

OUR VIRTUAL EXHIBITION

Welcome to the virtual exhibition for our Seagreen 1A proposal. We are following Scottish Government guidance in line with Covid-19 and currently moving our public exhibitions online to ensure the safety of our staff and the local communities in which we work.

This virtual exhibition includes the information that you would expect to find at a traditional public exhibition including information boards on the proposals and feedback opportunities.

To discuss the proposals and answer any questions that you may have, the Project Team will be available via the live chat function in the virtual exhibition on **Monday 18th January at 12:00 – 14.30hrs and 18.00 – 20.30hrs.**

Alternatively you can contact us directly at the email address and telephone number at the foot of this exhibition board.

About the Seagreen 1A Project

The Seagreen Offshore Wind Farm was consented in 2014. This consent covers 150 wind turbines and the associated offshore infrastructure to export the energy generated by 114 of these turbines to landfall at Carnoustie in Angus. Separate planning permission has been secured for the onshore works to connect these 114 wind turbines to the national electricity transmission network at Tealing in Angus and construction of this onshore infrastructure is now underway.

To maximise energy generation and facilitate full export capacity from the Seagreen Offshore Wind Farm, we now intend to seek consent for an additional offshore and onshore export cable and the associated infrastructure to connect the remaining 36 of the consented 150 offshore wind turbines to the national electricity network at Cockenzie in East Lothian. This proposal is known as the 'Seagreen 1A project'.

The Seagreen 1A project will contribute to:



Scottish Government targets to deliver **11 GW** of offshore wind energy by 2030.

Scotland's ambitious climate change legislation, which sets a target date for net-zero emissions of all greenhouse gases by 2045.

The Seagreen 1A project will enable:



The additional export of up to **360 MW** of clean renewable energy from the Seagreen Offshore Wind Farm to the national electricity transmission network, enough to power approximately **1/3 million homes**.

Approximately **0.5 million** tonnes of carbon dioxide to be avoided every year - similar to removing **100%** of all of Scotland's industrial sector emissions.

ABOUT US

The Seagreen Wind Farm and the Seagreen 1A project is a joint venture between SSE Renewables (49%) and Total (51%), with SSE Renewables managing the project development. SSE Renewables is the leading developer, operator and owner of offshore wind energy across the UK and Ireland, with around 3 GW of consented or in construction projects in UK and Irish waters out of a total development pipeline of over 6 GW. SSE Renewables has the largest offshore wind development pipeline in the UK and Ireland. Part of the FTSE-listed SSE plc, our strategy is to drive the transition to a net zero future through the world class development, construction and operation of renewable energy assets.

Total is a broad energy company, which produces and markets fuels, natural gas and low-carbon electricity. Its 100,000 employees are committed to better energy that is safer, more affordable, cleaner and accessible to as many people as possible. Active in more than 130 countries, Total's ambition is to become the responsible energy major, which means providing energy that is affordable, reliable and cleaner.

Sharing Your Views

We would welcome your feedback on the Seagreen 1A proposals before we submit our applications for consent. If you have any questions or comments on the proposals you can:

- Complete our feedback form in the virtual exhibition room.
- Email us at: Seagreen1A@sse.com
- Call us on **07779650514**.

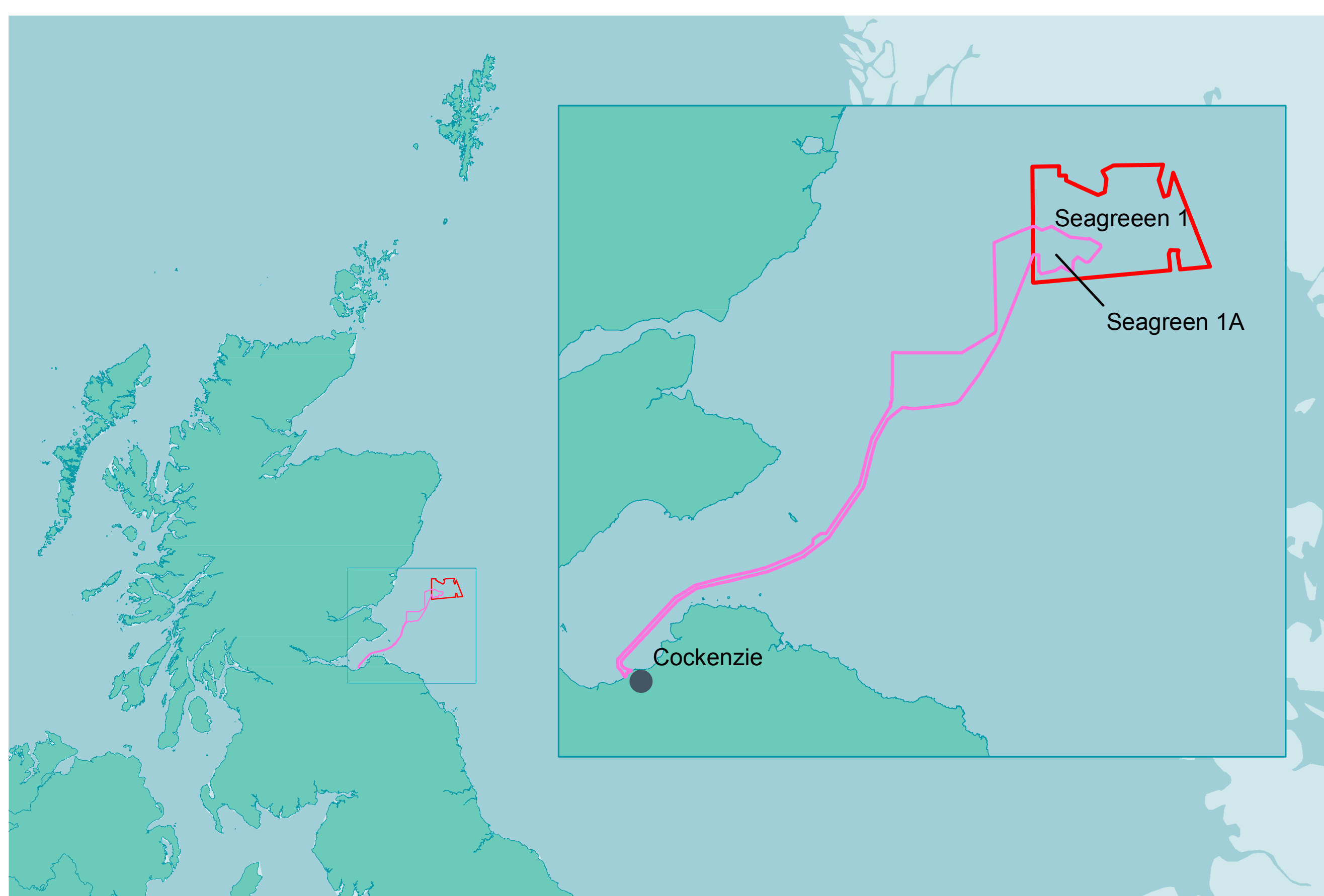
We would request that any comments be submitted by **5pm on Monday 1st February 2021**.

OVERVIEW OF THE SEAGREEN 1A PROJECT

The consented Seagreen Offshore Wind Farm is located in the outer Firth of Forth and Firth of Tay, approximately 66 km from the East Lothian coastline at its closest point. 114 of the 150 consented offshore wind turbines have a grid connection into Tealing in Angus, and construction on this grid connection started in 2020.

The proposed Seagreen 1A project seeks consent for the onshore and offshore infrastructure to connect the remaining 36 consented turbines to the national electricity transmission network. An application was made to National Grid in October 2019 for a grid connection and they responded with a connection offer at Cockenzie in East Lothian. We accepted this connection offer in June 2020.

The offshore infrastructure will comprise one offshore export cable of approximately 108 km in length from the Seagreen Offshore Wind Farm to landfall at Cockenzie. As far as possible we are proposing to locate the offshore export cable in proximity to the consented export cable corridor (for up to 6 cables) for the Inch Cape Offshore Wind Farm project.

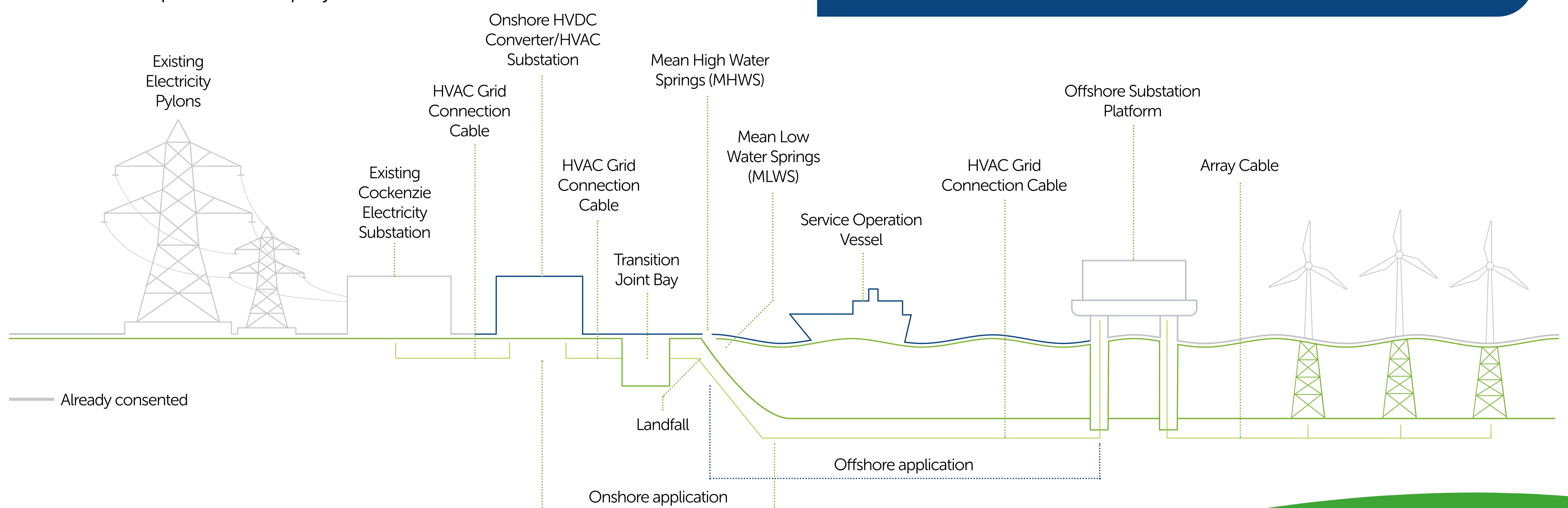


The proposed onshore infrastructure will include an onshore export cable to connect to the offshore export cable at landfall, and a new onshore substation. The proposed site for the onshore electricity transmission infrastructure is located between Cockenzie and Port Seton to the east and Prestonpans to the west. The site extends from mean low water springs at the coast through Preston Links to an area of open ground between the B1348 Edinburgh Road and the former Cockenzie Coal Store. Directly adjacent to the site is the existing Cockenzie Electricity Substation, which is the accepted grid connection point for the project.

CONSENTING APPROACH

Separate applications for consent will be made for the offshore and onshore electricity transmission infrastructure:

- a marine licence application will be submitted to Scottish Ministers for the offshore infrastructure.
- an application for Planning Permission in Principle will be made to East Lothian Council in respect of the onshore infrastructure.



SEAGREEN 1A ONSHORE PROPOSAL

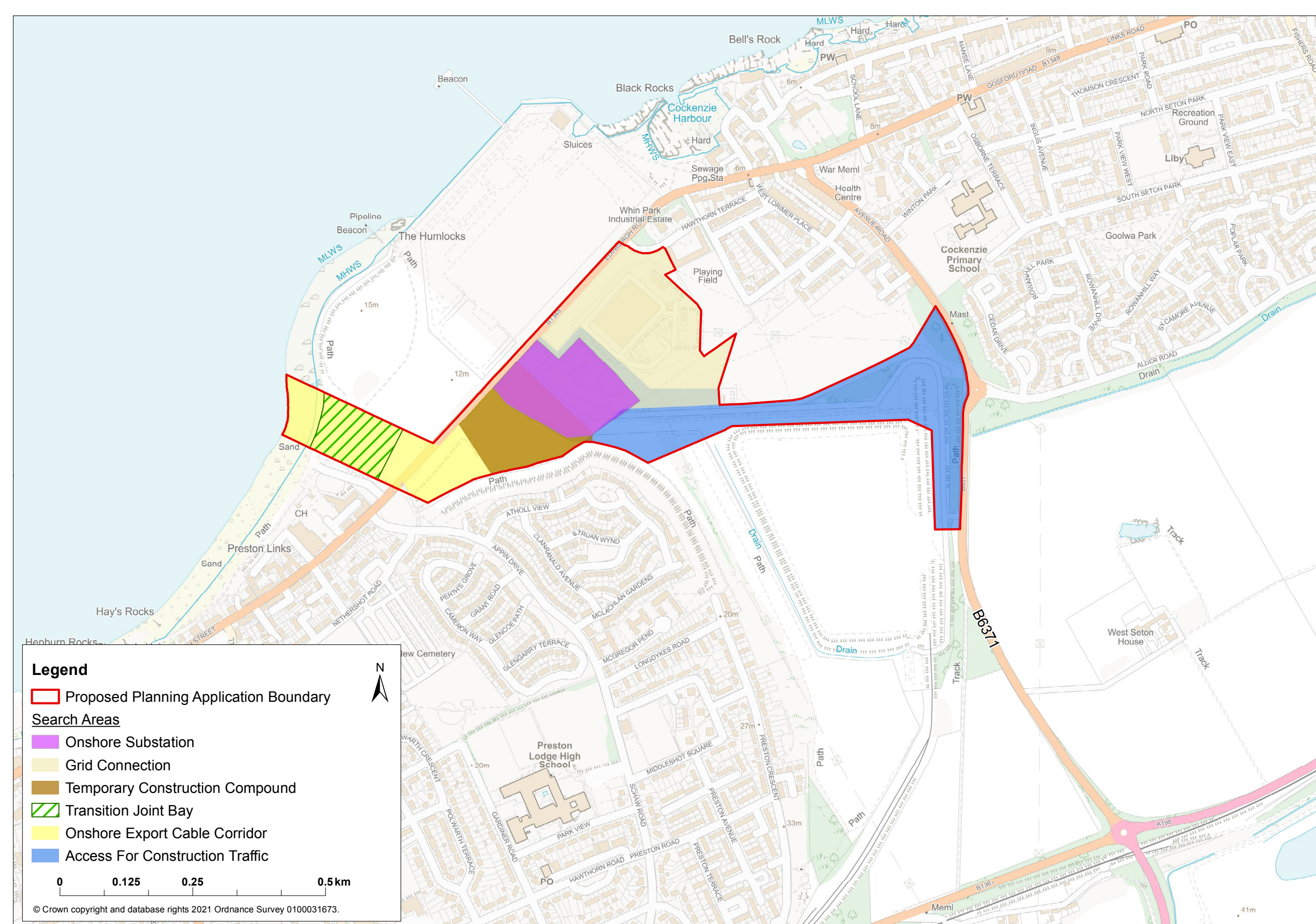
Project Description

The onshore electricity transmission infrastructure at Cockenzie will comprise:

- one landfall location and one underground transition joint bay, where the offshore export cable would interface with the onshore export cable;
- a new onshore substation, adjacent to the existing Cockenzie Electricity Substation;
- the underground onshore export cable running from the transition joint bay to the onshore substation; and
- potential new and upgraded access tracks to the onshore substation.

To enable its construction, a temporary construction compound will also be required to accommodate the plant, equipment and materials associated with the installation of the export cable.

At this stage it is not possible to identify the exact position of the above infrastructure, however its general location can be seen in the flythrough available in the virtual exhibition and on the figure below which shows the proposed search areas for the main onshore components.



At landfall and under the B1348 Edinburgh Road, it is anticipated that the onshore export cable will be installed using a form of directional drill or other trenchless techniques to minimise potential impact to users of the beach and the B1348 respectively. The remainder of the onshore export cable will be installed using open cut trenching. Once installation of the cable is complete, the land will be fully reinstated and restored.

It is anticipated that the proposed onshore substation will measure in the region of 22,000 m² and would include exterior main electrical equipment up to 18 m in height. It will therefore be smaller in footprint and height than the adjacent existing Cockenzie Electricity Substation. An illustration of how the proposed substation may look is shown to the right.

It is anticipated that construction of the onshore substation and installation of the onshore electricity transmission infrastructure will take approximately 20 months in total and will take place between Q1 2022 and Q4 2023. The main site access route for construction traffic would be via the A1, the A198 and the B6371.

Landfall Site Selection

The grid connection location was determined by the grid network operator. This led to the East Lothian coast being studied for suitable landfall locations. Key issues considered in selecting the proposed landfall location included:

- geotechnical (earth materials such as soil and rock);
- bathymetric (sea bed features);
- topography (the shape and features of the land's surface);
- underground/ overground infrastructure such as sewers, cables, utilities etc;
- recreational amenity and access for the John Muir Way;
- unexploded ordnance devices and historic mining;
- nature conservation designations for the protection of wintering bird populations on the coast; and
- potential for unknown archaeology.

The proposed landfall location selected at Prestonpans Beach is the same location previously awarded planning permission for the Inch Cape project in 2014.

Onshore Substation Site Selection

Once a suitable landfall option was identified, various sites were studied for the proposed substation location. Key issues considered in selecting the substation site included:

- co-location adjacent to existing operational and consented substations;
- minimising potential impact to residential and recreational amenity by locating away from residential areas and recreational spaces as far as possible;
- topography (the shape and features of the land's surface);
- land availability;
- underground/ overground infrastructure such as cables, utilities etc;
- the absence of nature conservation designations or other ecological constraints;
- national, regional and local planning policy (including the Cockenzie Masterplan); and
- minimising cable route length from landfall.

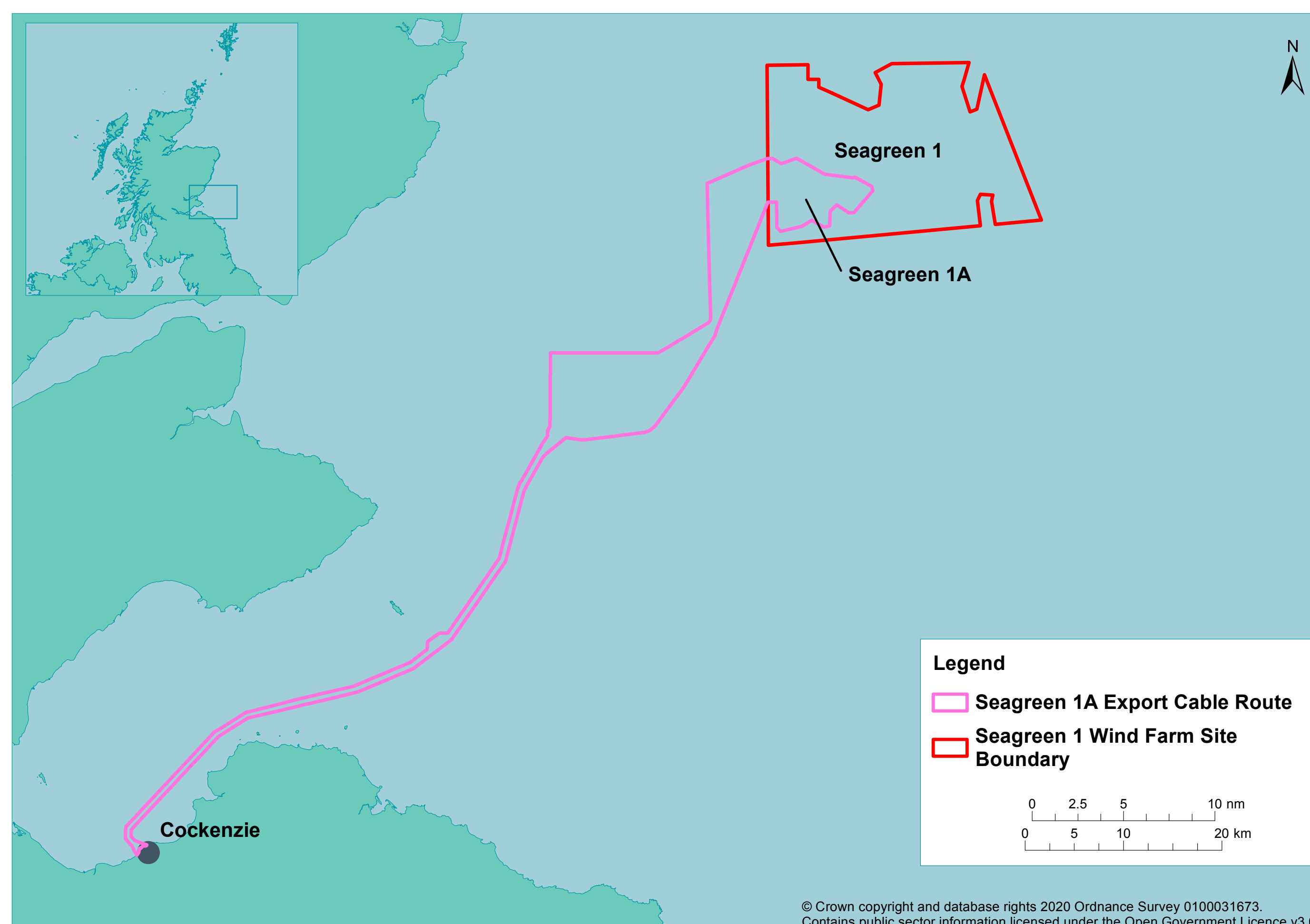
SEAGREEN 1A OFFSHORE PROPOSAL

A feasibility study was undertaken of six potential offshore export cable routes to connect 36 of the consented 150 Seagreen Offshore Wind Farm turbines to the accepted grid connection point at Cockenzie. We present the preferred option here.

The Preferred Offshore Export Cable Route Corridor

The proposed offshore export cable route corridor has been selected to reduce the overall export cable length as well as considering:

- environmental and cultural sensitivities:
 - environmental and cultural heritage sites protected by legislation;
 - important seabed habitats;
 - wreck features have been avoided where possible;
 - feedback from commercial fisheries representatives in relation to protection and installation methods; and
 - known areas of hard seabed substrate.
- impact on other marine users by:
 - considering the feedback from commercial fisheries representatives in relation to protection and installation methods by avoiding hard ground to maximise burial potential;
 - avoids other offshore wind developments in the region, maintaining a safe separation distance from both the Inch Cape and Neart na Gaoithe wind farms. However, there will be a section where export cables from Seagreen and Inch Cape (up to 6 cables) cross; and
 - reducing impact on other marine uses. The corridor deliberately overlaps across approximately 400m-500m of the consented Inch Cape cable corridor (up to 6 cables) and extends approximately 200m-300m outwith the Inch Cape cable corridor to minimise the combined cable footprint of both projects.



Proposed Export Cable Installation and Protection Methods

The final export cable route will be refined following geophysical survey data, consultation feedback and the information provided within the Export Cable Burial Risk Assessment.

The offshore infrastructure works are expected to include:

- seabed preparations; which may include the removal of seabed debris, pre-sweeping, boulder clearance or Unexploded Ordnance (UXO) clearance; and
- the installation, burial and protection of the cable.

The cable will be buried wherever possible. This will be achieved by either:

- burying the export cable using a jetting Remotely Operated Vehicle (ROV) or a mechanical trencher after it has been laid; or
- burying the export cable as it is laid using an export cable plough or a mechanical trencher.

However, where this is not achievable, external export cable protection may be required. The following methods are being considered:

- a form of directional drill from the shore end at Cockenzie from above mean high water springs to below mean low water springs;
- rock placement;
- concrete mattresses;
- grout bags; or
- export cable crossings infrastructure.

It is anticipated that the offshore export cable installation and associated works will take place between Q2 and Q3 of 2023.

The Seagreen 1A Project and Fisheries Liaison team would welcome feedback on this information from other sea users, and particularly commercial fishing vessel operators on the export cable corridor, installation and protection methods being proposed.

SEAGREEN 1A ONSHORE CONSENT APPLICATION

Onshore Planning Application

As the application for consent for onshore electricity transmission infrastructure is being made in advance of developing the detailed design, we plan to submit an application for Planning Permission in Principle to East Lothian Council in February or March this year to establish the acceptability of the principle of the proposal.

Provided the proposal is granted permission, we will then develop and refine the detailed design of the onshore infrastructure and submit these to East Lothian Council for approval through further applications for matters specified in conditions. There will therefore be further opportunities for you at this stage to view and provide your feedback into the detailed design of the proposals.

Environmental Impact Assessment

EIA is a process which identifies and assesses the potential significant environmental effects of a project, informs the design of the project from an environmental perspective, and sets out standard industry and additional mitigation measures to eliminate or minimise the project's effect on the environment.

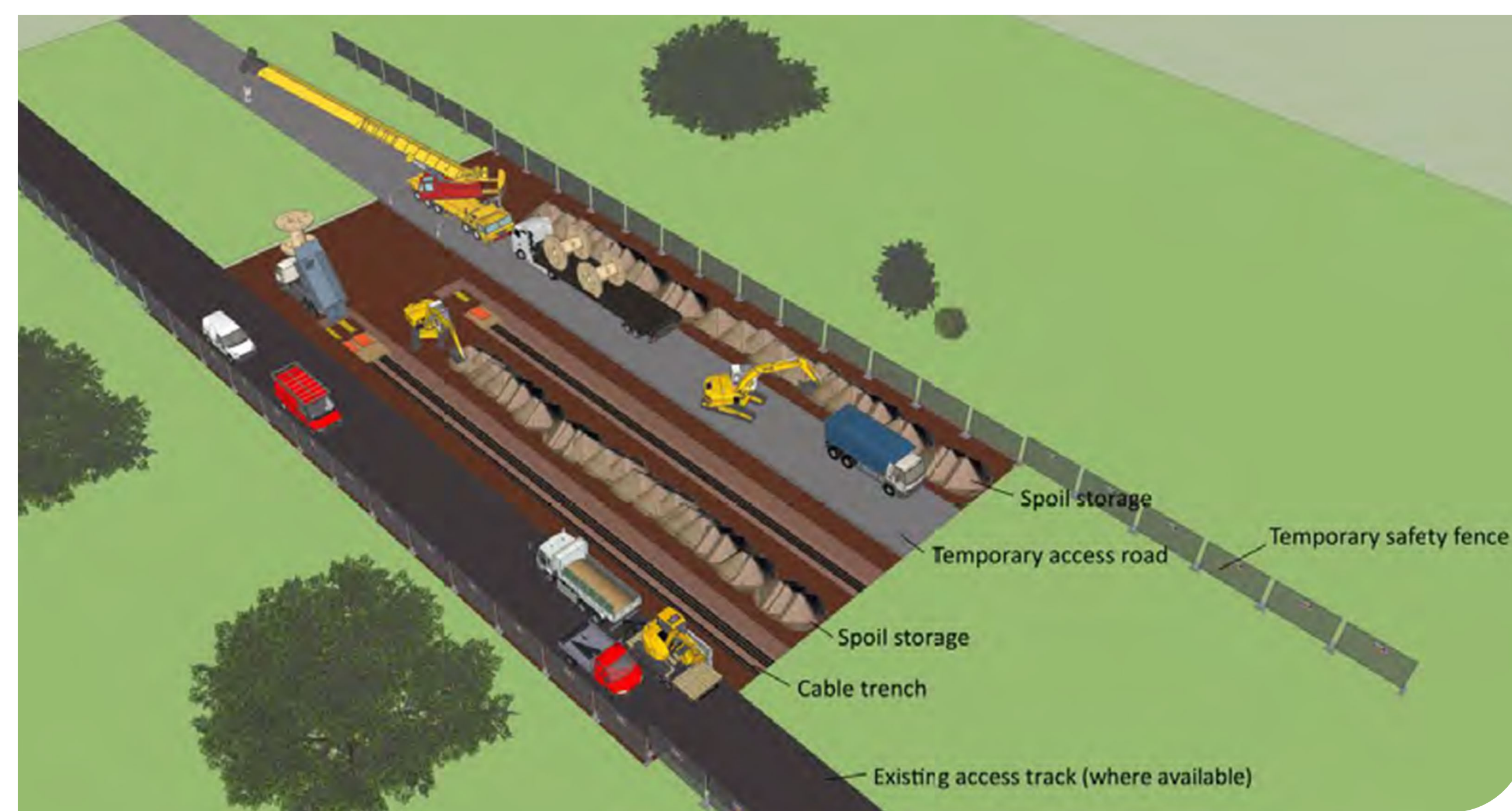
An EIA will be undertaken for the proposed onshore electricity transmission infrastructure, and the findings of this EIA will be presented in an EIA Report which will be submitted to East Lothian Council in support of the application for Planning Permission in Principle.

Pre-application discussions with East Lothian Council and other consultees have taken place to discuss the scope of the onshore EIA. It is proposed that the onshore EIA Report will consider:

Physical Environment	<ul style="list-style-type: none"> - Geology - Hydrology - Soils - Flood Risk
Biological Environment	<ul style="list-style-type: none"> - Ecology - Ornithology
Human Environment	<ul style="list-style-type: none"> - Traffic and Transport - Cultural Heritage - Landscape and Visual Amenity - Socio-economics, Tourism and Recreation - Noise

OTHER DEVELOPMENTS

In addition to assessing the potential significant environmental effects of the proposed onshore electricity transmission infrastructure alone, the EIA will also consider the potential for cumulative impacts with the proposed offshore transmission infrastructure as well as other consented and proposed developments including the Inch Cape offshore wind farm project.



SEAGREEN 1A OFFSHORE CONSENT APPLICATION

Offshore Marine Licence Application

A marine licence will be submitted to Scottish Ministers for the offshore electricity transmission infrastructure. We plan to submit this marine licence application in March this year. The application will be administered by the Marine Scotland Licensing Operations Team (MS-LOT) on behalf of Scottish Ministers.

Environmental Appraisal

The marine licence application will be accompanied by an Environmental Appraisal. The Environmental Appraisal will assess the potential impacts to key environmental receptors, and mitigation measures for the project and in relation to specific receptors. This is based on the findings of our [screening report](#) submitted to MS-LOT in December 2020.

It is proposed that the Environmental Appraisal will consider:

- Commercial Fisheries:
 - Temporary loss or restricted access to fishing grounds;
 - Displacement of fishing activity into other areas; and
 - Safety issues for fishing vessels (assessed in part within Shipping and Navigation chapter).
- Shipping and Navigation
 - Collision of a passing (third party) vessel with a Project vessel;
 - Disruption to passing vessel routing/timetables;
 - Increase in the risk of a vessel-to-vessel collision due to construction / decommissioning vessel activity;
 - Disruption to fishing and recreational activities;
 - Disruption to third party marine activities (military, dredging);
 - Vessel drags anchor over the export cable or anchor in an emergency over the export cable; and
 - A vessel engaged in fishing snags its gear on the export cable.
- Navigational Risk Assessment
 - Reduction in under keel clearance resulting from laid export cable and associated protection; and
 - Potential impacts to shipping and navigation receptors.
- Marine Archaeology
 - Seabed disturbance resulting in loss or damage to shipwrecks, aircraft or anthropogenic geophysical anomalies.
- Nature Conservation Appraisal (NCA)
 - Considering the potential effects to key protected sites and species and will incorporate a Habitats Regulations Appraisal (HRA) and a Nature Conservation Marine Protected Area (NCMPA) appraisal.



We would welcome your feedback on the scope of the Environmental Appraisal and if there are any data sources that you would like us to consider.

SEAGREEN 1A

PROGRESS TO DATE AND NEXT STEPS

Project timeline

October 2019	→	Application to National Grid for a grid connection for the Seagreen 1A project.
February 2020	→	National Grid make a 360 MW grid connection offer at Cockenzie in East Lothian.
June 2020	→	We accept the connection offer from National Grid with a connection date of October 2023.
June – November 2020	→	Feasibility studies and assessment work undertaken to identify optimal offshore and onshore export cable route and onshore substation location.
December 2020	→	Pre-application discussions with East Lothian Council and other consultees undertaken to agree scope of the EIA for the onshore planning application. Screening request submitted to Scottish Ministers to confirm scope of the Environmental Appraisal for the offshore marine licence application.
January 2021	→	Public consultation including virtual public exhibition and live question and answer event undertaken to obtain feedback on the proposals. Baseline survey work and environmental assessment work undertaken and fed back into the iterative layout and design process.
February / March 2021	→	Anticipated submission date for Planning Permission in Principle application to East Lothian Council for the onshore electricity transmission infrastructure. In addition to the EIA Report, the application will be accompanied by a Pre-Application Consultation Report which will identify how we have taken on board your comments and feedback. There will be an opportunity for you at this stage to make formal representations on the application to East Lothian Council.
March 2021	→	Anticipated submission date for the Marine Licence application to Scottish Ministers. In addition to the Environmental Appraisal, the application will be accompanied by a Pre-Application Consultation Report which will identify how we have taken on board your comments and feedback. There will be an opportunity for you at this stage to make formal representations on the application to Scottish Ministers.
June / July 2021	→	Anticipated determination date for Planning Permission in Principle application and marine licence application.
Q3/Q4 2021	→	If Planning Permission in Principle is granted, detailed design development, consultation and submission of matters specified applications for onshore infrastructure works.
Q1 2022 to Q4 2023	→	Anticipated construction period for onshore infrastructure works.
Q2 / Q3 2023	→	Anticipated construction period for offshore infrastructure works.