

Five Estuaries Offshore Wind Farm

Consultation Booklet



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Introduction

The Five Estuaries Offshore Wind Farm Project (the 'Five Estuaries project' and 'the Project') is a proposed extension to the existing Galloper Offshore Wind Farm. The new wind farm would include up to 79 new turbines, across two separate sea bed areas in the southern North Sea, and create enough energy each year to power hundreds of thousands of homes.

The Project will create job opportunities, support the UK Government's target for up to 50 gigawatts (GW) of electricity generated from offshore wind by 2030 and help meet the objectives of the UK Energy Security Strategy.

The Project includes the following:

- An offshore wind turbine generating station, comprising up to 79 wind turbine generators with associated foundations, and a maximum tip height of 420m, and other offshore infrastructure including up to two offshore substations.
- Offshore cables to bring the power to shore at a landfall between Frinton-on-Sea and Holland-on-Sea in Tendring, Essex.
- Underground electricity cables from landfall to connect the Project to National Grid's proposed East Anglia Connection Node substation.
- Construction of a new substation located in the vicinity of Little Bromley, required to transform the power from the wind farm up to the required voltage to connect to the national electricity transmission network.



Consultation

We are consulting on our proposals for the Project and the initial findings of our Environmental Impact Assessment. This document outlines key information about the Project, where you can find more information, and how you can respond to the consultation.

This is likely to be the last time the Project consults before submitting an application for a Development Consent Order later this year. As such, it is an important opportunity to have your say before we finalise our application.

We are specifically looking for your feedback on our:

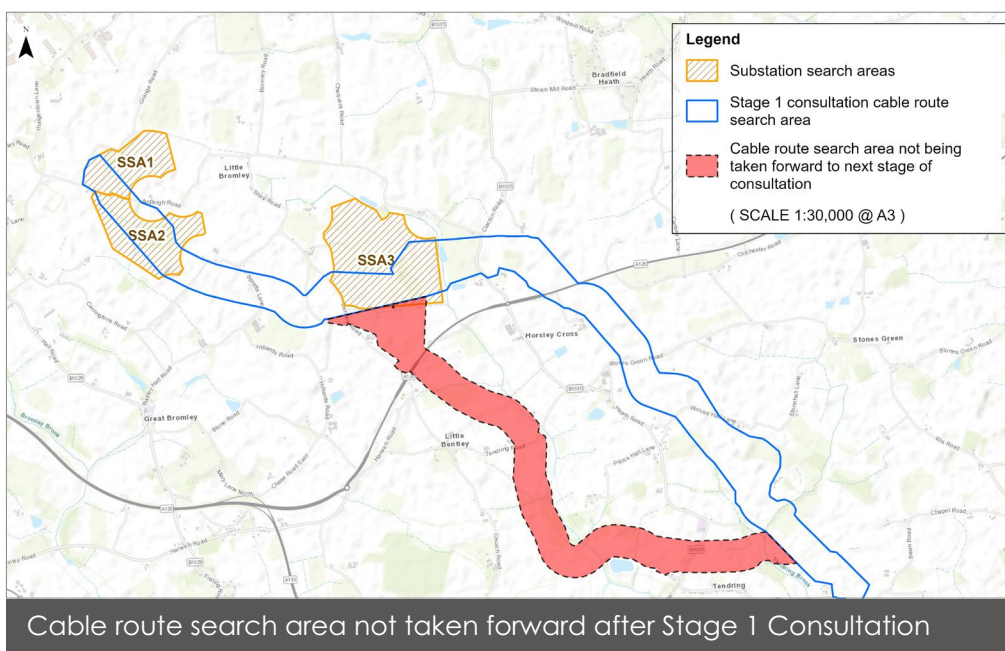
- Proposed onshore underground cable route corridor;
- Search areas and indicative locations for the onshore substation;
- Proposed offshore cable route corridor;
- Mitigation proposals for potential impacts; and
- Environmental Impact Assessment information about the Project (as set out in our Preliminary Environmental Information Report).

The story so far

The Project was named and launched back in the autumn of 2020. In 2021 we started our survey work and carried out a scoping consultation with statutory consultees to work out the extent of the Environmental Impact Assessment we would need to carry out.

Between 30 July and 12 August last year, we consulted on our early proposals for the Project. The purpose of the consultation was to collect information about the area from the local community and learn about any other issues we should be aware of in the development of our preferred route corridor for the onshore cables. We received 139 responses to consultation, which contained a large amount of useful information particularly about land uses, wildlife and traffic.

Following the consultation, the cable search area nearest to Tendring was dropped and our northern offshore array was reduced. You can read more about the findings of the first stage of consultation in our Stage 1 Feedback Report.



How to find out more

This document summarises key elements of the Project, and some of its potential benefits and impacts. As part of this consultation, we have published our Preliminary Environmental Impact Report (PEIR). The PEIR is the first main output of the Environmental Impact Assessment, and will set out the environmental baseline (how it currently is), the Project's potential benefits and impacts, and our proposals to mitigate those impacts. More information about this process and what's in the PEIR can be found on page 22.

We have provided a Non-Technical Summary of the PEIR, which includes a short summary of each environmental topic we've assessed. We have also produced a Guide to the PEIR to help navigate the information we have published.

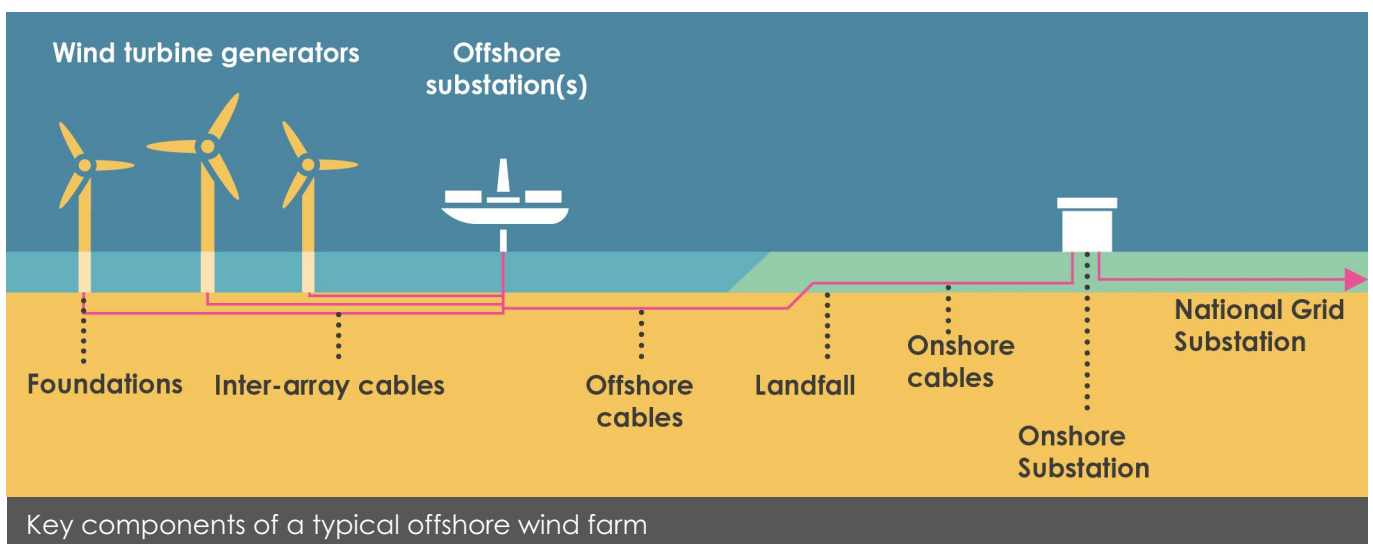
In addition to the PEIR, large scale maps of the proposed onshore route are available. An interactive route map is also available on our website.

All of the consultation documents can be accessed on our website:
www.fiveestuaries.co.uk

During the consultation you can request paper copies of this Consultation Booklet, the Guide to the PEIR, the Non-Technical Summary and feedback form, free of charge, by contacting us using the details at the end of this document. Paper copies of the rest of the PEIR can be provided, but due to the size of the material, a fee may be incurred to cover printing (maximum charge £1,000).

About Five Estuaries Offshore Wind Farm Limited

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.



The wind farm and offshore infrastructure

Key facts and figures

- The Project will include up to 79 turbines, split across two areas.
- Each turbine would be up to 420m at the tallest point of blade tip above sea level.
- Up to four electrical circuits would be required to connect the wind farm to the national electricity network.
- The length of the offshore export cable corridor would be up to 84km.

The specific placement 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. We use a design envelope to carry out our assessments based on a reasonable worst case scenario, which is then included in our Development Consent Order application.

Offshore infrastructure

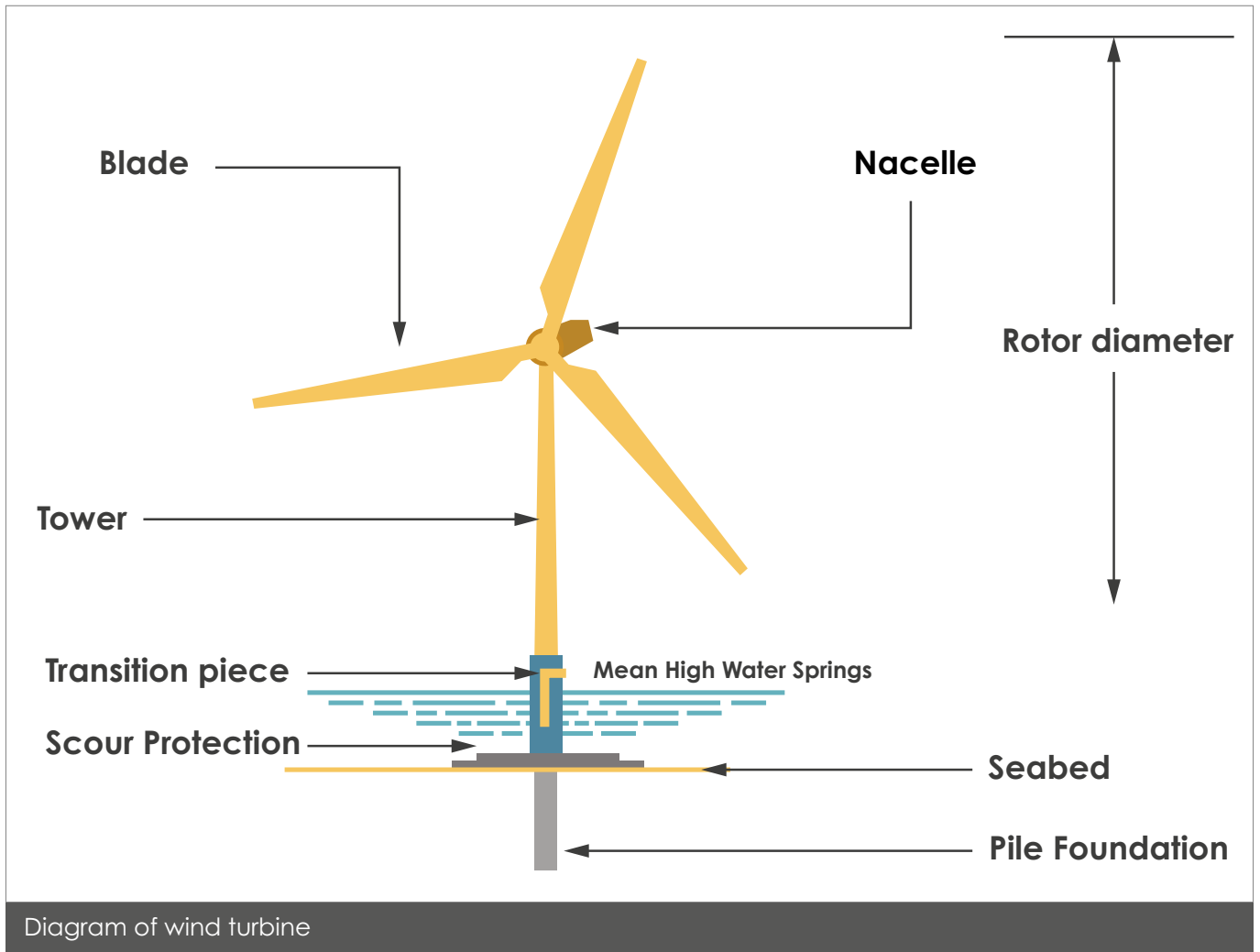
The offshore wind farm itself is called the 'array'. This area makes up around 128km² across two areas in the southern North Sea. These two areas are separated by a shipping traffic separation scheme. The closest distance to shore of the array is around 37km.

The array is made up of the following components:

- **Wind turbine generators** convert wind energy to electricity. Offshore turbine models are continuously evolving and improving, therefore the model will be selected after consent. The turbines will be attached to the seabed with foundation structures.
- **Offshore substation platforms** collect and export the power generated by the turbines. These will also be attached to the seabed using foundation structures. There will be up to two offshore substation platforms.
- **Inter-array cables** connect the wind turbines to the offshore substation(s). Cables will either be buried in the seabed or protected by a hard layer of rock or concrete mattresses. 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 offshore cables are connected to the onshore cables within buried transition joint bays. The offshore export cable route will be routed to avoid major seabed constraints.
- **Scour and cable protection** made of rock or concrete mattresses is sometimes required to protect the seabed around foundations and cables from scour, and where cable or pipeline crossings are required.



Views

The closest point of the array to the coast 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 (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, 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.

Visualisations of the potential views towards the wind farm can be found in Volume 6 of the PEIR.

Have your say

We welcome any questions about, or feedback, on the wind farm array as part of the consultation.

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.



James Fisher and Sons plc



Seacat Services Ltd

Potential impacts

Without mitigation, key areas that the Project may impact include shipping and navigation, marine mammals, birds and commercial fishing.

You can read more about the potential impacts and how we intend to limit and mitigate these in the Non-Technical Summary or Volume 2 of the Preliminary Environment Information Report (PEIR).



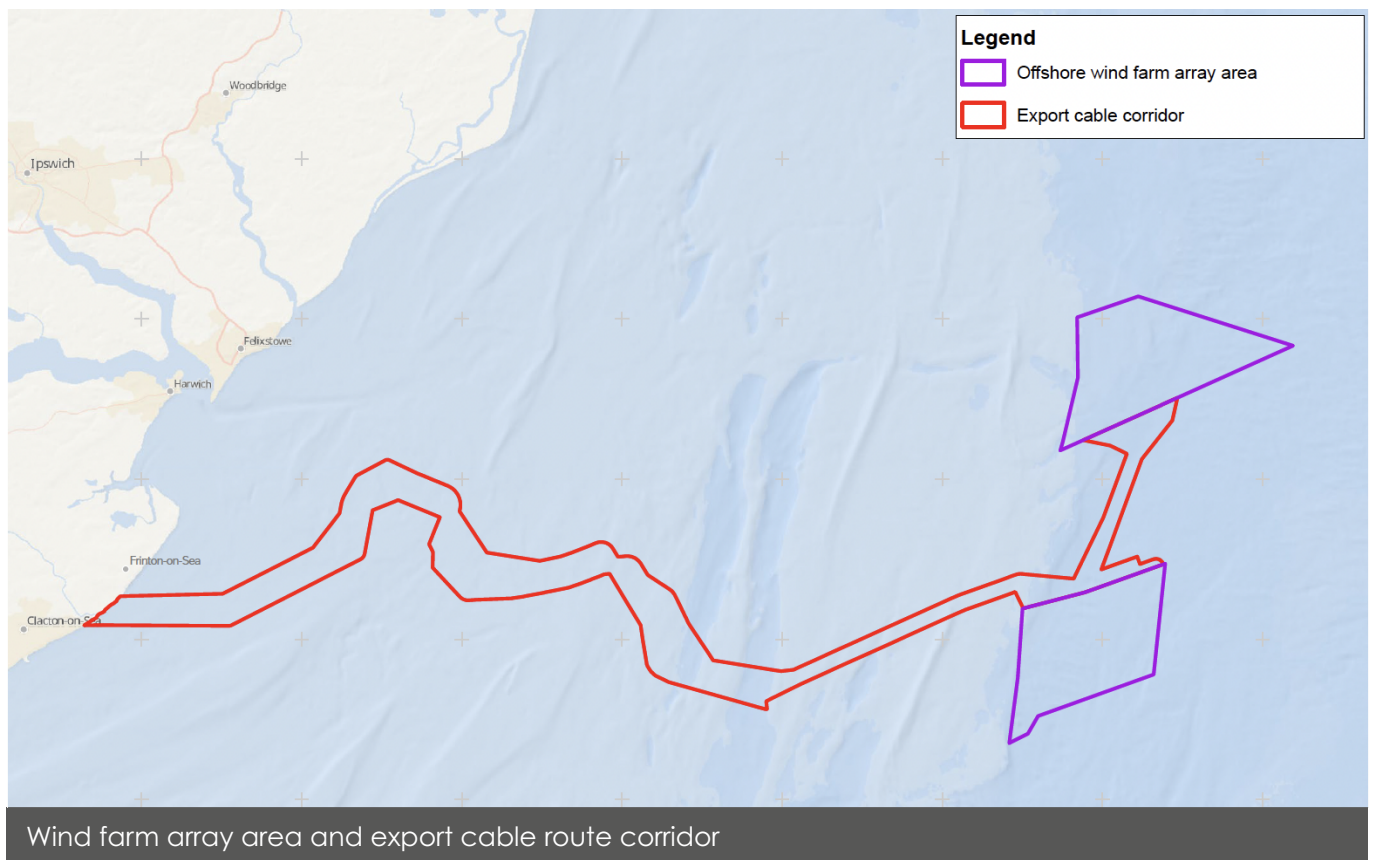
Harwich International Port, Essex

Offshore export cables and construction

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 (see page 29).

The area of sea between the array and the proposed landfall site is complex, with a large number of environmental considerations. The below is a non-exhaustive list of the constraints that have been 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;
- Specials Areas of Conservation, Special Protection Areas and certain maritime habitats; and
- 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. Indicative locations are shown on pages 20-21. During operation of the wind farm we may need to periodically access the bays for maintenance.

You can read more about the onshore cable and the construction methodology on page 12.

Building the offshore infrastructure

Working offshore is a challenging environment but RWE is experienced at delivering similar projects in the UK and across the world. Health and safety is at the heart of our approach.

Before construction starts, we will carry out detailed geotechnical and unexploded ordnance surveys. The installation of wind turbines, offshore substations and export cables are highly complex construction activities. A summary of the various techniques used to construct the wind farm itself can be found in the Offshore Project Description, Volume 2.1 of the PEIR.

Large components for the wind farm are typically shipped from where they're manufactured to a staging port, before then being taken to site, rather than using the road network. We have not yet chosen a location to base our offshore construction activities from.

Building the wind farm and laying the export cables will have a temporary impact on commercial fisheries and shipping. We will develop a Fisheries Liaison and Coexistence Working Plan, and work closely with operators potentially affected, as we have done during our early stage surveys.



Substation for the Rampion Offshore Wind Farm



Export cable spool for Galloper Offshore Wind Farm during installation

Onshore cable route

Key facts and figures

- The wind farm will connect to the national electricity transmission network via National Grid's proposed East Anglia Connection Node substation.
- A separate project specific substation in the vicinity of Little Bromley, with a maximum size of 280m by 210m.
- Up to four electrical circuits along an approximately 22km long corridor. All cables would be placed underground.

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. In Spring 2022, National Grid announced the proposed location for the East Anglia Connection Node substation, near Lawford, Essex. This new substation is part of the National Grid wider high voltage network reinforcement between Norwich, Bramford and Tilbury. National Grid has advised that they anticipate Five Estuaries would connect to this new substation. A separate onshore substation, built by Five Estuaries, is also required – you can read more about this on page 14.

Concern regarding the need for onshore infrastructure was a common theme in the feedback received to our first stage of consultation. Five Estuaries is actively engaged in the Offshore Transmission Network Review (OTNR), which is a government-led initiative looking at the opportunities to streamline how offshore wind farms are connected to the network. However, at the moment the only existing regulatory and commercially viable path available for the Project is to connect to the location provided by National Grid. You can read more about the Project's involvement with the OTNR and the potential offshore connection options on page 27.

Cable route corridor

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.

This ducted approach allows for quicker reinstatement of the land above the ducts and access for ongoing maintenance with minimal disruption.

Have your say

We welcome any questions about, or feedback on, the onshore cable corridor as part of the consultation.

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.

The cable route corridor assessed for the PEIR is significantly wider than the actual space likely required to lay the cables. This allows for eight circuits, which gives us flexibility so different installation options can be considered at obstacles and to agree a final alignment with the North Falls Offshore Wind Farm project that also needs to lay its own cables to connect to the national electricity transmission network. This is part of the ongoing coordination with the North Falls project.

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 such as crossing under railways, roads or certain areas of environmental sensitivity.

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 spoil. These compounds are typically around 100m by 100m. The corridor for HDD is normally wider than for trenching, because of electrical and engineering requirements.



Open cut cable trench excavation



Horizontal directional drilling

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. Underground cables would also be used to connect this new substation to National Grid's.

The Project's onshore substation needs to be located near to our National Grid connection point. The site selection process considered engineering requirements along with environmental constraints. There were no brownfield (previously developed) sites of suitable size that met our criteria. Two search areas have been identified. Both are larger than the amount of space needed for the new substation and mitigation around it. You can read more about our approach to site selection in the Alternatives chapter, which is part of the PEIR (see page 22).

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.

Location options

The Western search area overlaps with the proposed search areas for both the onshore substation for the North Falls Offshore Wind Farm project and National Grid's East Anglia Connection Node substation. This search area is nearer to Lawford and Ardeigh. All three projects are working together to ensure the proposals in this area would be coordinated.

The Eastern search area is remote from the other proposed substation areas, next to the A120 near Horsley Cross. While working closely with the other projects, we have retained this option to provide flexibility as we develop the Project.

While both search areas are broadly similar and on existing arable fields, there are some minor differences between them around topics such as flood risk and ecology. In addition to feedback on the areas and how these should be taken forward, we welcome comments on where within each area we could place the substation.

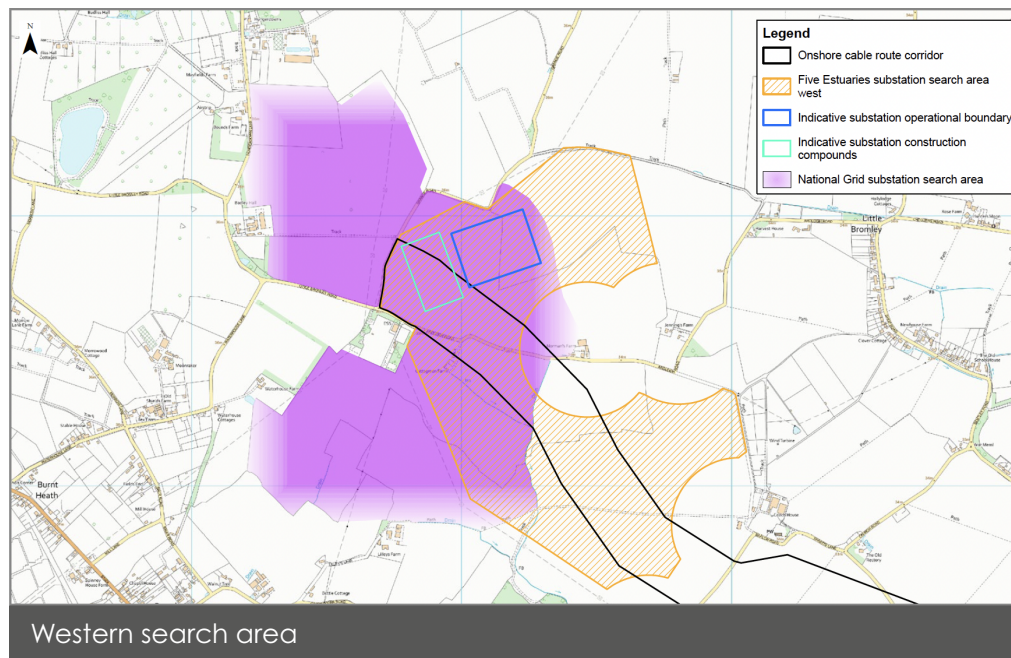
Western search area

Being close to the other proposed substations keeps the substations in one area. The existing substation in the area also provides some context for similar development. We are coordinating with the other two projects on siting and how to manage access. We are also looking at the potential for joint mitigation, such as landscape screening, and drainage plans with North Falls.

Have your say

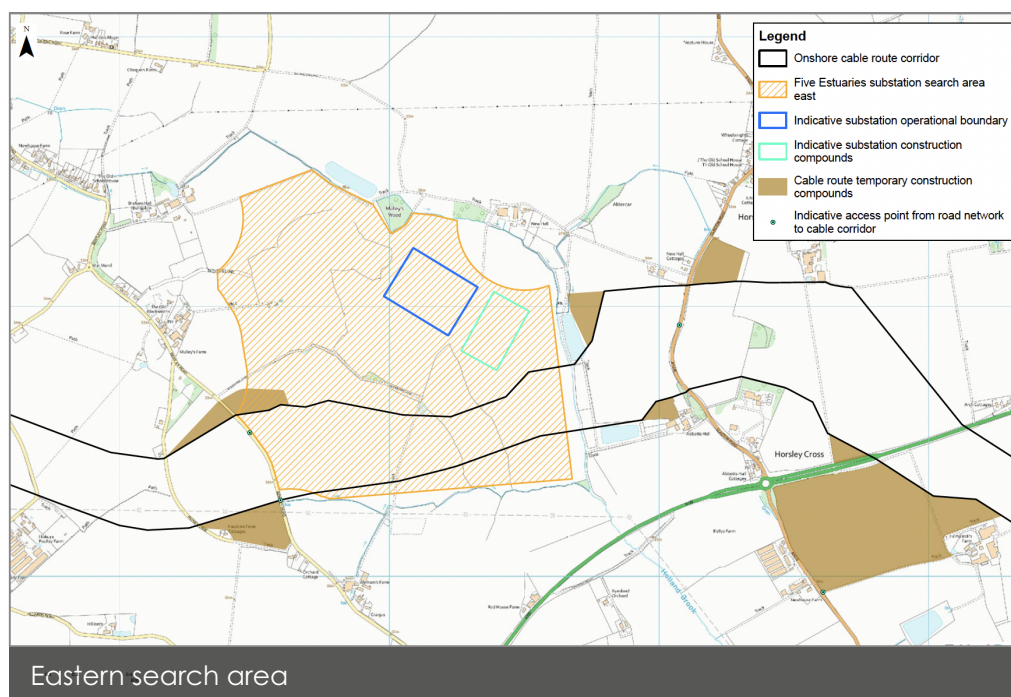
We welcome any feedback on or preferences regarding the two search areas and the indicative substation locations within them.

As was highlighted in feedback to Stage 1 Consultation, the roads around this search area would create a challenge (mostly for construction) and road upgrades would need to be considered. While this would increase construction work, the road improvements would likely stay in place.



Eastern search area

The Eastern search area has some existing woodland pockets that mitigation planting could be integrated with. It is also closer to a major road, the A120. While developing the substation away from the other projects would mean that two separate areas experience new impacts, there are unlikely to be



locations with clear views to both sites, reducing risk of cumulative visual impacts on nearby receptors, although this would be reliant on final siting and the approach to screening.

What type of substation?

There are two technologies the Project is considering for the onshore substation to provide electrical insulation; air insulated and gas insulated. The Project does not currently have a preferred technology.

Air insulated – An air insulated substation has most of its electrical elements outside, making use of the natural insulating properties of air. Most substations in rural areas are air insulated. The maximum area required for this kind of substation would be 280m by 210m and main equipment would have a maximum height of 15m.

Gas insulated – A gas insulated substation puts all live electrical components in grounded metal enclosures, and the whole system is then housed in a chamber full of insulating gas. This equipment would then be within a new building up to 15m tall. The maximum area required for this kind of substation would be 250m by 180m.

Mitigation proposals

The Project would look to mitigate the visual impacts of the new onshore substation. This would be done by screening the substation so that it is less visible, using a combination of reprofiling/earth bunds and planted vegetation. We will additionally explore opportunities around the substation to improve local habitats as part of our commitment to Biodiversity Net Gain.

The onshore substation would take up to three years to build but much of this time will be electrical fit out and testing. Measures to reduce and manage the impact of construction will be included in a Code of Construction Practice included as part of our application for a Development Consent Order.

East Anglia Green Energy Enablement (GREEN) project is a proposal by National Grid Electricity Transmission (National Grid) to reinforce the high voltage power network in East Anglia between the existing substations at Norwich Main in Norfolk, Bramford in Suffolk and Tilbury in Essex.

As part of this project, National Grid is proposing to build a new substation (the East Anglia Connection Node substation) on land near Lawford and Ardleigh, which is the proposed point for the Five Estuaries Offshore Wind Farm to connect to the national electricity transmission network.

You can find out more about East Anglia GREEN at:

www.nationalgrid.com/east-anglia-green

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. Larger compounds are needed where drilling is carried out. They would not include overnight accommodation for workers. A number of proposed compound locations have been included in the area assessed in the PEIR. The Project has worked with individual landowners to identify suitable sites.

Traffic and haul roads

Construction will generate additional traffic in the area; we are carrying out detailed traffic surveys and planning to manage this impact. More detail about this can be found in Chapter 3.8 of the PEIR.

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. RWE has a lot of experience restoring land on similar projects. While Five Estuaries would retain a permanent right to access the cable route if needed, this is unlikely to interfere with farming activities.

Have your say

We welcome any feedback or concerns regarding the construction of the onshore elements of the Project.



Delivery of a cable spool during construction

Construction management

A number of 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.



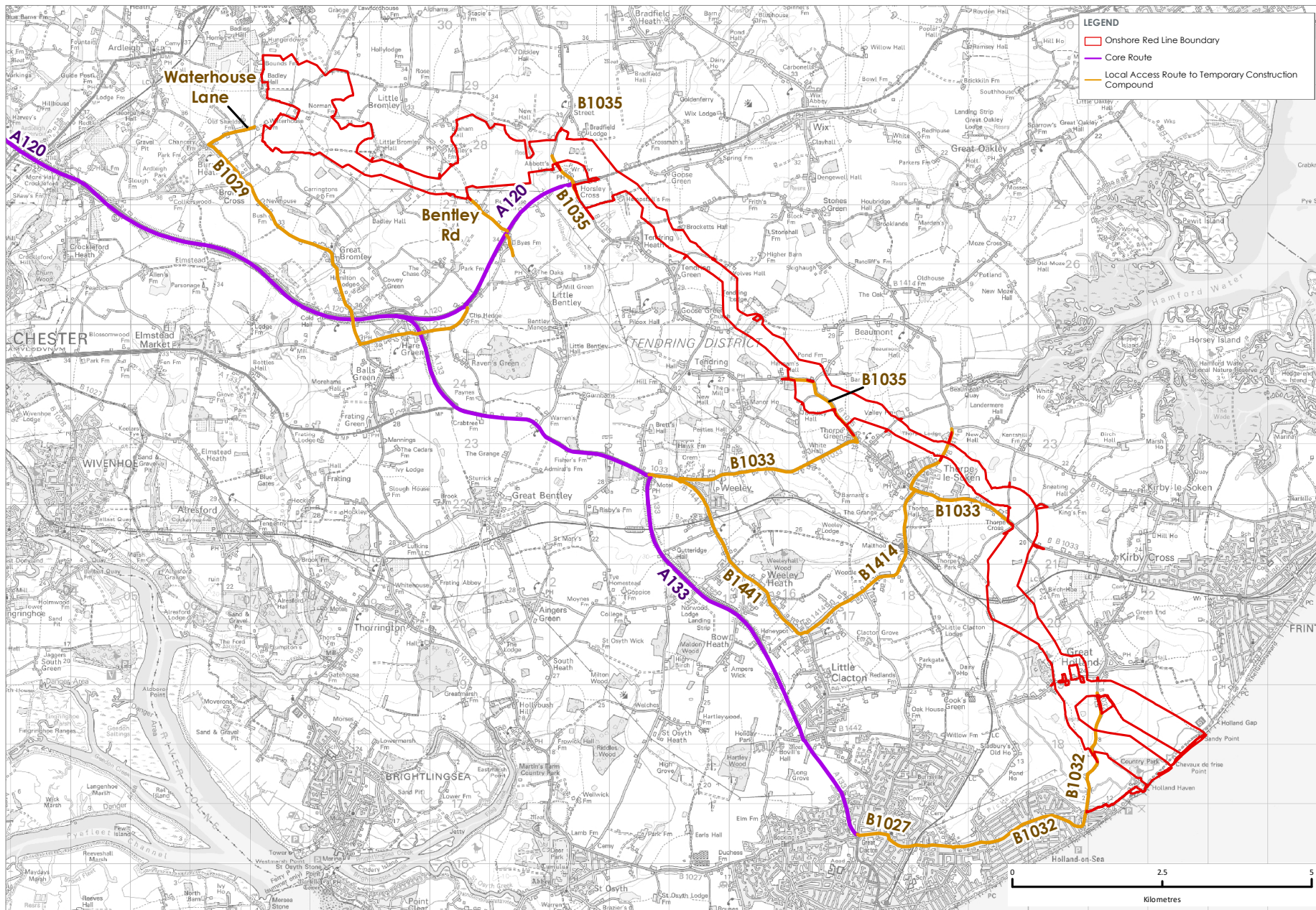
Example of soil storage during construction

The Code of Construction Practice will include specific measures and details of monitoring regimes to ensure that we comply with a wide range of industry best practices. These requirements and standards will be applied throughout the construction period.

The Project will also have archaeologists and ecologists supporting during construction where necessary. This is to help to ensure the works are managed in a sensitive way and species protected.

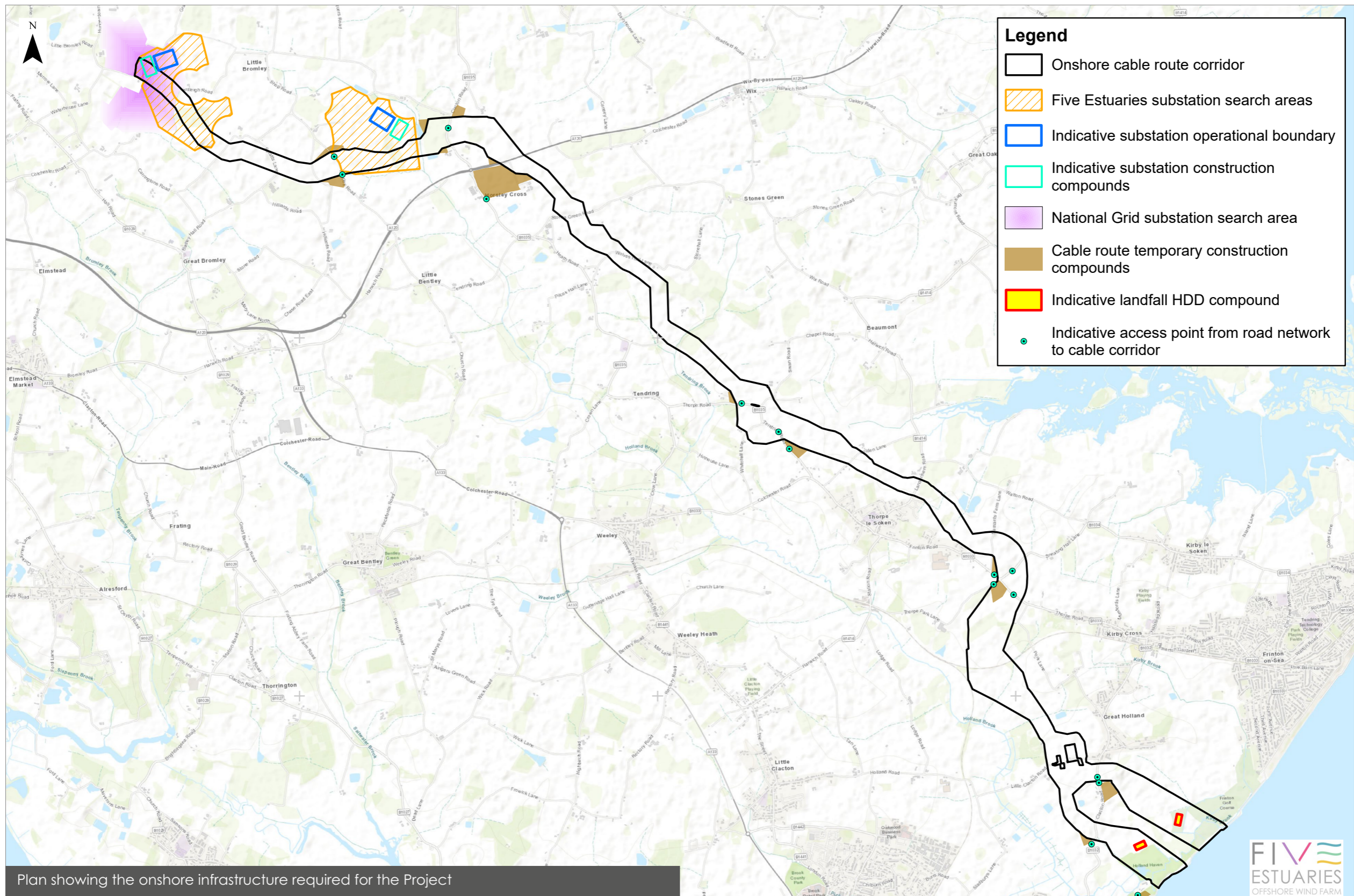


An example of wildlife protection fencing used during construction



Construction access for building the project include core traffic routes as well as local access points to reach the cable corridor.

Onshore infrastructure



Processes – getting consent for the Project

Development consent

As the Five Estuaries project will generate more than 100 megawatts of power it is classified as a Nationally Significant Infrastructure Project (NSIP), 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 (current stage):** Before an application is submitted, Five Estuaries will carry out a consultation on the emerging proposals and on preliminary environmental information (see below). 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.

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. The Non-Technical Summary summarises the key findings of the PEIR. We have produced a Guide to the PEIR as part of the consultation to help people navigate the multi-volume document.

National policy

There are a large number of policy statements and pieces of legislation that are relevant to the Project. These are set out in the PEIR, Volume 1.2.

As a Nationally Significant Infrastructure Project, the Government's National Policy Statements (NPSs) set out the primary basis for how the Project will be assessed and determined. The Examining Authority and the Secretary of State must have regard to these NPSs in their decision making.

The current NPSs relevant to the Project are:

- EN-1 Overarching NPS for Energy
- EN-3 Renewable Energy
- EN-5 Electricity Networks Infrastructure

These NPSs came into effect in July 2011 and are currently undergoing revision. The PEIR refers to the existing NPSs most of the time, but also refers to drafts of the updated NPSs that were consulted on in 2021. We will make sure the Project proposals are inline with up to date national policy when we submit our application. The NPSs can be viewed online here: www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure

Have your say

The PEIR is an important step in the development of the Project and is part of this consultation.

We welcome any feedback on its contents including our assessments and proposed mitigation measures.



Galloper Offshore Wind Farm at dusk

Benefits

Jobs and skills

In addition to generating renewable energy, 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.

RWE recognises the importance of a future skilled workforce to support the growth of offshore wind. As part of our activities in the region, we intend to work with local education institutions to help students at all levels learn about the opportunities that Five Estuaries would create and the wider offshore energy industry. 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. To date, over 40 wind turbine apprentices have been trained at the College. Some of these apprentices are working at the Galloper Operations and Maintenance base located in Harwich. 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.



Galloper Operations and Maintenance base

Galopper Offshore Wind Farm

Five Estuaries' sister project, Galopper Offshore Wind Farm (operational since 2017), supported over 700 jobs during construction. Since becoming operational, 60 long-term skilled jobs are linked directly to the wind farm.

The Galopper team works closely with local authorities, not-for-profit organisations, education and industry groups to deliver education and skills activities along the East coast. This includes shadowing days at Galopper Operations and Maintenance base, holding mock interviews for students at Clacton High School, and engagement with the East Coast Energy Internship Scheme and many Science, Technology, Engineering and Mathematics (STEM) events.

The wind farm also has four STEM ambassadors who work closely with local schools and supports five apprentices all who all live locally.

The long-term operations and maintenance of the wind farm is bringing significant employment and investment benefits to Tendring, the wider Essex area and along the East coast as well as elsewhere in the UK and we expect Five Estuaries to do the same.



Galopper Wind Farm apprentices

Local supply chain benefits

The UK supply chain has an integral role to play in shaping the future of the offshore wind industry here and abroad. We know our UK offshore wind farms can act as a catalyst for the UK supply chain.

Five Estuaries is keen to use local suppliers and understand the products and services local businesses can provide to the Project. The £1.5 billion Galopper Offshore Wind Farm worked with over 20 local companies during construction. As the Five Estuaries project progresses we'll work with local suppliers through a range of activities such as Meet the Buyer events, and setting up a supplier directory.

Community benefits

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 local people and groups to help shape how the Project can best support the community.

As an example, Galloper Offshore Wind Farm provides three community fund packages to the local community including £187,000 over 17 years through the Galloper Wind Farm Fund to contribute to the appearance, setting, conservation, amenity, accessibility and enjoyment of the Suffolk Coast & Heaths Area of Outstanding Natural Beauty. The Galloper Sponsorship Fund has given away approximately £60,000 to date to local community projects and organisations, and a fund managed by Essex Community Foundation which has awarded 29 grants since 2018, totalling over £54,000, which promote charitable, community, educational or environmental initiatives.

Have your say

We are still early in the development of our approach to community benefits but we welcome any suggestions or priorities.



Little Oakley Football Club sponsored by Galloper Offshore Wind Farm

Offshore connection options and coordination with other projects

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 and 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 read more about the Review here: www.gov.uk/government/groups/offshore-transmission-network-review

The Preliminary Environmental Information Report published as part of the consultation is based on the principle of an onshore connection for just the Five Estuaries project, taking into account the potential cumulative impact of other projects. Options being explored as part of the OTNR process would be expected to reduce the amount of infrastructure required, and therefore likely to reduce the environmental impact.

Nearby offshore transmission projects

There are two projects currently in development that may present opportunities for a coordinated offshore transmission connection for Five Estuaries as identified in the joint OTNR statement dated 7 July 2022.

OTNR and the consultation

While we welcome any comments on the proposals, this information has been provided for information only.

Through our first stage of consultation and continued engagement with stakeholders, we are aware of the desire to see an offshore connection option delivered.

We are not consulting on an offshore option as the Project's ability to progress with it is dependent on the OTNR process, which we are fully engaged with, and resolving the challenges set out in this chapter.

Sea Link is a proposal by National Grid Electricity Transmission to reinforce the transmission network across Suffolk and Kent. Initial proposals include a new high voltage link approximately 140km long, mostly offshore, connecting an extended substation at Friston in Suffolk to a new substation within 5km of an existing substation in Richborough, Kent. The project could be operational by 2030.

National Grid carried out a consultation on Sea Link late last year, and you can find out more about the project at: www.nationalgrid.com/sealink

Nautilus Interconnector is a proposal by National Grid Ventures to build a multi-purpose interconnector between the UK and Belgium, increasing the connection between the two energy markets and connecting offshore energy generation to shore. Initial proposals include connecting to a substation at Friston in Suffolk and a new high voltage line connecting to an offshore energy island in Belgium. The project could be operational by 2029.

National Grid Ventures carried out a consultation on their Nautilus Interconnector project in 2021. In 2022 National Grid Ventures stated that, in addition to the connection at Friston, it was investigating if it was technically feasible to locate the project at the Isle of Grain. You can find out more about the project at: www.nationalgrid.com/nautilus-interconnector

Challenges

Delivering an offshore connection may have a number of benefits, however in order to deliver an operational wind farm by 2030 and contribute to the 50GW target there are a number of regulatory, technical and commercial challenges to overcome. The below is a non-exhaustive summary of these issues.

Regulatory: Transporting electricity in the UK is a regulated activity and specific licences are required to legally operate electricity transmission assets.

- There are three distinct licences under the current system (onshore transmission, offshore transmission owner, and interconnector). The existing available licences would have to be altered to enable Five Estuaries to connect to either a UK only transmission asset (Sea Link) or an international interconnector (Nautilus). This would be the first time this kind of altered licence would have been issued.
- In addition, the existing legal mechanism for renewable energy generators (Contracts for Difference) does not currently allow for connection via interconnectors or directly into “onshore” infrastructure located offshore, such as a bootstrap.
- Finally, connection via an interconnector introduces further regulatory challenges with the connection with the European energy market.

Technical: An offshore coordinated transmission network connection for a new wind farm has not been delivered in the UK before. While technically achievable, there will be both known and unforeseen technical challenges to reach an engineering design that works for all parties involved.

Commercial: The business model for developing an offshore connection for multiple projects does not currently exist in the UK. The share of investment costs, transmission charging arrangements, and rights and responsibilities would have to be established between all projects.

Overcoming these hurdles is a complex challenge, which is being considered as part of the government-led OTNR process. In order for a coordinated connection by 2030 to be a viable option, reform to policy, associated regulations and licensing needs to happen at pace.

In addition, Five Estuaries will need a degree of commercial certainty. In order to maintain the coordinated connection options for as long as possible, Five Estuaries is considering drafting its Development Consent Order (expected to be submitted later this year) on the basis of an onshore connection, but with the option to move to a coordinated connection should it become a viable alternative within Project timescales.

Coordination with North Falls Offshore Wind Farm

The North Falls Offshore Wind Farm is the proposed extension to the operational Greater Gabbard Offshore Wind Farm, which has also been provided with a grid connection at the East Anglia Connection Node substation. Due to the location of the two projects, we continue to work closely with North Falls on key elements such as cable corridor selection (to optimise both onshore routes), environmental surveys and by sharing consultation feedback.

Coordination and cooperation will continue throughout the development of both projects and may enable elements of joint delivery should the technical and commercial conditions make it practical. 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.

The potential cumulative impacts of these projects is part of the Environmental Impact Assessment process, and is included in the PEIR.

You can find out more about the North Falls Offshore Wind Farm project at:
www.northfallsoffshore.com



How to give us your feedback

Feedback to this consultation

This consultation is likely to be the last time the Project will seek public feedback on the 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.

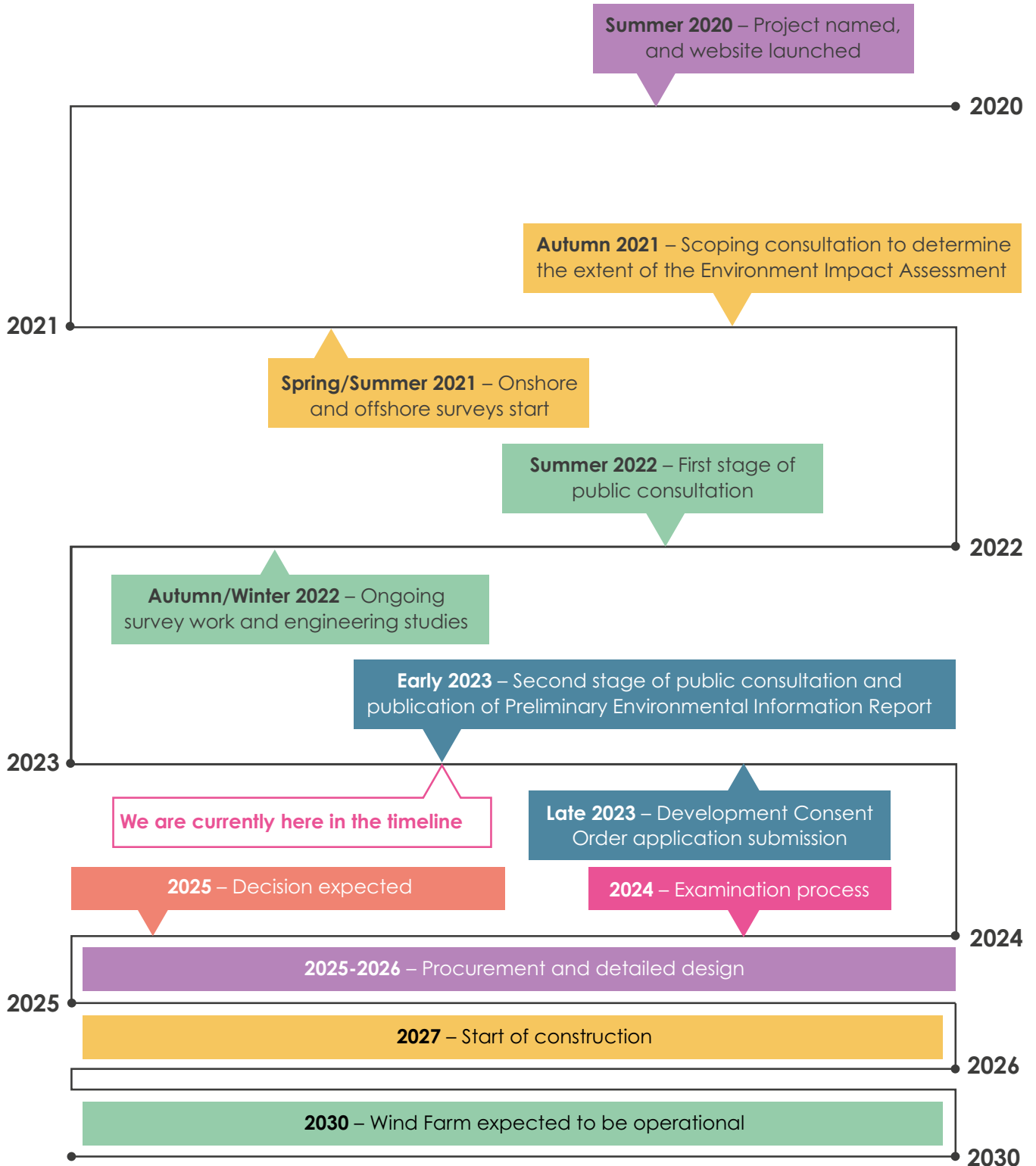
Freepost FIVE ESTUARIES

- Feedback forms or written feedback can also be left with us at any of our public events.
- You can complete our feedback form online via: 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.

Project timeline



You can contact the Project team at any time using the details below:

Phone: 0333 880 5306

Website: www.fiveestuaries.co.uk

Email: fiveestuaries@rwe.com

2023

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