



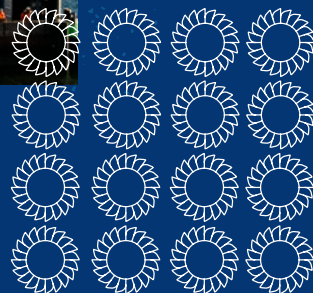
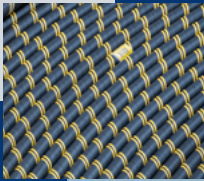
Scottish & Southern
Electricity Networks

TRANSMISSION

Shetland HVDC Link 2

Public Information Event

Summer 2026



ssen-transmission.co.uk/shetland2

Contents

Powering change together	3	Northern Substation Hub	20
Help shape our plans	4	Marine approaches progressing to Stage 2	24
The story so far	5	Shetland Landfall Selection	26
Shetland projects overview	6	Landfall sites progressing to Stage 2	28
Shetland HVDC Link 2 project need and overview	8	Building a lasting legacy	32
What you told us	10	Project development next steps	34
Environmental and social considerations	17	Next Steps	35
Marine survey	18	Your feedback	37

Public Information Events:

Northern Substation Hub

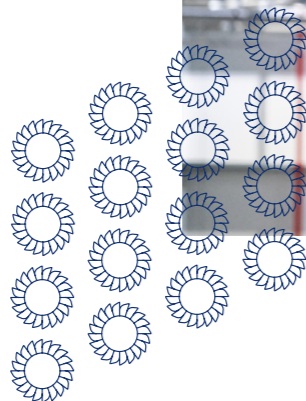
Monday 29 June, 3–7pm
Mossbank Public Hall, Mossbank, Shetland, ZE2 9RB.

Marine Events

The same marine information event will be held at two locations:

Thursday 2 July, 11am–1pm
Brae Community Hall, Brae, Shetland, ZE2 9QJ

Thursday 2 July, 3–7pm
Hillswick Hall, Hillswick, Shetland ZE2 9RW.



Powering change together



If we want to deliver on clean power and energy security targets and provide power for future generations, upgrades to Scotland’s electricity transmission infrastructure are needed.

The shift to a cleaner, more sustainable future is about more than tackling the impact of climate change, it’s about ensuring that future generations can thrive.

Countries around the world are investing in their energy infrastructure to support increasing electricity demands and to deliver on clean power targets and the UK is leading the way in building a modern, sustainable energy system for the future.

We all have a part to play

The UK and Scottish governments have set ambitious energy security and clean power targets, and we all have a part to play in delivering them.

At SSEN Transmission, we work closely with the National Energy System Operator (NESO) to connect vast renewable energy resources – like solar, wind, hydro and marine generation – to areas of demand across the country. Scotland will play a particularly big role in meeting increasing electricity demand.

But there is more to be done. By 2050, the north of Scotland is expected to contribute more than 50GW of low carbon power to the GB energy system. Today, the region has around 11GW of renewable generation connected to the network.

At SSEN Transmission, it is our role to build the energy system of the future. To do that, we are planning to invest around **£29 billion** in the coming years to upgrade the electricity transmission network in the north of Scotland. It’s an investment that will unlock cleaner, more secure energy for homes and businesses now, and for generations to come.

By 2050, annual electricity demand is expected to at least double - our investment will support the connection of more clean power to meet that demand to the GB electricity network, supporting up to **17,500 jobs in Scotland**, with more than **8,000** of those in the north of Scotland, along the way.

Who we are

We are responsible for maintaining and investing in the electricity transmission network in the north of Scotland. We are 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 and we are committed to minimising our impacts and maximising all the benefits that our developments can bring to your area.

To do that 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 and we want to hear people’s views, concerns, or ideas – and harness local knowledge – so that our work benefits communities today and long into the future. You can share your views with us at: ssen-transmission.co.uk/talk-to-us/contact-us/

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 projects 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.

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, and let us know your concerns about the impact of our work.

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.

If you require additional support to submit your views, please contact our Community Liaison Team on ShetlandEngagement@sse.com who will happily assist you.

What to expect from this event

The aim of today's event is to:

- share with the community and other key stakeholders the progress made on the project
- provide a summary of feedback received from 2025 consultation events and outline how we have responded to this
- gain valuable feedback from you on new landfall and site options to help inform the project going forward

There will be experts from SSEN Transmission on hand to answer any questions you may have.

Your feedback today has the power to influence outcomes. Across our wider portfolio, local insight has already led to changes in routing and design. By sharing your views, you're helping us to understand what matters most to the people who live and work here.

Whether you have detailed feedback or just a first impression, we would really value your input.

The story so far

The Shetland Islands have a vital role to play in the UK's clean energy future. This has been formally recognised through independent national planning. In March 2024, the National Energy System Operator (NESO) Beyond 2030 report confirmed that additional transmission infrastructure is needed, both on Shetland and to the Scottish mainland to connect future renewable generation and to support security of electricity supply across Great Britain.

This assessment forms the basis of the Shetland Strategy - NESO and Ofgem have tasked us with providing coordinated response to a confirmed need.

From National Plan to Local Action

NESO's findings were based on a comprehensive assessment of how the electricity network must evolve to:

- Meet net zero targets;
- Manage increasing demand;
- Support economic growth and
- Maintain resilience

Shetland was identified as a strategically important location, not because of any one single project, but due to its long-term potential and critical role in the future energy network.

In December 2024, Ofgem, the GB energy regulator, endorsed this position by approving funding for early-stage development works in Shetland.

This sits alongside Ofgem's assessment of NESO's broader Clean Power 2030 recommendations, with further decisions expected in 2026.

Why this matters

Since the first Shetland HVDC link was developed, the scale of renewable energy generation and electricity demand on Shetland has increased, creating the need for additional transmission infrastructure.

The Shetland Strategy takes a coordinated approach to planning these future network requirements, considering the wider needs of Shetland's electricity network rather than responding to individual projects separately. This approach will ensure we deliver a technically robust solution that supports future growth while minimising impacts on communities and the environment.



March 2024

NESO publishes transitional Centralised Strategic Network Plan (tCSNP2) (Beyond 2030) confirming Shetland requirements



December 2024

Ofgem approves early stage development funding



July 2025

Ofgem publishes Clean Power 2030 minded to position.



October/November 2025

Early public engagement in Shetland



2026

Further Ofgem decisions expected to support Clean Power 2030

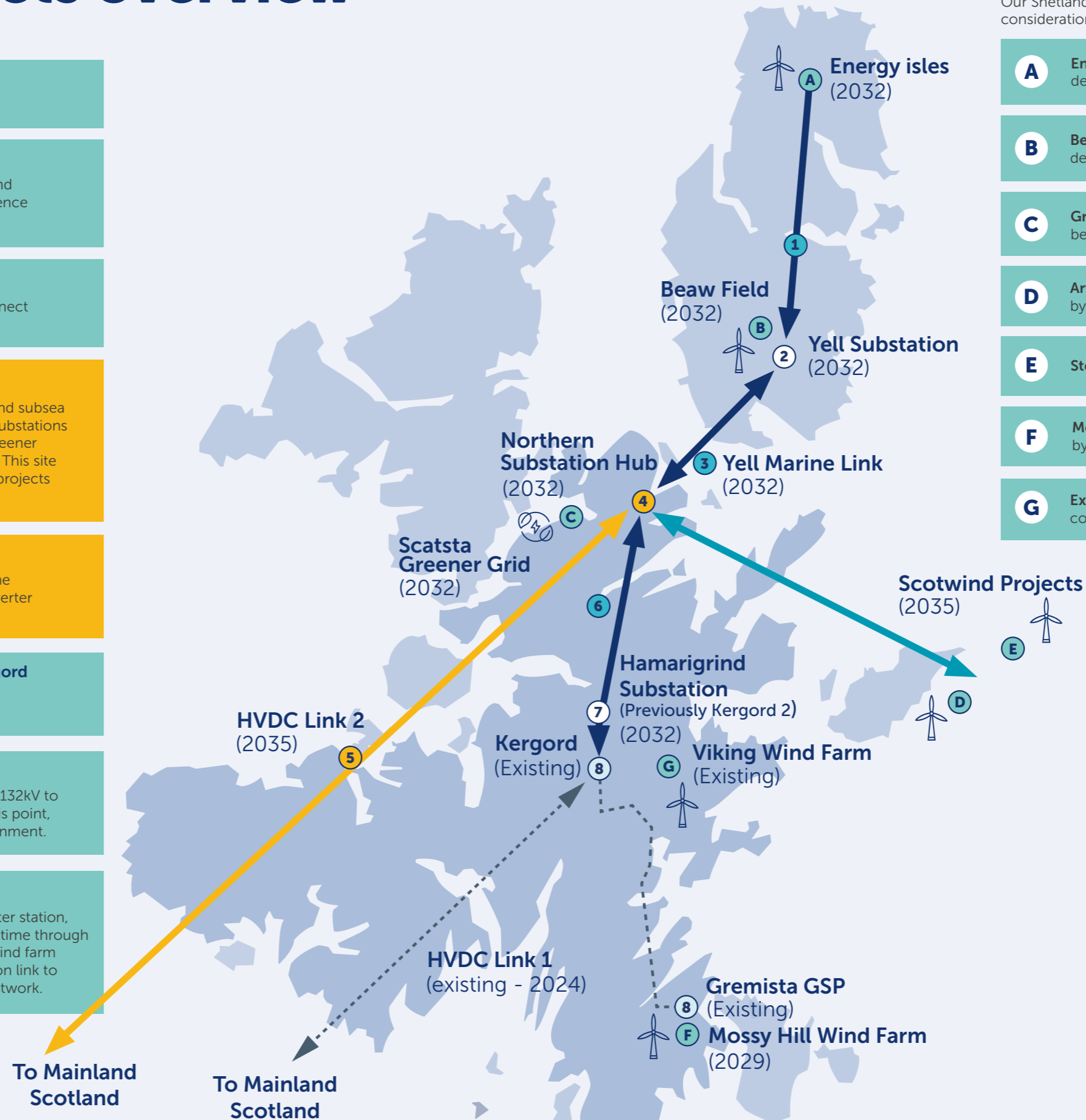


You can read the NESO Beyond 2030 report here



Shetland projects overview

- 1 Yell wind farm connections**
 Connects the wind farm projects to Yell Substation.
- 2 Yell Substation**
 A substation to connect the two wind farm projects, and also offers opportunity for further expansion and resilience to the Distribution supply on the island.
- 3 Yell Marine link**
 A subsea cable, with associated onshore circuit to connect Northern Substation Hub to Yell Substation.
- 4 Northern Substation Hub**
 A 2GW HVDC converter station which connects to a 2nd subsea link to mainland Scotland. This will also be the site of substations which allow the island of Yell and the Scotwind and Greener Grid projects to connect to the Transmission Network. This site will also have capacity to support future unconfirmed projects like electrification of oil and gas platforms.
- 5 HVDC subsea link 2**
 A subsea cable connecting the new converter site at the Northern Substation Hub on Shetland with a new converter site on the Scottish mainland.
- 6 Connection from Northern Hub to existing Kergord**
 Circuits running between Kergord, Kergord 2 and the Northern Substation Hub.
- 7 Hamarigrind Substation (Previously Kergord 2)**
 A substation which changes the network voltage from 132kV to 220kV. A higher voltage means less circuits north of this point, minimising our impact on communities and the environment.
- 8 Existing infrastructure**
 The Kergord site is home to our existing HVDC converter station, connecting Shetland to mainland Scotland for the first time through a subsea transmission link. It is also where the Viking wind farm connects. Under construction currently is a transmission link to Gremista, where it will connect into the Distribution network.



Third party developer projects

Our Shetland Strategy takes into consideration the following projects:

- A Energy Isles** Onshore wind being developed by Statkraft.
- B Beaw Field** Onshore wind being developed by Statkraft.
- C Greener Grid** Hydrogen electrolyser being developed by Statkraft.
- D Arven** Offshore wind being developed by Ocean Winds.
- E Stoura** Offshore wind being developed by ESB.
- F Mossy Hill** Onshore wind being developed by Statkraft.
- G Existing infrastructure** Viking Wind Farm constructed by SSE Renewables.

*Indicative illustration only
 Dates displayed are target energisation dates.*

Key

- # Proposed SSENT Substation/ Converter station site
- # Proposed SSENT circuits
- # Offshore wind export cables (Third party developer build)
- A Third party developer projects
- Installed SSENT assets
- # Project focus for this booklet
- # Existing infrastructure

For updates on the projects, visit our Shetland Strategy page: ssen-transmission.co.uk/shetlandstrategy

Shetland HVDC Link 2 project need and overview

Why is the project required?

The Shetland HVDC Link 2 is needed to provide a secure, long-term connection between Shetland and the GB (Great Britain) electricity network. It will enable new renewable generation, such as onshore and offshore wind farms, and support demand projects such as green hydrogen production. By reinforcing the existing Shetland HVDC Link 1, it also provides resilience for the islands' electricity supply.

The project will include the construction of new HVDC converter stations on Shetland and Aberdeenshire, together with associated substations and underground cables to connect them to the wider electricity transmission network.

A subsea cable will link the two landfall points, carrying clean, renewable electricity over these longer distances efficiently and reliably.

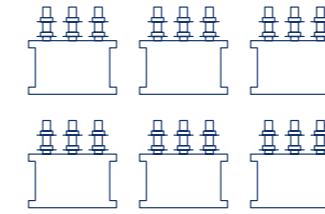
In addition to the Subsea HVDC cable, the other key elements of the Shetland HVDC Link 2 project may include:

Northern Shetland:

- New HVDC converter station, likely to be in the Toft area.
Co located with:
 - New AC 220kV substation
 - New AC 400kV substation
- Landfall in Northern Shetland and potentially up to 40km underground cable

Scottish mainland:

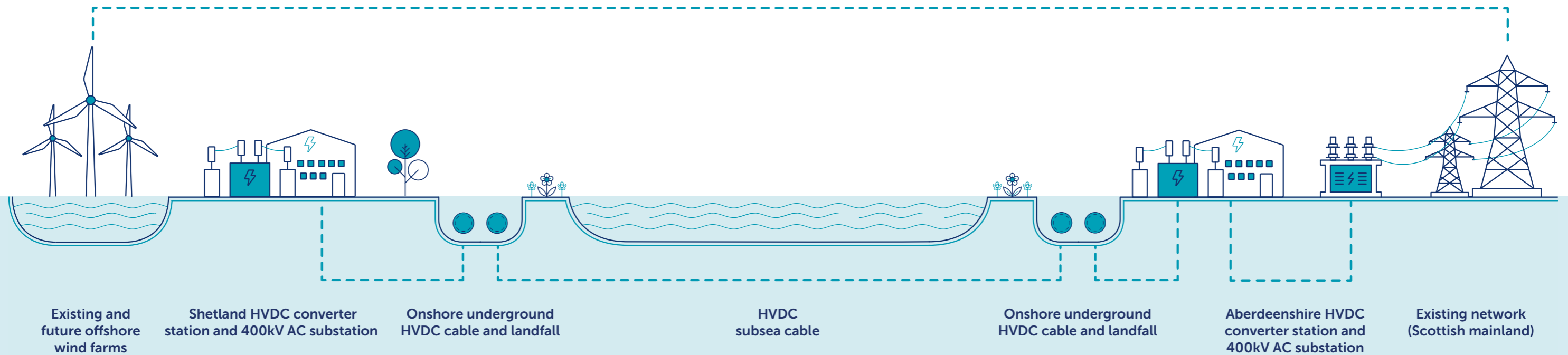
- New HVDC converter station in the Strathbogie region of Aberdeenshire
- Landfall on the Aberdeenshire coastline between Portsoy and Banff and approximately 30km underground cable route



Why HVDC?

High Voltage Direct Current (HVDC) technology offers the most efficient means of transmitting large amounts of power over long distances.

It helps minimise energy losses, reduce environmental footprint, and improve the stability of the wider electricity network. Using HVDC also ensures the new Shetland HVDC Link 2 is compatible with the first Shetland HVDC link and any other future subsea connections, providing a coordinated and future-proof solution.



What you told us

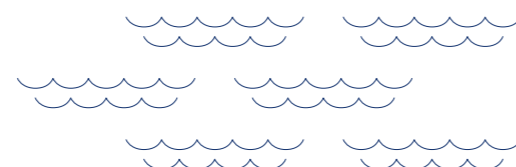
The first consultation events were held last year in Brae (June and October 2025) and Mossbank (October and November 2025)

Some responses were general objections to the project itself and questioned the need for the project. Whilst this feedback is acknowledged, only specific feedback is summarised and responded to within the following table.

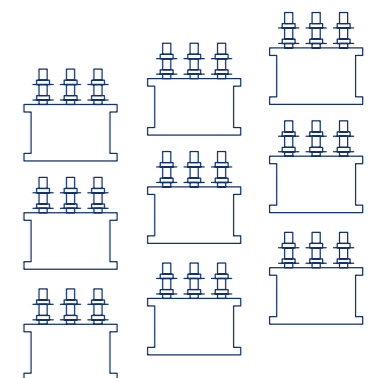
Many of the responses also posed general questions, these are covered in our Frequently Asked Questions (FAQ) page, which can be accessed at: ssen-transmission.co.uk/2030faqs

We have included summaries of both written and verbal feedback from during the consultation events and meetings with local residents and statutory stakeholders.

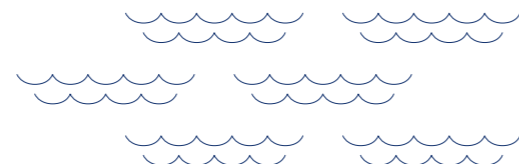
Feedback	Our Response
Project Design and Site Selection	
Concerns regarding landfall at Wethersta (Site 14) due to impact on aquaculture sites within the Voe.	We have listened to feedback from aquaculture owners who outlined the importance of this area for local aquaculture businesses. This, along with feedback from local residents and key/statutory stakeholders meant we have decided not to continue further with the development of the Wethersta landfall.
Some feedback indicated a preference for a landfall at Toft Camp (Site 23) as opposed to Wethersta (Site 14).	The Toft Camp landfall site has been taken forward to Stage 2, however there are significant constraints associated with the onward routing, therefore further assessment is being carried out. We are currently examining the marine conditions in Yell Sound to assess whether this landfall site option is viable.
Mavis Grind (Site 9) was suggested as an alternative to the Toft and Wethersta landfalls.	SSEN Transmission appreciated the additional information provided in support of Mavis Grind as an alternative landfall. However the landfall remains a significant engineering challenge following additional review. Therefore, it remains discounted at this stage.
Disagreement with proposed Northern Substation Hub site selection options.	We have carefully considered feedback regarding site selection, including concerns about Scatsta. Site identification is based on a range of technical, environmental, and deliverability criteria. We are reviewing all feedback, including alternative site suggestions, to ensure the final location minimises impacts on communities, infrastructure, and the environment.

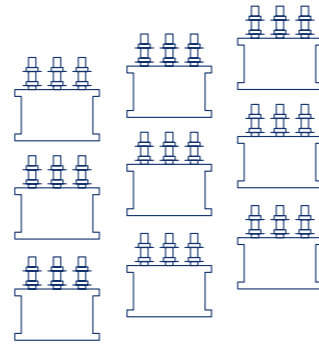


Feedback	Our Response
Environment (Terrestrial)	
Concerns around the impacts on Shetland peatland and carbon-rich soils	We acknowledge concerns regarding peatland disturbance. Detailed environmental assessments are being undertaken, and we will seek to avoid or minimise impacts on Class 1 peat where possible. Where impacts cannot be avoided, mitigation measures and restoration plans will be developed in line with best practice and regulatory guidance.
Concerns on the cumulative impact of all the new infrastructure proposed on Shetland, on the environment and local communities.	Cumulative effects will be assessed as part of the Environmental Impact Assessment (EIA), considering the project alongside other existing, consented and reasonably foreseeable developments. This will help us understand the overall combined effects on communities, landscape and visual amenity, transport, biodiversity and the wider environment. Landscape architects and environmental specialists will support this assessment, and engagement with local communities will help inform the identification of appropriate mitigation measures where required. The findings will help shape the project design to minimise cumulative impacts wherever possible.
Landscape and Visual Impacts	
Concerns regarding the impact of new infrastructure on the landscape, including the potential industrialisation of the local area and the effects this may have on nearby residents and homes, such as noise, lighting, traffic and visual amenity.	Landscape and visual effects will be assessed as part of the environmental appraisals supporting the projects. This will consider potential effects on landscape character, visual amenity and views from surrounding areas, including residential properties and other sensitive receptors. Potential impacts on local communities, including noise, lighting and general amenity effects, will also be assessed through the environmental studies. We will seek to minimise impacts through careful site selection, design and layout, and by implementing appropriate mitigation and operational controls where required. Further, we will work with Shetland Islands Council to agree appropriate viewpoints for assessment and to identify suitable mitigation measures.



Feedback	Our Response
Community and Access	
<p>Concerns about the routing of the underground cable through Brae village and other communities across Shetland, including the potential disruption this could cause to road users, residents, businesses and access to local amenities during construction works.</p>	<p>We recognise that Brae Village and other communities across Shetland contain important residential areas, businesses, community facilities and essential local services, and that construction activities have the potential to affect road users, residents, businesses and access to local amenities.</p> <p>A Traffic and Transport Impact Assessment will therefore be undertaken as part of the Environmental Appraisal (EA), supported by the preparation of a Construction Traffic Management Plan. This work will be carried out by specialist Traffic and Transport consultants, with input from the appointed construction contractors.</p> <p>As the underground cable route design develops, a more detailed understanding of the construction methodology, phasing, traffic management requirements and likely duration of works will be established and assessed through the EA process. The assessment will consider the potential effects of construction activities on local communities, including access, traffic disruption and amenity impacts, and will identify appropriate mitigation measures to reduce disruption wherever reasonably practicable.</p> <p>Ongoing engagement with local communities and stakeholders will also help inform the design and development of mitigation measures as the project progresses.</p>
Local Economy and Land/Sea Use	
<p>Concerns regarding potential impacts on local livelihoods, including crofting activities, fishing operations, existing marine infrastructure and navigation systems.</p>	<p>We recognise the importance of local livelihoods and industries across Shetland. Engagement with fishers, crofters, landowners and other stakeholders is ongoing to understand potential impacts and identify opportunities to avoid, reduce or minimise disruption wherever possible.</p> <p>We have identified a number of interfaces between cable route options and landfall sites and existing third-party infrastructure and activities, including pipelines and cables, ferry routes, aquaculture sites and other marine users. We have commenced early engagement with relevant stakeholders and will continue working closely with them to understand operational requirements and any constraints that may influence the site selection and design of the project infrastructure.</p>
<p>Concerns regarding the impact of new infrastructure on Shetland islands tourism.</p>	<p>SSEN recognise the importance of tourism to the Shetland economy. We seek to locate and design our essential infrastructure in a manner that would minimise impacts. Socio-economic impacts will be considered fully for inclusion in the associated environmental appraisals.</p> <p>These projects will also provide significant benefits to local and national economies. We also expect these projects to deliver significant local benefits, including direct and indirect job opportunities, alongside supply chain opportunities for local businesses.</p>





Substation and converter station site selection process

SSEN Transmission has developed and implemented a formal process for the selection of sites for new substations and converter stations. The main aim of the process is to provide a consistent approach to the selection of new substation sites, underpinned by our statutory obligations to:

Develop and maintain an efficient, co-ordinated and economical electricity transmission system within our licensed area and in doing so, to have regard to the desirability of preserving the natural beauty, of conserving flora, fauna and geological and physiographical features of special interest and protecting sites, buildings and objects of architectural, historic or archaeological interest; and do what we reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites buildings or objects as part of the Electricity Act 1989, Section 9 (2) and b.

Our site selection process ensures the design, consenting, construction and operation of a substation is done in a manner that is technically feasible and financially viable whilst, on balance, creating the least disturbance during construction and operation to the environment and the people who live, work, and use it for recreation. We aim to consult on this at various stages, ensuring key stakeholders have the opportunity to feed in to the process.

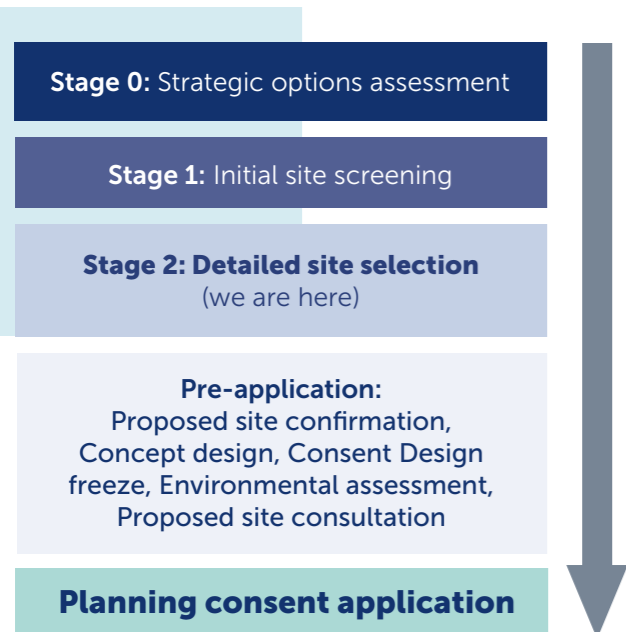
For most new projects following pre-site selection activities, the approach follows two principal stages, each iterative and increasing in detail and resolution, bringing cost, technical and environmental considerations together in a way which seeks the best balance at both stages. This staged process leads to the identification of a preferred site, which will be consulted on and assessed further before determining the optimal arrangement.

What happens next: the planning application process

The outcome of the above site selection process will culminate in seeking planning consent under the Town and Country Planning (Scotland) Act. The application will identify:

- The site boundary (the planning red line site boundary) including any access route (up to the public road, including junction improvements).
- The proposed development in relation to the site boundary, with dimensions of all permanent structures, buildings, perimeter fencing, and any key drainage features and electrical features, such as transformers.
- Any required landscape and biodiversity proposals (both in situ and remote to the proposed sites) will also be identified and detailed as part of each planning submission. In some cases, the application will be subject to Environmental Impact Assessment (EIA) under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. This may result in further alterations to the proposed development to reflect outcomes of the EIA consultation process.

Further public and stakeholder consultation will be undertaken to present our proposals ahead of submitting any planning applications.



What is a landfall?

Cable landfalls 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 the installed ducts which are then buried, and the shoreline is reinstated.

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.

Landfall Assessment

When planning where a subsea cable comes ashore, several factors need to be considered. This involves input from engineering, environmental and community specialists to identify the optimal option. Key considerations include:

- Technical feasibility of bringing the cable to shore, including proximity to existing infrastructure.
- Environmental sensitivities and designated areas.
- Feedback from stakeholders and local communities.

This cross-disciplinary approach ensures that the landfall options taken forward for detailed design are robust, balanced and take account of local priorities.



Indicative HDD compound



Example HDD process



Example intermediate link pillar



Landfall site – selection process

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

Confirm landfall site and identify potential terrestrial cable routes between landfall site and converter site. Corridor optioneering, identifying potential subsea corridors based on relative impacts on constraints.



Stage 4

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

Provided below is a list of some of the key constraints which may influence development in a marine environment, and which will be considered in the site selection process for the project.

Environmental constraints

- **Cultural heritage** – the project will seek to avoid direct and indirect impacts on recorded heritage assets, such as chartered wrecks, scheduled monuments and other historic environment records.
- **Shipping and transport** – The project will seek to avoid busy areas with a high density of shipping and/or road activity, to not impact their operations.
- **Commercial fishing** – The project will seek to engage with fisheries to manage and mitigate any impacts as best as possible.
- **Ecology and ornithology** – The project will seek to avoid wherever possible designated sites such as those designated for breeding birds, or mammals, which may be sensitive to installation activities.
- **Benthic ecology** – The project will seek to avoid areas of Annex I reef, including maerl beds and horse mussel beds. These habitats are protected by legislation and may be sensitive to installation activities.
- **Peatland and Habitat** – the project will seek to avoid impact on areas of deep peat and sensitive habitat.
- **General Amenity Considerations** – the project will seek to manage noise and disturbance to nearby communities and their residents.

Technical constraints

- **Bathymetry** – Both seabed slope and water depth may impact the feasibility of how infrastructure can be installed.
- **Seabed and landfall geology** – The type of bedrock may impact the technical feasibility of installing cable and hub e.g. ability to pile on the seabed.
- **Metocean conditions** – Wave heights, wind speed and currents are considered as part of site selection, design and installation of the project.
- **Vessel access** – The project must ensure that water depths are sufficient and that there are no rocky outcrops that may impact the installation vessel access to the work site.
- **Third party assets** – The project will seek to minimise proximity to other third party assets, to minimise potential for disturbance to operations.
- **Construction Access** – The project will seek to site the landfall close to existing road networks.

The project team uses key data sources which illustrate the above constraints and applies them to a 'constraints model'. Once we have identified viable areas, they are taken forward for further evaluation and consultation, so we can better understand their use and sensitivity. As well as the constraints identified above, other environmental factors will be investigated including ecology, ornithology, mammals and seascape and landscape.

Environmental and social considerations

Environmental assessments and site surveys will be undertaken as we move through the stages of site selection to preferred site and consenting. This includes assessing landscape, visual and recreational amenity; ecology, habitats and ornithology; geology, hydrogeology and hydrology and cultural heritage of the potential options and then preferred sites. An assessment of environmental impact will be required as part of the Town and Country Planning consent application which will be subject to further rounds of consultation events.

Ecology, habitats and ornithology

Protected species and sensitive habitats could be present within the project area. However the short list of potential site options have been selected to avoid environmental designations and known sensitive habitats. The project will assess the risk to species and habitats as it moves through the stages of site selection, aiming to select a site with the least risk to the environment overall. Achieving a Biodiversity Net Gain for the site will be an overall objective of the preferred sites.

Landscape and visual amenity

The project site selection process aims to position sites in locations that minimises the effect on landscapes and visual amenity. The process being followed for our projects will look at the visual impact of all the potential site options and will consider landscape designations, landscape character and residential proximity to the site locations.

Cultural heritage

Scheduled, non-scheduled cultural heritage, archaeological features will be mapped and risk assessed through the stages of site selection. The project works will be designed and constructed to ensure these features are avoided, where possible.

Where this is not possible, further site assessments will be conducted in consultation with the planning authority.

Geology, hydrology and hydrogeology

The geological and hydrological sensitivities of a site will be risk assessed throughout the stages of site selection and further refined once a preferred site is selected. The site and access points will be selected to minimise effects as far as possible.





Marine survey

The marine survey campaign started in February 2026 and will conclude in late summer 2026.

Reach Subsea are acquiring geophysical, benthic and geotechnical data on our behalf and will use a number of specialist vessels to do so.

This data will be used to help:

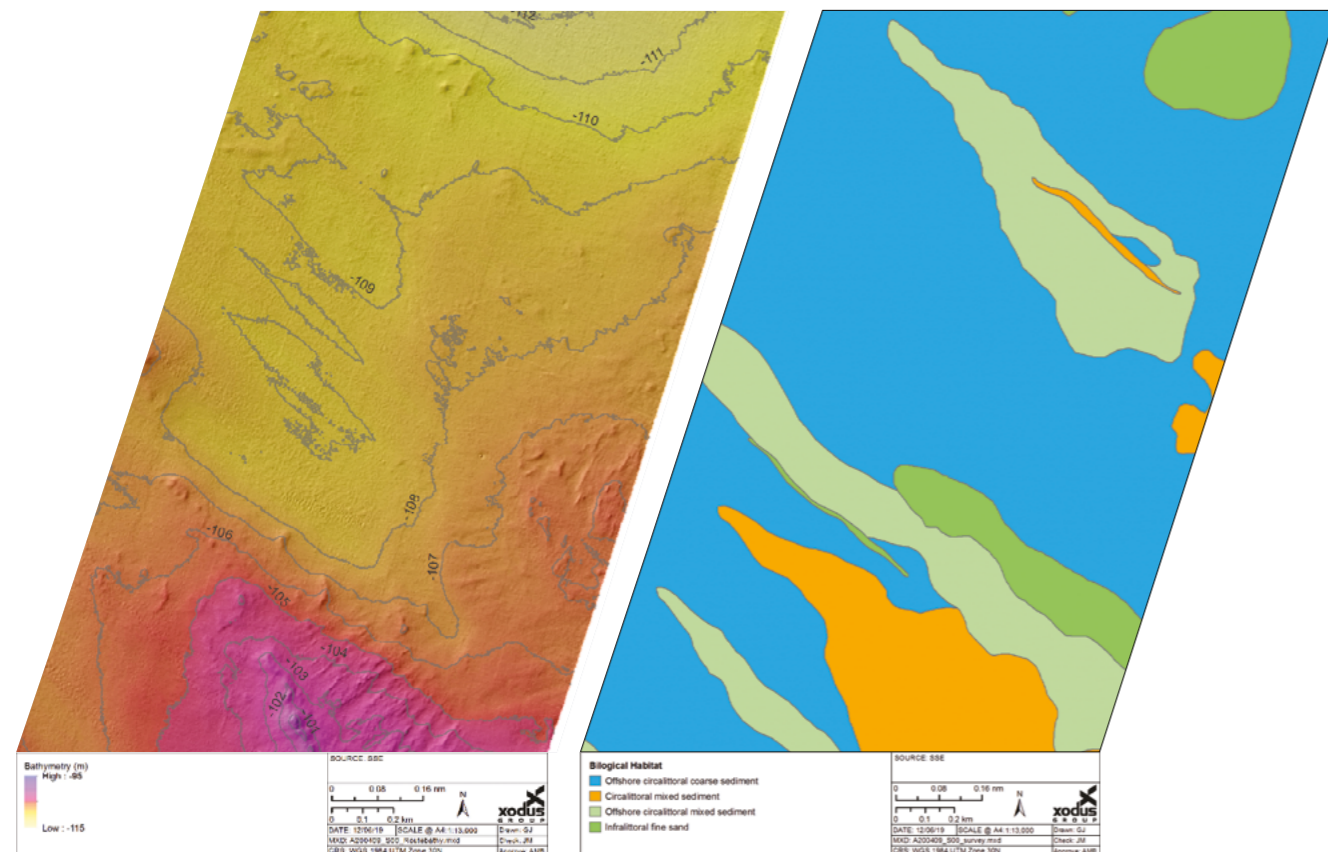
- Finalise the landfall site selection
- Design the subsea cable
- Refine the route of the cable between the Aberdeenshire coast and Shetland

In advance of these surveys commencing, local fishery bodies were consulted and a Notice to Mariners was published.

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.

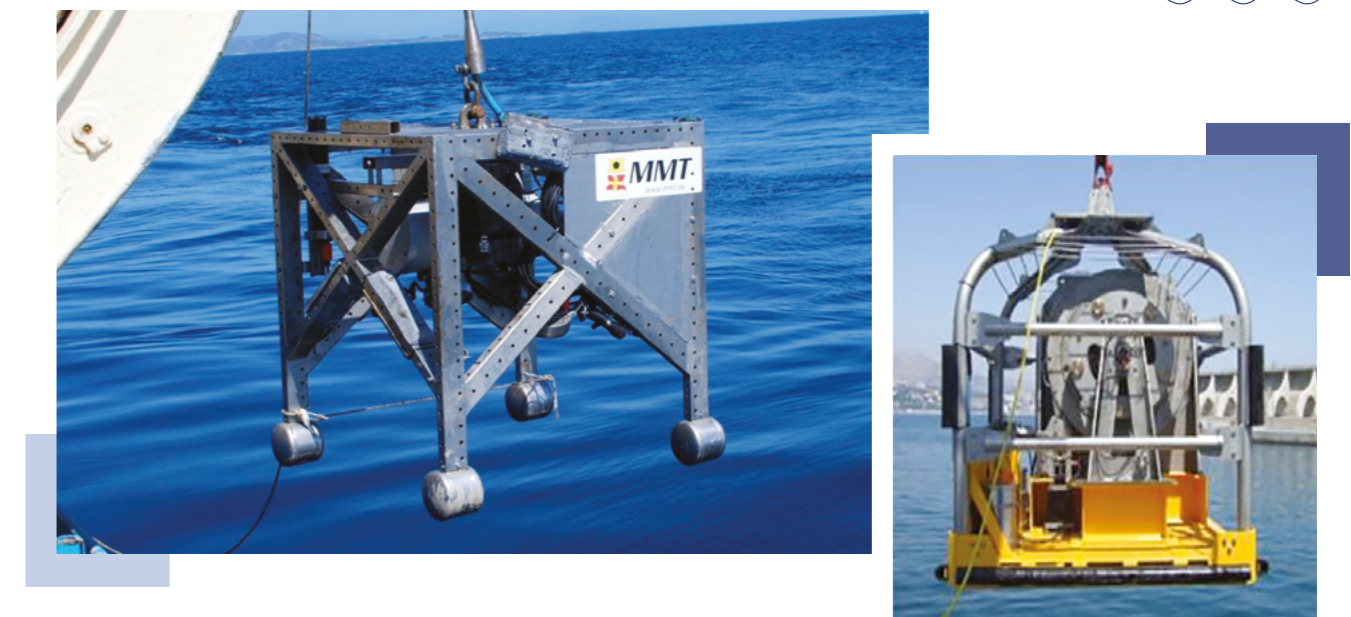
Instruments used: grab sampler and drop-down camera.



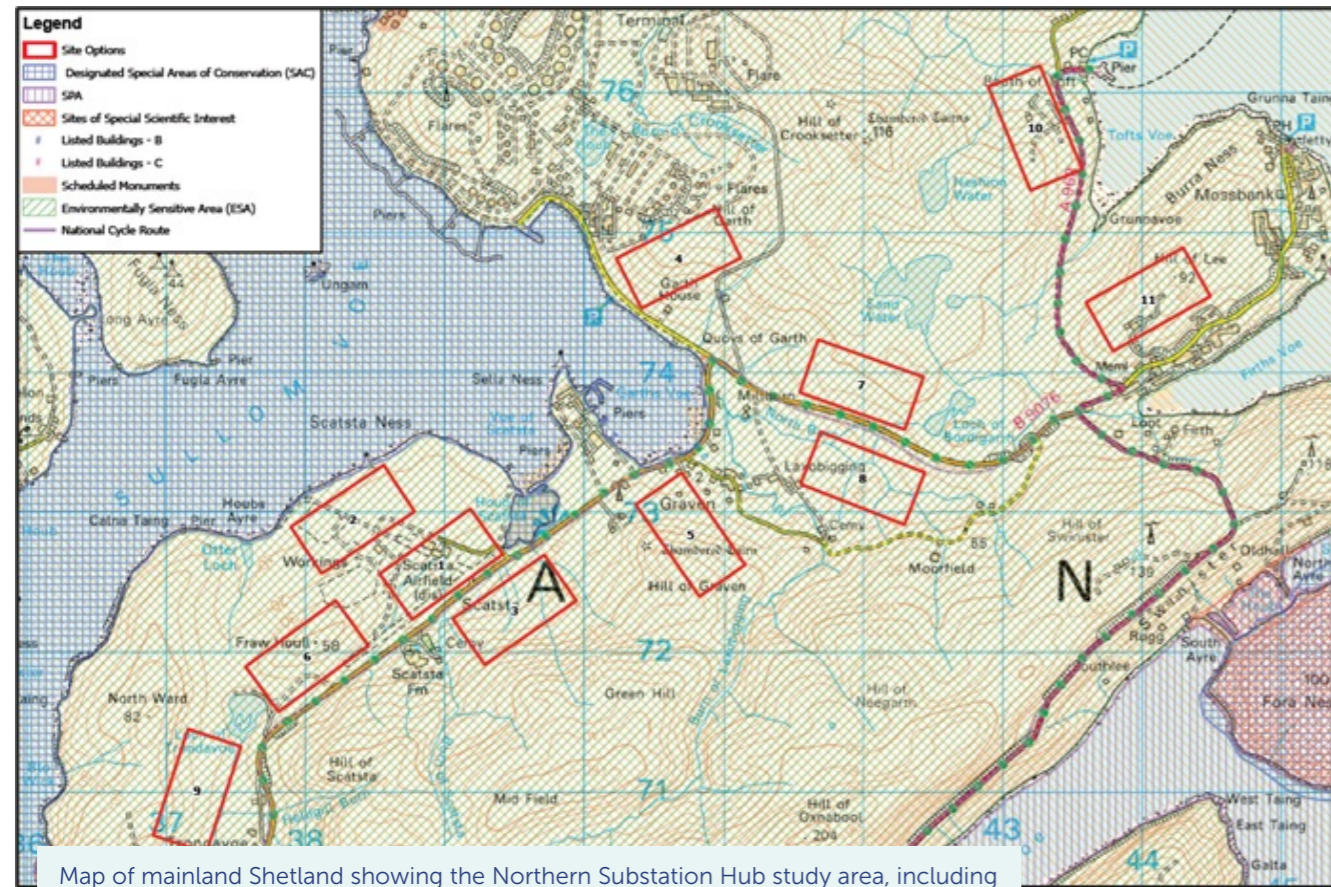
3. Geotechnical survey

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).

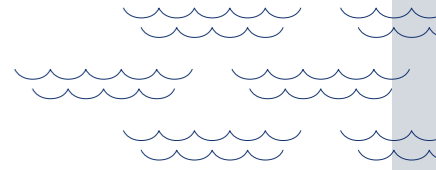


Northern Substation Hub



Map of mainland Shetland showing the Northern Substation Hub study area, including identified site options and those taken forward through the site selection process.

Site	Area	Proceed to Stage 2	Key Reason
1	Scatsta Airfield	Yes	Previously developed land with good infrastructure access.
2	Scatsta Ness	Yes	Strong balance of engineering and environmental considerations.
3	Scatsta Farm	No	Peatland, topography and nearby receptors.
4	Garth House	No	Heritage, peatland and access constraints.
5	Graven	No	Extensive peatland and challenging terrain.
6	Fraw Houll	Yes	Development flexibility and runway land reuse potential.
7	Sand Water	No	Peatland, hydrology and infrastructure constraints.
8	Laxobigging	No	Environmental and landscape constraints.
9	Trondavoe	No	Landscape, visual and residential impacts.
10	Toft Camp	Yes	Brownfield site with strong planning advantages.
11	Hill of Lea	No*	Landscape, community and land-use conflicts.



Northern Hub Site Selection

From an initial longlist of 11 sites, several locations were discounted due to extensive peat, terrain constraints, or landscape/heritage sensitivities – leaving a shortlist of 5.

*Hill of Lea was subsequently discounted due to its prominent hilltop position, strong visual impact, proximity to large residential populations, and competing land uses, including housing and community allotments.

The remaining sites were assessed in greater detail, reducing the options to two focus areas:

- Scatsta (Sites 1 & 6)
- Toft (Site 10)

These remaining areas demonstrated the strongest balance between environmental sensitivity, engineering practicality, and planning alignment, warranting detailed assessment to identify the location with the fewest development constraints.

Least Constrained Location: Toft

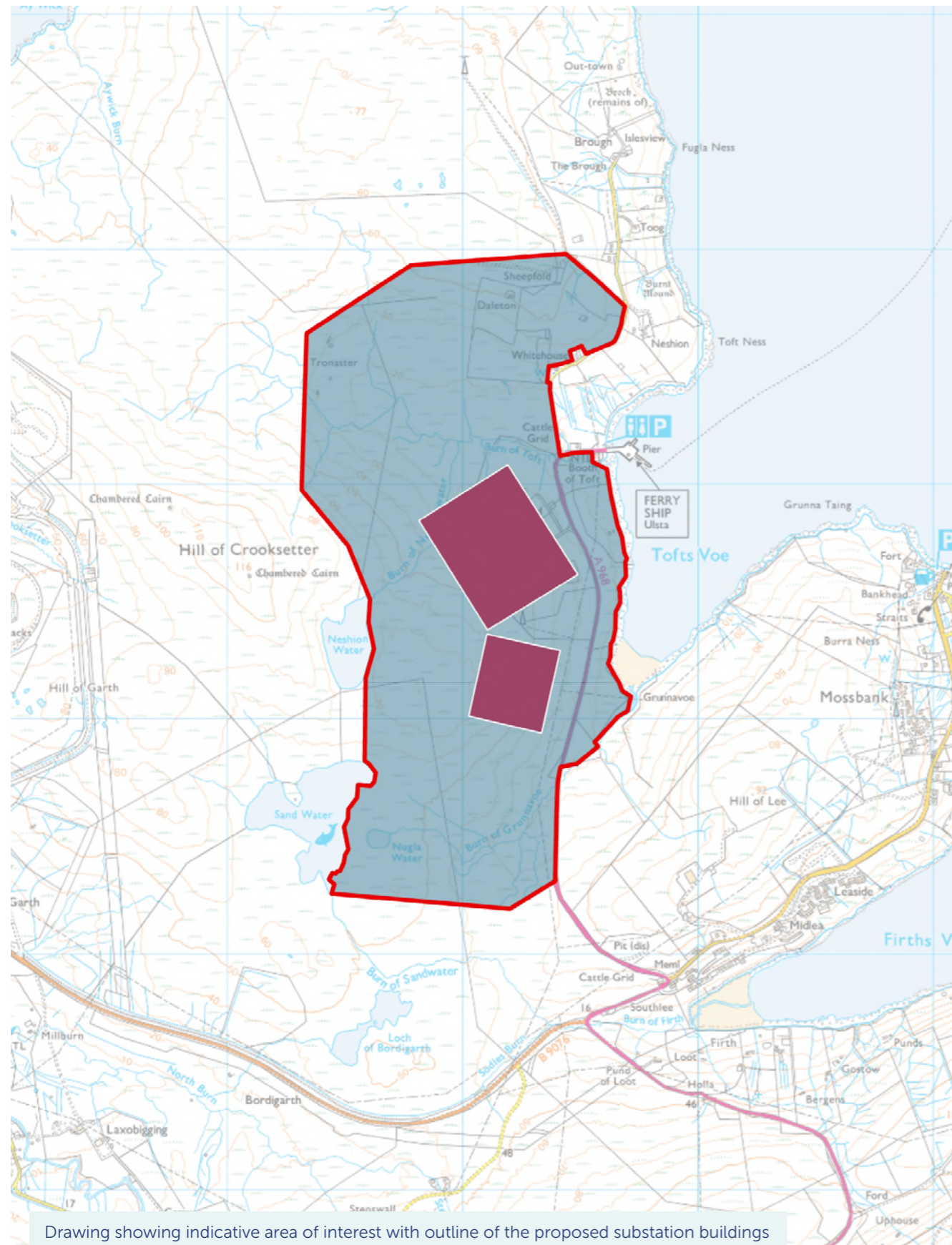
Following detailed assessment as part of the Stage 2 site selection process, Toft has been identified as the preferred location for the Northern Substation Hub.

The assessment considered a range of factors, including environmental constraints, engineering feasibility, planning considerations, and programme deliverability. While all potential locations present some challenges, Toft offers greater opportunity to progress a viable solution when considered alongside reasonable alternatives.

The site has previously supported major infrastructure activity and has been identified as a location where further engineering optimisation and environmental design can be progressed to minimise impacts while meeting the project's strategic need.

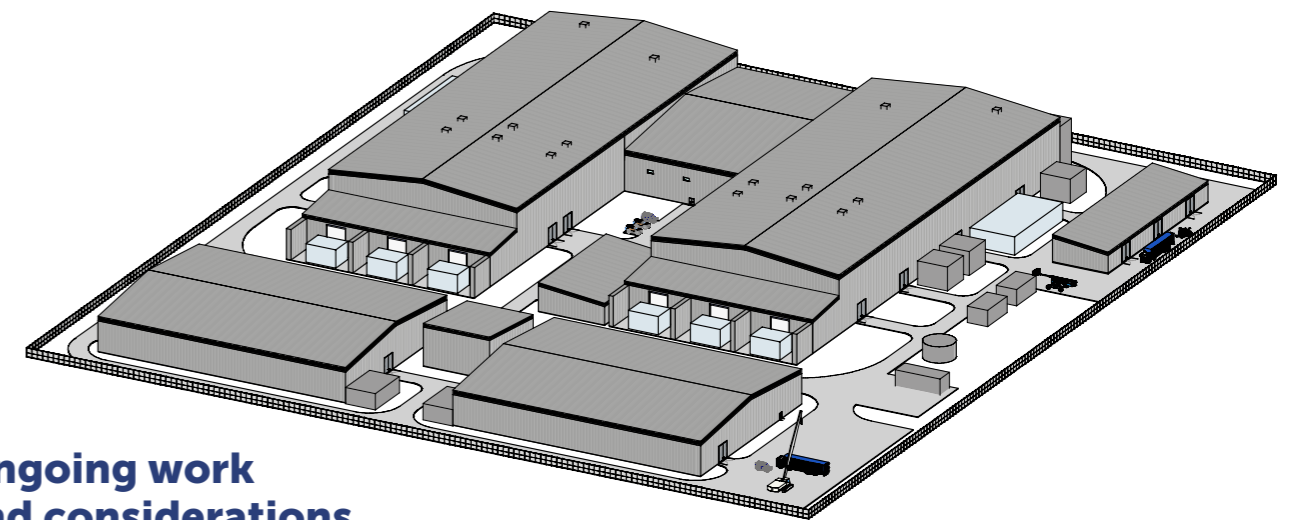


The Kergord HVDC converter station and AC switching station



Drawing showing indicative area of interest with outline of the proposed substation buildings

Indicative conceptual design for 2GW 525kV bipole converter station



Ongoing work and considerations

Further work is being undertaken to fully understand and manage the constraints associated with the site, including:

- Ground conditions, peat management and peatland restoration opportunities
- Engineering layout optimisation
- Environmental and planning considerations
- Landscape and community impacts
- Identification of mitigation measures, environmental buffers and potential design refinements within the wider red line boundary area
- Opportunities for habitat enhancement, biodiversity improvement, and long-term land management

The indicative boundary shown on the plan represents the maximum design envelope currently under consideration and does not indicate that the entire area will be permanently developed. Some areas may only be required temporarily during construction and, where appropriate, land would be reinstated following completion of the works. This may include peatland restoration, habitat enhancement, and the return of land to an improved ecological condition where opportunities are identified.

Given the importance of Shetland’s peatland habitats and carbon-rich soils, ongoing studies are informing the design process to avoid and minimise impacts wherever possible. Measures to carefully manage peat during construction, restore disturbed areas and enhance degraded peatland habitats are being considered as part of the wider environmental strategy.

The proposals will continue to be refined through ongoing environmental studies, engineering assessment and engagement with local communities and statutory stakeholders, helping to ensure that environmental, engineering and community considerations are appropriately balanced throughout the development process.

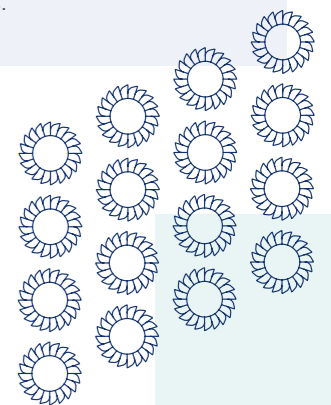
Next Steps:

Selection of Tofts as the preferred location is subject to the outcome of further technical and environmental work and the statutory consenting process.

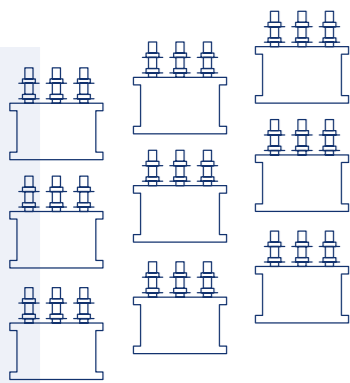
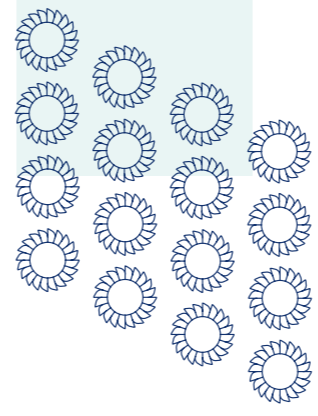
The project will continue to:

- Progress detailed ground investigations and environmental surveys
- Refine design solutions to minimise impacts
- Engage with statutory bodies as the proposals are developed
- Retain alternative options to ensure resilience should unforeseen constraints arise

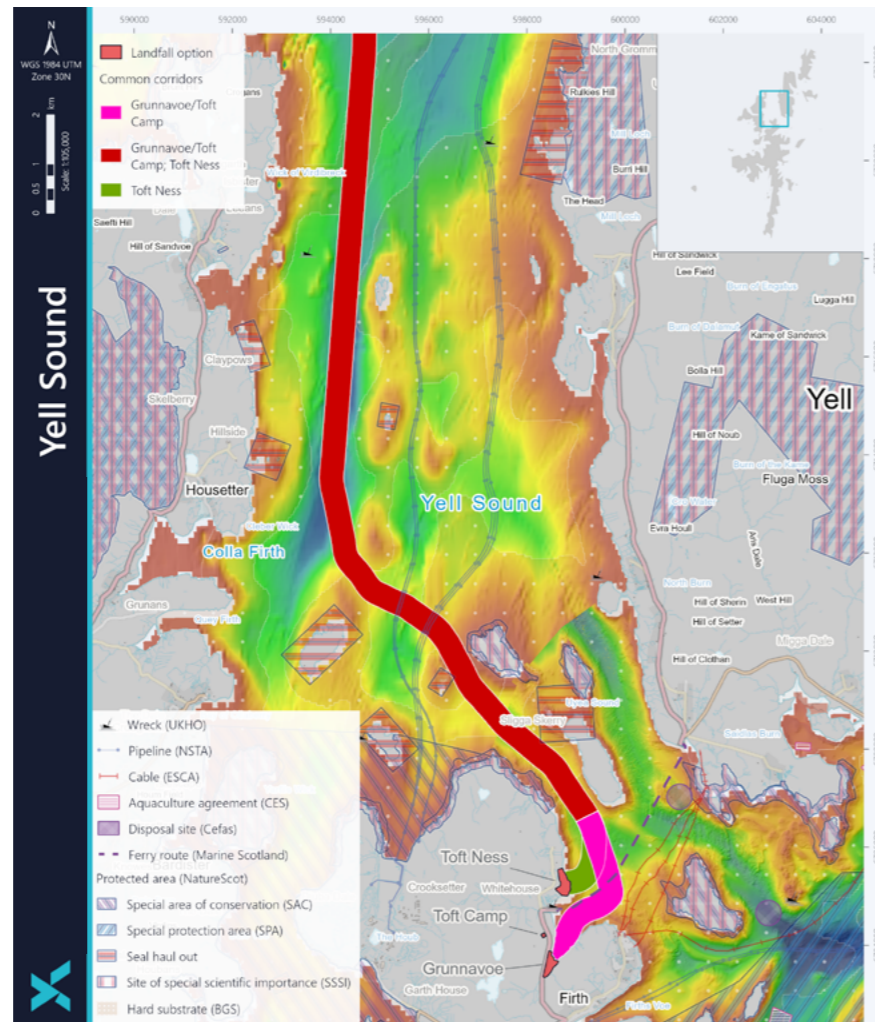
This approach ensures that the preferred location can be progressed responsibly, transparently, and in line with planning policy and regulatory requirements.



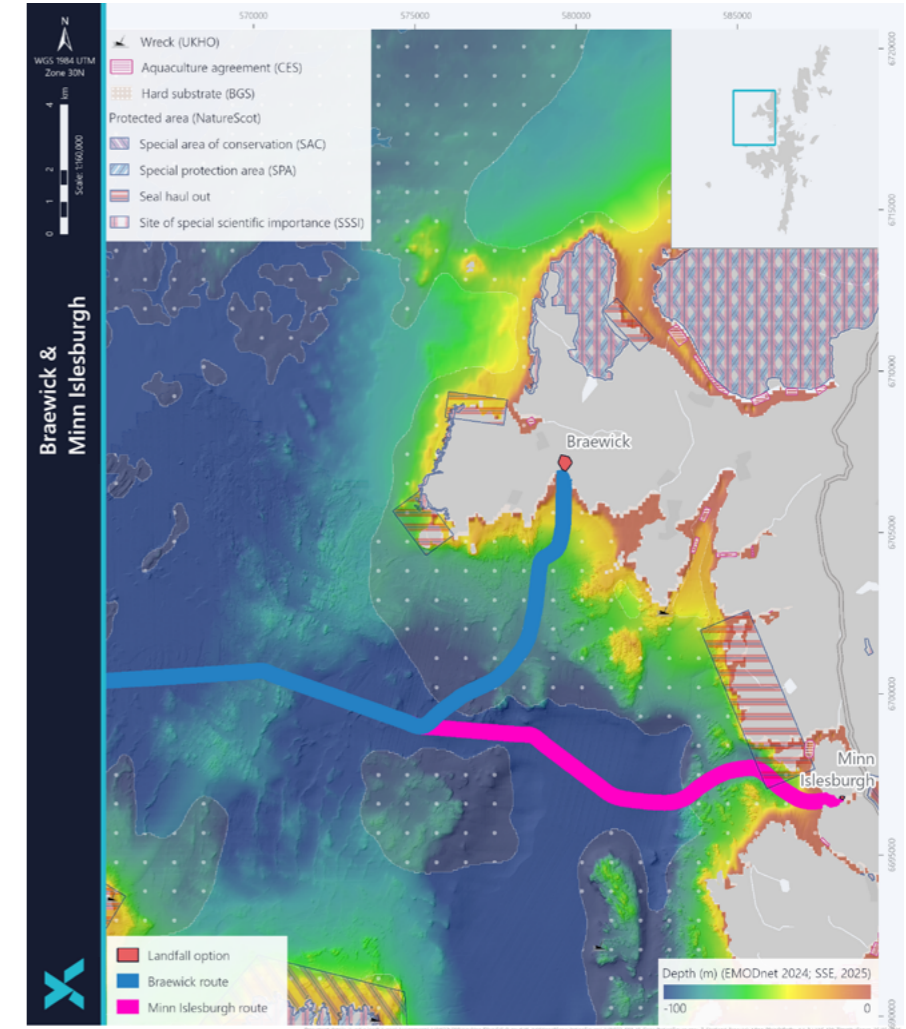
Marine approaches progressing to Stage 2



The potential Yell Sound marine approach encompasses the proposed landfall sites: Site 3: Grunnavae, Site 4: Toft Ness and Site 23: Toft Camp.



Yell Sound	
Opportunities	Constraints
Reduces the length of the onshore cable route significantly (compared to other landfall options)	Extreme tidal currents, in excess of 6 knots. Cable installation, operation and maintenance may be challenging
Cable route does not overlap with any active aquaculture sites	Overlap / interface with Toft-Ulsta ferry
Reduced impact on Class 1 peatland	Overlap / interface with Sullom Voe statutory harbour limit
Reduces number of onshore cables coming north	Multiple crossings with cables, oil and gas pipelines
	Overlap with two protected seal haul outs and Yell Sound Coast Special Area of Conservation
	Area of high fishing activity, towed dredges. Landfalls are within an area of static fishing grounds



The potential Braewick and Minn Islesburgh marine approaches encompass the proposed landfall sites: Site 29: Braewick and Site 26: Minn Islesburgh

Braewick	
Opportunities	Constraints
More benign current conditions compared to Yell Sound	Evidence of sensitive benthic habitats in the vicinity of the landfall, these features are present around the majority of Shetland's coastline
No overlap with any statutory environmental designations	Overlap with an area of static fishing grounds
No interaction with existing or planned aquaculture sites	
No constraints identified with shipping and navigation, third party assets and marine archaeology receptors on the approach to Braewick.	
Minn Islesburgh	
Opportunities	Constraints
No constraints identified with shipping and navigation, third party assets and marine archaeology receptors on the approach to Minn Islesburgh	Overlap with an area of static fishing ground
No interaction with existing or planned aquaculture sites	Evidence of sensitive benthic habitats in the vicinity of the landfall, these features are present around the majority of Shetland's coastline
Reduces the length of onshore cable route (compared to the Braewick landfall option)	Overlaps with Egilsay, Heodale & Isle of Gunnister seal haul-out, designated for harbour (common) seal (<i>Phoca vitulina</i>).
	Exposed to prevailing westerly weather and swells, which may make cable installation more challenging.

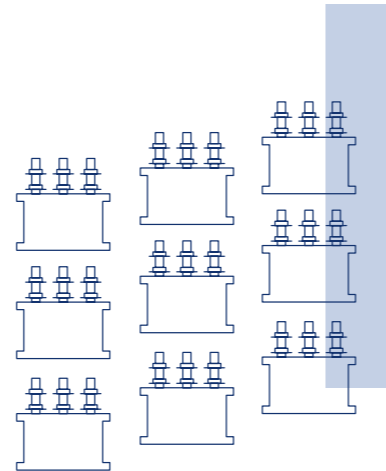
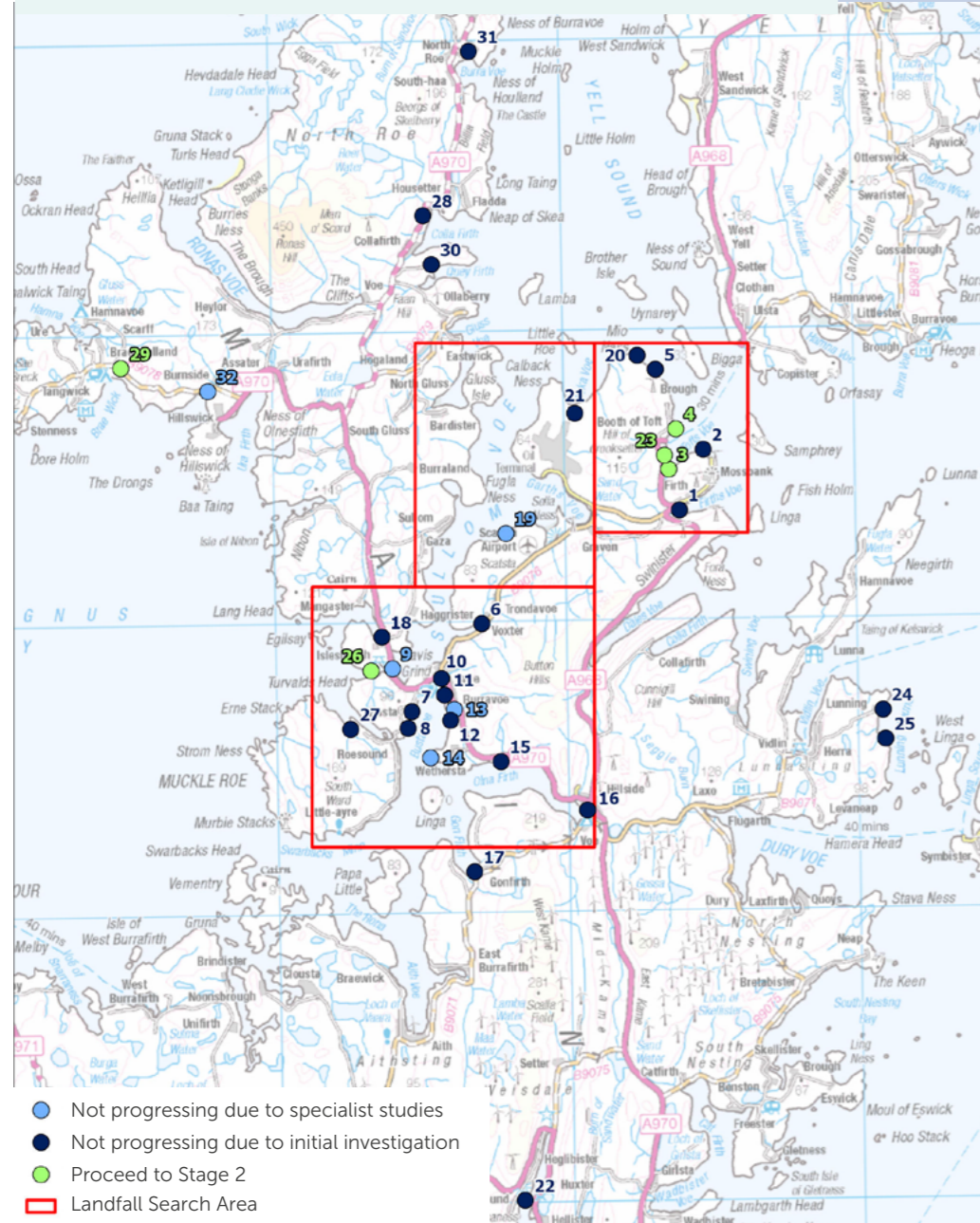
Shetland Landfall Selection

Since November 2025, SSEN Transmission have reviewed and incorporated feedback received from the consultation events and stakeholder engagements alongside findings from our engineering appraisals, and decided to reexamine our area of interest to identify new alternative sites, that had the potential to be suitable for a landfall of the HVDC marine cable.

As a result of this desk-based assessment, we identified nine new sites, as illustrated on the map.

These sites were analysed by the project team and external specialists, considering onshore and offshore engineering, community, consenting and environmental factors. As a result of these analyses Site 29: Braewick and Site:26 Minn Islesburgh were considered as suitable alternative landfalls. Therefore, they were taken forward to detailed design and survey stage.

Map of mainland Shetland showing all landfall options identified to date.



Sites identified 2025

Site	Site Name	Proceed to Stage 2	Key reasons
1	Firths Voe	No	Steeply sloping area making construction challenging and existing pipelines in Voe reduces space for HVDC cable.
2	Mossbank	No	Multiple existing pipelines / cables in the area already making construction challenging.
3	Grunnavoe	Yes	Please see page 30 for further detail.
4	Toft Ness	Yes	Please see page 31 for further detail.
5	Croo Taing	No	Access road difficulties, and seal haul outs making construction and consenting challenging.
6	Voxter	No	Insufficient space for HDD compound.
7	Busta	No	Insufficient space for HDD compound, and marine vessel access constrained by aquaculture sites.
8	West St Magnus Bay	No	Challenging geotechnical conditions, proximity to aquaculture sites, making construction and consenting challenging.
9	Mavis Grind	No	Ruled out by specialist studies. Challenging geotechnical conditions, complex marine operations required.
10	Brae	No	Suitably sized site for HDD compound could not be found.
11	Brae Hall	No	Existing water infrastructure constraints, challenging onward onshore cable routing and aquaculture activities within Busta Voe.
12	North Houllands	No	Suitable site for HDD compound could not be found, and challenging geotechnical conditions.
13	Houb of Burravoe	No	Ruled out by specialist studies. Suitable site for HDD compound could not be found.
14	Wethersta	No	Ruled out by specialist studies. Significant concerns from aquaculture industry, making consenting challenging.
15	Olna	No	Proximity to aquaculture sites, making consenting and construction challenging.
16	North Voe and West Voe	No	Marine vessel access constrained by aquaculture sites, making construction challenging.
17	Gonfirth	No	Access road difficulties, making construction challenging.
18	Mangaster	No	HDD not feasible.
19	Scatsta Airport	No	Ruled out by specialist studies. Marine environmental impacts, making consenting challenging.
20	Mio Ness	No	HDD exit point would be in protected marine environment, making consenting challenging.
21	Orka Voe	No	Marine environmental designations, existing pipelines and road access constraints, making construction and consenting challenging.
22	Weisdale Voe	No	Onshore route deemed unfeasible due to construction challenges.
23	Toft Camp	Yes	Please see page 31 for further detail.

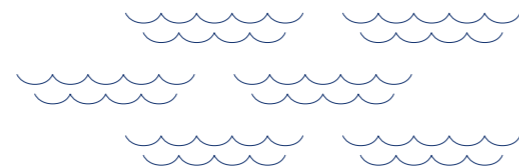
Sites identified 2026

Site	Site Name	Proceed to Stage 2	Key reasons
24	Lunning North	No	HDD considered unfeasible.
25	Lunning East	No	Seal haul-out and environmental protection zones, and HDD feasibility, making consenting and construction challenging.
26	Minn Islesburgh	Yes	Please see page 29 for further detail.
27	Roesound	No	Road access constraints and proximity to aquaculture sites, making construction and consenting challenging.
28	Collafirth	No	Proximity to anchorage areas, making marine installation and consenting challenging.
29	Braewick	Yes	Please see page 28 for further detail.
30	Quey Firth	No	High environmental impact - seal haul outs, kelp beds, seaweeds, horse mussel beds and annex 1 reef, making consenting challenging.
31	Burra Voe	No	Does not unlock the key opportunities of Yell Sound marine approach, but does suffer from some of the key constraints
32	Sandwick	No	Ruled out by specialist studies. Insufficient space for HDD compound, and challenging geotechnical conditions, making construction challenging.

Landfall sites progressing to Stage 2

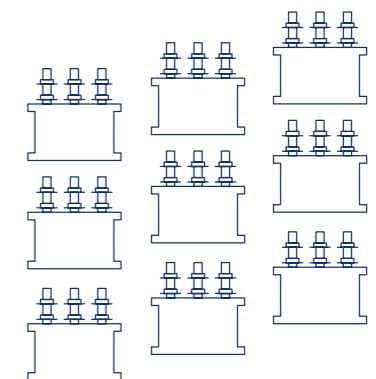
Site 29: Braewick

Environment including Community	
Opportunities	Constraints
No direct interaction with any onshore or offshore environmental designation	Three designated seal haul out sites near the landfall
No evidence of horse mussel beds or maerl beds within the vicinity of the landfall	Long onshore underground cable route to connect to the Northern Substation Hub
No aquaculture sites within the vicinity of the landfall	Located close to residential properties and Braewick Café and Caravan Park
No wrecks or obstructions within the vicinity of the landfall	Braewick Beach Geosite (volcanic rocks and granite; remnants of the Eshaness volcano) crosses the south of the site option
Does not overlap with any annex 1 reefs	
Technical	
Opportunities	Constraints
The Horizontal Directional Drill (HDD) is considered feasible and there is plenty of space for drilling equipment and a platform	Long onshore underground cable route to connect to the Northern Substation Hub
No significant tidal flows present	
No ferry routes within the vicinity of the landfall	
Short haul road to the nearby B9078	
No chartered anchorages in the proximity of the site.	



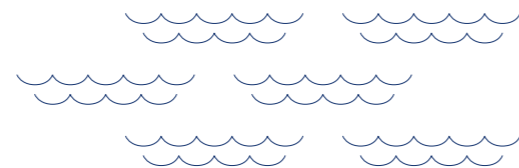
Site 26: Minn Islesburgh

Environment including Community	
Opportunities	Constraints
No aquaculture sites in the vicinity of the landfall	Prehistoric house and scheduled monument in close proximity to the landfall site
No direct interaction with an onshore or offshore environmental designated sites	Qty 12 scheduled monuments within 2km of the site option
No evidence of horse mussel beds or maerl beds within the vicinity of the landfall	Seal haul-out area in vicinity of the landfall
Does not overlap with any annex 1 reefs	
Technical	
Opportunities	Constraints
HDD deemed feasible from internal project team assessment	Exposed location which may make HDD installation activities challenging
Shorter onshore underground cable route to the Northern Substation Hub, compared to other landfall options	Temporary haul road would be required to access the site
No ferry routes within the vicinity of the landfall	External review of HDD feasibility still pending
No significant tidal flows are present at this landfall	
No chartered anchorages	



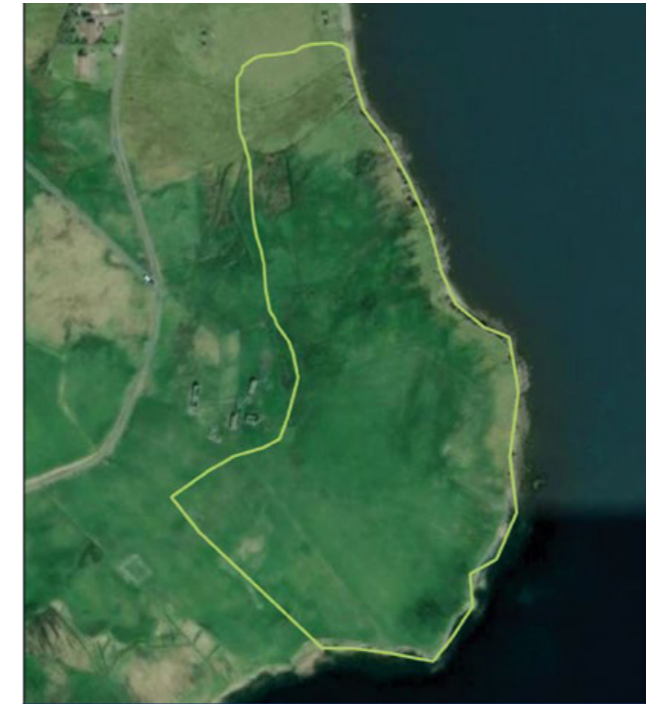
Site 3: Grunnavoe

Environment including Community	
Opportunities	Constraints
Landfall site is set away from residential properties thus minimising potential disturbance during the installation phase	Within an area of static fishing grounds
No direct overlap with any onshore or offshore designated sites	Some areas of the site may have potential for high likelihood of surface water flooding. Burn of Grunnavoe located within the site.
No evidence of horse mussel beds or maerl beds within the vicinity of the landfall	
Does not overlap with any annex 1 reefs	
No aquaculture sites within the vicinity of the landfall	
No scheduled monuments (cultural heritage) within the site	
Technical	
Opportunities	Constraints
HDD considered feasible (but challenging)	Within 1km of Ulsta-Toft ferry route
Short access to the nearby A969 road	Potential for thick layer of soils over bedrock making HDD more challenging (but still feasible)
Plenty of space for a HDD drilling compound	Extreme tidal currents in Yell Sound will make marine operations for installation, inspection, maintenance and repair challenging
No chartered anchorages	



Site 4: Toft Ness

Environment including Community	
Opportunities	Constraints
No direct overlap with any environmental designations	Special Area of Conservation (Seals and Otters) within 1.5km of the site
No aquaculture sites within the vicinity of the landfall	Some nearby residential properties
Nearest seal haul out is over 4km	One non-designated heritage asset located within the site and Canmore sites across the site.
Technical	
Opportunities	Constraints
HDD considered feasible, with sufficient space for a drilling compound	Road to landfall unsuitable for construction vehicles, require to be upgraded
	Located within 1km of the Toft to Ulsta ferry
	Extreme tidal currents in Yell Sound will make marine operations for installation, inspection, maintenance and repair challenging



Site 23: Toft Camp

Environment including Community	
Opportunities	Constraints
No direct overlap with any environmental designations	Within an area of static fishing ground
Closest residential properties are over 1km from the site	
No aquaculture sites within the vicinity of the landfall	
Nearest seal haul out is over 4km away.	
Technical	
Opportunities	Constraints
HDD is considered feasible, with plenty of space for a drilling compound, which may utilise a brown field site	Located within 1km of the Toft to Ulsta ferry
Short access to the A968 road	Extreme tidal currents in Yell Sound will make marine operations for installation, inspection, maintenance and repair challenging
Short underground cable to the Northern Substation Hub, if it is located in a similar area.	



Building a lasting legacy

Our community benefit funds

Following an extensive stakeholder consultation exercise in 2023, we launched our first community benefit fund in 2024, to fund a range of community projects across the north of Scotland and the Shetland islands. These funds are open to applications from not-for-profit, constituted groups and organisations. There are two types of funds available:

Local funds

In anticipation of the expected UK government's guidance on community benefit funding, we have launched four preliminary local funds connected to projects recently completed or currently under construction. These funds will vary to reflect the differing needs, wishes and priorities of each of the local communities.

Local Community Benefit Funds are intended for local communities close to our transmission infrastructure works. We will work with those communities to design a fund that can make a positive local impact. We will work with independent panels to make funding allocation decisions, and we will support local communities to ensure best use of the funding opportunities.

Regional funds

This fund is to be used to provide support for strategic projects in the region, and must meet one or more of the following themes:

People: Focusing on skills, training and employability;

Place: Emphasising the community and culture of the north of Scotland and the Shetland islands;

Alleviating fuel poverty: Looking at strategic ways to help people across the region.

Local impact in focus

In Shetland, community benefit funds are already being put to work. A total of **£338,625** was awarded through SSEN Transmission's new cable community fund linked to the first Shetland-Scottish mainland HVDC cable.

Shetland's allocation, being delivered via the local charity Win Furt is earmarked for community-driven infrastructure, such as footpaths and cycle routes in Tingwall, Whiteness and Weisdale, as identified through local consultation.

Indicative funding levels

UK government guidance sets out indicative levels of community benefit funding for transmission infrastructure. These figures provide a useful benchmark for the types of investment local communities should expect:

Overhead lines: £200,000 per km

Converter stations/substations: £530,000 each

Based on this guidance, the Shetland strategy projects are poised to deliver over **£2 million** in community benefit funding, helping to support tangible long-term improvements for local people in Shetland.



SSEN Transmission are committed to leaving a lasting, positive legacy within the communities we operate in. To us, this means going beyond the delivery of the infrastructure.

In Shetland, this includes supporting local initiatives through our Community Benefit funds, getting involved in volunteering and outreach efforts and working closely with local groups to understand where support is most needed.

Housing

Through our housing strategy we hope to accelerate the supply of affordable housing, because we are seeking to leave a positive legacy whilst housing our workers.

Our approach is multi-faceted, and includes looking at options to support permanent housing, the redevelopment of existing properties that require refurbishment, assessing use of underutilised, off season, hotel and rental accommodation, potential use of empty homes, potential use of existing short term lets who would wish to revert to long term rented accommodation, and temporary accommodation village options.

We have worked with the Council from the very start of our engagement, on a long list of accommodation options to ensure that this helps meet the aspirations of Shetland, and this work continues.

Economy

Through the first HVDC link we have invested tens of millions of pounds into Shetland's economy.

This included hundreds of jobs and local business opportunities. Going forward, we intend to work with our supply chain to further increase the number of local jobs and business opportunities on Shetland.

Skills

We will be taking a co-ordinated approach across all our supply chain to enable training and identify opportunities for young people and school leavers.

Our contractors' obligations will include how they can increase opportunities for local people either through training or jobs.

Our Supply Chain

At every stage of development, we carry out a competitive tender process to appoint contractors who align with our commitment to delivering positive local outcomes. The companies that we work with are expected to contribute meaningfully to the communities we serve, including here in Shetland.

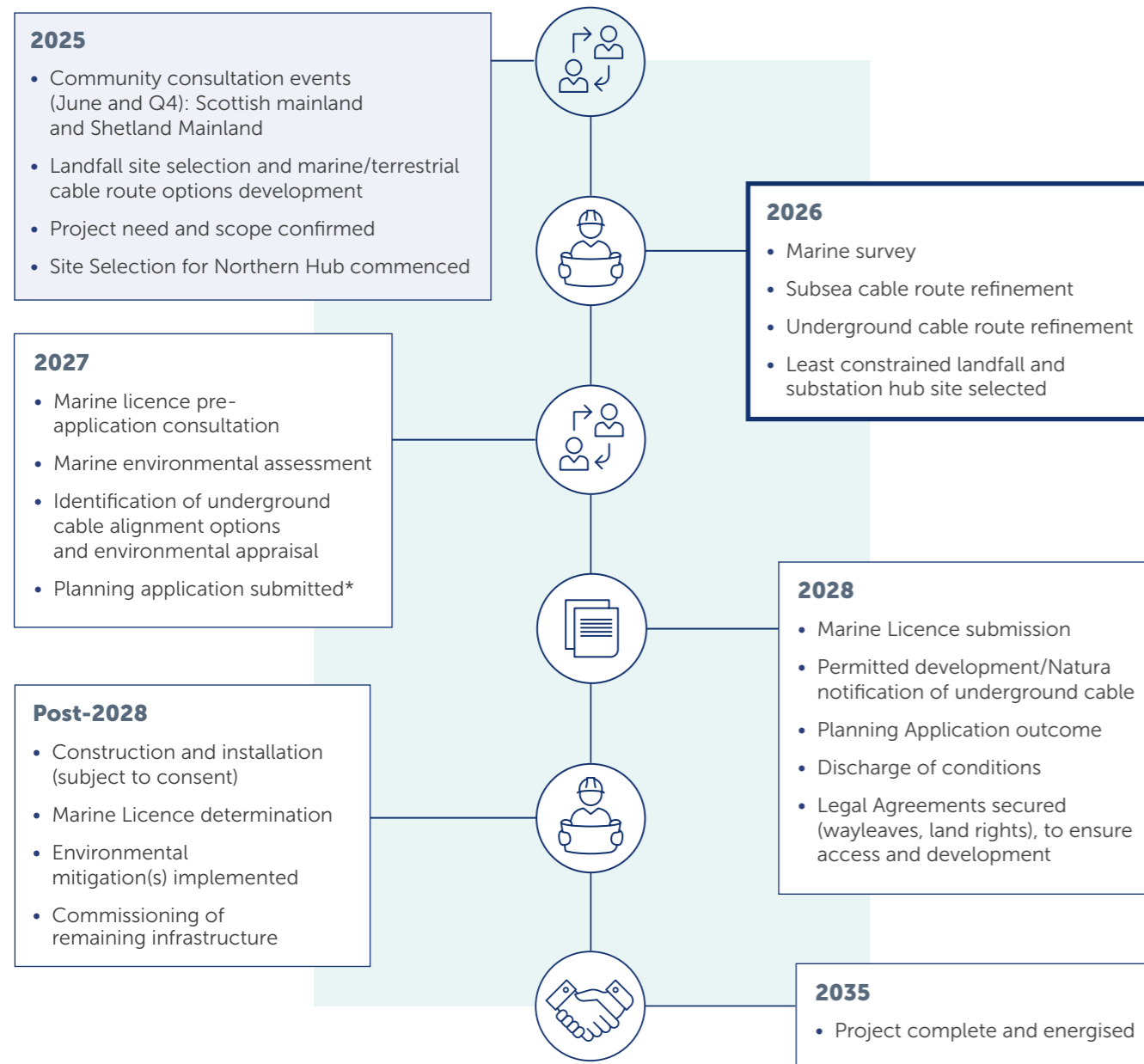
Our works can bring a wide range of benefits to the local area such as employment opportunities, apprenticeships and training, as well as working with local schools and colleges to inspire the next generation.

We actively promote and encourage the use of local suppliers, services and materials to help ensure that the benefits of our projects are felt within Shetland's economy.



Project development next steps

The timeline below sets out the key milestones for the project. Note the dates are indicative and are subject to change.



*Northern Substation Hub will require an application for planning permission to be submitted to the relevant Local Planning Authority (Shetland Islands Council) under the Town and Country Planning (Scotland) Act 1997.

This large scale project may be subject to Environmental Impact Assessment (EIA). This requires an application to be supported by a formal EIA Report together with robust consultation and mitigation proposals. Should the proposed development be deemed non-EIA (due to its scale or potential environmental impacts), a voluntary Environmental Appraisal will be produced by SSEN Transmission to support the application.

Next Steps

We value community and stakeholder feedback. Without this, we would be unable to progress projects and reach a balanced proposal.

The feedback period

Following our event, a consultation period will open until **21 August 2026**.

How to provide feedback

You can complete our feedback form online, using the feedback form at the back of this booklet or submit feedback in writing or email.

The feedback will be analysed by the project team and a report on consultation produced and published on our website detailing our response to your feedback.

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.

What we're seeking views on

Please share any feedback with us regarding the landfall sites, marine route and Northern Substation Hub site selection shown today.



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.



How to get in touch

SSEN Transmission, Stewart Building, Lerwick, Shetland, ZE1 0LL

shetlandengagement@sse.com

You can also follow us on social media:

@sentransmission SSENTransmission

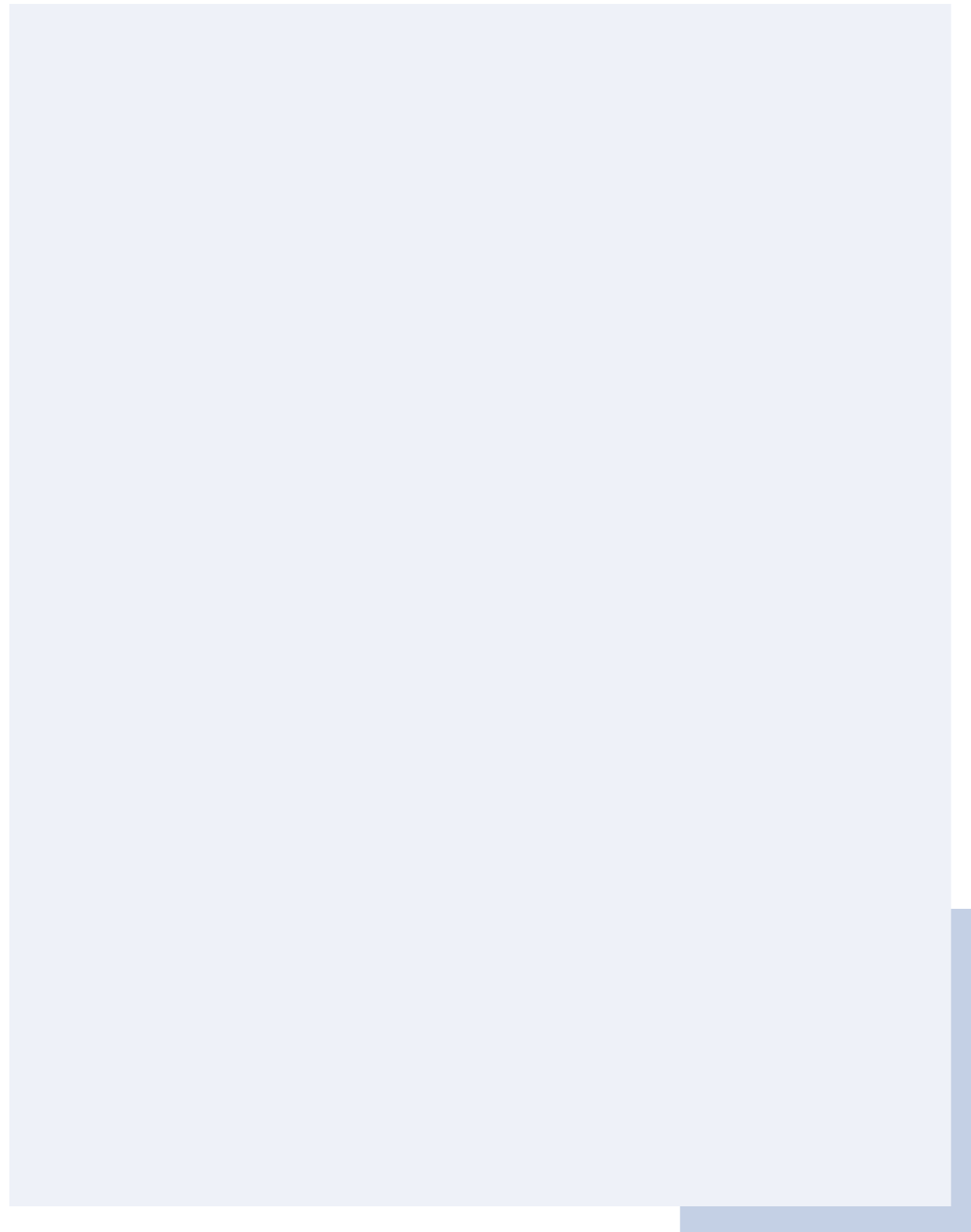
Additional information:



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

ssen-transmission.co.uk/shetland2

Notes



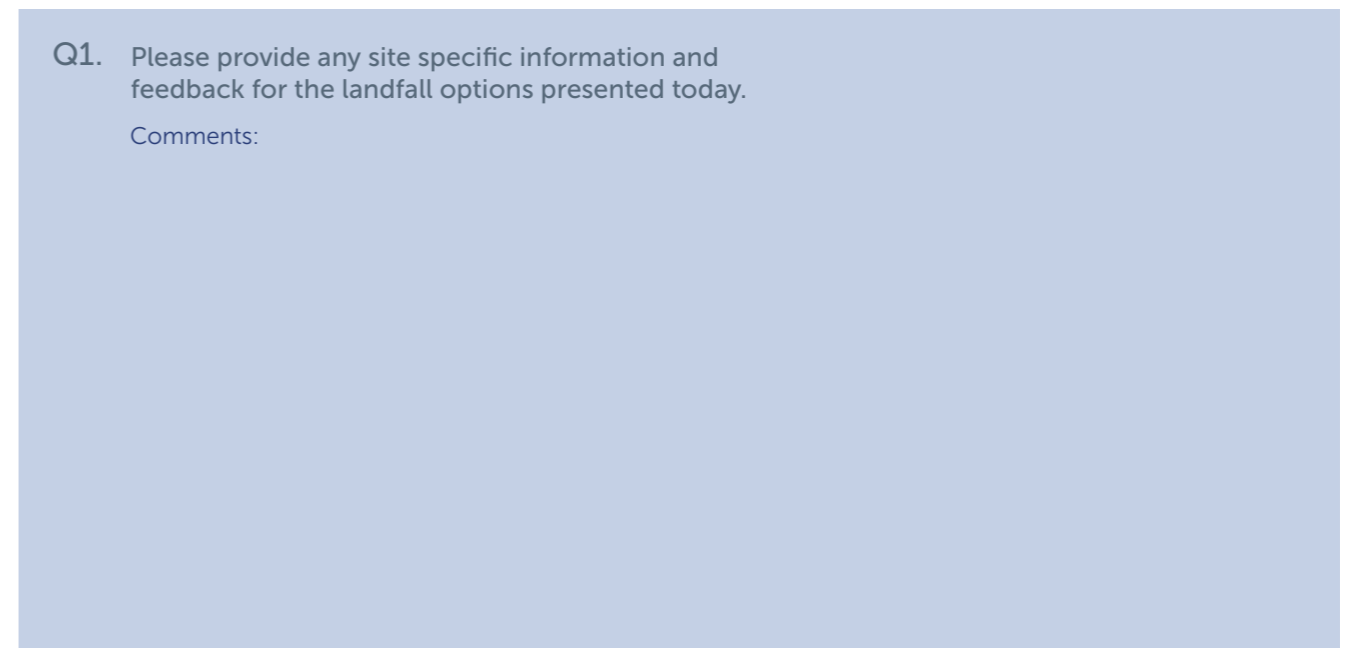
Your feedback

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)

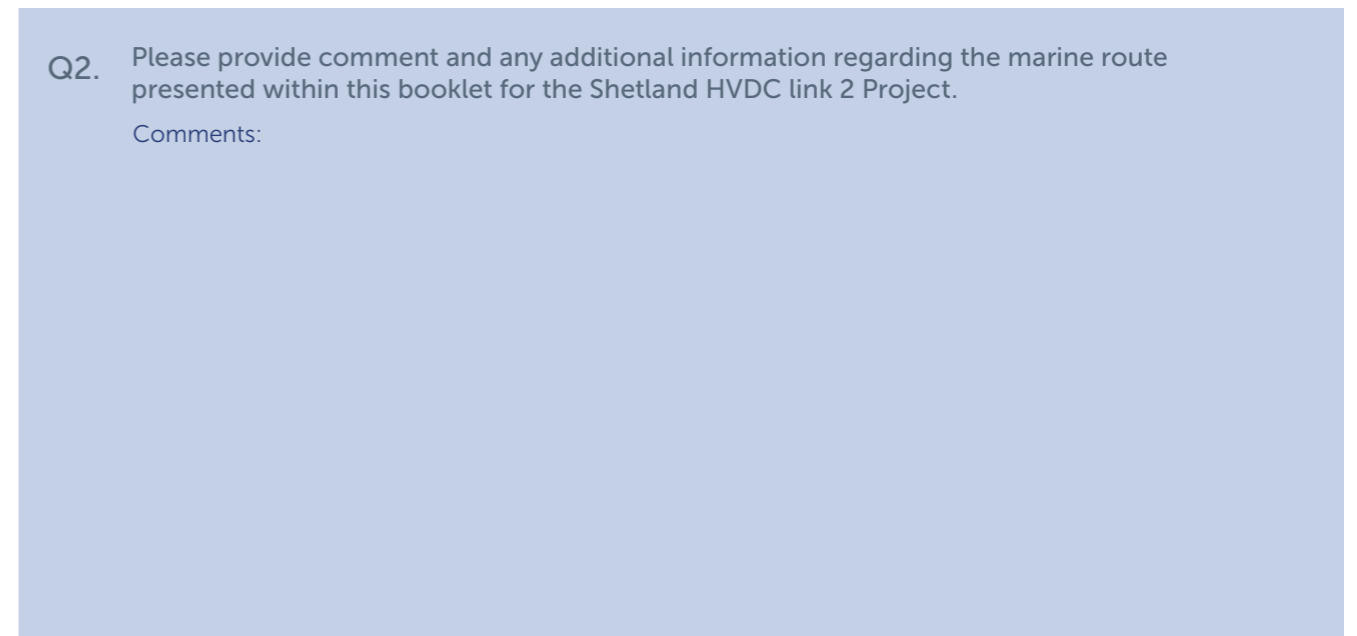
Q1. Please provide any site specific information and feedback for the landfall options presented today.

Comments:



Q2. Please provide comment and any additional information regarding the marine route presented within this booklet for the Shetland HVDC link 2 Project.

Comments:



Q3. Please provide comment and any additional information regarding the site options we have identified for the Northern Substation Hub

Comments:

Q4. What suggestions for social or environmental community benefit opportunities do you have that you would like us to consider? Or are there any local initiatives that you would like us to consider supporting?

Comments:

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, Stewart Building, Lerwick, Shetland, ZE1 0LL

Email: shetlandengagement@sse.com

Online: ssen-transmission.co.uk/shetland2

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.





Scottish & Southern
Electricity Networks

TRANSMISSION



ssen-transmission.co.uk/shetland2