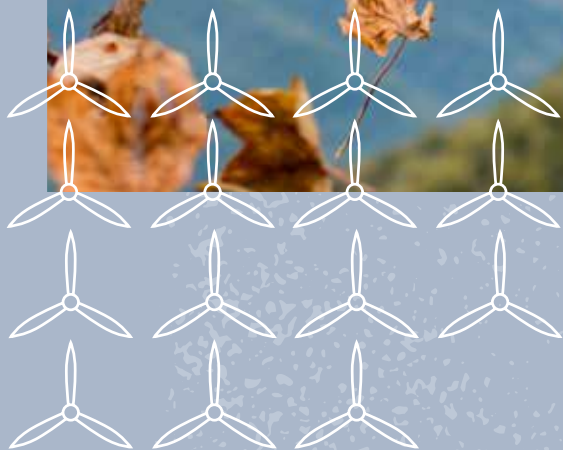


Berwick Bank Wind Farm - Cambois Connection



Who we are

SSE is the leading generator of renewable electricity in the UK and Ireland, providing energy needed today while building a better world of energy for tomorrow.

We're a leading developer and operator of renewable energy generation, headquartered in the UK and Ireland, with a growing presence internationally. Part of the FTSE-listed SSE plc, we're taking action as part of SSE's Net Zero Acceleration Programme (NZAP) to increase our installed renewable energy capacity to 9GW by 2027, and over 16GW by 2032.

We have an operational portfolio of around 4GW of installed onshore wind, offshore wind and hydro generation capacity, with a secured future project pipeline of over 15GW in development. We're also pursuing a further pipeline of over 13GW of additional prospective sites under development.

Our operational portfolio comprises nearly 2GW of onshore wind capacity, almost 0.5GW of offshore wind capacity, and almost 1.5GW of flexible hydro power and pumped storage capacity. These generation assets produce around 10TWh of renewable power each year.

We're committed to delivering the green energy the world needs now and in the

future. Our 15.1GW construction and development pipeline includes 3.8GW of onshore wind, 1.3GW of pumped hydro storage, 1.2GW of solar and battery storage, and 8.8GW of offshore wind energy - the largest offshore development pipeline in the UK and Ireland.

We know offshore wind will be the backbone of a net zero power system and that's why we're building more offshore wind than any other company in the world right now. This includes the world's largest offshore wind farm, the 3.6GW Dogger Bank project in the North Sea, and the world's deepest fixed-bottom offshore wind farm, the 1.1GW Seagreen project off the Scottish coast.

We're a team of around 1,500 renewable energy professionals based across the UK, Ireland, Spain, France, Italy, Greece, the Netherlands, Japan and the USA. We've honed our skills through over 15 years of delivering world-leading projects with expertise in project design and optimisation, consenting and stakeholder engagement, financing, procurement, construction, and operations.





Project Overview

Located in the North Sea, in the outer Firth of Forth, Berwick Bank Wind Farm has the potential to deliver up to 4.1 GW of installed capacity, making it one of the largest offshore opportunities in the world.

Project Background

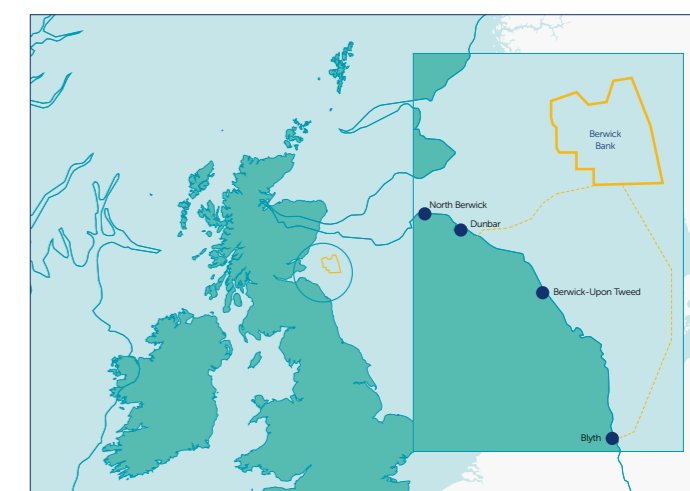
Berwick Bank Wind Farm is in the development stage and with a forecasted capacity of 4.1GW, it is currently the largest offshore wind farm in development in the UK.

The project will be capable of generating enough clean, renewable energy to power over five million homes. The UK Government has recently set themselves a target of achieving 50GW of installed offshore wind capacity by 2030, with a capacity of 4.1GW. Berwick Bank Wind Farm is crucial to the success of achieving this target.

Over the last ten years SSE Renewables has been refining proposals for Berwick Bank Wind Farm and we are now able to progress through the planning process. Given the scale of the site, Berwick Bank Wind Farm will be required to connect at two locations on the National Grid – these have been determined to be at East Lothian, Scotland and Cambois, Northumberland.

In December 2022 we submitted our planning proposals for the offshore array area, associated offshore infrastructure and onshore infrastructure to the relevant planning authorities within East Lothian Council and the Scottish Government.

We are now consulting on our proposals for our proposed Cambois Connection in Northumberland.



Berwick Bank Wind Farm

The Cambois Connection

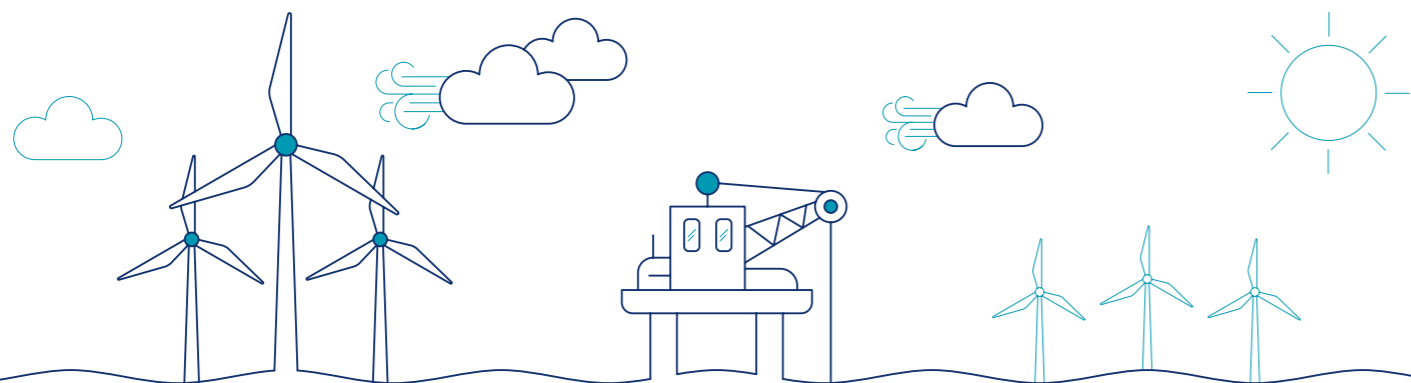
The Cambois Connection comprises two distinct proposals, or 'Schemes':

Marine Scheme

The installation of offshore export cables from within the Berwick Bank Wind Farm (BBWF) array area to a landfall near Cambois, Northumberland.

Onshore Scheme

The installation of a cable landfall, onshore High Voltage Direct Current (HVDC) cables, a new onshore converter station, High Voltage Alternating Current (HVAC) grid cables and works to integrate into the existing National Grid substation at Blyth.



Strategic Routeing

A wide range of potential options for connecting the BBWF with the grid connection location at Blyth have been considered. This process considered a range of potential hard and soft constraints (from an environmental, social, technical and commercial perspective) to help identify broad, strategic installation and connection options. The outputs from this process were used to inform detailed appraisals of connection options.

Landfall Selection

A number of potential landfalls were considered along the Northumberland coast, representing options which could support the installation of onshore cables and connection into the converter station of the Onshore Scheme and UK energy network. This process considered technical factors, including the viability of typical landfall construction techniques, as well as environmental, social and commercial factors.

Onshore Site Selection

Informed by the existing National Grid substation in Blyth, detailed studies were carried out to identify the best potential location for a converter station. This was not carried out in isolation - concurrently, studies were completed to confirm the best solution for the onshore HVDC export cable route and the onshore HVAC grid cable route (discussed further below).

Detailed Routeing (Onshore)

Informed by the outputs from the strategic optioneering, landfall selection and onshore site selection, we carried out a detailed appraisal of individual potential routes from the landfall to the grid connection location. This process considered a range of environmental, technical, commercial and social criteria.

Detailed Routeing (Offshore)

Informed by the outputs from the strategic optioneering and landfall selection we have carried out further assessments of different route options for the Marine Scheme.

Project Timeline*



*Timelines are indicative and subject to change

Project Details: Onshore

The approach taken to Onshore Scheme site selection has been based on the core objective of developing a viable connection between the BBWF and existing grid network to maximise export capacity, thereby delivering a significant volume of new low-carbon electricity as soon as possible, with a substantial contribution to the national grid before 2030.

We considered converter station and landfall options, taking into consideration the wider environment for cable routing within the vicinity of the grid connection at Blyth substation. These were evaluated from an engineering, consents (planning and environment), commercial and land use perspective. A two-stage process was then undertaken:

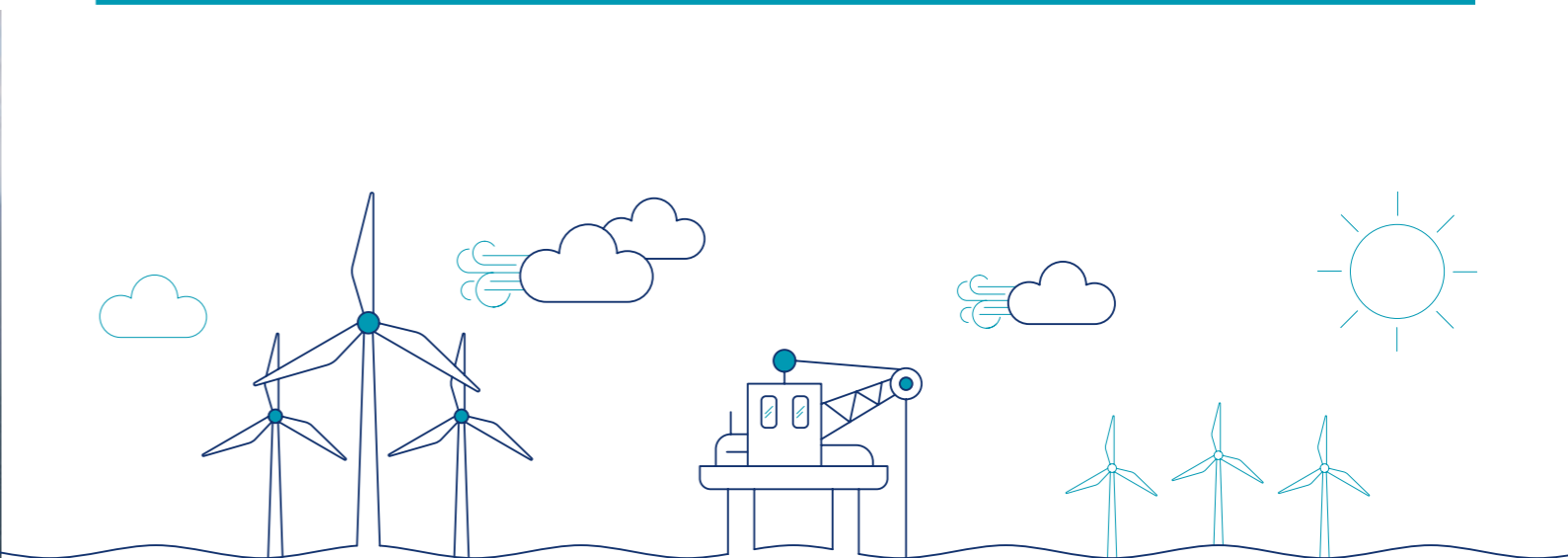
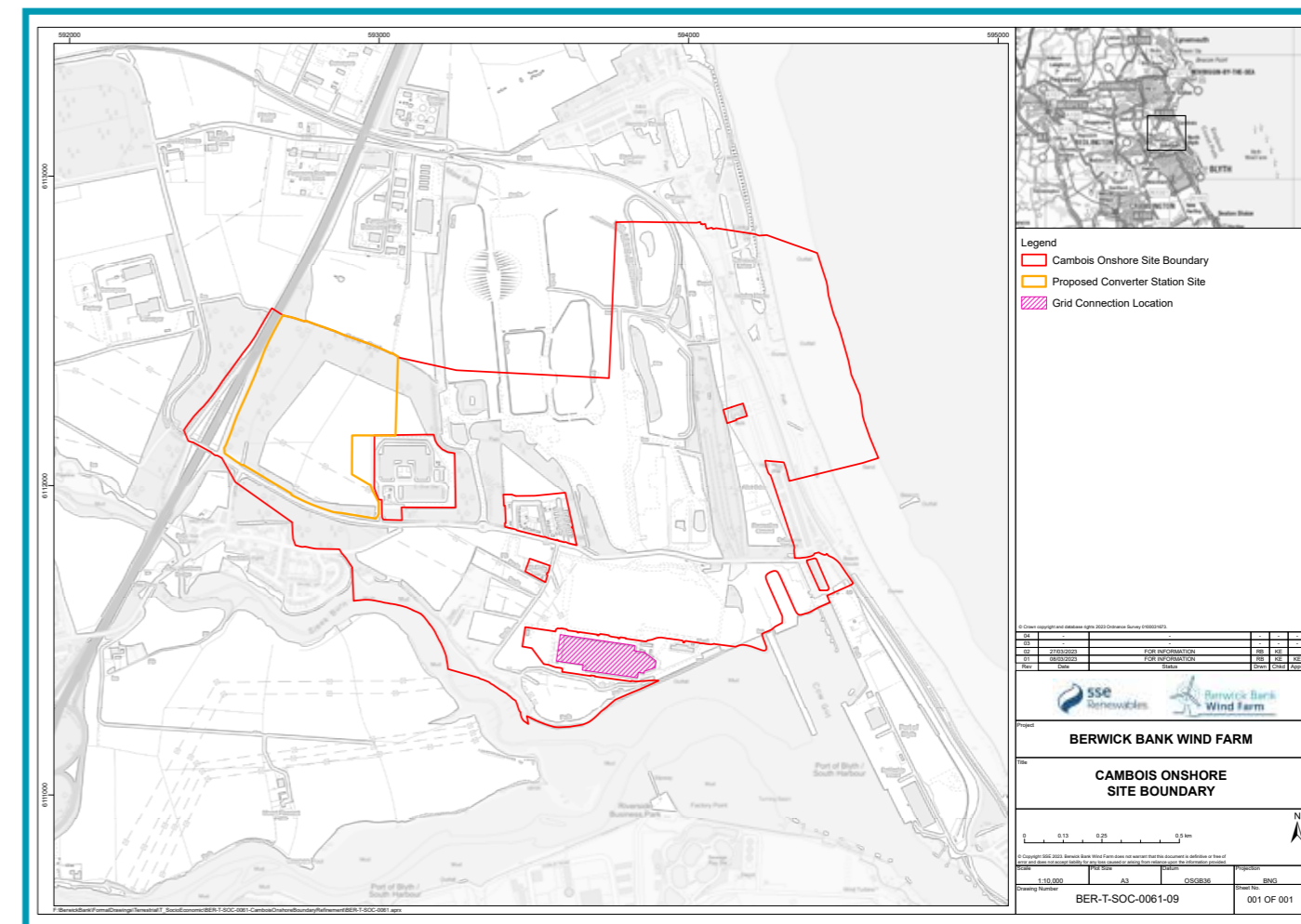
Stage 1

Identification and screening of converter station options. Preferred converter station option selected.

Stage 2

Identification of landfall area options. Preferred landfall areas selected.

A key reason for refining landfall areas was to minimise the length of cable corridor where possible, thereby minimising the extent of potential environmental impacts. From landfall, our cable corridor runs west across industrial land and then connects to our proposed converter station which is proposed to be situated to the north-west of the existing (North Sea Link) NSL converter station site. Our converter station will be connected to the substation at Blyth via another cable corridor.



Project Details: Offshore

Project overview

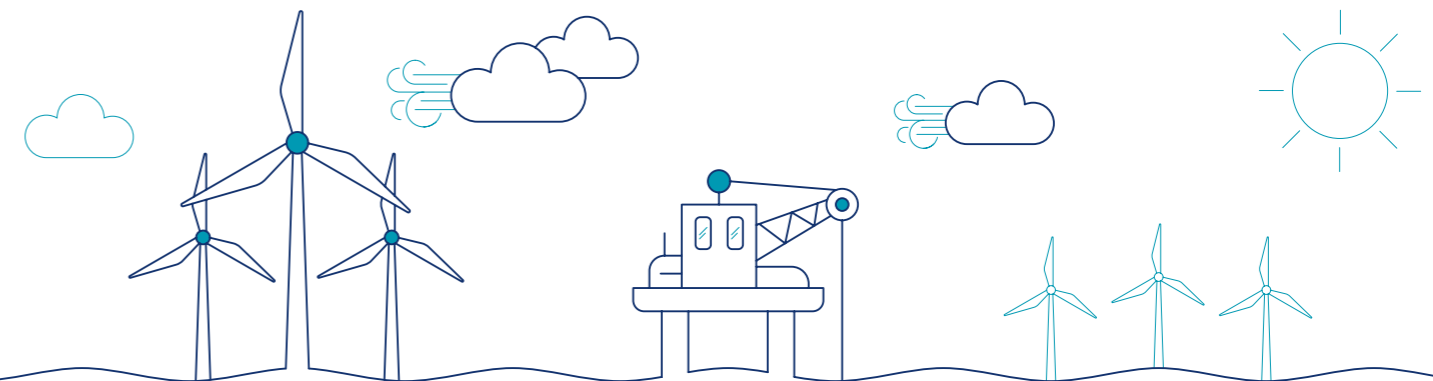
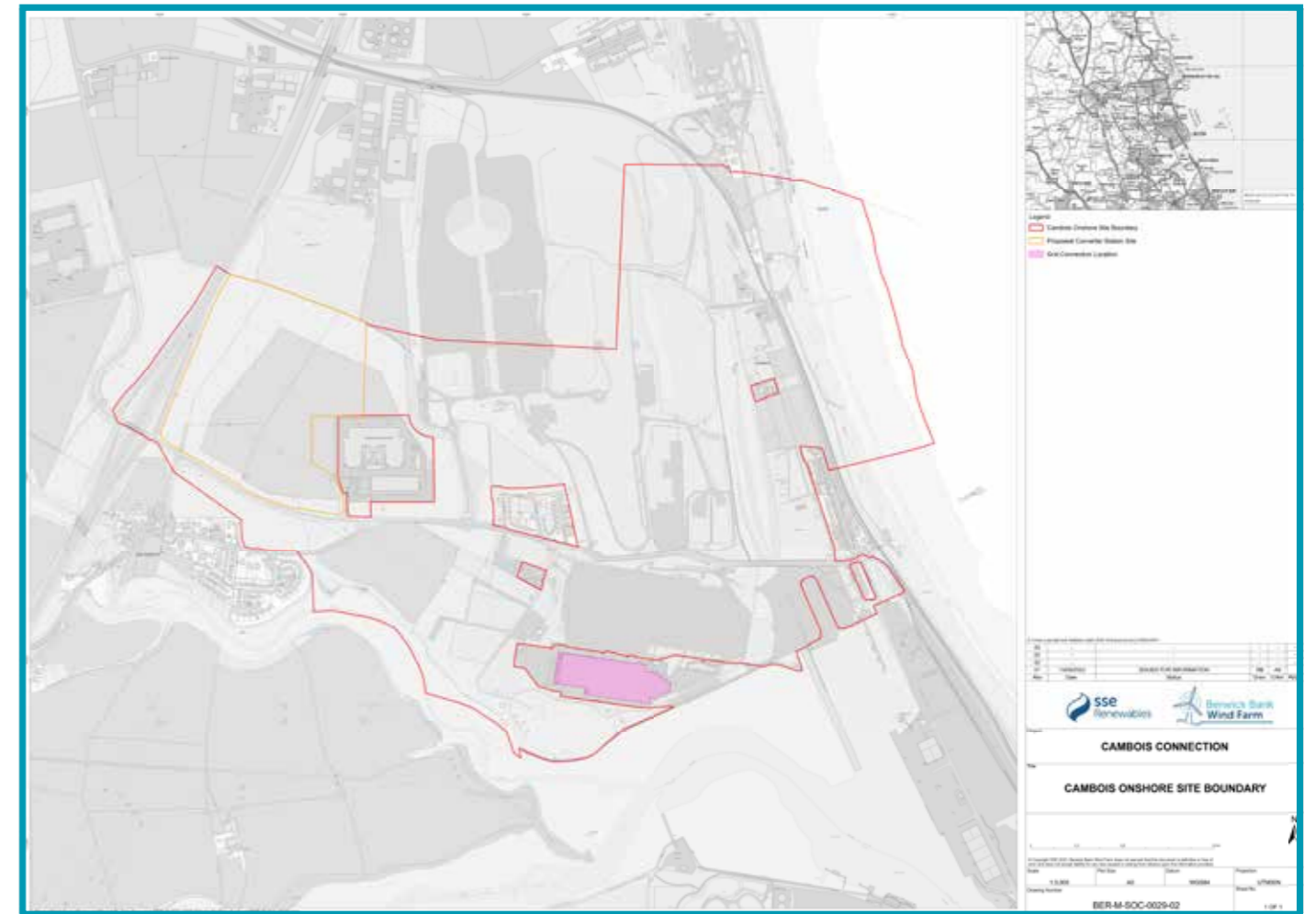
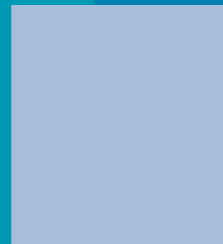
Certain design details relating to the Onshore Scheme are still to be finalised subject to the acquisition of information on ground conditions across the red line boundary (RLB) of our application, ongoing engineering design work and the procurement of cable and converter station suppliers which will be completed post-consent.

As such, the RLB forming the basis of the application for outline planning permission includes flexibility to allow for the final locations and design details of the various components of the Onshore Scheme to be defined post outline planning permission having been granted. These further details will be consented by way of reserved matters approvals granted by Northumberland County Council.

Key commitments

Open cut trenching at landfall was eliminated to reduce impacts on the coastline, primarily the Sand Dune Priority Habitat. Instead trenchless techniques will be implemented.

During construction it is expected that access to the beach will be maintained, signage may be employed at this time to advise of the works. Some areas of woodland will also be retained to reduce potential visual impact and maintain habitat connectivity.



EIA: Onshore

We are currently completing our Environmental Impact Assessment (EIA). This will evaluate the potential impacts of our proposals to determine where we need to apply mitigation or control measures to lessen those effects.

The onshore EIA considers a broad range of potential impacts on, for example, the natural environment (e.g. woodland), wildlife (e.g. otters), and local residents. The findings of the EIA will be written in an EIA Report that will be published online when we submit our planning application.

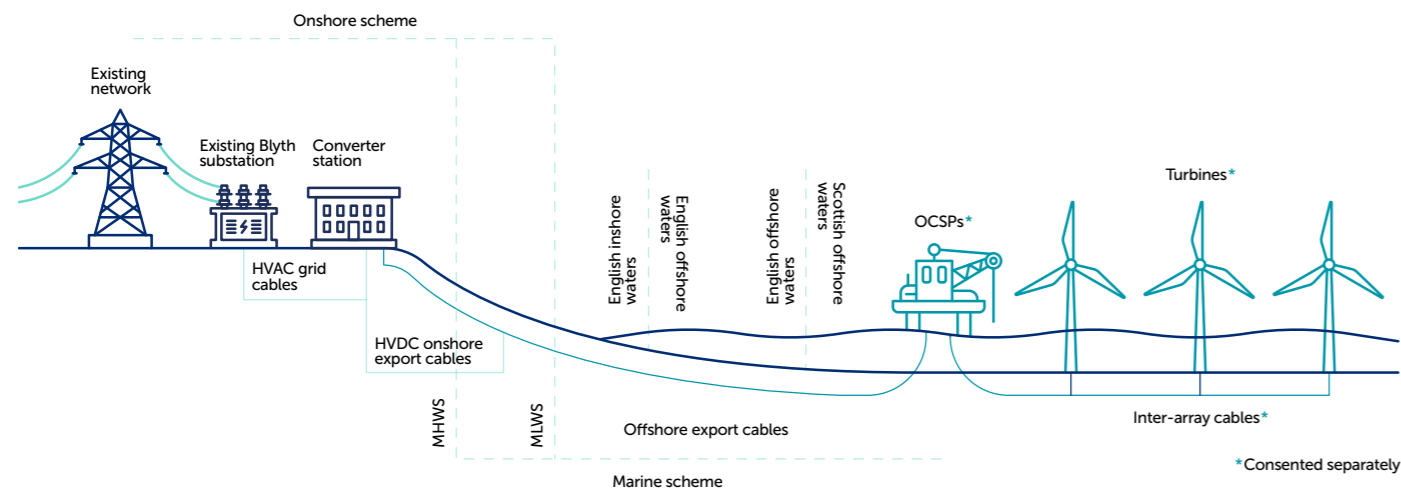
As part of the EIA, we seek the views of a diverse range of organisations, from Northumberland County Council and their statutory consultation bodies to local parish councils' groups and residents. Our aim is to gain feedback on the project and where possible seek to find ways to avoid or minimise the impact we may have.

We consider the following aspects to be an important part of our onshore EIA process.

This consultation exercise is designed to obtain any further feedback you may wish to provide:

Construction Traffic

We understand that with any large infrastructure construction project, there are concerns about construction traffic using local roads. Whilst it is necessary for our construction traffic to use some of the local roads, we will develop a Construction Traffic Management Plan (CTMP), which would be implemented throughout the construction phase, with the aim of reducing the impact on local road users and residents living in the area. This would be subject to the approval of Northumberland County Council should we secure planning consent.



Noise Impacts

We understand there may be concerns about construction noise and noise generated by the proposed converter station. As part of our EIA process our noise specialists will complete a noise impact assessment that models noise levels and the potential impacts on nearby receptors.

Hydrology

We will undertake surveys to map out the watercourses across the area and will continue to work with specialist hydrologists to ensure we avoid or reduce the impacts during construction. This will include potential impacts on any identified Private Water Supplies as well as consideration of flood risk and climate change which will be detailed in the EIA Report.

Wildlife & Habitats

We are working with a team of ecologists to determine the impact on habitats and wildlife in the area. If any significant impacts are identified, we will develop suitable control and mitigation measures to avoid or reduce the impact.

Landscape & Visual Impact

We appreciate that our converter station will result in a feature in the landscape. During the design phase we will investigate options to help reduce the visual impact and through the EIA process we will identify further mitigation to help minimise the impact on the landscape and the views experienced by residents.



Pacific Orca Vessel at Beatrice Offshore Wind Farm

Project Details: Offshore

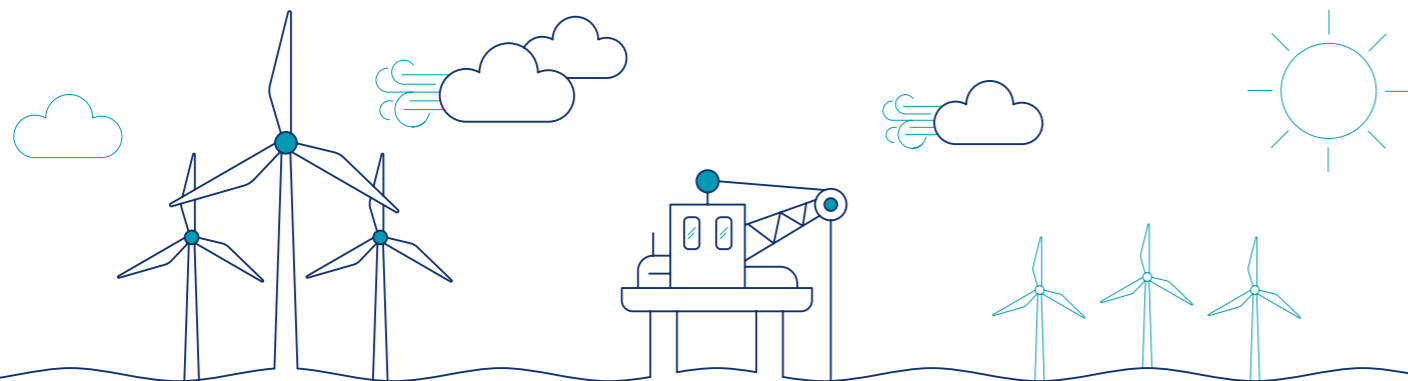
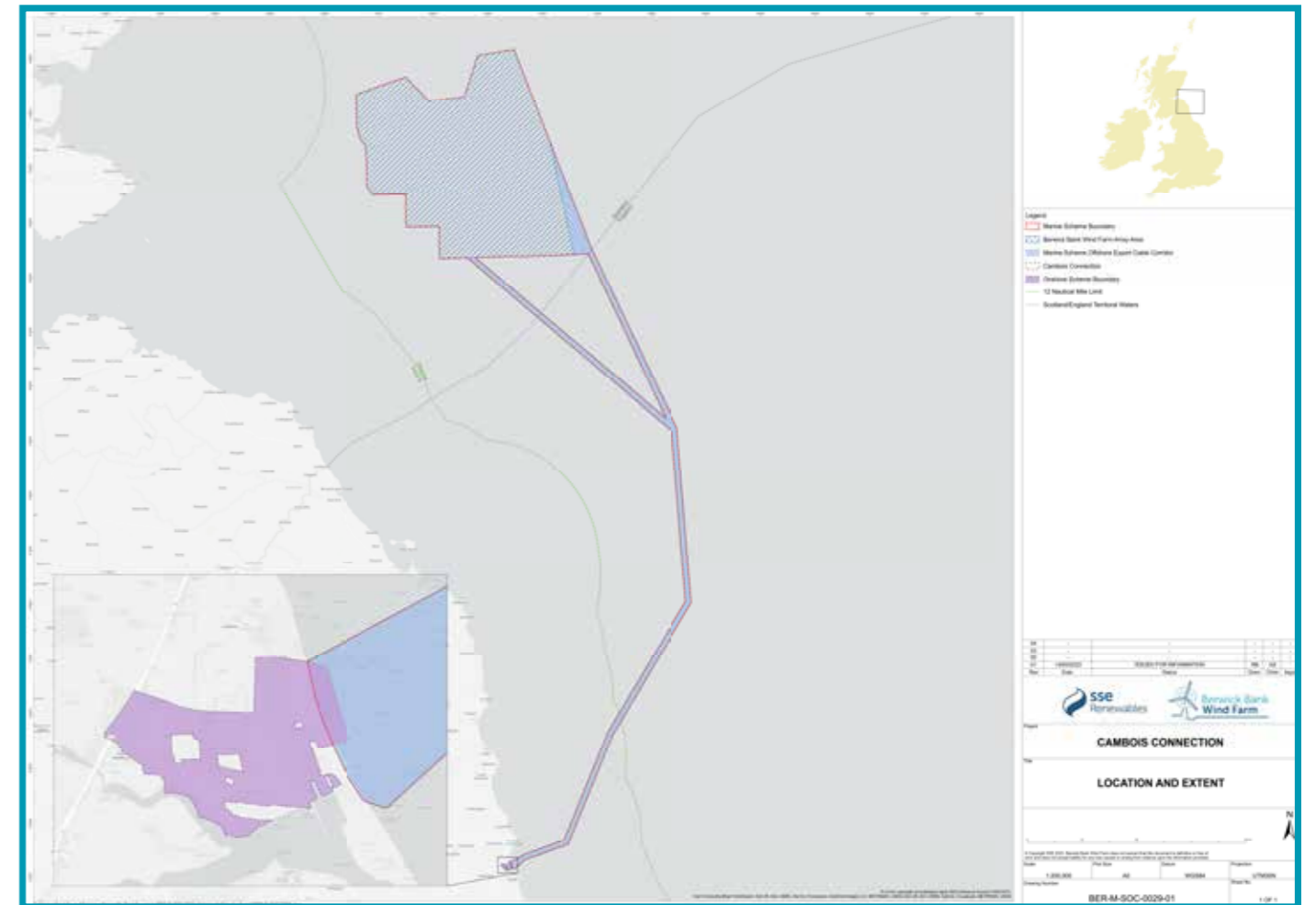
Berwick Bank Wind Farm will be located in the central North Sea, approximately 38 km offshore of the East Lothian coastline. It will have an operational design lifetime of approximately 35 years.

We submitted our Marine Licence Application for the Cambois Connection Marine Scheme to the Marine Management Organisation and Scottish Government in July 2023. This application can be viewed in full at www.berwickbank.com

The offshore export cable route to Cambois will be approximately 180 km in length. This is measured from the offshore wind farm site to the proposed landfall location at Cambois. The Cambois landfall location has been selected following

the National Grid's Holistic Network Design Review. This is a process which National Grid has undertaken to identify the optimum locations across the UK for forecasted energy developers to connect into.

The key offshore components of the Cambois connection will be up to four High Voltage Direct Current (HVDC) subsea export cables which will make landfall along Cambois beach using trenchless techniques, therefore avoiding any interaction with the beach itself.



Environmental Considerations: Marine Scheme

Marine Considerations

As we will be placing a cable under the seabed, it is important that we know what is living there. Therefore, we have undertaken an extensive benthic survey campaign in the wind farm site, along the offshore export cable corridor and within the nearshore area in Cambois to define the habitats and species present. This is particularly important as the offshore export cable sits partially within a Marine Protected Area (MPA) in Scottish waters, and are in proximity to and overlap with some Marine Conservation Zones (MCZ) in English Waters. We are also assessing the fish and shellfish ecology that is present as these can also be affected, positively and negatively, by the Marine Scheme. This includes assessing the effects of the offshore export cables on the species present. The detailed survey work done to date will allow the team to propose the most environmentally sensitive design possible.

Fishing

We have contracted a Fishing Industries Representative (FIR) and Fisheries Liaison Officer (FLO) to provide advice with regards to local fisheries and help liaise with the local fishing industry as we undertake further offshore surveys to inform the design of the Marine Scheme. Commercial fisheries are an especially important sector to the coastal communities around the United Kingdom. Therefore, we will continue to liaise closely with those stakeholders to understand the types of fishing within the offshore export cable corridor, and concerns that they may have about the Cambois Connection. By doing this we can understand the effects that we may have on this sector during the different project phases and to also allow us to factor in mitigation that may lessen any effects and allow their activities to carry on with the least amount of interruption.

As we await a decision on our Marine Licence application further exploratory offshore surveys may be undertaken to inform detailed engineering design. All information will be communicated through our FIR and FLO and survey specific Notice to Mariners well in advance of the survey commencing.

Environmental Assessments

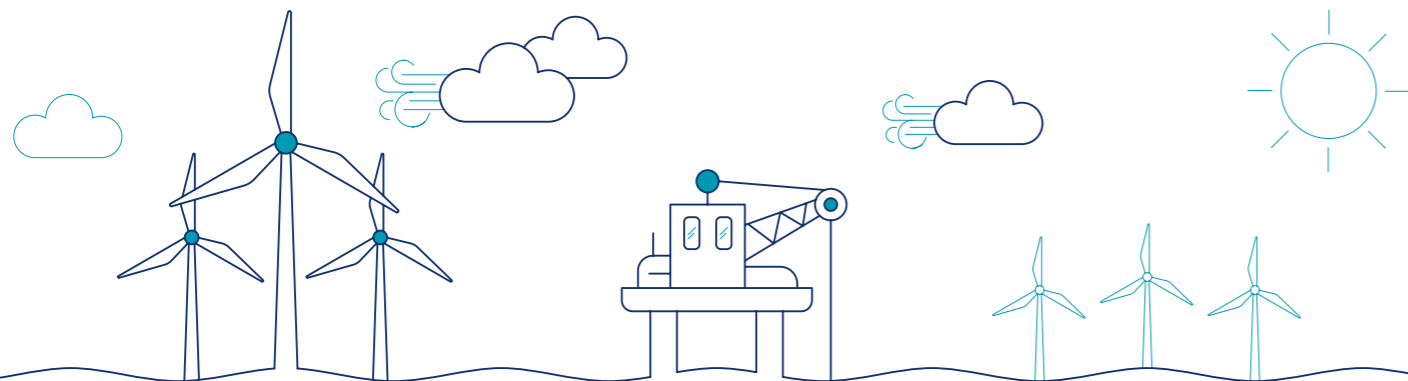
An Environmental Impact Assessment (EIA) was undertaken as part of the Marine Licence applications for the Marine Scheme. An Environmental Statement (ES) was prepared which provides a description of the Marine Scheme and presents the environmental information which has been gathered in order to carry out an assessment of the likely significant effects of the construction, operation and maintenance, and decommissioning phases of the Marine Scheme on the receiving environment. The key technical topics which were assessed in the EIA included:

- Offshore Physical Environment and Seabed Conditions;
- Benthic Subtidal and Intertidal Ecology;
- Fish and Shellfish Ecology;
- Offshore and Intertidal Ornithology;
- Marine Mammals;
- Commercial Fisheries;
- Shipping and Navigation;
- Marine Archaeological and Cultural Heritage;
- Other Sea Users; and
- Effects on Climate (through greenhouse gas emissions).

No significant effects were predicted as a result of the Marine Scheme alone or cumulatively with other developments.

Additional environmental assessments were undertaken to support the Marine Licence applications. These included:

- A Report to Inform Appropriate Assessment which assessed likely significant effects of the Marine Scheme (and likely significant effects in combination with other developments on European protected sites and species such as Special Protection Area/Ramsar sites designated for birds or Special Areas of Conservation designated for fish, marine mammals or sensitive habitats. No adverse effects to the site integrity of any designated site are anticipated as a result of the Marine Scheme alone or in combination with other developments.
- A MCZ/MPA Assessment which considered the potential for the Marine Scheme to hinder the achievement of the conservation objectives of designated sites. No impacts on conservation objectives alone or in combination with other developments are anticipated for the Firth of Forth banks Complex ncMPA, Farnes East MCZ, Berwick to St Mary's MCZ and Coquet to St Mary's MCZ .
- A Water Framework Directive (WFD) Assessment which assessed potential effects of the Marine Scheme against the objectives for relevant designated waters (comprising WFD waterbodies, Bathing Waters, Shellfish Waters and other associated protected areas). It was concluded that the Marine Scheme will not result in a deterioration of waterbodies, will not put at risk the 'good' status of waterbodies or the potential of any waterbodies and will not inhibit any waterbodies from progressing toward 'good' status or potential.



Project Opportunities

Additional elements and considerations which are being considered during our offshore EIA process are as follows.

Supply Chain

Berwick Bank Wind Farm represents a multi-billion-pound investment and presents an enormous opportunity for the local and UK supply chain. Despite still being in the pre-planning stage, to date the Project team have engaged with and utilised several UK suppliers, ranging from the hospitality sector, communications sector, local ports, and harbors, UK based environmental, survey, geotechnical and engineer consultancies and local contractors.

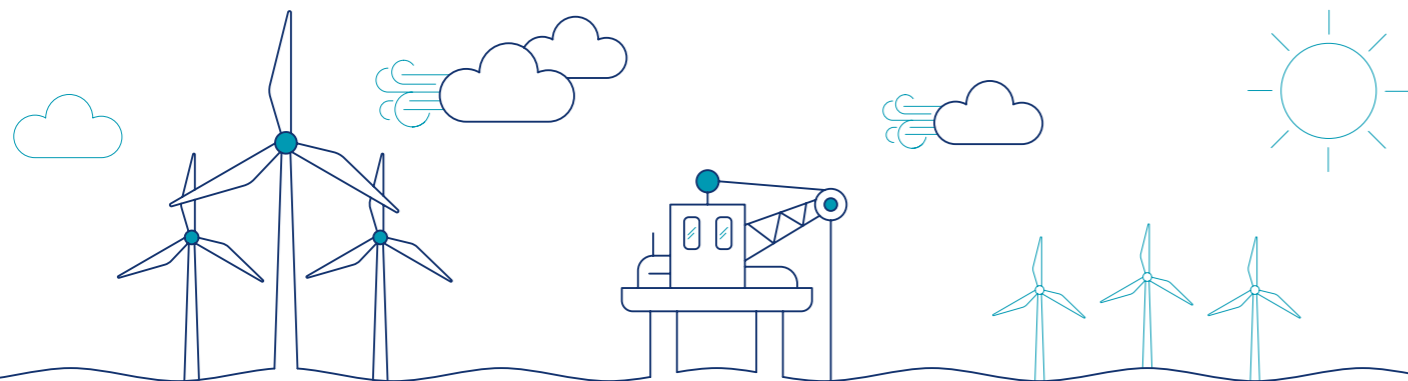
In April 2020 we held an initial Supply Chain online seminar which was attended by approximately 700 businesses, and we are committed to continuing our engagement with the local supply chain. In February 2022 we attended a skills and

apprenticeship fair sponsored by Ian Levy MP, which was held in Cramlington. In the event of a successful planning decision, we will look to engage further with local suppliers and businesses as part of our development process.

For further information on how your business can become involved with the Berwick Bank Wind Farm project please contact our procurement team at berwickbank@sse.com

Local Opportunities

To date the Project team have been delighted to work alongside various local organisations in Scotland. We are keen to ensure that Berwick Bank Wind Farm also provides benefits to the local community in the Cambois area and we look forward to working alongside local organisations and projects as our plans develop.



Keep In Touch

We would be delighted to hear feedback from all interested stakeholders, and you can submit any feedback directly to the project team at berwickbank@sse.com. You can also register for updates on the latest news relating to Berwick Bank on our project website; www.berwickbank.com





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