the amount of heavy goods vehicles using local roads, the Project is proposing to build temporary haul roads along the cable route corridor to access points along the route not otherwise reachable from main roads. As with all of our construction works, land restoration would be carried out after works have been completed.

Land restoration

The majority of the onshore cable route will pass through arable farmland. Engagement with individual landowners is ongoing, and we understand the importance of land restoration to ensure that farming activities can restart, land drainage is reinstated appropriately and soil quality is maintained.

Construction management

Plans such as a Code of Construction Practice and Ecology and Landscape Management Plan will be put in place to limit the disturbance and manage the onshore construction works. Contractors undertaking work on behalf of Five Estuaries will need to follow strict measures and controls to manage the potential environmental impacts of construction such as dust, noise and lighting. There will also be a separate, dedicated Construction Traffic Management Plan.



Environmental Impact Assessment

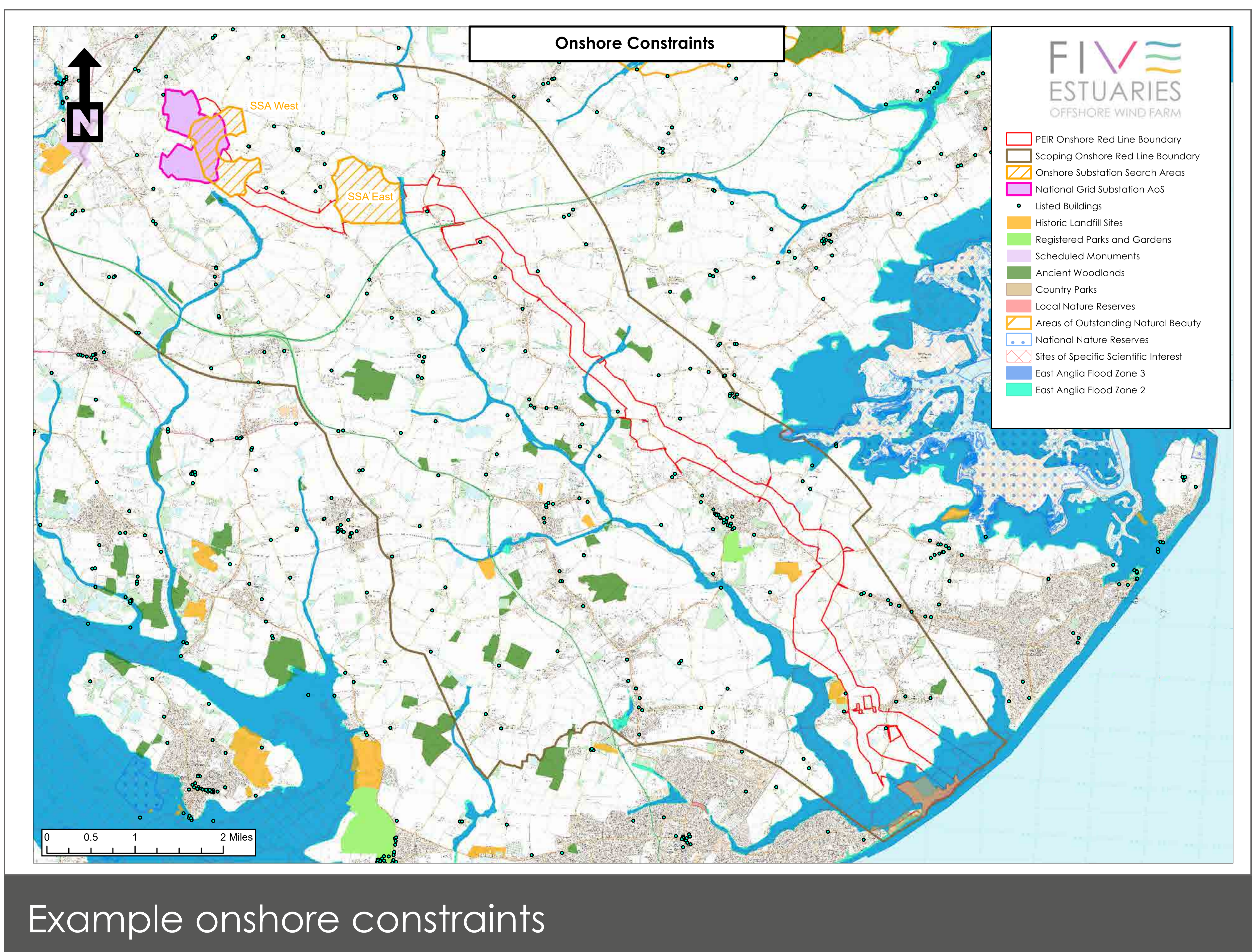
In accordance with Regulation 12 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations), the Five Estuaries project is required to produce an Environmental Impact Assessment (EIA).

The Preliminary Environmental Information Report (PEIR) sets out our initial findings of the EIA process, and based on further technical work and feedback to the consultation, will be developed into an Environmental Statement that is submitted as a key part of our application for Development Consent.

The PEIR is an early draft of what will become the Environmental Statement and as such some chapters will be more developed than others. This consultation is an opportunity for the community and statutory bodies (such as local councils, the Environment Agency, National Highways and the Marine Management Organisation) to review the PEIR and provide feedback on our surveys, assessments and proposals to avoid, reduce and mitigate potential impacts.

A Non-Technical Summary summarises the key findings of the PEIR.

We have also produced a Guide to the PEIR as part of the consultation to help people navigate the multi-volume document, copies are available at this event.



Development Consent Order

As the Five Estuaries project will generate more than 100MW of power, it is classified as a Nationally Significant Infrastructure Project, which means that it needs a Development Consent Order (DCO) under the Planning Act 2008 before it can be built.

Applications for Development Consent are examined by a government organisation called the Planning Inspectorate.

Following Examination of our proposal, the Planning Inspectorate will make a recommendation to the Secretary of State for Energy Security and Net Zero, who will make the final decision.

The six steps of the DCO process are:

Pre-application (where we are now)

Before an application is submitted, Five Estuaries will carry out a consultation on the emerging proposals and on preliminary environmental information (this consultation). Following consultation and the completion of our Environmental Impact Assessment, we will submit an application for a DCO in late 2023.

Acceptance

After an application is submitted, the Planning Inspectorate has 28 days to decide whether it meets the standards required to be accepted for Examination.

Pre-examination

During this stage you can register as an Interested Party by making a Relevant Representation, which is a written summary of your views. Inspectors are selected, who then hold preliminary meetings and set out the timetable for Examination.

Examination

The Planning Inspectorate has a six month period to carry out the Examination. This is mostly a written process, and those who have registered as Interested Parties will be invited to provide further information in writing. There will also be open floor hearings, which the public can register to speak at.

Decision

The Planning Inspectorate has three months to prepare a report, which includes a recommendation. The relevant Secretary of State for the Project then has a further three months to issue a decision.

Post-decision

After a decision has been issued by the Secretary of State, there is a six week period in which the decision can be challenged through a process called Judicial Review.

Benefits

Five Estuaries will create jobs directly and indirectly throughout the supply chain. Jobs are created during the entire life cycle of an offshore wind farm, from its development and design, through to construction and longer-term operation and maintenance.

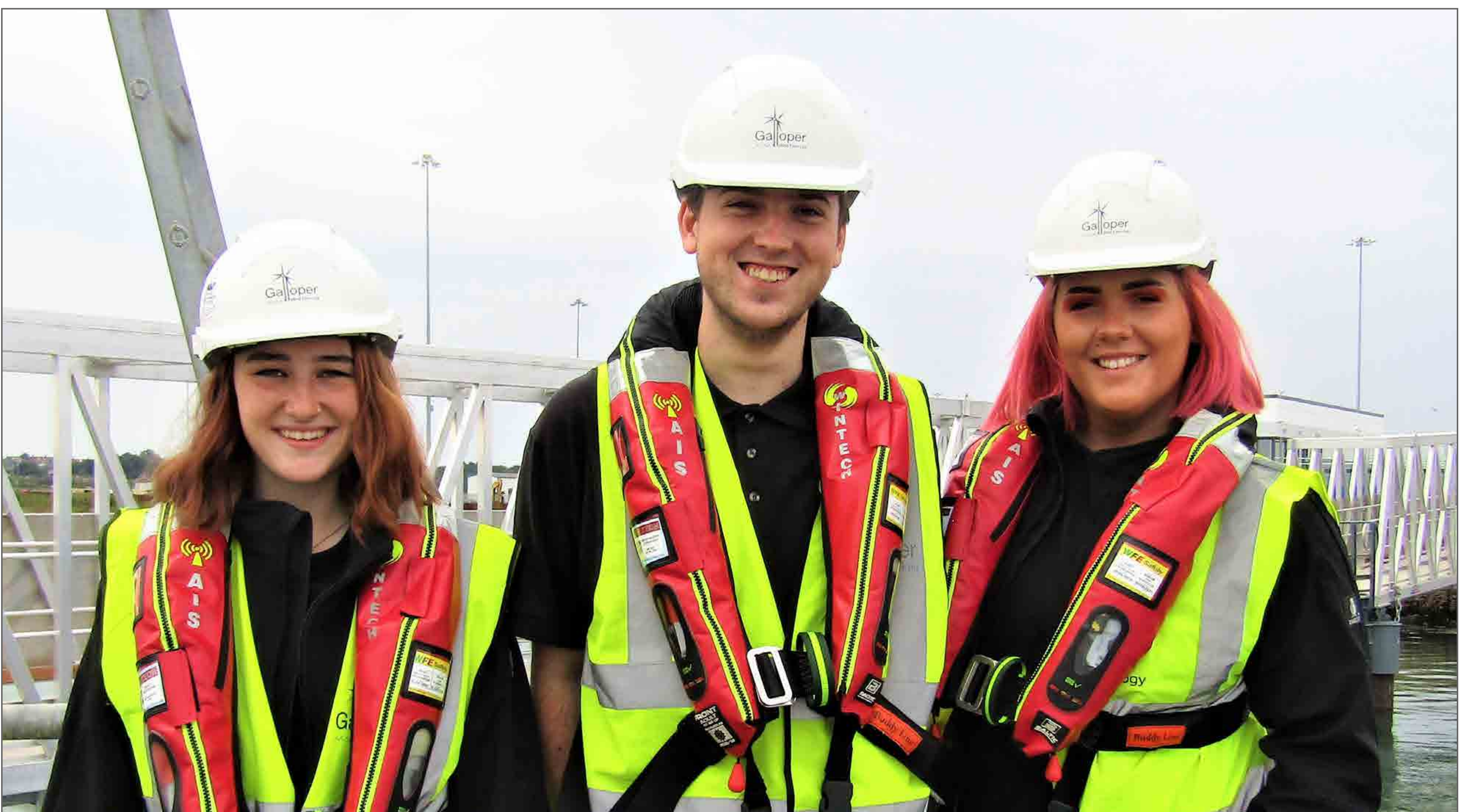
Five Estuaries is an extension to the Galloper Offshore Wind Farm (operational since 2017), which supported over 700 jobs during construction. Since becoming operational, 60 long-term skilled jobs are linked directly to the wind farm and based out of their Operations and Maintenance base in Harwich.

We are still developing our programme, but potential opportunities include:

- Supporting growth and employment in local supply chain companies;
- Helping local SMEs to be visible to the employment market;
- Promoting training and employment opportunities to the local community;
- Engaging with local education institutions to educate on career opportunities; and
- Supporting career transition from other sectors.

RWE also champions skills development at its UK-wide training hub through a valuable partnership with Llandrillo College in North Wales. Five Estuaries is committed to developing an Employment, Skills and Education Strategy, which would seek to identify and secure a greater contingent of local workforce, increasing skills locally.

RWE has a long history of supporting the communities in which it operates. As the Five Estuaries project progresses, we will work with communities to develop our approach to supporting the local area. At this stage, the details of any community benefit package associated with Five Estuaries have not been finalised. We plan to engage with local people and groups to help shape how the Project can best support the community and welcome suggestions as part of this consultation.



How to respond and next steps

This consultation is likely to be the last time the Project will seek public feedback on the full proposals. Following consideration of the feedback to this consultation we will finalise our application for a Development Consent Order.

Your feedback is important to us and we welcome all comments on the proposals. The deadline for responses to the consultation is 11:59pm on **Friday 12 May 2023**. It is important that responses are submitted to us before the deadline. You can respond to the consultation using any of the channels below:

- Feedback forms or written feedback can be sent to us at the following Freepost address. Please note that no stamp or further address information is required.

Freepost FIVE ESTUARIES

- Feedback forms or written feedback can also be left with us at this or future public events.
- You can complete our feedback form online on the project website www.fiveestuaries.co.uk
- You can email your feedback to us at: fiveestuaries@rwe.com
Please include 'FEEDBACK' in the subject line.

What we do with your feedback

After the consultation is closed, the Project team will analyse the responses received and consider all of the issues identified in feedback. As part of our application for Development Consent, we will prepare a Consultation Report that will set out a summary of the issues received and how the Project has considered them in the development of the final application. Demonstrating this is a key requirement for the Planning Inspectorate to accept the application for Examination.



Offshore Transmission Network Review

Five Estuaries is currently engaged in the government-led Offshore Transmission Network Review, which is looking into ways that the offshore network is designed and delivered, consistent with the ambition to deliver net zero emissions by 2050. Both the Government's recent Energy Security Strategy and Net Zero goals show the importance of bringing 50GW of new offshore renewable generation online by 2030.

Following the Project's involvement with the Offshore Transmission Network Review and the feedback from our last stage of consultation, we have now identified the opportunity to coordinate more closely with the North Falls Offshore Wind Farm project. The primary goal of this coordination is to reduce the potential impact of building the onshore connection to the national electricity transmission network for the two projects.

Five Estuaries is also considering submitting an application for a Development Consent Order that would allow for flexibility to accommodate a coordinated connection at a later date, provided there is greater certainty on the commercial, regulatory and technical environment. The viability of any coordinated connection is dependent on the progress made by the Offshore Transmission Network Review process, associated regulatory and commercial policy changes and the individual offshore connector projects involved.

It is important to recognise the risk of delaying projects that the UK Government is counting on to deliver their 2030 ambitions for offshore wind deployment. Alongside considering opportunities for cooperation, we will continue to develop coordinated plans on the basis of existing regulations to provide an onshore connection, ensuring no delay to our planned grid connection date and therefore continuing to support the UK Government's 2030 targets.

You can find out more about the two offshore transmission projects that are close to the Five Estuaries Offshore Wind Farm, and the challenges to delivering a coordinated connection, in our Consultation Booklet.

The array

The offshore wind farm itself is called the 'array'. This area makes up around 128km² across two areas in the southern North Sea. These two areas are separated by a shipping traffic separation scheme. The closest distance to shore of the array is around 37km. The array is made up of the following components:

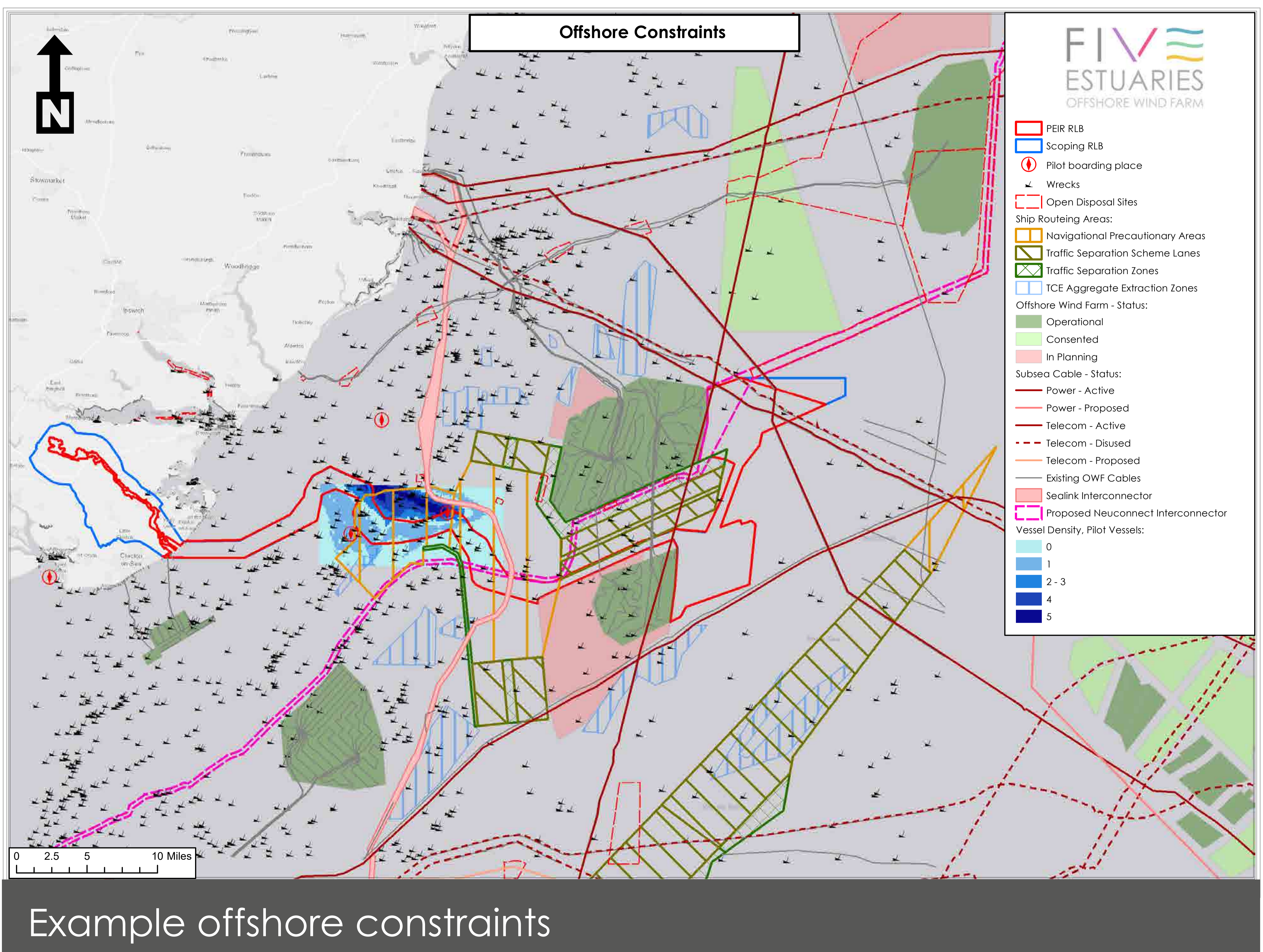
- Up to 79 wind turbine generators converting wind energy to electricity.
- Up to two offshore substation platforms collect and export the power generated by the turbines.
- Inter-array cables connect the wind turbines to the offshore substation(s). Up to 200km of inter-array cables will be required, dependant on the number of turbines.

Other offshore components include:

- Offshore export cables will be required to connect the offshore substation(s) back to shore. The length of the offshore export cable corridor would be up to 84km and will be routed to avoid major seabed constraints.
- Scour and cable protection made of rock or concrete mattresses.

Design 'envelope'

The specific locations of wind turbines and other offshore infrastructure will not be decided as part of our application in order to allow for flexibility in our final engineering design.



Views

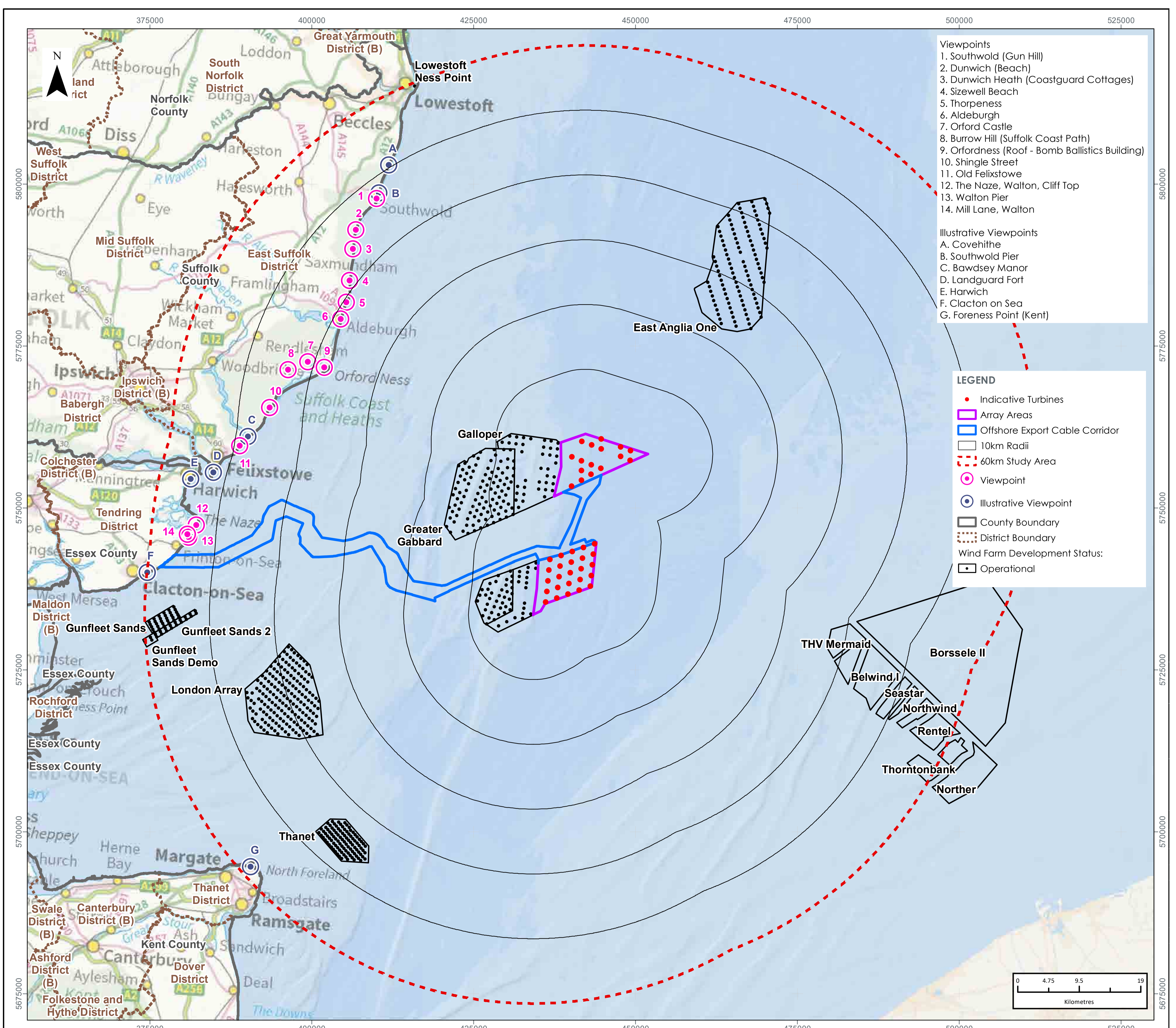
The array is 37km from the coast of Suffolk at its closest point to shore. From the majority of viewpoints, turbines for the Five Estuaries project would be behind existing wind farms (Gallopier and Greater Gabbard). However, our turbines are proposed to be taller (up to 420m) than the existing turbines that have a maximum tip height of 180.5m.

For our Seascape, Landscape and Visual Impact Assessment we have used a study area 60km from the arrays, however due to the distance, weather conditions and curvature of the earth the turbines are unlikely to be visible frequently. We are however aware of the sensitivity of views from the coast, particularly Areas of Outstanding Natural Beauty.

As part of the Project development, since our last consultation we have reduced a section of our northern array that helps avoid filling in the 'gap' between existing wind farms as seen from the Suffolk coast.

Working with maritime stakeholders

The Project has been working with key commercial stakeholders whose activities may interface with the construction and operation of the wind farm and the offshore cable route, such as the nearby ports, commercial fishermen and shipping. This engagement will continue throughout the development of the Project and through construction and operation.



Seascape, Landscape and Visual Impact Assessment area

Offshore cable route and landfall

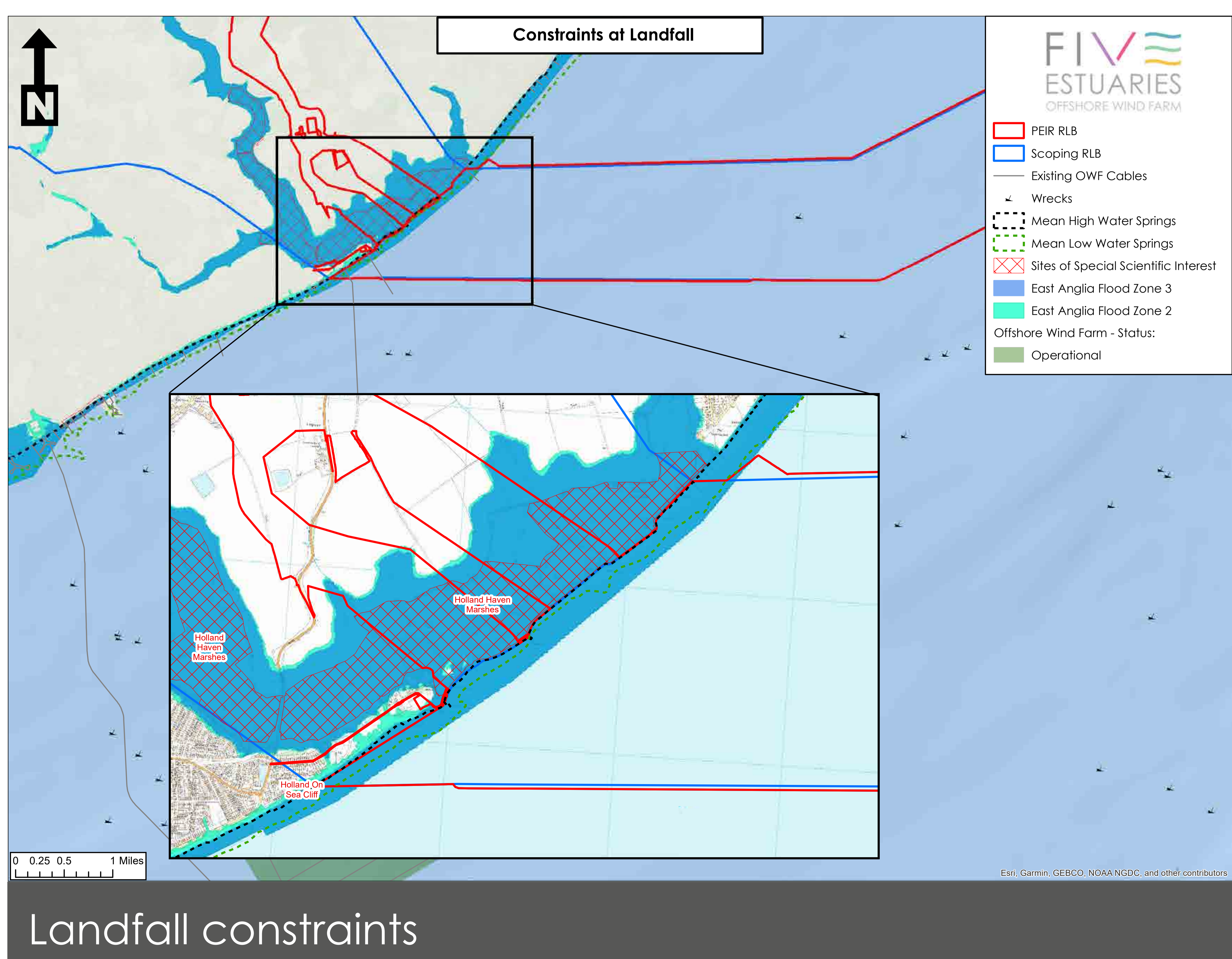
There will be up to four offshore export circuits. The offshore cable route is approximately 84km at its maximum length. The export cable corridor is up to 2km wide, although the actual diameter of each cable will be approximately 310mm (around 12 inches). This corridor width provides the opportunity for micro siting around obstructions and coordination on cable routing with North Falls. The area of sea between the array and the proposed landfall site is complex, with a large number of environmental considerations.

Constraints considered in the development of the offshore export cable route:

- Existing and proposed offshore wind farms (Gallopier, Greater Gabbard and North Falls)
- Other existing and proposed offshore infrastructure such as telecoms and transmission cables
- Shipping routes, high traffic areas (such as ferry routes) and other navigational routing measures for maritime traffic
- The Harwich Deep Water Channel
- Special Areas of Conservation, Special Protection Areas and certain maritime habitats
- Known wrecks and Archaeological Exclusion Zones.

Landfall

Landfall is the area where the offshore export cables come ashore. At the landfall, a trenchless technique such as horizontal directional drilling will be used to install ducts so that the offshore cabling can be pulled under the sea wall to 'transition joint bays' where they are connected to the onshore cables. These bays would be inland and below the ground to the northwest of Frinton Golf Course. During operation of the wind farm we may need to periodically access the bays for maintenance.



Onshore summary

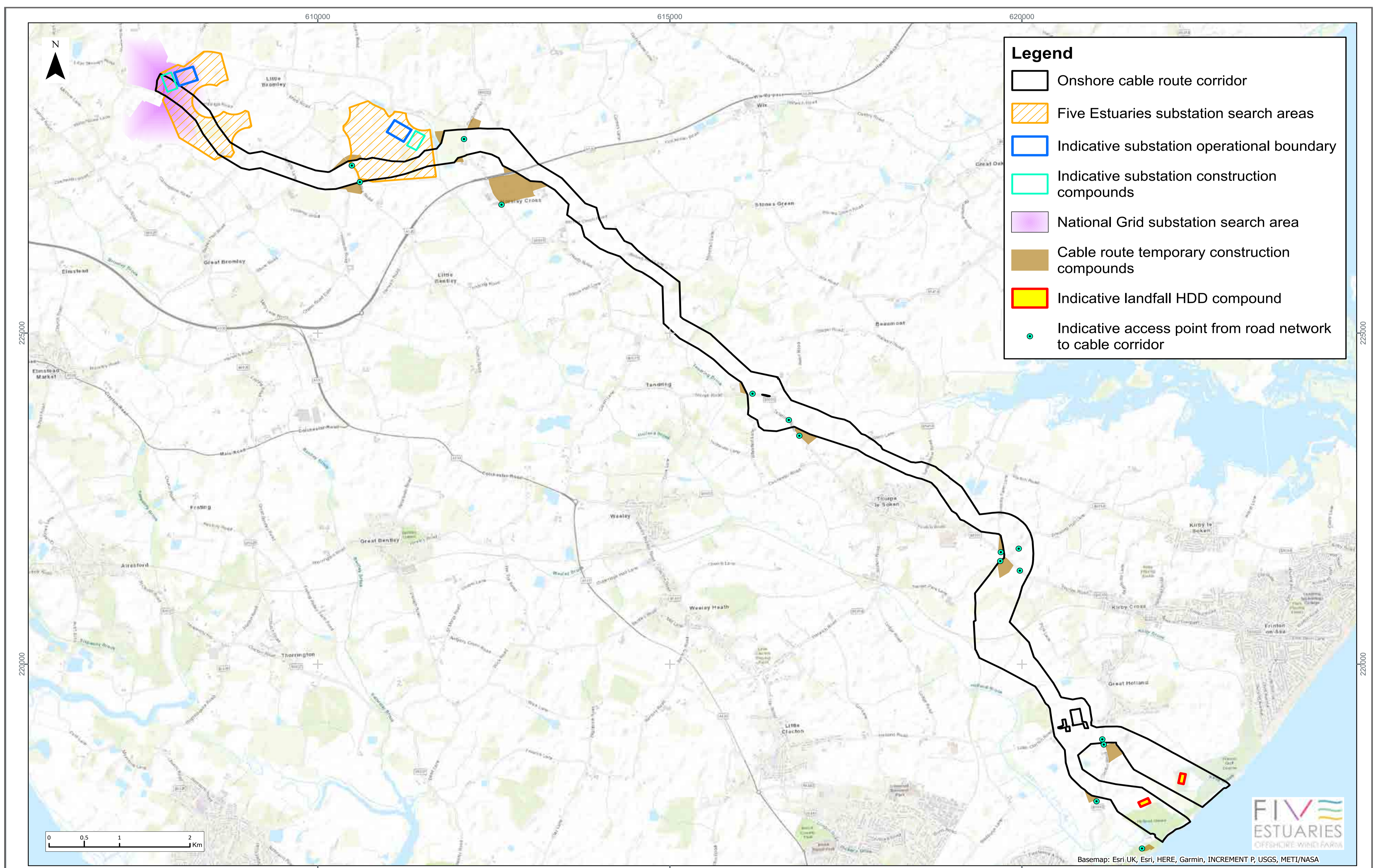
All onshore infrastructure would be located in Tendring District, Essex.

In Spring 2022, National Grid announced the location of the East Anglia Connection Node substation, near Lawford, and have advised us that Five Estuaries would connect to the national electricity transmission network there.

In order to get from the landfall location to the East Anglia Connection Node substation, the Project will need to lay new underground electricity cables along a route approximately 22km long. The cable corridor has been chosen and refined on the basis of environmental surveys, engineering assessments, avoiding residential properties and feedback to our first stage of consultation. Construction of the onshore cable route would take around 18 months to two years.

Each of the four onshore circuits required to connect the wind farm are made up of three power cables. These are laid in plastic ducts. Two approaches will be used to lay the ducts; open cut trenching and trenchless techniques such as horizontal directional drilling. Joint pits are installed at regular intervals along the cable route so that after ducts have been laid, the cables can be pulled through them and jointed, tested and commissioned.

In order to connect to the national electricity transmission network, the electricity exported from the wind farm needs to be 'stepped up' to increase the voltage. To do this, a new onshore substation is required before the Project connects to National Grid's proposed East Anglia Connection Node substation near Lawford. The Project currently has two search areas for the substation, with an indicative location for each area.



Onshore infrastructure search areas