



Scottish & Southern
Electricity Networks

TRANSMISSION

Eday Grid Supply Point (GSP) and High Voltage Alternating Current (HVAC) Connection

Public Consultation Events

Eday and Rendall, Orkney
September 2025



ssen-transmission.co.uk/Eday

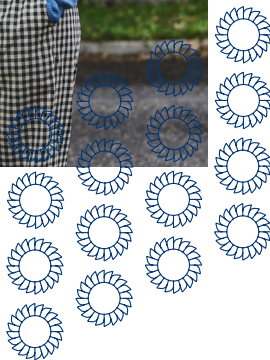
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The consultation event will be taking place on:

17 September 2025, 11–4pm
Eday Heritage Centre, Eday, KW17 2AB

18 September 2025, 3–7pm
Rendall Hall, Orkney, KW17 2EZ



Powering change together



The time has come to further enhance Scotland’s energy infrastructure, providing power for future generations as we move towards net zero.

The shift to a cleaner, more sustainable future is about more than climate change. It’s about ensuring future generations have the same opportunities to thrive as we have all had.

Countries around the world are investing in their energy infrastructure to support the demands of modern economies and meet net zero targets. The UK is leading the way in building a modern, sustainable energy system for the future.

We all have a part to play

When it comes to net zero, we have to be in it together. The UK and Scottish governments have ambitious net zero targets, and we’re playing our part in meeting them.

We work closely with the National Energy System Operator (NESO) to connect vast renewable energy resources—harnessed by solar, wind, hydro and marine generation—to areas of demand across the country. Scotland is playing a big role in meeting this demand, exporting two thirds of power generated in our network.

But there’s more to be done. By 2050, the north of Scotland is predicted to contribute over 50GW of low carbon energy to help deliver net zero. Today, our region has around 9GW of renewable generation connected to the network.

At SSEN Transmission, it is our role to build the energy system of the future.

We’re investing over £20 billion into our region’s energy infrastructure this decade, with the potential for this to increase to over £30bn. This investment will deliver a network capable of meeting 20% of the UK’s Clean Power 2030 target and supporting up to 37,000 jobs, 17,500 of which will be here in Scotland.



Scan the QR code with your smartphone to find out more about how these policies have been assessed and determined.

Who we are

We’re responsible for maintaining and investing in the electricity transmission network in the north of Scotland. We’re part of SSE plc, one of the world’s leading energy companies with a rich heritage in Scotland that dates back more than 80 years. We are also closely regulated by the GB energy regulator Ofgem, who determines how much revenue we are allowed to earn for constructing, maintaining and renovating our transmission network.

What we do

We manage the electricity network across our region which covers a quarter of the UK’s land mass, crossing some of the country’s most challenging terrain. We connect renewable energy sources to our network in the north of Scotland and then transport it to where it needs to be. From underground/subsea cables and overhead lines to electricity substations, our network keeps your lights on all year round.

Working with you

We understand that the work we do can have an impact on communities. So we’re committed to minimising our impacts and maximising all the benefits that our developments can bring to your area. We’re regularly assessed by global sustainability consultancy AccountAbility for how we engage with communities. That means we provide all the information you need to know about our plans and how they will impact communities like yours. The way we consult is also a two-way street. We want to hear people’s views, concerns, or ideas and harness local knowledge so that our work benefits their communities: today and long into the future. You can share your views with us at: ssen-transmission.co.uk/talk-to-us/contact-us

Transmission in Orkney

We are leading some exciting projects to power change in the UK.

To reduce the UK and Scotland's greenhouse emissions and help towards achieving net zero targets, high levels of renewable generation are expected to connect to the UK network from the Orkney Islands. This level of additional generation cannot be supported on the existing Distribution circuit connecting Orkney to the mainland infrastructure at Thurso South GSP, therefore the Orkney Link project was approved as a High Voltage Alternating Current (HVAC) transmission circuit between Finstown substation and Dounreay West substation on the Scottish mainland. The Orkney Link project is currently under construction.

The proposed Eday Grid Supply Point (GSP) will allow generators in the Northern Orkney Islands to connect to the Finstown substation and onwards onto the Orkney Link, by means of the 132kV HVAC link between Eday and Finstown.

As there is currently no transmission infrastructure in Eday, a Transmission Connection Asset (TCA) is required in Eday, which includes the construction of a transformer substation building at the proposed Eday 132/33kV GSP substation, complete with a 120MVA 132/33kV transformer and associated equipment within new substation buildings. Generators, will connect into the GSP through cable connections on to 33kV circuit breakers in the substation building.

Given the interest in generation applications for Eday, a 120MVA transformer is proposed in the GSP to allow for future extensibility.



Help shape our plans

At SSEN Transmission, we are committed to delivering a robust and transparent consultation process underpinned by inclusion and accessibility. As a stakeholder led business, we understand the importance of involving communities and key stakeholders throughout each stage of our development process.

This period of engagement in the development phase of the project is vital in shaping our proposals and to do this effectively, we need to capture feedback from stakeholders and harness local knowledge to identify key risks. Today we are presenting our approach to developing this project.

We're committed to delivering a meaningful consultation process that actively seeks the views of everyone affected by our plans. That means making our plans clear and easily accessible, so that you can give us input throughout each stage of the development process.

We want you to share your thoughts and opinions on our plans, where you think we can make improvements, concerns about the impact of our work and what you think of any changes and refinements we've made. By telling us what you think, you will help shape our proposals. We want to harness your local knowledge so that we spot any unforeseen challenges early and maximise the potential benefits and opportunities for your communities. Because, ultimately, we want you to work with us to ensure that the energy infrastructure we build will be the best it can possibly be.

This event is intended to provide a high-level overview of the project, to present the broad area of interest for the subsea cable connecting Eday to mainland Orkney and sharing the locations of a short-list of potential landfalls. If you require additional support to submit your views, please contact our Community Liaison Team (eday.engagement@sse.com) who will happily assist you.

What we are consulting on today

This event is focusing on the potential landfall locations on either side of the connection. We are keen to gain feedback and input on any constraints and considerations within the area.

Who we are consulting with

At this stage we are interested in hearing feedback from a broad range of stakeholders including but not limited to, communities, stakeholders including fisheries and aquaculture, statutory and non-statutory consultees.

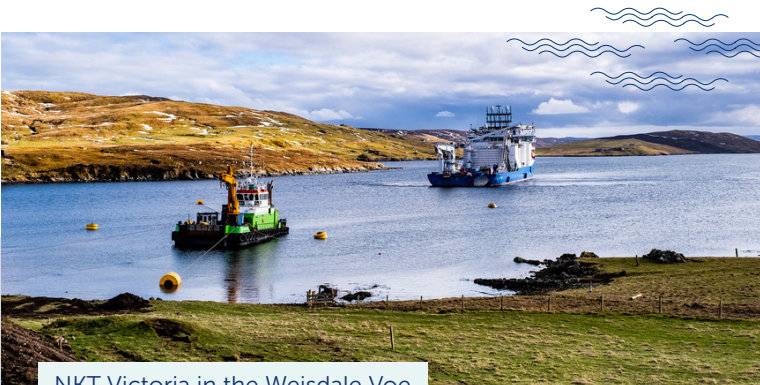


Project overview

The aim of the Eday GSP Project is to connect the island of Eday to the Electricity Transmission link on Mainland Orkney

The Orkney Link project, connecting Finstown Substation with Dounreay West substation, is currently under construction.

Scottish Hydro Electric (SHE) Transmission has a licence requirement to provide a connection to the UK’s transmission network when requested by a generator. Therefore, the Eday GSP project is being driven by the need to connect contracted generators via Distribution to the transmission network. To facilitate this, a new 132kV subsea circuit will need to be installed between Eday and Mainland Orkney to provide these generators with access to export energy to the wider UK transmission system. This will also provide future connection capacity for potential growth on Eday and the Northern Islands of Orkney.

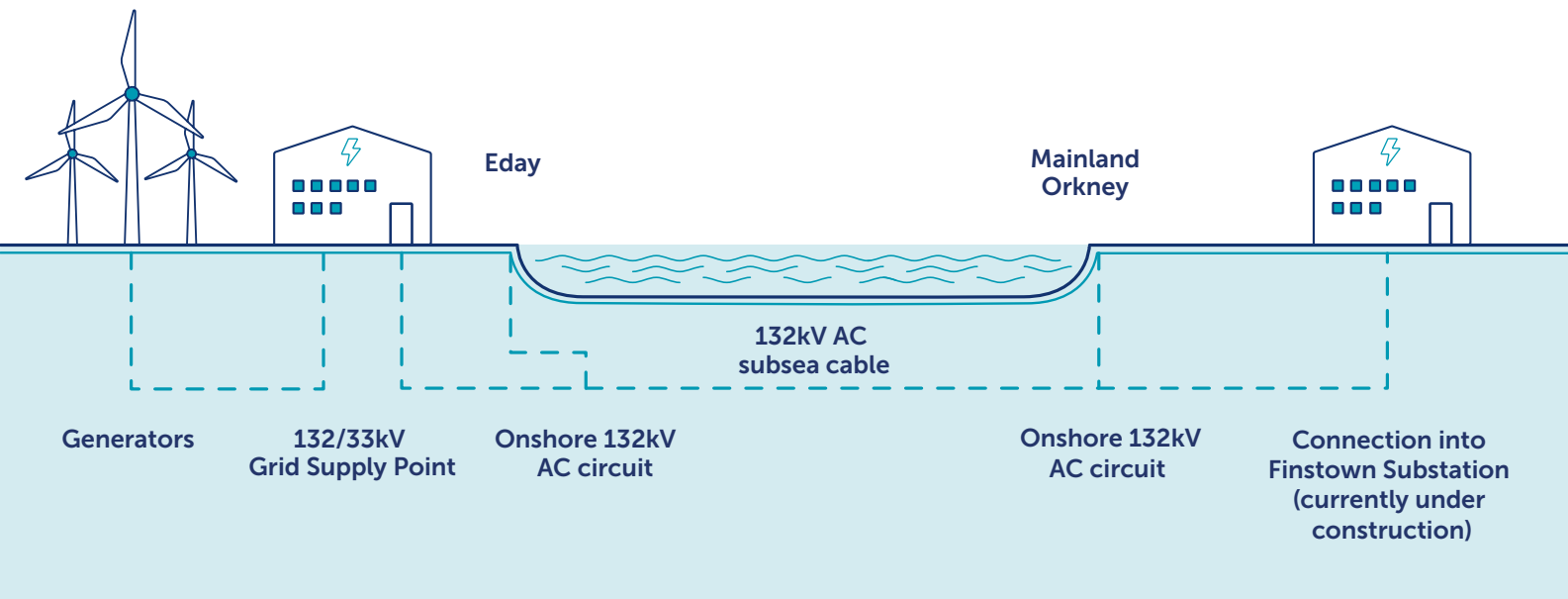


NKT Victoria in the Weisdale Voe

In addition to the subsea circuit, other key elements of the Eday GSP Project include:

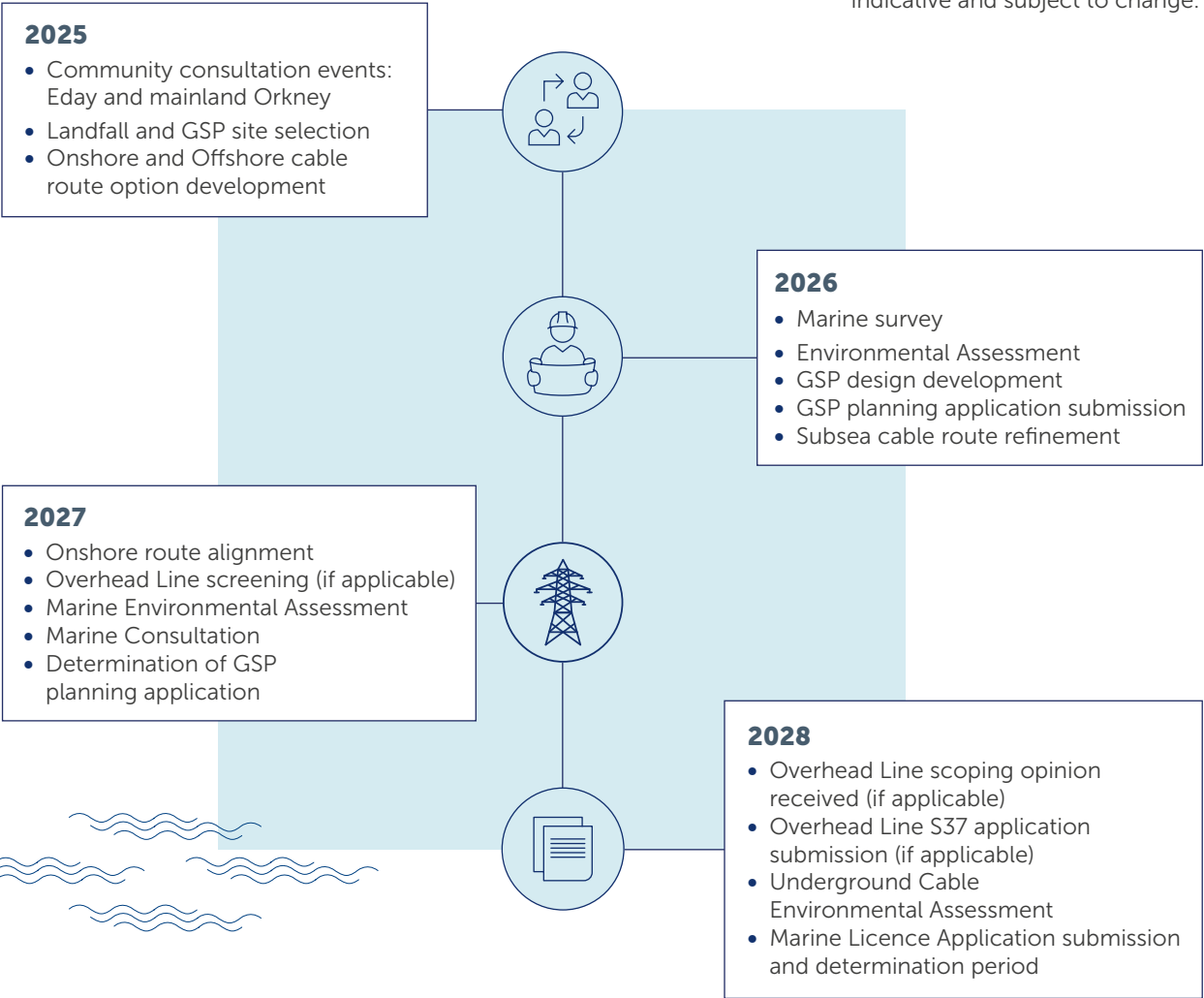
- Construction of a new 132/33kV GSP on Eday, to which the Distribution generators will connect to
- Construction of a new 132kV circuit on Eday and Mainland Orkney to connect from the Eday GSP to Finstown Substation

Further information in relation to the marine elements of this project will be presented at future consultation events.



Site and Route Selection Timeline

*Please note that dates are indicative and subject to change.



Project elements for the Grid Supply Point

A Grid Supply Point (GSP) enables SSE Transmission assets to interface with the Distribution network, allowing Distribution generators to connect into the Transmission network, and for power to also be delivered from Transmission to Distribution, and onwards to customers' homes.

GSP Project Elements

- A GSP platform, indicatively 127m x 92m, containing;
- A Grid Transformer Hall building, 80m x 30m, 11.3m high
- A Reactor Room building, 42m x 22m, 11.3m high
- A Switchgear/Control Room building, 26m x 16m, 5.6m high

The local 33kV Distribution network connects to the GSP through cables in to the Switchgear/Control Room building, and onwards to the Grid Transformer Hall Building. In the Grid Transformer Hall building, the voltage is stepped-up to 132kV to allow power to be exported on to the Transmission network, through 132kV cables. The Reactor connects to the Transmission system at 132kV, helping to stabilise the system and protect the network.

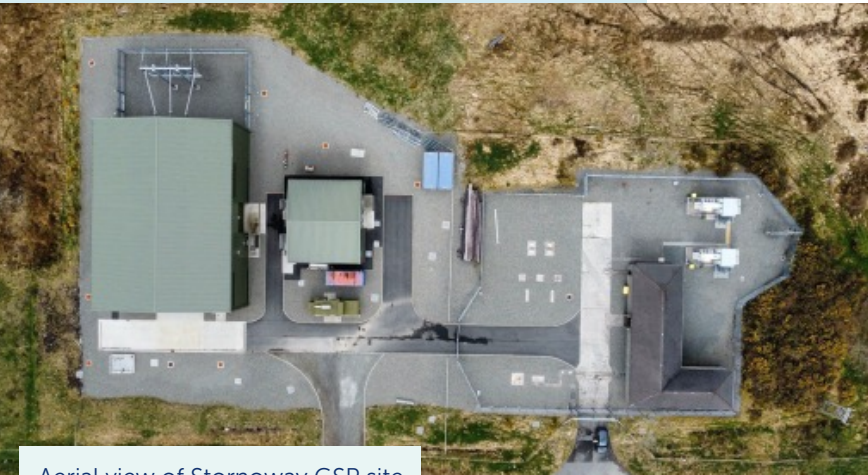
This current high- level design will be reviewed with our equipment suppliers and building designers. Depending on the location selected for the GSP, landscape forms may be used around the GSP platform to screen the development. The sizes and locations will be refined in further development.



Example of GSP site in Stornoway



Example of GSP site in Stornoway



Aerial view of Stornoway GSP site

The Stornoway GSP site is slightly smaller than the proposed Eday GSP, at an area of 120m x 65m. The images are included to illustrate the potential design and layout.

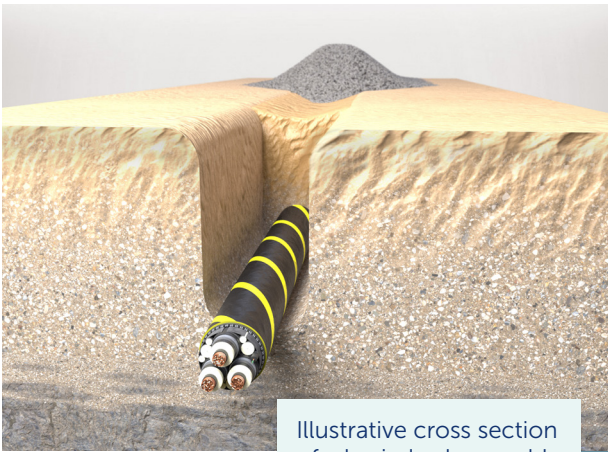
Subsea cables and landfall

Subsea cables

Subsea electricity transmission cables are important critical infrastructure that carry electricity from areas where it is generated to areas of high demand.

The subsea HVAC system will comprise of a cable bundle which is planned to be installed in a single trench.

Wherever possible the marine cables will be buried in the seabed to protect them. Where burial is not possible, they will be protected by using rock berms placed on top of the cables or another type of external cable protection system.



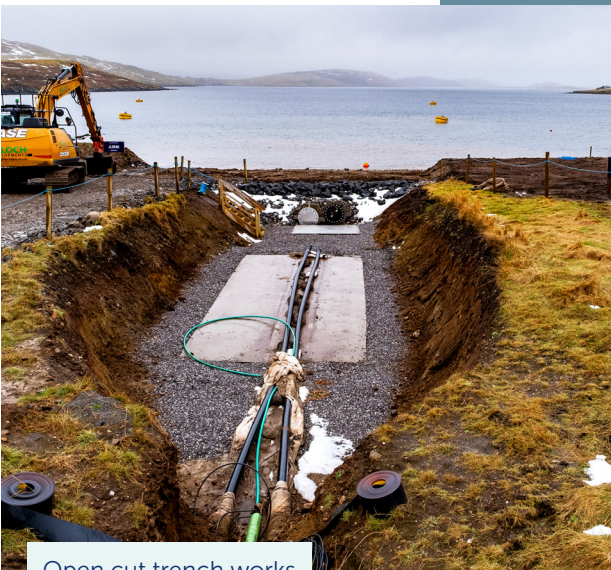
Illustrative cross section of a buried subsea cable

What is a cable landfall?

Cable landfalls or landing points are the locations where our subsea cables come ashore. When bringing the cable ashore there are two engineering options:

Open Cut Trench

A section of the shoreline is excavated and ducts are installed that will carry the cable from under the seabed onto land. The cable is then pulled through installed ducts which are then buried and the shoreline reinstated.



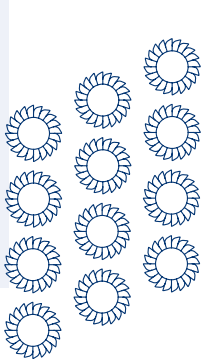
Open cut trench works

Horizontal Directional Drill (HDD)

HDD is a type of trenchless method that can be used to drill and install ducts underground through the shoreline, providing an alternative method in areas of shallow bedrock or challenging geology.

Is there any above ground infrastructure?

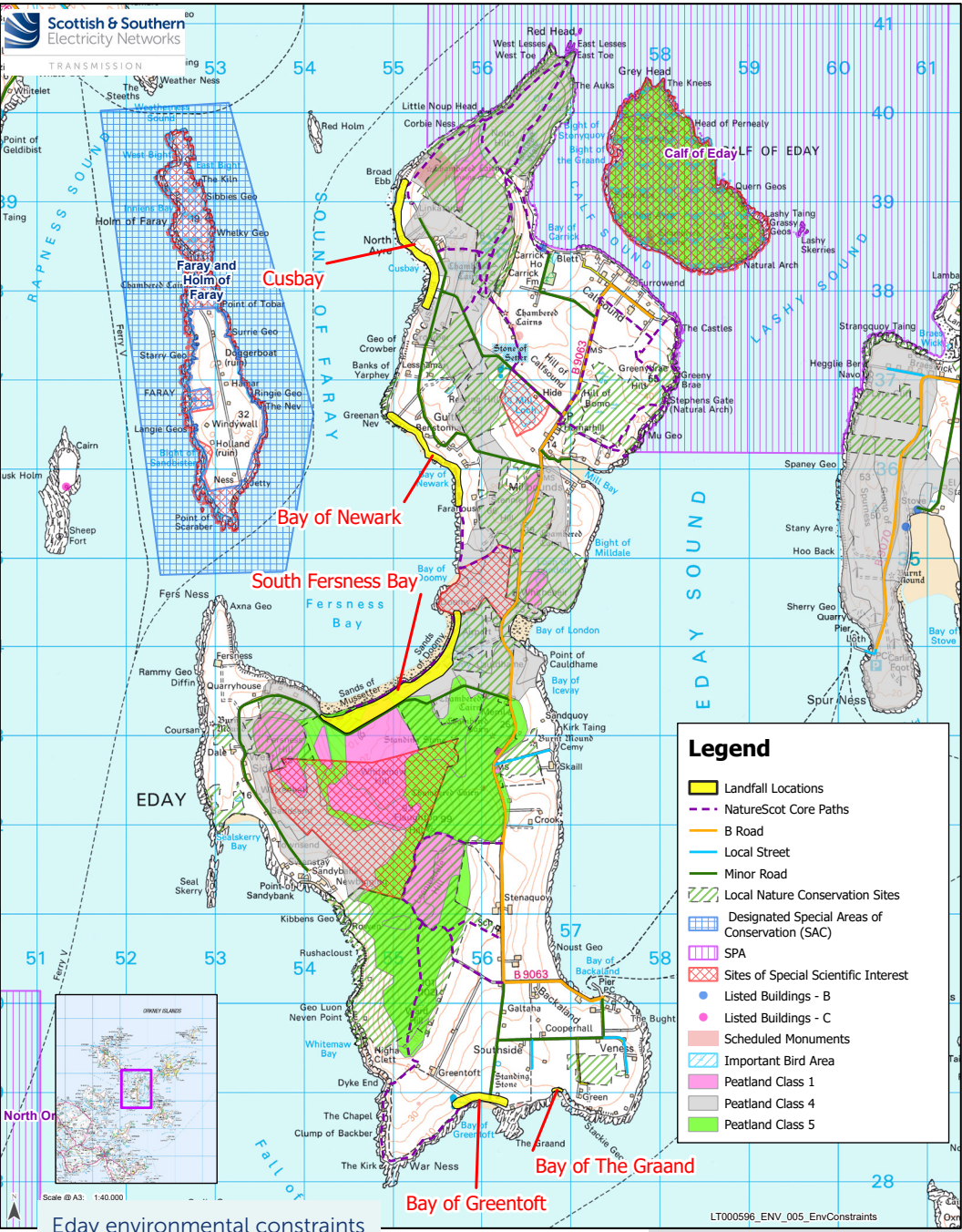
Once the shoreline is reinstated, after the cable is laid, there will be a permanent cabinet (called a link pillar), contained within a fenced area, as shown in the photo to the right.



Intermediate link pillar

Eday GSP environmental constraints

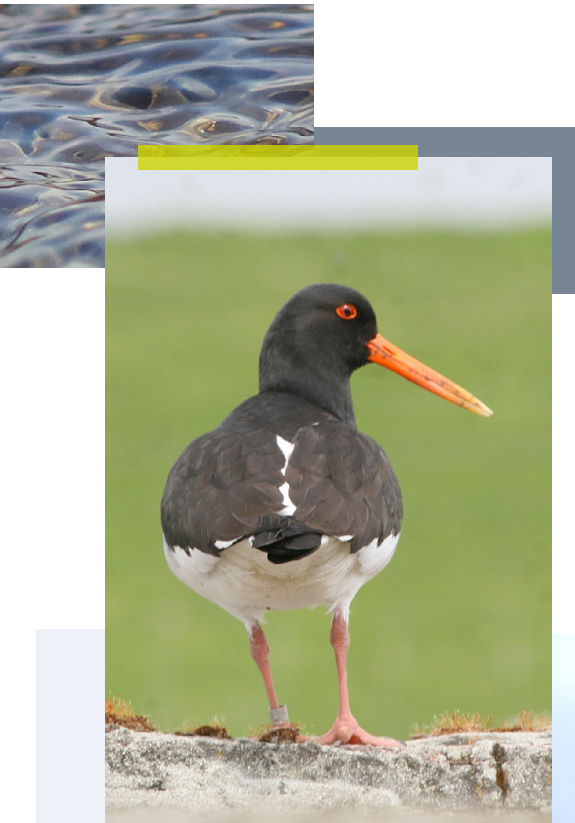
The map below presents the various environmental constraints which apply in Eday.



The principal objective of the site selection process is to balance technical and cost considerations with environmental considerations, to select a proposed site which is economically viable, technically feasible, minimises impacts on important resources or features of the environment and reduces disturbance to those living in it, working in it, visiting it or using it for recreational purposes.

From an initial site screening using our Multi-Criteria Analysis tool, comparative analysis of potential sites is ongoing. Planned site surveys will assist our assessments, allowing us to take sites forward for more detailed analysis by specialist consultants for our Stage 2 Detailed Site Selection process.

We plan to present potential GSP sites at future information events later in the year.



The Stage 2 Detailed Site Selection seeks to identify a preferred site, which avoids where possible physical, environmental and amenity constraints, is likely to be acceptable to stakeholders, and is economically viable, taking into account engineering and connection requirements.

A preliminary layout and design of the GSP has been developed. This includes closed buildings to house the GSP equipment. The overall area proposed in the early design is 127m x 92m. Further space will be required for a temporary compound during the construction period.

Once a preferred site has been selected, following consultation, detailed design and further environmental surveys will be carried out.

Consideration of Environmental Effects

Environment, ecology and cultural heritage are considered at every step in project development. To date there has been a detailed environmental appraisal of switching station site options, as well as all landfall options and potential connection routes.


Desk based assessment has included consideration of:

- Landscape and visual impact;
- Special Protection Areas (SPA), for birds;
- Special Areas of Conservation (SAC);
- Sites of Special Scientific Interest (SSSI);
- Local Nature Conservation Sites;
- Scheduled Monuments;
- Listed Buildings; and
- Peat depths and cover.




Considerations during landfall and route selection


The process for selecting our proposed landfall and marine cable corridors:




Stage 1
Preliminary landfall option identification, focusing on identifying potential landfall locations meeting essential construction characteristics.



Stage 2
Constraints identification, identifying environmental, social, and technical constraints associated with each landfall.



Stage 3
Corridor Optioneering, identifying potential subsea cable corridors based on relative impacts on constraints identified in Stage 2.



Stage 4
Corridor Development and Selection, including a multi-disciplinary review of constraints and interactions between them to develop a suitable subsea cable corridor.

The Eday GSP and HVAC connection project is currently concluding Stage 2 and moving into Stage 3 in the process detailed above.

Our landfall site selection process

A preliminary landfall search area has been identified covering Eday and the northern coastlines of Orkney. Landfall options were then identified based on high level criteria, with further refining applied taking into consideration a range of aspects including environmental and marine constraints.

We apply a comparative appraisal methodology to assess the landfalls, using a 'Red/Amber/Green' (RAG) terminology. Each landfall option is assessed against specific evaluation criteria to determine an indicative RAG status. Evaluation criteria includes, but is not limited to:

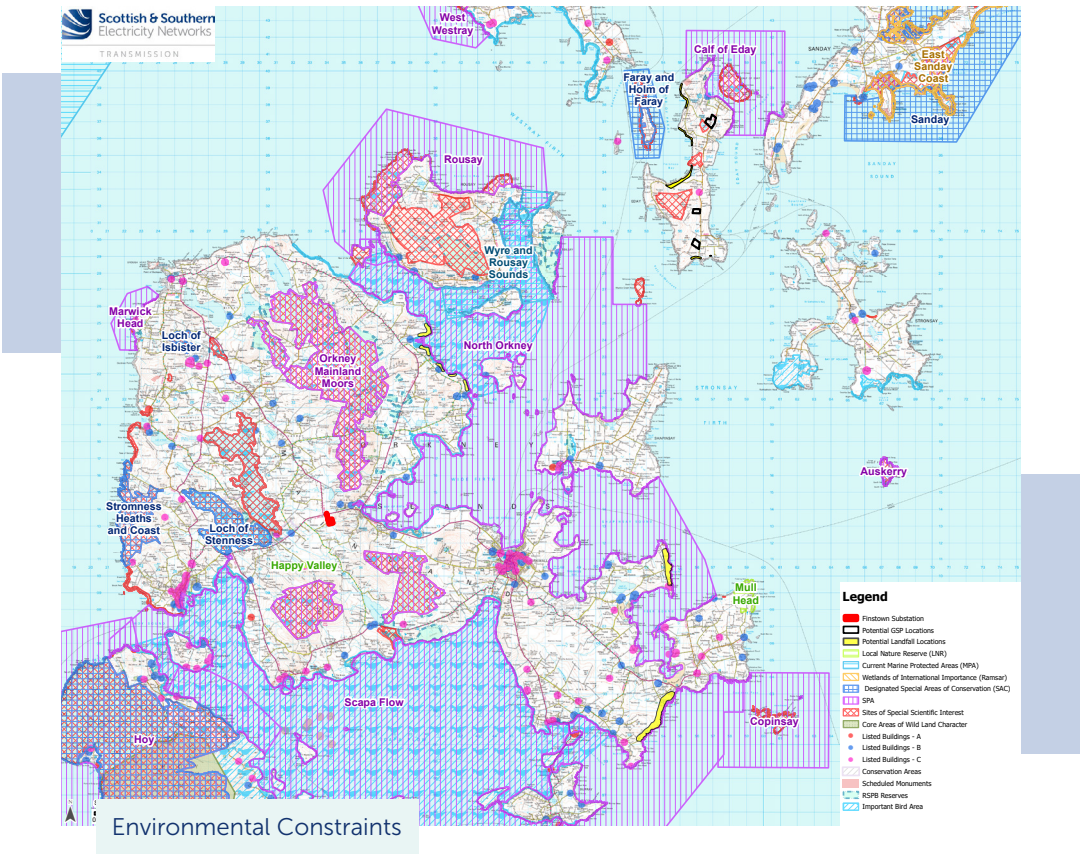
- **Terrestrial environment;** designated areas and features such as Special Site of Scientific Interest (SSSI), Special Protected Areas (SPA), Special Areas of Conservation (SAC) and nature reserves, and features determined through landscape character assessments (LCAs), cultural heritage, water designations
- **Marine environment;** seabed conditions and constructability, designated areas and features such as Marine Protected Areas (MPAs), interactions with other sea users (e.g. commercial fisheries, shipping/navigation), cultural heritage, fish ecology, marine mammals and ornithology
- **Geotechnical;** sediment depth, presence of bedrock, glacial till, deposits, blown sand Landfall engineering; constructability, site access, cliff gradients, environmental effects on cable ratings

The project team uses key data sources to assess the above constraints. Once we have identified viable options, they are taken forward for further evaluation and consultation, so we can better understand their use and sensitivity.



Eday HVAC connection potential landfalls

The chart below presents the areas for which the Eday HVAC connection may be located, linking Eday to Mainland Orkney.



The landfall options currently under consideration on Eday are located at **Bay of Greentoft, Bay of the Graand, South Fersness Bay, Cusbay, and Bay of Newark.**

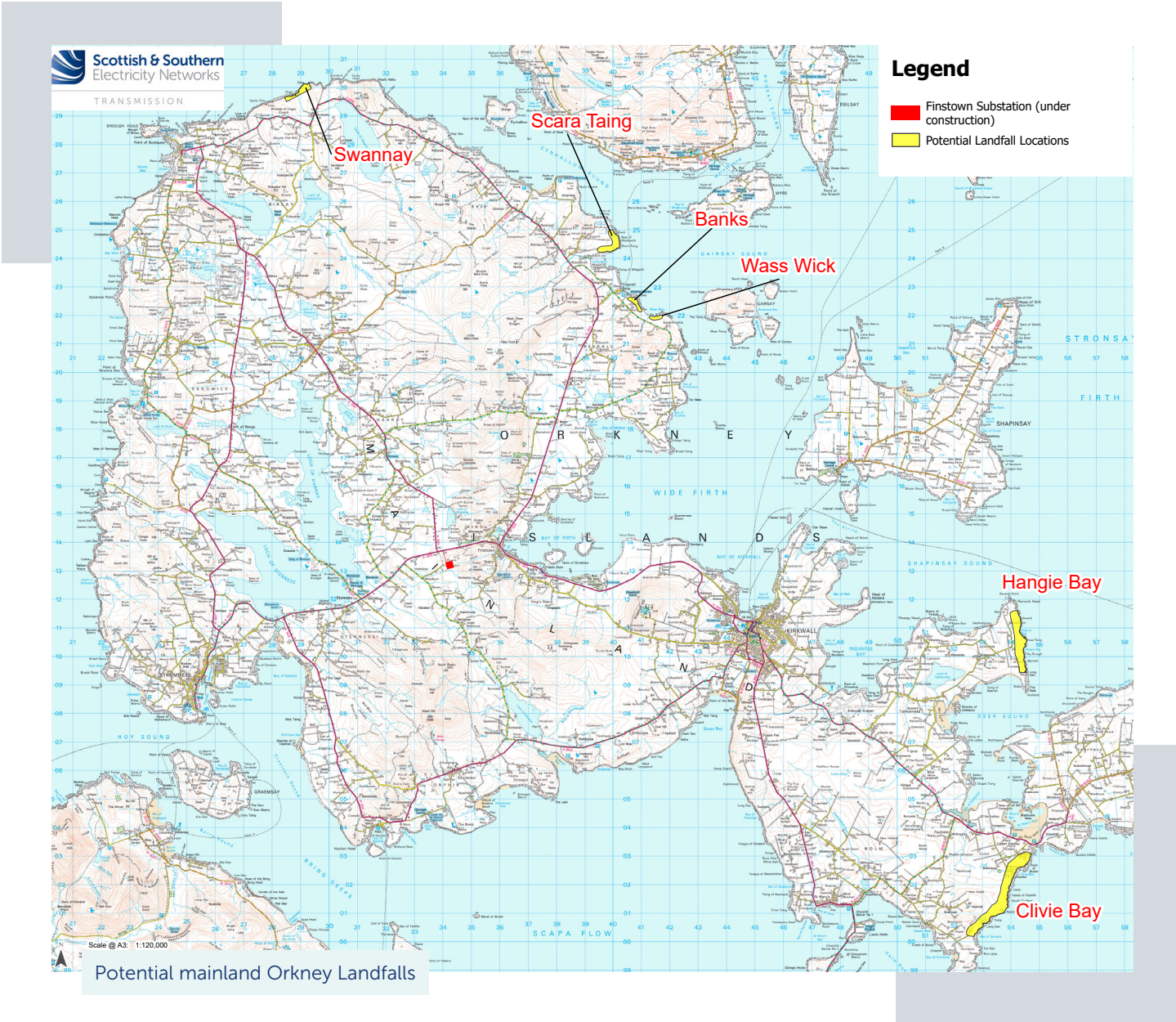
The landfalls under consideration on mainland Orkney are at **Swannay, Scara Taing, Wass Wick, Banks, Hangie Bay and Clivie Bay.**

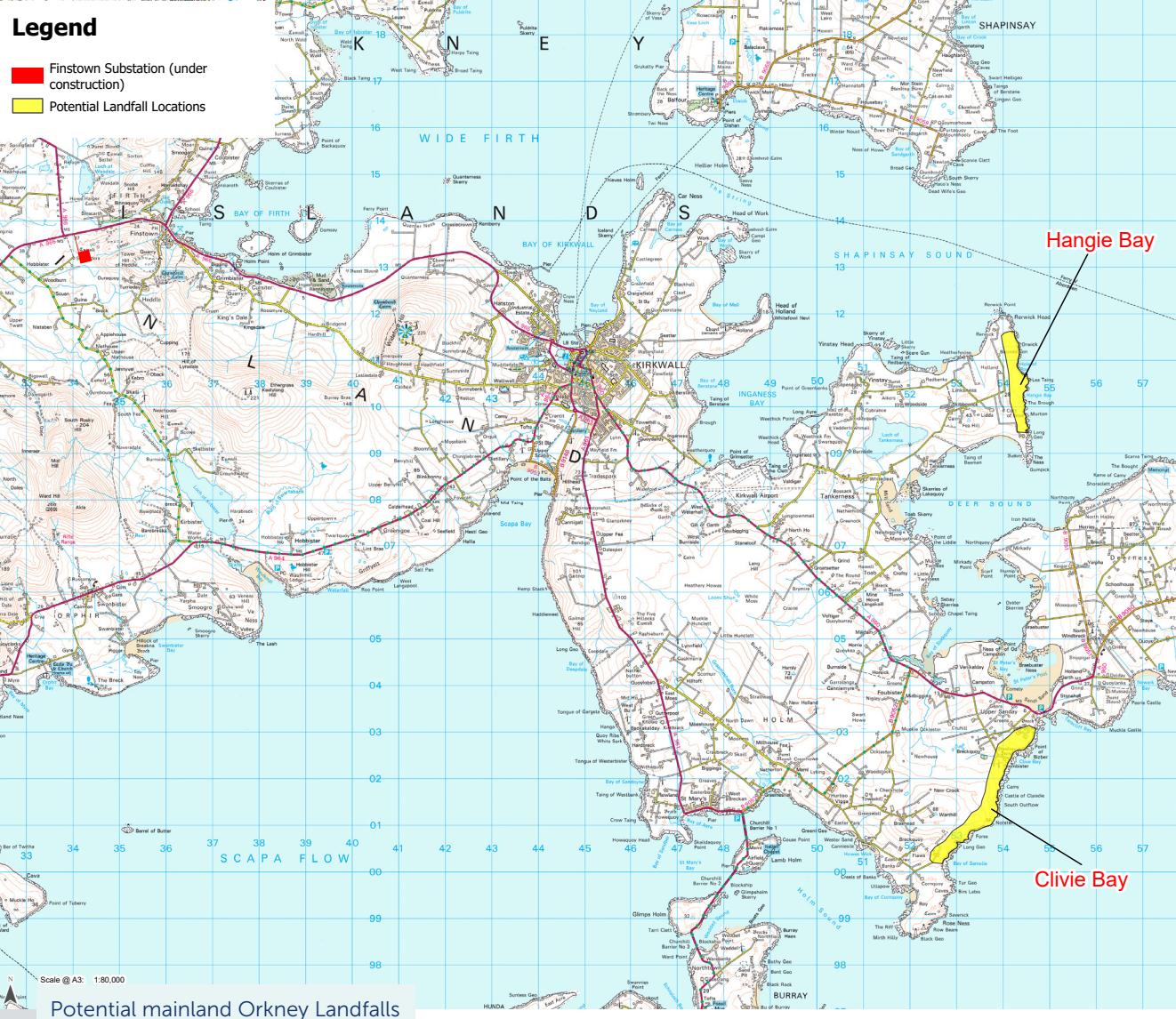
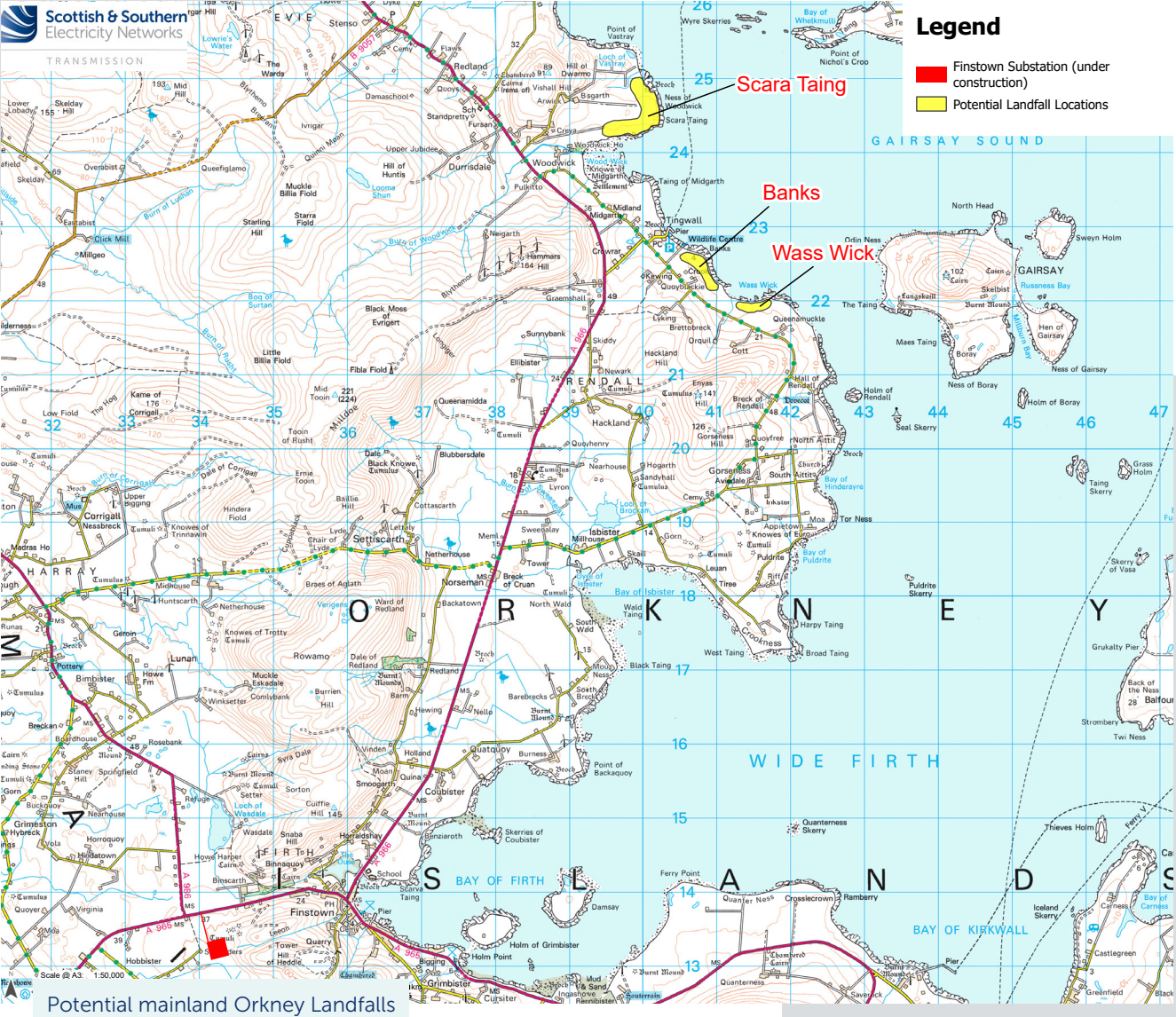
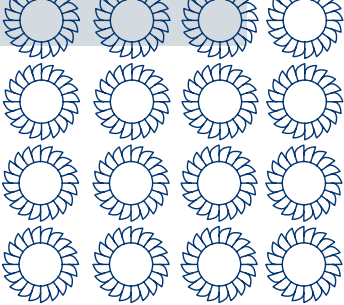
These landfalls are being assessed for their suitability to land a cable from an offshore and onshore point of view. Feedback from this consultation will feed into this process.

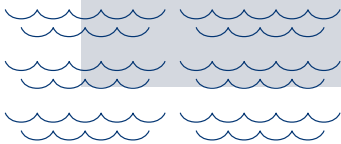
When the assessment has concluded for the landfall options, the subsea cable routing exercise will begin, identifying suitable cable corridors for the subsea cable to be laid.

The following maps present the landfalls under consideration in yellow. The subsea cable route will be routed between two of these potential landfall options.

The map above highlights some of the considerations and constraints that will feed into the corridor assessment. These include but are not limited to Marine Protected Areas, aquaculture, subsea cables, pipelines and ferry routes. Technical constraints such as bathymetry and metocean conditions are also considered.







Marine survey

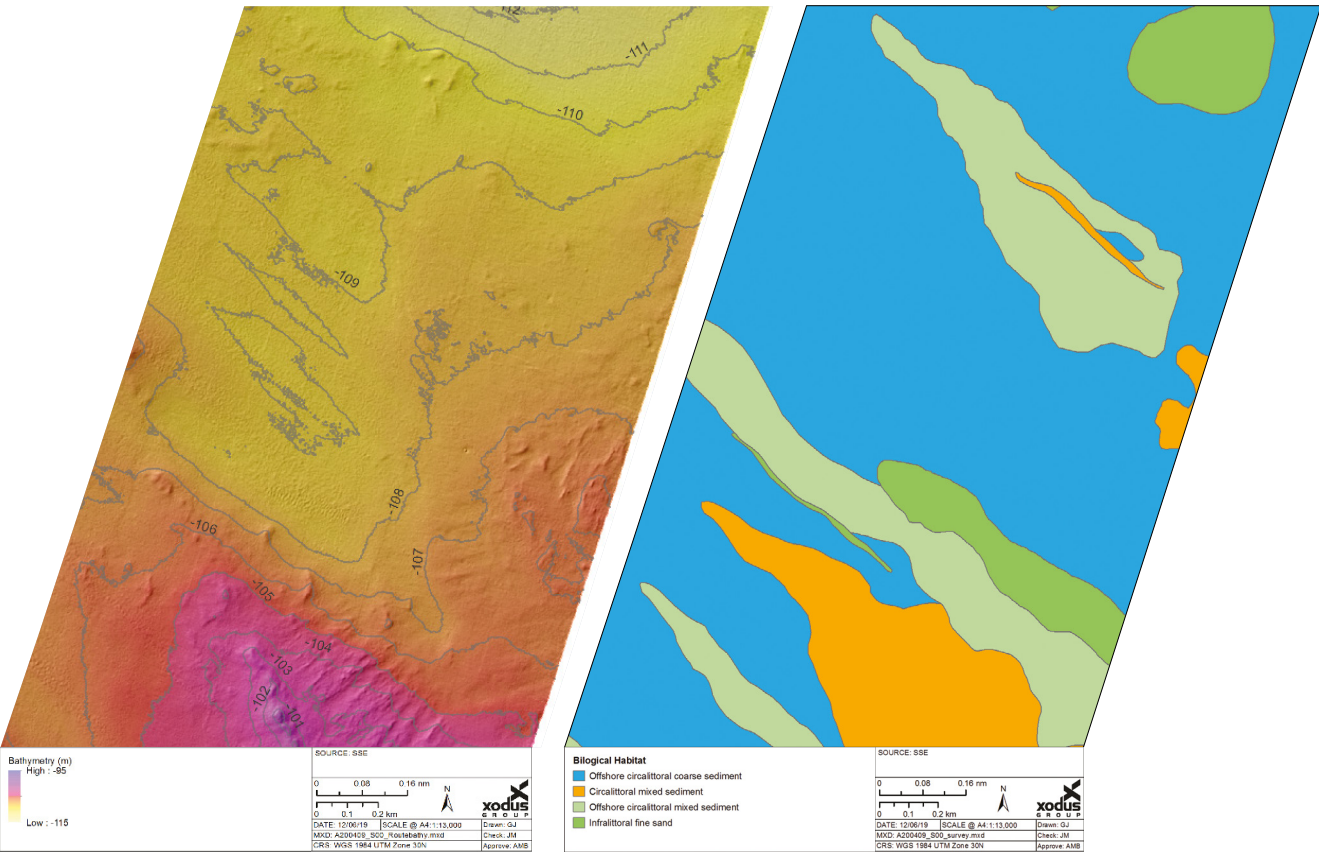
Subsea cable corridor options will be developed and assessed this year, using our understanding of the seabed, metocean conditions and the incorporation of stakeholder and community feedback.

The first marine survey campaigns are currently scheduled for Spring 2026 whereby detailed information on bathymetry, seabed sediments and biological features and wrecks will be collected. Our marine offshore and nearshore survey operations include the following:

1. Geophysical data acquisition

To determine water depths, seabed features, shallow geology, object detection and cable crossing positions.

Instruments used: Multibeam Echo Sounder (MBES), Side Scan Sonar (SSS), Sub-bottom Profiler (SBP) and Magnetometer (offshore and nearshore).



2. Environmental survey

The Data from the Side Scan Sonar (SSS) and the Multi Beam Echo Sounder (MBES) is used to create habitat boundaries which are then checked using cameras and grab samples to create maps of the type and extent of seabed habitats.

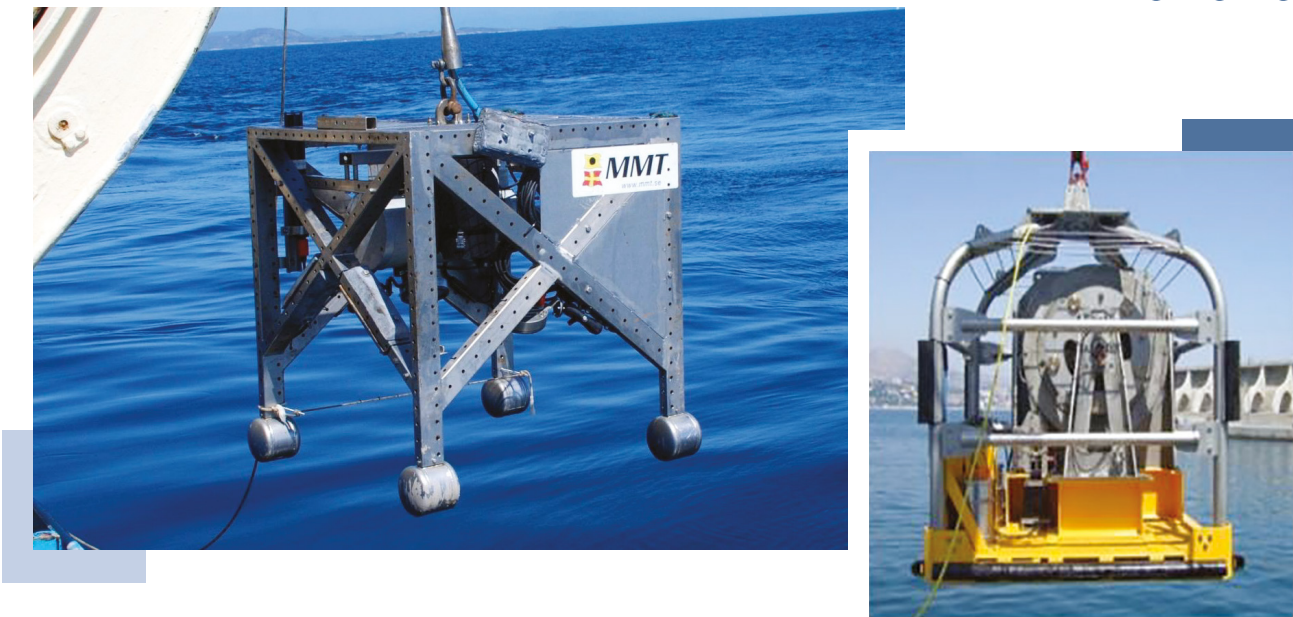
Instruments used: grab sampler and drop-down camera.



3. Geotechnical survey

To determine the structure and physical properties of the surficial and shallow sediment layers. Tools are used to recover cores of sediment and push a cone through the sediment measuring the resistance.

Instruments used: Vibrocorer and Cone Penetrometer Testing (CPT).



Have your say

We understand and recognise the value of feedback provided by the community and stakeholders. Without this valuable feedback, we would be unable to progress projects and reach a balanced proposal.

The feedback period

We will accept feedback from now until **10 October 2025**.

How to provide feedback:

- Submit your feedback online by scanning the QR code on this page or via the form on our project webpage.
- Email the feedback form to the Community Liaison Manager, or write to us enclosing the feedback form at the back of this booklet.

What we’re seeking views on

We want to know your thoughts on the GSP and landfall sites under consideration. We’ll be actively looking to mitigate the impacts of the project as much as possible over the coming months, but it would be helpful to understand what you believe we should be doing to help minimise these impacts and if there are any opportunities to deliver a local community benefit you would like us to consider.

We encourage all interested community members to fill in a feedback form when submitting feedback, however if you prefer, you can email us to provide your feedback or ask any questions.

Our Community Liaison team

Each project has a dedicated Community Liaison Manager who works closely with community members to make sure they are well informed of our proposals and that their views, concerns, questions or suggestions are put to our project teams.

Throughout the life of our projects, you will hear from us regularly. We aim to establish strong working relationships by being accessible to key local stakeholders such as community councils, residents’ associations and development trusts, and regularly engage with interested individuals.



To support everyone online, we provide accessibility and language options on our website through ‘Recite Me’. The accessibility and language support options provided by ‘Recite Me’ include text-to-speech functionality, fully customisable styling features, reading aids, and a translation tool with over 100 languages, including 35 text-to-speech.

Please select “Accessibility” on our website to try out our inclusive toolbar.”

Community Liaison Manager

Jeni Herbert



SSEN Transmission, 10 Henderson Road,
Inverness, IV1 1SN



eday.engagement@sse.com

Additional information:



The best way to keep up to date is to sign up to project updates via the project webpage:

ssen-transmission.co.uk/Eday

You can also follow us on social media:



@ssentransmission



@SSETransmission

Your feedback

Thank you for taking the time to read this consultation booklet. In order to record your views and improve the effectiveness of our consultation, please complete this short feedback form.

Please complete in BLOCK CAPITALS. (Please tick one box per question only)

Q1. Are there any factors or environmental features that you consider to be important and that should be brought to the attention of the project team?

Comments:

Q2. Is there any information regarding the potential landfalls that should be brought to the attention of the project team?

Comments:

Q3. Do you have any comments or concerns with regards to potential sites for the GSP? We welcome opinions on areas that the community feel the GSP should or should not be located.

Comments:



Q4.

Do you fish in the area included for consideration for the subsea cable?

Please provide details of the type of fishing you do. i.e. mobile or static; and Please provide an estimate of how often you fish in this area and the time of year.

Yes

No

Unsure

Comments:

Q5.

Do you feel that sufficient information has been provided to enable you to understand what is being proposed and why?

Yes

No

Unsure

Comments:

Q6.

At this early stage of development, we would also like to start collecting ideas and opinions on what the community would like to see as potential community benefits. We welcome initial feedback on community preferences and priorities at this time.

Comments:

Q7.

We continuously seek to identify the best methods of communication based on community needs. Please tell us how you would prefer to receive project updates so that we can consider this for future improvements.

Newsletter

Email to a mailing list

Text message

Public meetings

Website updates

Other (please state)

Full name: Email:

Telephone: Address:

We would like to send you relevant communications via email such as invitations to stakeholder events, surveys, updates on projects, services and future developments from the Scottish and Southern Electricity Networks group listed below. If you are happy to receive email updates please opt in by ticking the box below. You can unsubscribe at any time by contacting us at stakeholder.admin@sse.com or by clicking on the unsubscribe link that will be at the end of each of our emails.

If you would like to be kept informed of progress on the project, please tick this box.

Thank you for taking the time to complete this feedback form.
Please submit your completed form by one of the methods below:

Post: SSEN Transmission, 10 Henderson Road, Inverness, IV1 1SN
Email: eday.engagement@sse.com
Online: ssen-transmission.co.uk/Eday

For information on how we collect and process your data please see our privacy notice available at today's event. This can also be obtained online at: ssen-transmission.co.uk/privacy

Comments forms and all the information from today's event will also be available to download from the project website.

We intend to use Artificial Intelligence (AI) to assist our experienced teams in the analysis of your feedback, so we can categorise key points raised more quickly. You can learn more about how we're utilising AI at: ssen-transmission.co.uk/AIFAQ

Any information given on the feedback form can be used and published anonymously as part of Scottish and Southern Electricity Networks consultation report. By completing this feedback form you consent to Scottish and Southern Electricity Networks using feedback for this purpose.

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC213459; Scottish Hydro Electric Transmission plc Registered in Scotland No. SC213461; Scottish Hydro Electric Power Distribution plc Registered in Scotland No. SC213460; (all having their Registered Offices at Inveralmond House 200 Dunkeld Road Perth PH1 3AQ); and Southern Electric Power Distribution plc Registered in England & Wales No.04094290 having its Registered Office at Number One Forbury Place, 43 Forbury Road, Reading, Berkshire, RG1 3JH which are members of the SSE Group.

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Notes