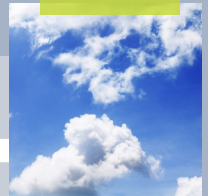


Shetland AC Connections: Northern Shetland 220kV to Kergord 132kV connection

Pre-Application Consultation 2 - Alignment

June 2026

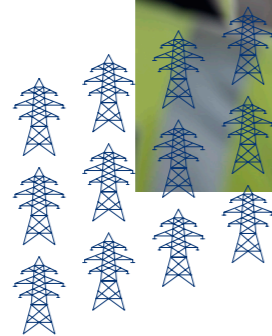


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The consultation event will be taking place on:

Tuesday 30 June, 3–8pm
Voe Public Hall, Isles Rd, Voe, Shetland, ZE2 9PT



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/

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's (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

Why this matters

The Shetland Strategy proposes a technologically robust solution, that is coordinated across the region and is shaped by local engagement and insight. The strategy serves Shetland's known energy needs as well as provision of headroom for future growth. We have looked to minimise the amount of infrastructure to reduce the impact on communities and the environment.



You can read the NESO Beyond 2030 report here

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 (CP2030) recommendations. Ofgem's determination on this was delivered in December 2025, with justification on the need for transmission reinforcement in Shetland being agreed, with further investigation required around some of the technical detail, particularly the voltage level.



The Shetland Strategy

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

The Shetland Islands can play a major part in helping Great Britain achieve Net zero targets.

There are a number of generation projects (e.g. offshore wind farms) and demand projects (e.g. hydrogen production) in the development pipeline, each project at a slightly different stage, that requires to connect to the electricity transmission network in Shetland.

Rather than look at each project on an individual basis, we have taken a whole-system approach and developed a strategic design that should accommodate both near-term and long-term network needs.

This strategic approach enables SSEN Transmission to identify the most efficient design for Shetland.

We submitted these strategic plans to Ofgem, the electricity industry regulator, as part of our Clean Power 2030 submission in early 2025.



March 2024

NESO publishes Transitional Centralised Strategic Network Plan (Beyond 2030) confirming Shetland requirement



December 2024

Ofgem funds early-stage development



July 2025

Ofgem publishes Clean Power 2030 minded to position



December 2025

Ofgem CP2030 need justified voltage under review



August 2026

Voltage confirmation from Ofgem expected

Shetland Strategy

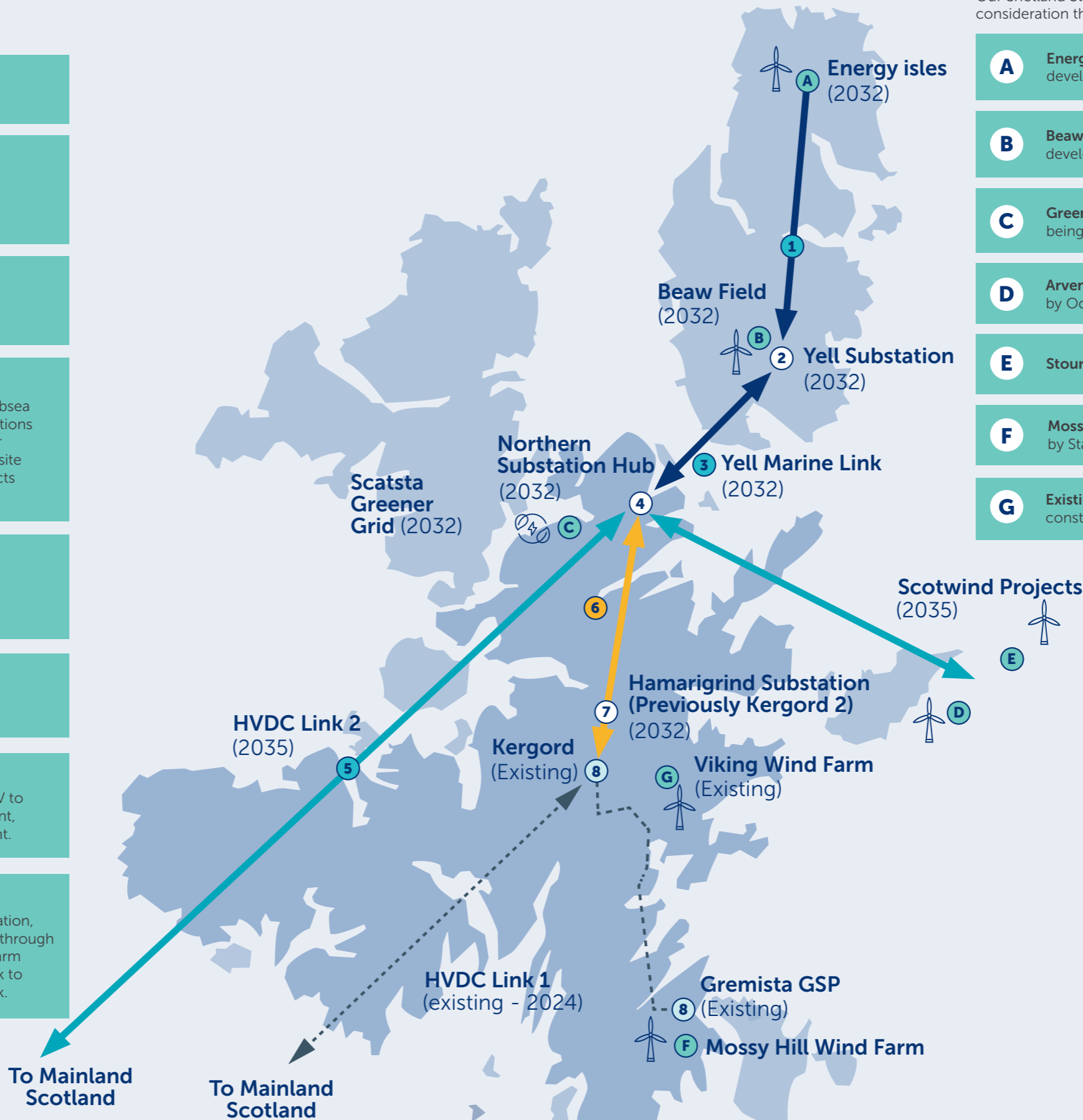


ssen-transmission.co.uk/shetlandstrategy



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**
 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.

Dates displayed are target energisation dates. Indicative illustration only.

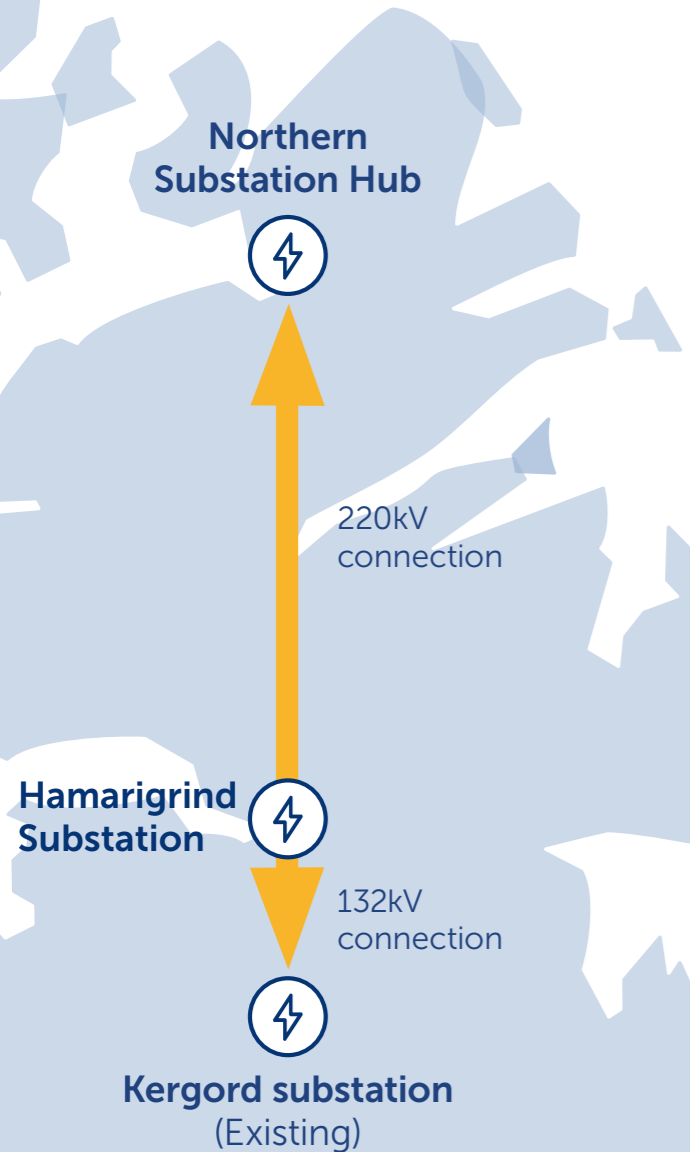
Key

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

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

About the project

Today's consultation event is focused on the connection between the proposed Northern Substation Hub and existing Kergord substation.



This project is split into two elements:

- **Existing Kergord to proposed Hamarigrind Substation:** Three 132kV circuits will be required between the existing Kergord Substation and the proposed Hamarigrind Substation
- **Proposed Hamarigrind Substation to Northern Hub:** At Hamarigrind Substation, it is proposed that the voltage will be stepped up to 220kV, which means only two circuits will be needed for the onward connection to the proposed Northern Substation Hub, which can be carried on a single line of towers.

This design reduces the total number of circuits and associated structures required, aiming to limit visual and environmental impacts.

Why is this project needed?

The Kergord Substation to proposed Northern Substation Hub Project is a crucial development aimed at integrating Shetland's renewable energy sources into the wider electricity grid. However, due to the geographical separation from the UK mainland, a robust transmission network and subsea link are necessary to export surplus energy efficiently.

This project will help support Shetland's on-island network by interconnecting the two Shetland HVDC systems together, providing a solution to meet the long-term energy resource potential and improve security of supply on Shetland, and aligns with Government Clean power 2030 ambitions to accelerate clean power connections.

This development is in line with our commitment and licence obligation to facilitate the connection to the grid through an economical, efficient and coordinated approach to transmission reinforcement.

What could this look like?

The suitability of both overhead line and underground technology options are under consideration to provide the connection.

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 is vital in shaping our proposals and to do this effectively, we need to capture feedback from stakeholders, harness local knowledge to identify risks in key areas of the route and explore potential community benefit opportunities.

Today we are presenting our approach to developing this project, including technology options, environmental considerations, the routeing process, route selection and presenting maps which aim to give stakeholders and community members a better visual representation of the work on the project to date.

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 we are consulting on today

Site surveys, engineering analysis and consultation feedback for the Northern Shetland 220kV to Kergord 132kV project have helped us identify our proposed technology and alignment options within the study area. This consultation is an opportunity to present our proposal, explain our approach to developing the project, and outline the reasoning behind our early proposals. We are keen to hear stakeholders' views on the proposals and any further considerations that should be taken into account as the project moves into the next stage of development.

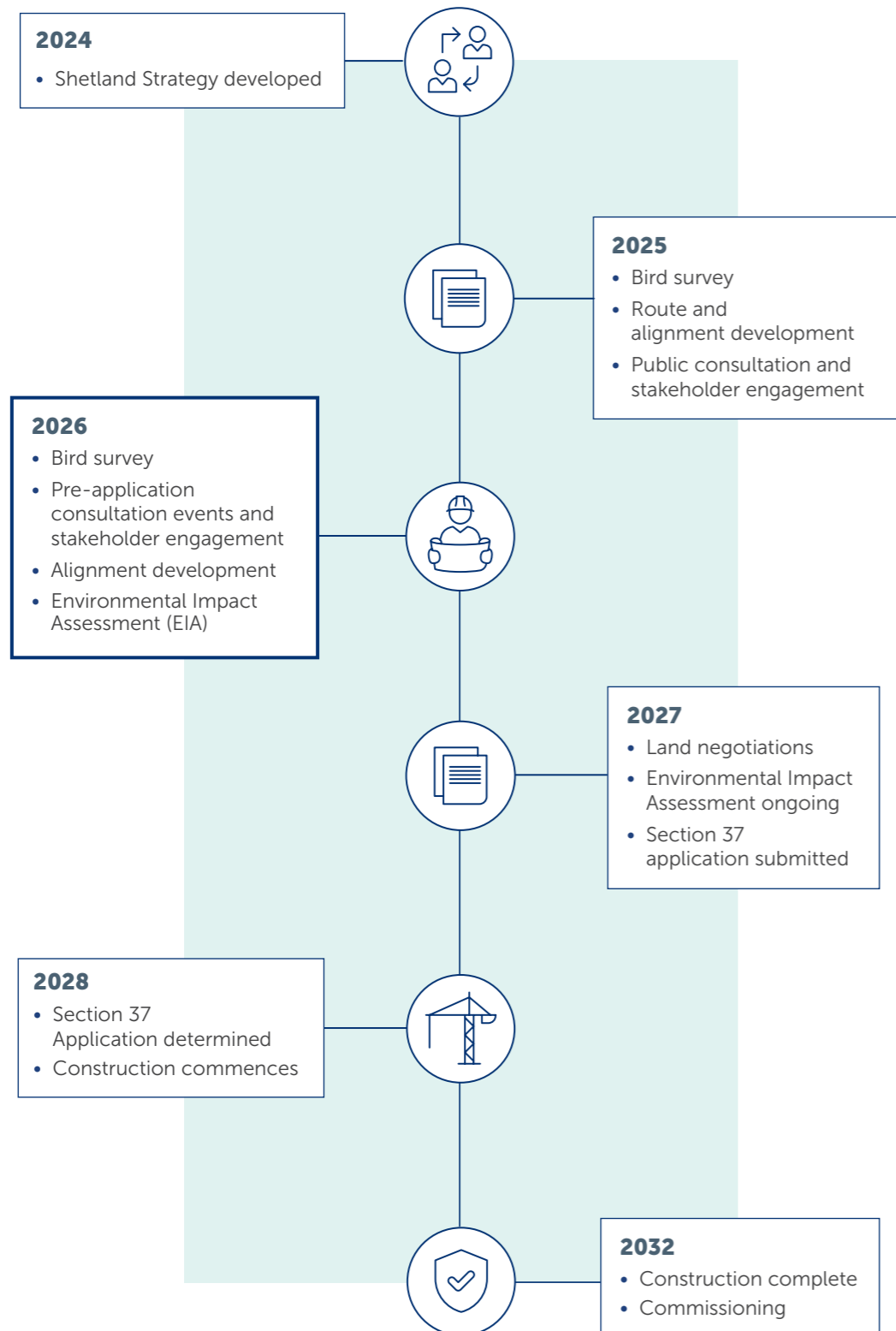
Who we are consulting with

We are keen to hear feedback from a broad range of stakeholders including but not limited to residents, landowners, businesses, non-statutory consultees and statutory consultees such as local authorities, Nature Scot, SEPA, Historic Environment Scotland.

We would encourage all those with an interest to submit their views through this consultation by submitting a feedback form.



Project timeline



Technology options

The table below presents a summary of the respective advantages and disadvantages of both technologies.

Overhead line

Advantages

- Easier to cross challenging terrain like valleys, hills, watercourses, roads and other utilities.
- Can travel long distances with no requirement for additional equipment to be installed at substations to aid in stability of the network.
- Quicker, easier and cheaper to maintain and to identify and repair faults compared to underground cable.
- Lower cost option when compared to underground cable.
- Capacity can be increased, within limits, by replacing or increasing the number of conductors. For underground cables, whole lengths of new cables would need to be installed.

Disadvantages

- Potential for significant landscape and visual impacts
- Overhead lines are exposed to possible weather damage
- Potential for audible noise and radio interference issues

Underground cable

Advantages

- Minimal landscape and visual impact from cables once construction has been complete
- No audible noise and radio interference issues
- Due to being underground not subjected to the same weather elements as overhead line

Disadvantages

- Routing is difficult when crossing challenging terrain
- Fault detection of long cable sections is challenging, and repairs can take a substantial amount of time and cost
- Over long distances cables can require additional equipment at substations to maintain stability of the network, resulting in larger substations and higher costs
- Cable is more expensive than overhead line to install and operate
- Construction corridor can be wide, particularly at higher voltages, and can potentially result in greater habitat destruction and ecological damage.



Previous consultation in November 2025

In November 2025, we consulted on route options for the proposed connection between the existing Kergord Substation, the proposed Hamarigrind (formally Kergord 2) Substation and the proposed Northern Substation Hub. We explained how environmental, technical, land and community factors would inform the next stage of design.

The project is being developed as a hybrid connection, using a combination of overhead line and underground cable. This approach reflects the need to balance technical, environmental and practical buildability considerations across the route, including ground conditions, local constraints and how the infrastructure can be delivered safely and efficiently.

Feedback from the first consultation showed strong concern about the potential visual impact on the landscape of steel lattice towers, and strong support for underground cable. Many people also raised concerns about visual impact around Voe and nearby homes, as well as peatland, wildlife and the wider landscape.

We have reviewed all feedback received during the first consultation alongside our ongoing environmental, technical, land and constructability assessments.

This has helped us identify the preferred route to take forward and informed the more detailed alignment options now being presented as part of this consultation.

During the November 2025 OHL consultation, we also consulted on a proposal for a new 132kV/220kV substation to the South of Voe, referred to at the time as 'Kergord 2'. The name of this project has been updated to 'Hamarigrind Substation' to reflect the preferred location and feedback. Consultation leaflets and materials for this project are also available at today's event or on the project website: ssen-transmission.co.uk/projects/project-map/hamarigrind-substation



Feedback	Response
<p>You said: Underground more of the route, especially around Voe.</p> <p>Many people told us that Voe and nearby homes are particularly sensitive and that more of the connection should be underground in these areas.</p>	<p>We responded: We have taken this on board.</p> <p>As part of the current design stage, we are considering underground cable sections around Voe and towards the northern end of the route on the approach to Toft, where this may help reduce impacts.</p>
<p>You said: Steel lattice towers would have too much visual impact.</p> <p>Many people were concerned about the introduction of steel lattice towers and the effect they could have on the Shetland landscape.</p>	<p>We responded: We recognise these concerns. We are continuing to develop a 220kV solution rather than a higher-voltage alternative, as this reduces the scale of infrastructure needed. We are also refining the route and tower locations to position towers sensitively and reduce visual impact. We are assessing potential underground cable in the most sensitive areas.</p>
<p>You said: Peatland and ground conditions must be taken seriously.</p> <p>Feedback highlighted concerns about peatland, hydrology and difficult ground conditions along the route.</p>	<p>We responded: These issues are a key part of our ongoing work. Further peat, ground and construction assessments are being used to refine the route and alignment, to position towers sensitively and reduce visual impact. We are assessing the most appropriate design, technology and construction options.</p>
<p>You said: Avoid the most sensitive areas and communities.</p> <p>Many people asked us to avoid the areas with the greatest impact on communities, homes and the landscape.</p>	<p>We responded: After reviewing consultation feedback alongside our environmental and technical assessments, we are taking forward Route Option 3. This was selected because Option 1 had greater impacts on communities (in particular Brae), and Option 2 had more impact on deep areas of peatland, presenting significant construction, access and environmental challenges.</p>
<p>You said: Explain more clearly why overhead line is still being proposed</p> <p>Some people said they understood the need for the project but wanted a clearer explanation of why overhead line remains part of the proposal.</p>	<p>We responded: The project is being developed as a hybrid connection, using a combination of overhead line and underground cable. This helps balance technical, environmental and construction considerations while reducing the overall amount of infrastructure needed across the route.</p>

Selecting an alignment

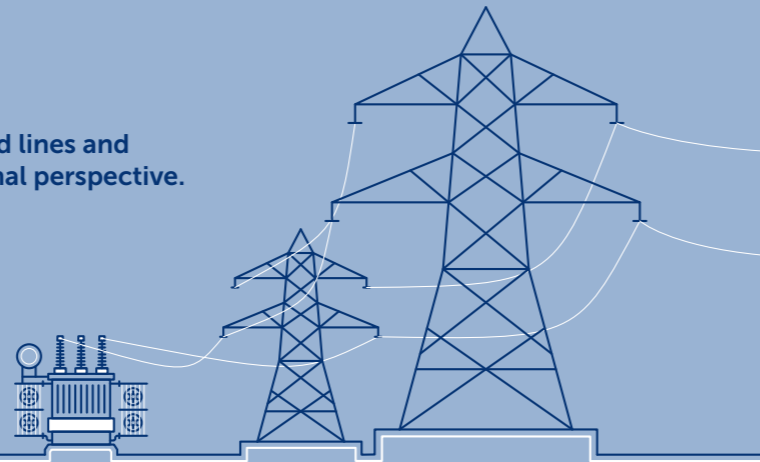
The consideration of alignment options and design solutions brings together work by four main disciplines:

Engineering Team

Who identify engineering constraints and where overhead lines and cables can be installed from a construction and operational perspective.

Key considerations include:

- Infrastructure crossings
- Environmental design
- Ground conditions
- Accessibility
- Proximity to existing infrastructure and properties



Communities Team

Who work with communities and make sure that their feedback during the consultation process is closely considered during project refinement.

Key considerations include:

- Community engagement
- Consultation responses review
- Recreational areas and areas of local interest



Land Team

Who engage with landowners to identify key land use constraints.

Key considerations include:

- Landowner engagement
- Mitigating effects of infrastructure on land and properties
- Reaching land agreements

Consent and Environment Team

Who identify key environmental, community and social constraints along the routes which the new infrastructure could impact upon.

Key considerations include:

- Engagement with statutory consultees and planning authorities
- Results of specialist environmental surveys including archaeology, ornithology, ecology, geology and hydrology
- International environmental designations including Special Areas of Conservation (SACs - designated for habitats), Special Protected Areas (SPAs - designated for bird species), Sites of Special Scientific Interest (SSSI), Ramsar sites (wetlands of international importance identified under the terms of the Ramsar Convention) and World Heritage Sites
- National designations including Scheduled Monuments, Listed Buildings, National Scenic areas, National Nature Reserves, Gardens and Designed Landscapes
- Regional environmental sensitivities including Wild Land Areas and Special Landscape Areas
- Local environmental aspects including visual amenity, local and RSPB nature reserves, recreation uses



Striking a balance

When selecting an alignment, we need to carefully balance key considerations relating to engineering, environment, cost and social aspects, in each section of the overhead line route.

We then consider the likely effect and level of impact of each consideration, which will vary from section to section.

This can be based on how populated the area is, the outcomes of environmental and engineering surveys, the presence of peat, the local water environment, if there is existing infrastructure we need to avoid, if the effects on land and property can be mitigated and if a constructable alignment can be identified.

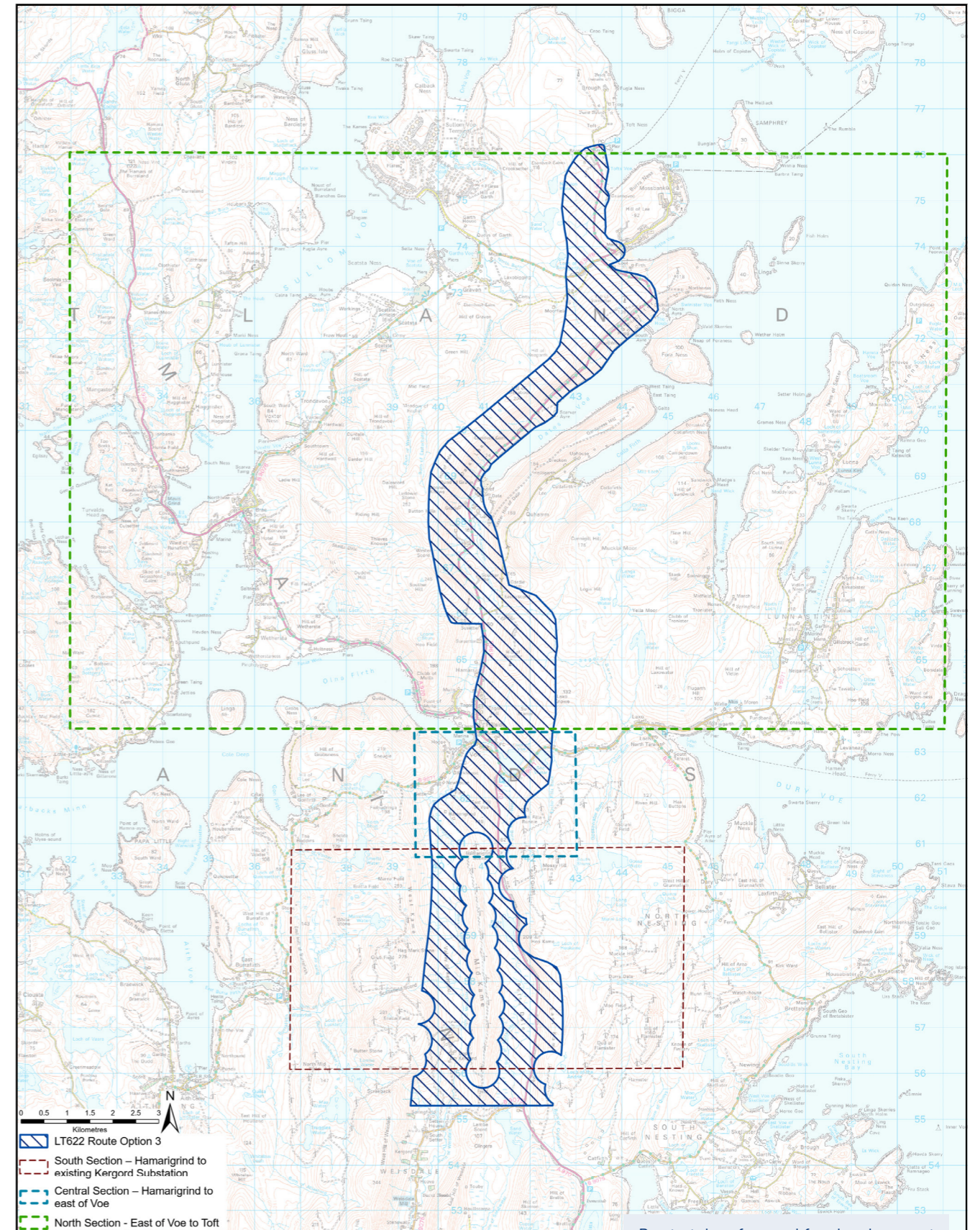
Ultimately, we need to balance a range of factors and present the solution we consider most viable for consultation. We consulted on our Potential Route in November 2025 and are now consulting on our alignment options.

We will produce an Alignment Selection Report on Consultation documenting the consultation responses received as part of our alignment consultation process for the project and where appropriate, show how the Proposed Alignment being taken forward to consent has been informed by this process. This will be available to be downloaded from the project webpage or viewed during future events.

Northern Shetland 220kV to Kergord 132kV route

A new transmission line is planned to connect the Northern Hub Substation at Toft with the existing Kergord Substation. The proposed connection will use a combination of underground cables and overhead lines.

The project comprises two main elements. The first connects the existing Kergord Substation to the proposed Hamarigrind Substation at 132kV. The second connects the proposed Hamarigrind Substation to the proposed Northern Hub Substation at 220kV. The map opposite shows the route taken forward for development following the previous consultation. For ease of reference, the northern section is shown in green, the central section in blue, and the southern section in red. The following pages provide further detail on each section, including the technology options considered, the alignment options assessed, and the proposed least constrained alignment.



Route taken forward for development

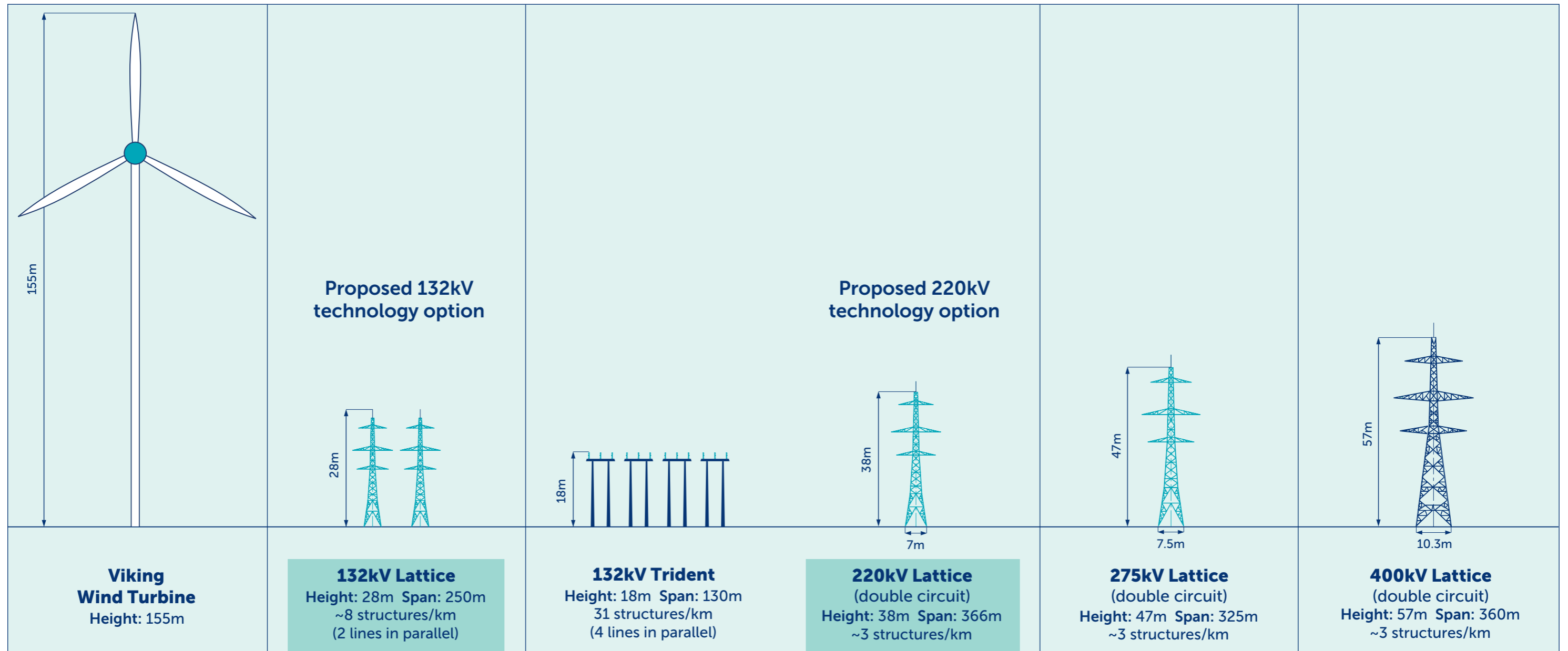
Our proposed technology

Given the scale and environmental context of the connection required between Kergord and the proposed Northern Substation Hub, overhead lines are being explored as a technically viable option for the project. Overhead lines are typically the most efficient, environmentally sensitive and economic method of transmission over long distances and will typically cause less disruption and environmental impact during construction in carbon rich soil environments compared to underground cable alternatives. As routes are finalised and alignment options developed, assessment will be made as to whether there are particular sensitivities along the route where sections of underground cabling might be more appropriate. We are required to make this assessment as part of our approach to delivering a coordinated and cost-effective solution in line with our licence obligations.

A key factor in determining the number of circuits and what these circuits look like, is the voltage the system operates at to meet its required rating. The voltage at the existing Kergord substation is 132kV and so the connection between this substation and the proposed Hamarigrind substation (where transformers will step up and change the voltage) is limited to a 132kV connection. To achieve the required capacity for the connection using an overhead line at 132kV, either 4 trident structures would be required running in parallel, with span between structures typically 130m or 2 lattice structures in parallel spanning approximately 250m between structures. Although 4 trident structures may meet the rating requirements, this would require extensive work at the existing Kergord Substation. Therefore, we do not consider this to be a viable option.

The proposed Hamarigrind substation, will step up the voltage to reduce the number of structures required between Hamarigrind and the proposed Northern Substation Hub, increasing voltage to allow the capacity to be carried by a single set of structures, rather than parallel lines. For this reason, Hamarigrind has been positioned as close as other constraints reasonably allowed to the existing substation. At 220kV two circuits would be required, these could be carried on a single steel lattice overhead line structure. 220kV is not a voltage widely used on our network (with 275kV more often deployed historically) but it is commonly used on mainland Europe. Whilst 275kV would be suitable and similarly allow for a single set of towers, 220kV is proposed to acknowledge the visual and environmental sensitivities on Shetland.

Typical 275kV towers are roughly 10m taller than the proposed 220kV structure and require larger foundations, whilst spanning a similar distance to the 220kV alternative. Our regulator, Ofgem, has queried the preference for use of 220kV, over 275kV or 400kV solutions which have potential to provide additional future capacity. This has been explored, and we continue to propose the use of 220kV as the most appropriate voltage for new connections. On Shetland, we believe 220kV offers the right balance between technical performance and reducing visual and environmental impacts. We have ongoing engagement with Ofgem in relation to this and a final decision from Ofgem is expected in Q3 2026.

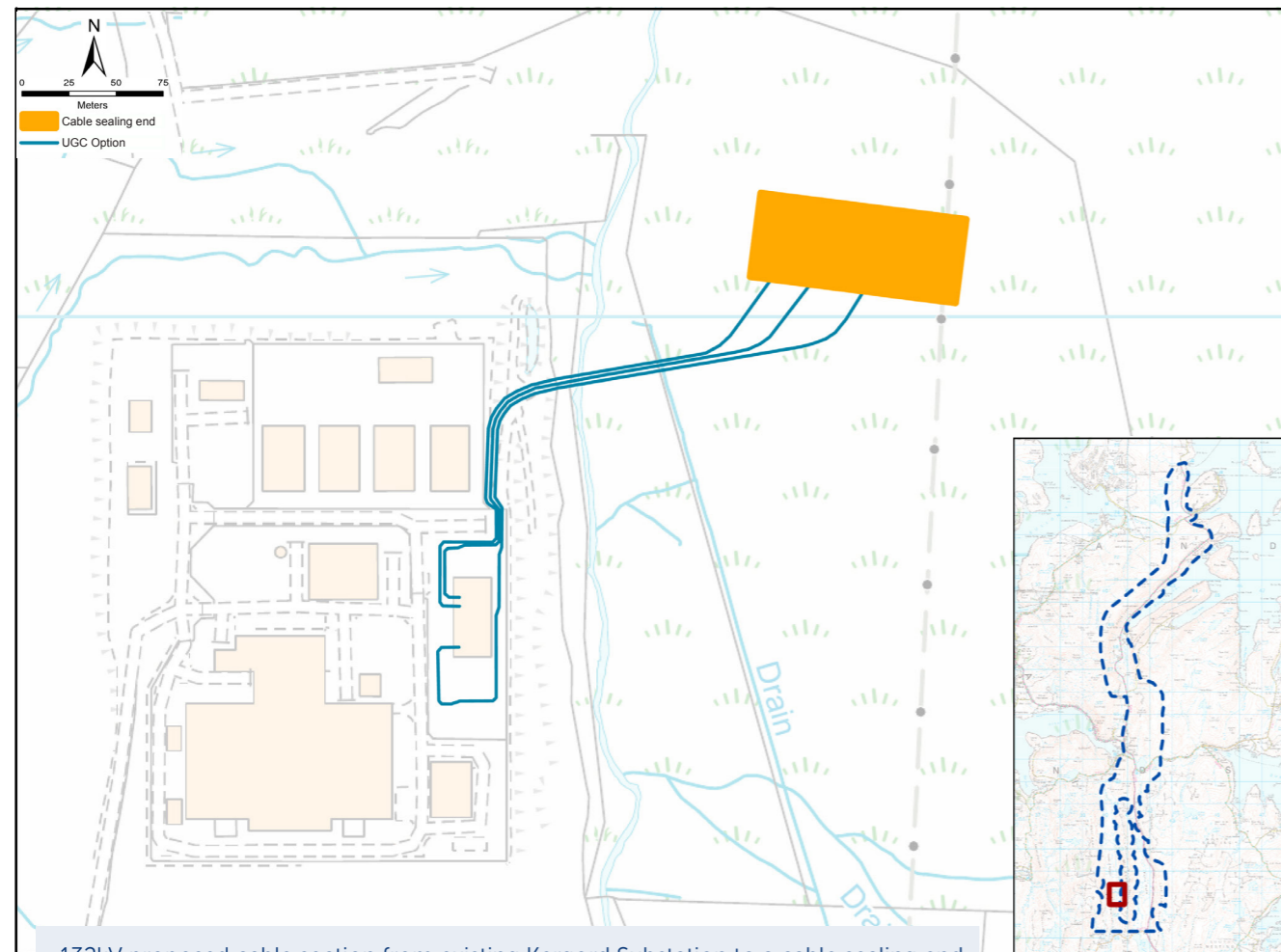


Southern Section 132kV: Kergord Substation to Hamarigrind

This section of the proposed connection would use a hybrid solution, comprising two sets of overhead line supported by lattice towers and an underground cable linking the proposed Hamarigrind Substation with the existing Kergord Substation.

Underground cable section

The image below shows the section where underground cable is proposed to connect the existing Kergord substation to a cable sealing end at the north east corner of the substation. Underground cable is being considered in this location because space is limited around the existing operational substation, and this may provide the most practical way to safely accommodate three circuits. The alignment would also need to cross a burn, which would be carefully considered as part of the design. This section would be approximately 286 metres long.



132kV proposed cable section from existing Kergord Substation to a cable sealing end

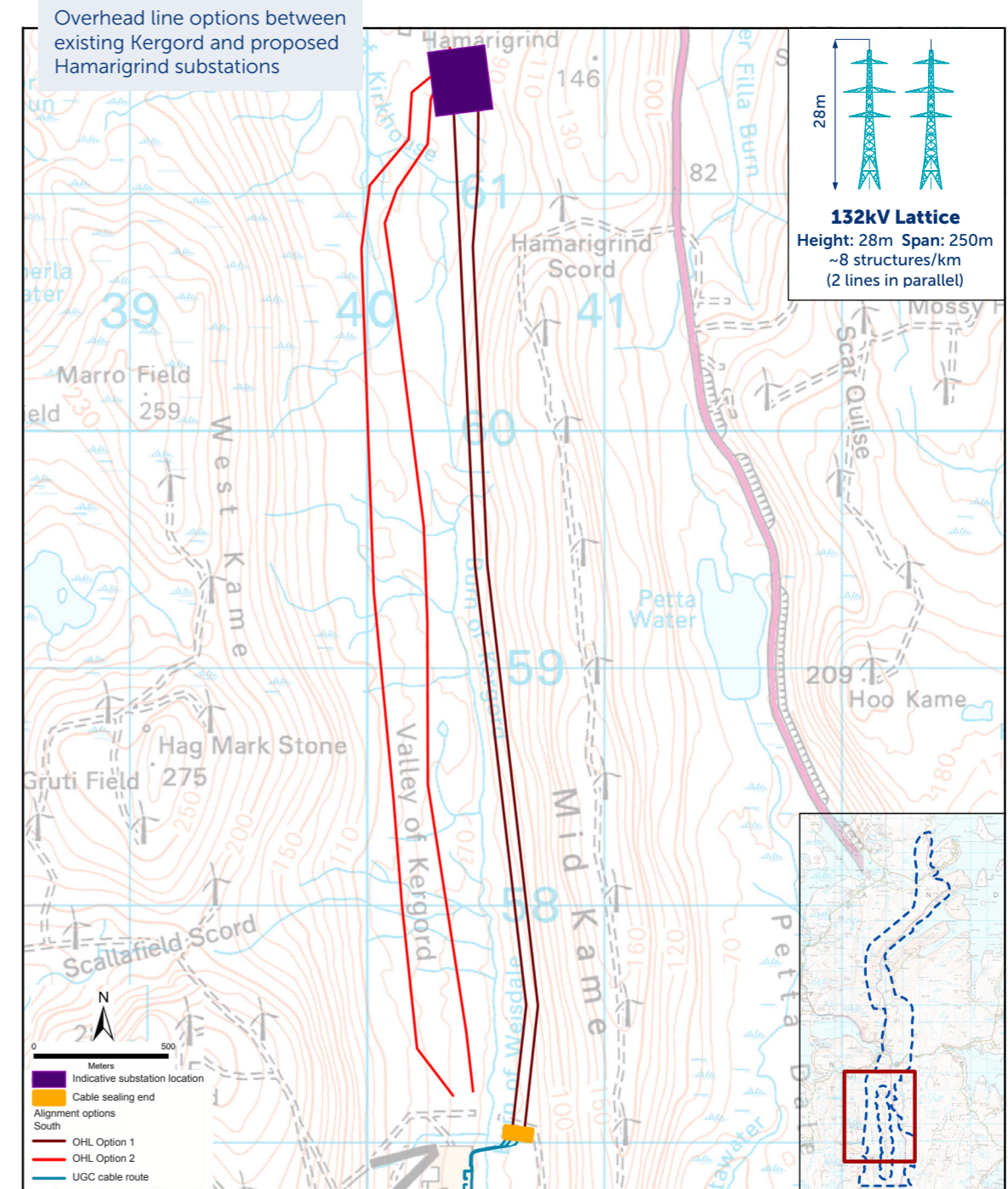
Overhead line section

Alignment Option 1

Option 1 is located along the eastern side of the Burn of Weisdale and Burn of Kergord, positioned close to the wind turbines. This alignment is subject to fewer constraints, as it crosses a reduced number of burns, and benefits from convenient access via the existing wind turbine tracks, which connect directly to the A970 main road.

Alignment Option 2

Option 2 is located on the western side of the Burn of Weisdale and Burn of Kergord, set at a greater distance from the wind turbines. This alignment is subject to increased constraints, as it requires multiple burn crossings, which considerably complicate the construction process. Furthermore, access to the proposed structures is limited due to challenging ground conditions.



Environmental and technical constraints

Natural Heritage:

All options pass through Class 1 peatland, including blanket bog, which is likely to be nationally important. They also pass through other valuable habitats, such as wet heath and upland flushes. Each route crosses several watercourses protected under the Water Framework Directive. The proposed overhead line technology could span over these crossings, significantly reducing potential ground disturbance near these watercourses compared with an underground cable alternative. Appropriate mitigation measures would be implemented to avoid or minimise potential impacts. None of the options pass through internationally, nationally or European-designated sites. However, other hots are present within the route areas, so the design will need to be refined to avoid harming otter habitat.

Landscape and Visual:

All alignment options pass through the landscape character inland valleys and are over 1km from the closest residential properties at Setter and Voe. There are no core paths or other recreational routes situated within 1km of the alignments.

Cultural Heritage:

No designated cultural heritage assets are within 2.5km of the alignments. There are a small number of low sensitivity non-designated assets and potential impacts would be limited.

Other potential environmental topics:

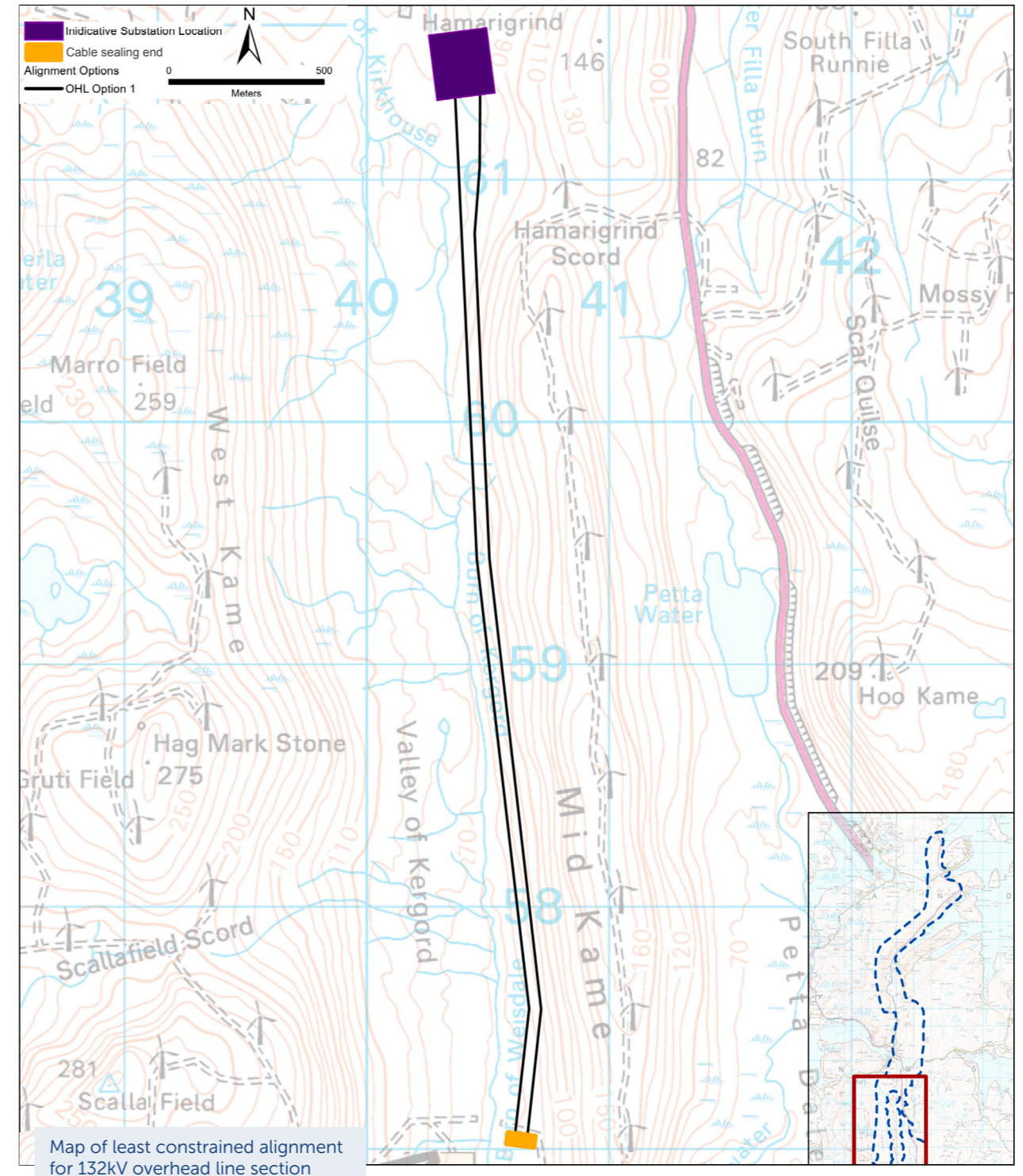
All options are located on land of low agricultural value with no significant land-use constraints identified. Recreational features and planning considerations are unlikely to be affected. All alignments have similar environmental impacts including peatland that contains nationally important habitats (blanket bog) that support vital plant and animal species including otters. All alignments also cross designated watercourses.

Technical considerations:

A review of the technical constraints identified that alignment Option 2 would present greater construction challenges, due to the need for multiple burn crossings and more difficult access to the proposed structures because of the ground conditions. By comparison, alignment Option 1 would be subject to fewer constraints, with a reduced number of burn crossings and more convenient access provided by the existing wind turbine tracks, which connect directly to the A970.

Southern section proposed least constrained alignment

Option 1 has been identified as the proposed least constrained alignment. The alignment can be located within an existing corridor that helps minimise environmental and technical constraints. This option is the closest to existing infrastructure of Viking wind farm and associated access tracks as well as an existing distribution overhead line. This provides the opportunity to use the existing infrastructure and reduce the environmental impact of the alignment in the Kergord Valley.

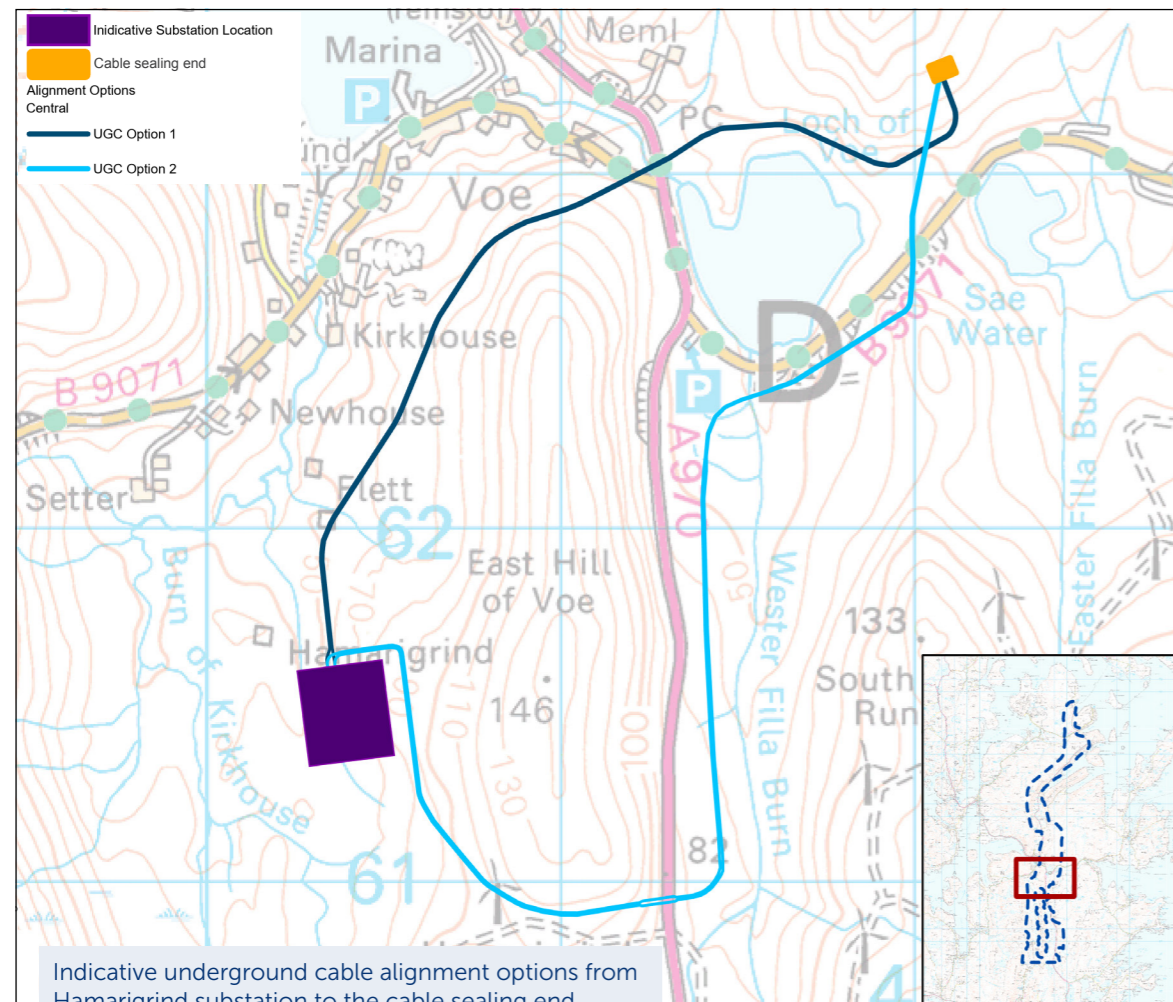


Central Section 220kV: Hamarigrind to East of Voe

Following previous consultation, the section heading north from Hamarigrind Substation, out of the Kergord Valley and to the East of Voe, is proposed as an underground cable. This approach reflects both feedback received during consultation and environmental considerations in this area.

It was not possible to route an overhead line north out of the Kergord Valley without coming into close proximity of residential properties or skylining over the brow of the hill, with visual impact to the residential area at Voe, users of the paths around the Lochs to east of Voe and transient receptors of vehicles passing along A970. Due to the pinch point of the landscape with sea to east and west and two bodies of water in between, it is an area that supports bird species and an overhead line could have greater potential to affect bird movements and the surrounding landscape.

Two underground cable alignment options have been identified within this area, one to the south of Loch Voe and one to the north, as shown below. The use of underground cable in this area remains subject to further assessment and investigation, including ground investigation works.



Alignment options descriptions

Alignment Option 1

Option 1 runs north from the substation location towards Voe, it then crosses the intersection of the B9071 and A970, which is located to the northwest of the Loch of Voe, it then runs to the north of the Loch Voe in an easterly direction for approximately 850m.

Alignment Option 2

Option 2 tracks south from the substation, at the Viking access track it turns east towards the A970, it crosses the A970 and then runs north following the road to meet the B9071, it turns east running parallel to the B9071 before crossing this road in a northerly direction and passing between Loch of Voe and Sae Water, it then continues north and follows the same path as Option 1.



Environmental and technical constraints

Natural heritage:

All options pass through Class 1 peatland classified as blanket bog, which is likely to be of national significance, however, Option 1 passes through less Class 1 peatland than Option 2. Option 1 also passes through important habitats that include upland acid grassland, upland heathland and upland flushes, fens and swamps, whereas Option 2 passes through a small section of upland acid grassland. All alignment options avoid international, European or national designation sites. However, otter holts are located within the alignment options, and design refinements will be required to ensure habitats that support the otters are not impacted.

Landscape and visual:

All alignment options pass through the landscape character 'Inland Valleys' and 'Farmed and Settled Voes' and are not situated within close proximity to any designations. The alignments are all over 100m from the closest residential properties at Voe. All alignments cross the EuroVelo cycle route.

Cultural heritage:

No designated cultural heritage assets are within 2.5km of the alignments. There are a small number of low sensitivity non-designated assets, and any potential impacts would be managed through design refinements.

Other potential environmental topics:

All alignment options are located on land of low agricultural value with no significant land-use constraints identified. Planning considerations are unlikely to be affected.

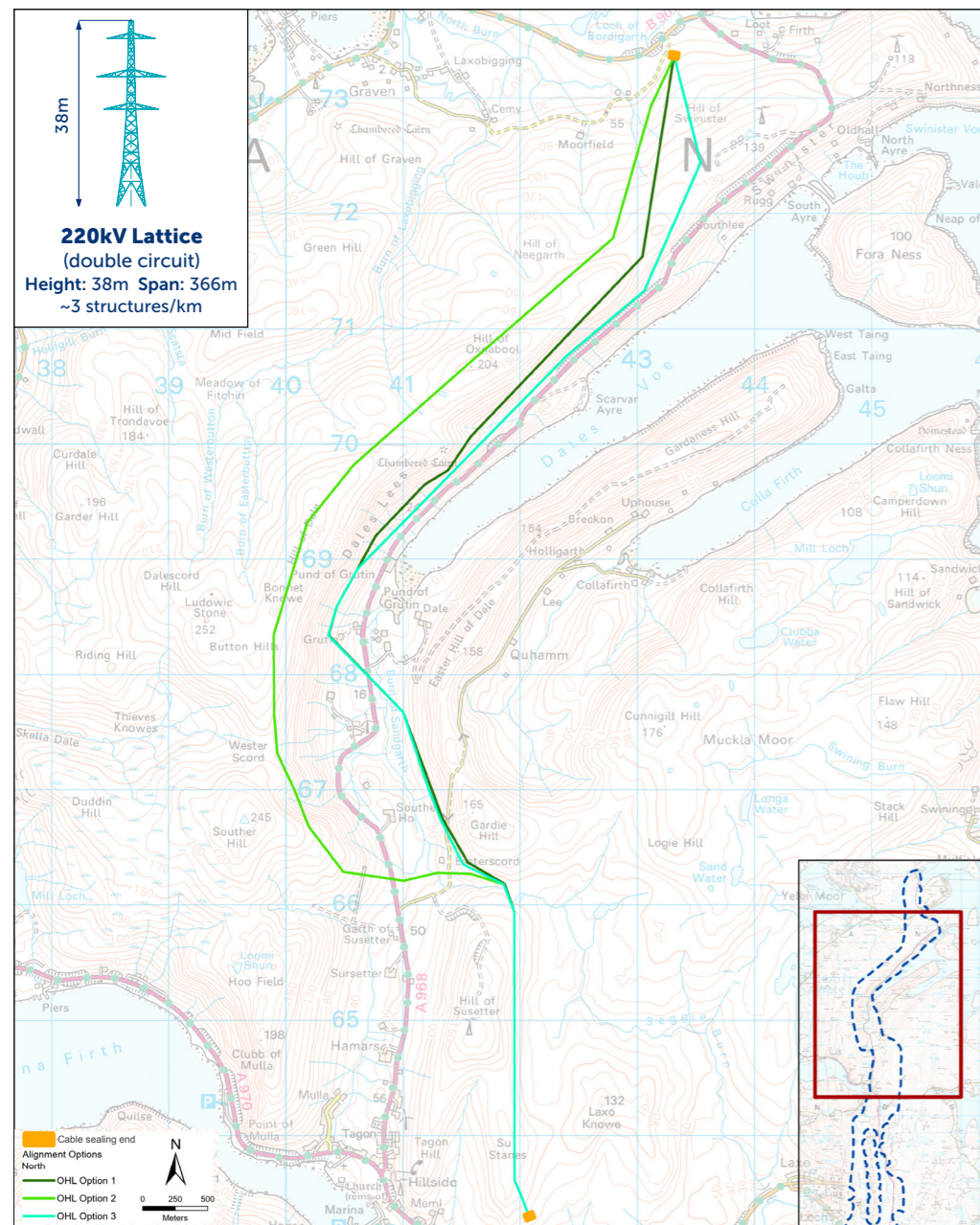
Central section 220kV underground cable proposed least constrained alignment option:

Option 2 has a number of environmental impacts, including passing through peatland that contains nationally important habitats (blanket bog) and which supports vital plant and animal species, including otters. Additionally, the increased length of Option 2 has the potential to lead to greater environmental impact. Option 1 crosses less Class 1 peatland than Option 2 and will therefore have less impact on nationally important habitats. **As a result, the proposed least constrained alignment is Option 1 to the north of the Loch of Voe.**

Northern Section: East of Voe to Toft

220kV overhead line - East of Voe to Hill of Swinister

Three potential route alignments have been identified, assessed and are presented below. This section is proposed as an overhead line (OHL) route between two cable sealing ends, requiring the installation of 220kV double circuit lattice towers.



Alignment options descriptions

Alignment Option 1

Option 1 separates from Option 3 at Dales Voe and continues northeast along the slope of Dales Lees broadly following the A968, it then turns north before Southlee and terminates at the cable sealing end south of the B9076.

Alignment Option 2

Option 2 diverges from Options 1 and 3 at Easterscord and follows a westerly route towards the A968. It crosses the A968 and then continues north, running along Hill of Dale and Hill of Oxnabool. At Hill of Neegarth, it turns north and terminates at the cable sealing end south of the B9076.

Alignment Option 3

Option 3 splits from Option 1 at Dales Voe follows the A968 on the lower slopes of Dales Lees, it turns north before Southlee, continuing over the Hill of Swinister and terminates at the cable sealing end south of the B9076.



Environmental and technical constraints

Natural Heritage:

All options pass through Class 1 peatland, classified as blanket bog and likely to be of national importance. However, Options 1 and 3 pass through less Class 1 peatland than Option 2.

Options 1 and 3 also pass through important habitats, including upland heathland, upland acid grassland and other neutral grassland. Option 2 mainly passes through blanket bog, with smaller areas of these habitats.

All options avoid internationally, European and nationally designated sites. Otter holts are present within the alignment corridors, so design refinement will be needed to avoid impacts on otter habitat.

Landscape and Visual:

All alignment options pass through the 'Major Uplands' and 'Farmed and Settled Voes' landscape character types, while alignment Options 2 and 3 also pass through 'Inland Valleys'. None of the alignment options are located close to any landscape designations. The nearest residential property is approximately 120m from alignment Options 1 and 3, while alignment Option 2 is more than 500m away from the nearest residential property.

Cultural Heritage:

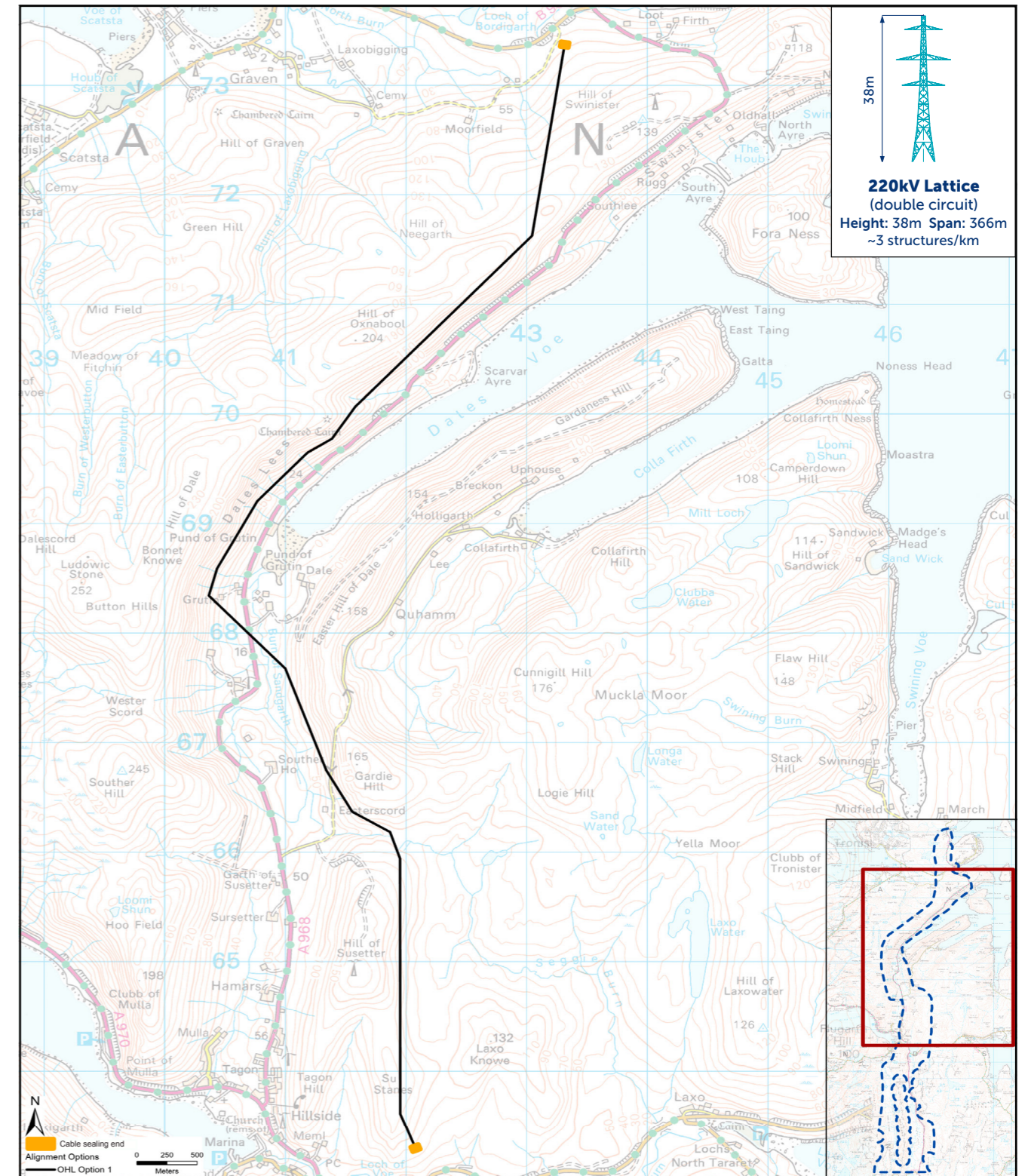
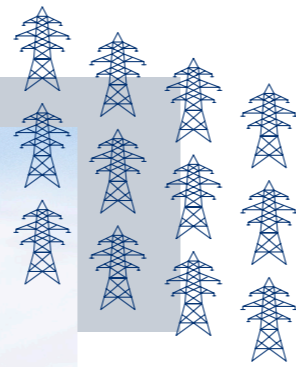
Alignment Options 1 and 3 are closer to a Scheduled Monument and several non-designated assets within 250m, increasing the potential for direct and setting effects. Option 2 is not close to any Scheduled Monuments and has fewer non-designated assets within 250m, although all options remain subject to some wider setting sensitivity.

Technical constraints:

A review of the technical constraints identified key differences between the three alignment options. Option 1 would reduce the overall route length, number of structures and permanent access requirements, but would be located on steeper slopes. Option 2 would avoid some of the more difficult terrain constraints, but would pass through areas of deeper peat and include access in more challenging ground, making it generally less preferred. Option 3 would remain closer to the A968 and avoid the steep slopes associated with Option 1, but would intersect an existing 33kV distribution overhead line, requiring additional undergrounding works.

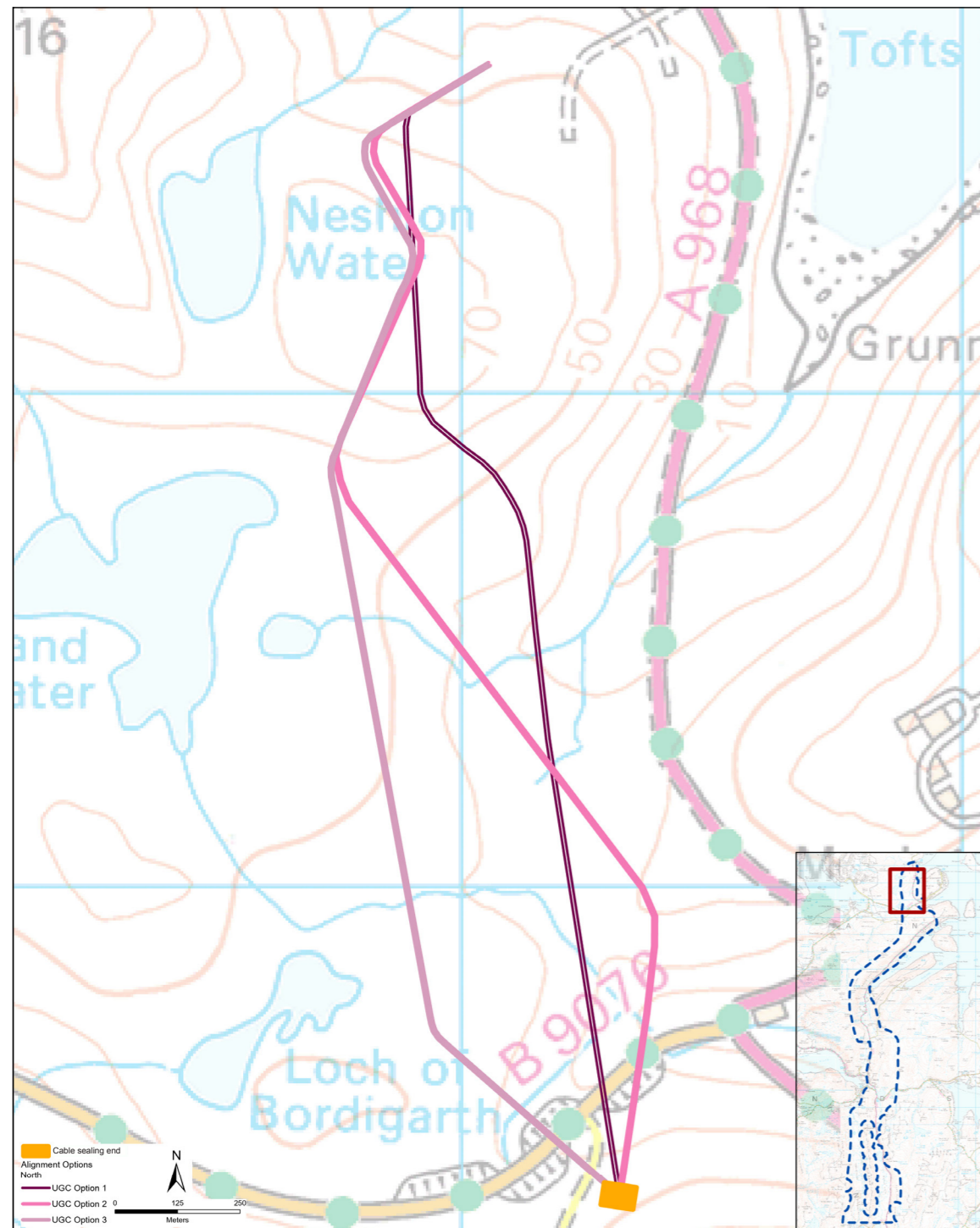
Proposed least constrained alignment

Option 1 is identified as the proposed least constrained alignment, taking both technical and environmental constraints into account. While Option 3 offers some environmental advantages, including greater opportunity to use existing infrastructure and reduce effects in Dales Lees, these benefits were considered broadly comparable to those of Option 1. Option 1 was therefore preferred because it avoids the additional engineering complexity associated with Option 3 while also limiting impacts on nationally important peatland habitat compared with Option 2.



Northern section: 220kV underground cable alignment options

Three potential route alignments have been identified and assessed for this section between the cable sealing end and the proposed Northern Hub substation. In this area, underground cable is being considered to help reduce potential effects on nearby Local Nature Conservation Sites and core paths. The approach to the Northern Hub requires entry across a Local Nature Conservation Site and an area of ornithological activity. Given the features of these sites, particularly in relation to birds and habitat, underground cable is being considered as an appropriate option to help avoid and mitigate potential impacts.



Alignment descriptions

Alignment Option 1

Option 1 crosses the B9076 and continues north across the Burn of Sandwater. After approximately 850m, the route turns north-west. At Neshion Water, it turns north towards Toft before heading east after around 550m to connect into the Northern Hub.

Alignment Option 2

Option 2 crosses the B9076 and heads north-east towards the A968. After approximately 500m, the route turns north-west towards Sand Water. At Neshion Water, the alignment turns north-east for around 450m, before turning north-west. After a further 230m, it turns east to connect into the Northern Hub.

Alignment Option 3

Option 3 crosses the B9076 and continues north-west for approximately 500m towards the Loch of Bordigarth, before turning north towards Neshion Water. The alignment then heads north-east for around 450m, before turning north-west. After a further 230m, it turns east to connect into the Northern Hub.

Northern section underground cable proposed least constrained alignment:

Option 1 is identified as the proposed least constrained alignment, taking both technical and environmental constraints into account. While Option 3 offers some environmental advantages, including greater opportunity to use existing infrastructure and reduce effects in Dales Lees, these benefits were considered broadly comparable to those of Option 1. Option 1 was therefore preferred because it avoids the additional engineering complexity associated with Option 3 while also limiting impacts on nationally important peatland habitat compared with Option 2.

Environmental and technical constraints

Natural Heritage:

All options pass through Class 1 peatland classified as blanket bog, which is likely to be of national significance. Options 1 and 2 affect areas of deeper peat, over 2.7m, while Option 3 avoids these areas. All options also pass through other important habitats. Option 1 crosses upland heathland and upland acid grassland, Option 2 crosses upland acid grassland, and Option 3 crosses a small area of modified grassland. While all options avoid internationally, nationally and European designated sites, they each overlap the Bordigarth Local Nature Conservation Site. Otter holts are present within the alignment areas, so further design refinements would be needed to avoid impacts on supporting habitat.

Landscape and Visual:

All alignment options pass through the Major Uplands, Farmed and Settled Voes, and Inland Valleys landscape character areas. None of the options are close to any landscape designations. The nearest residential property is around 450m from Option 2, and over 500m from Alignment Options 1 and 3.

Cultural Heritage:

Option 2 could directly affect one non-designated heritage asset and passes close to another. No Scheduled Monuments are located within 250m of any option. Design refinements would be needed to reduce potential effects on cultural heritage assets. Due to the nature of the underground cable in this section, no significant effects on setting are anticipated.

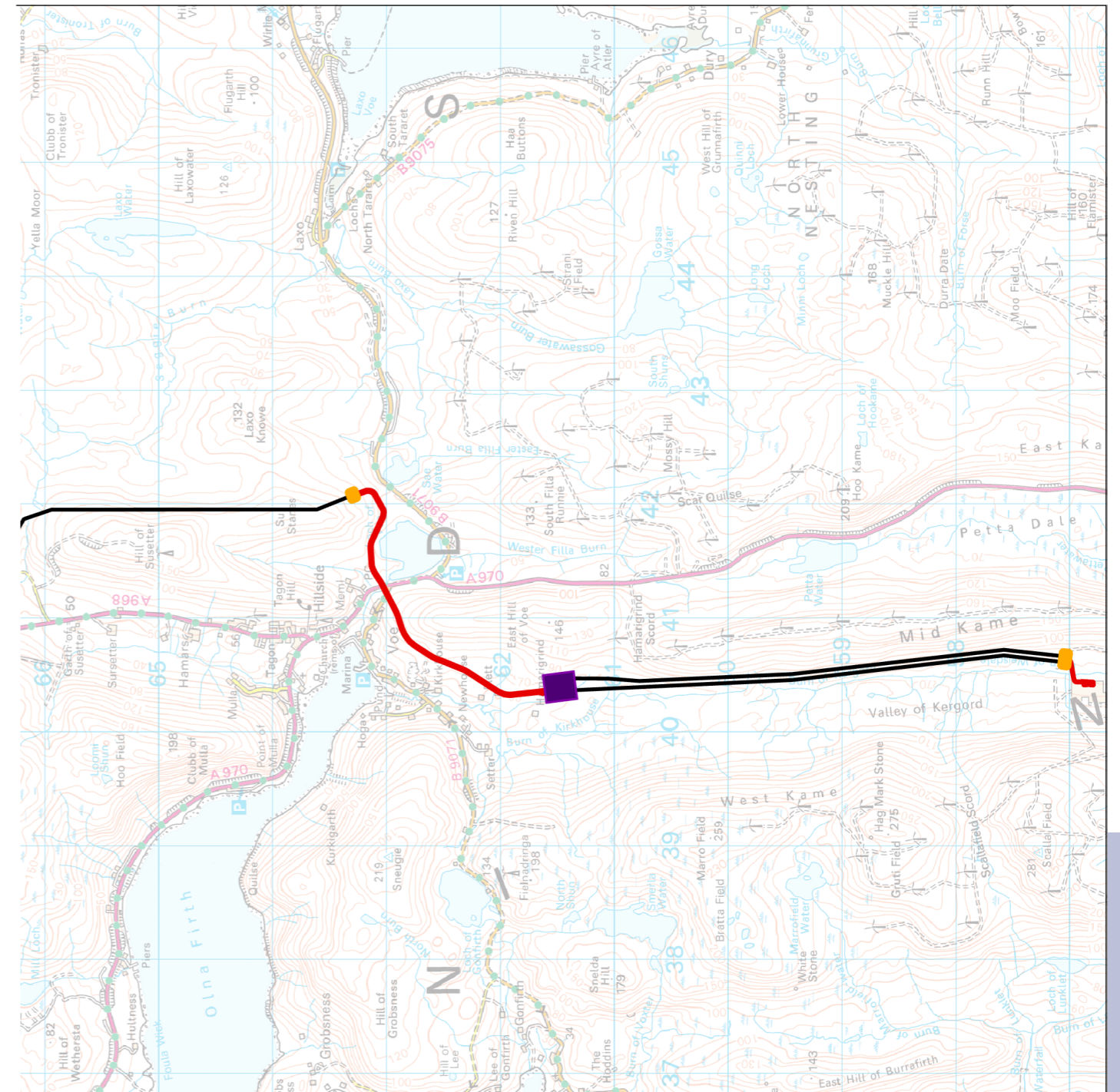
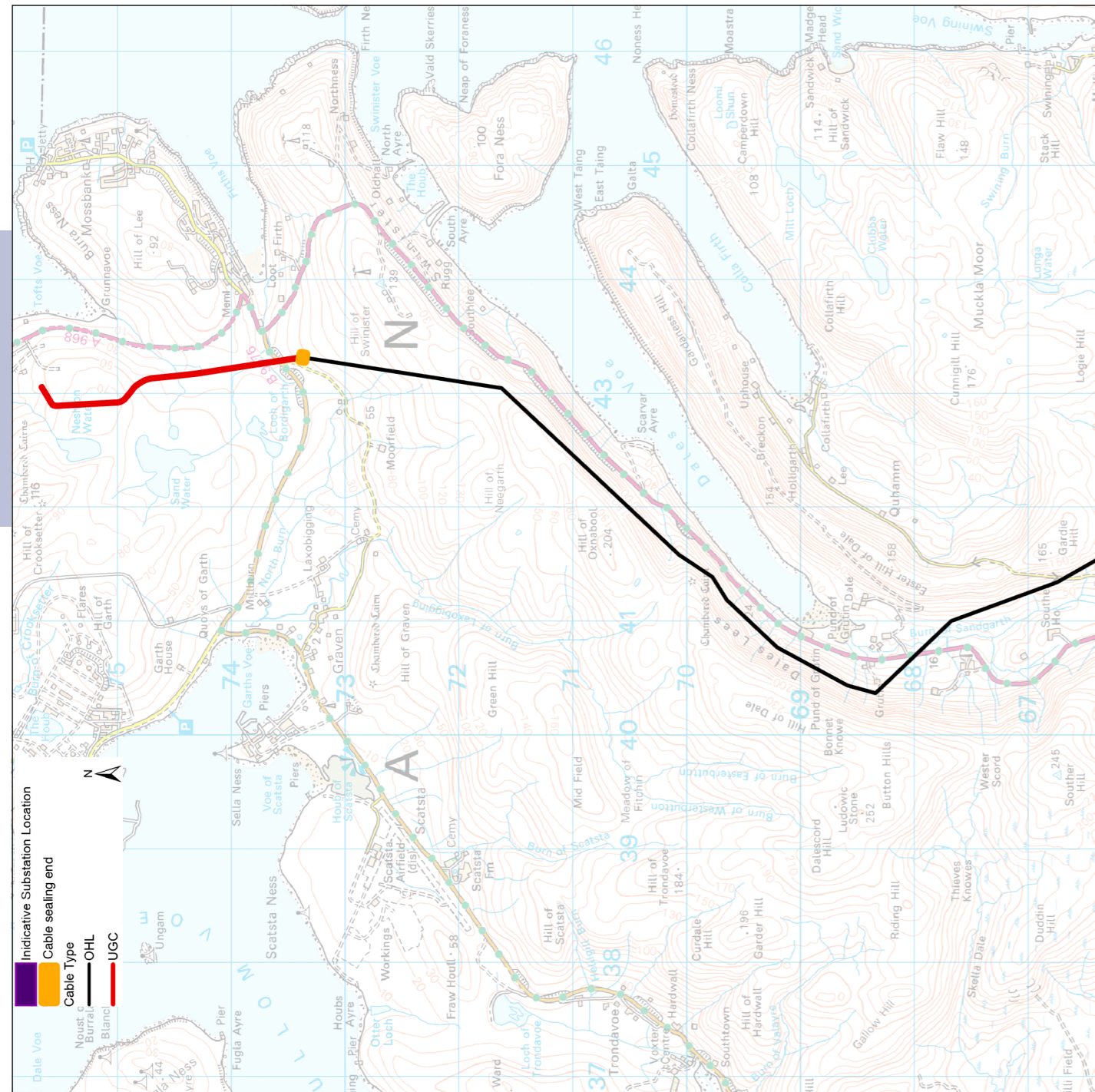
Technical constraints:

From an engineering perspective, Option 3 is constrained by the presence of existing utility lines close to the route, which would also need to be undergrounded if this option were taken forward. However, its proximity to the road could reduce the construction footprint and make access easier during delivery.

Option 2 is more constrained from an engineering perspective, as access could be more difficult due to the higher ground levels and peat conditions along the route. Overall, Option 1 is considered less constrained from an engineering perspective than Options 2 and 3.

Northern Shetland 220kV to Kergord 132kV full proposed least constrained alignment

The image below combines the proposed least constrained alignments from each section, to provide an overview of the full proposed least constrained alignment between the proposed Northern Hub and the existing Kergord Substation.



Indicative 3D visualisations

We understand that stakeholders need to be able to visualise what the development may look like in their local area. We have commissioned 3D visualisations which model the proposed overhead line into the local landscape to help understand the proposals in terms of the visual impact, distance, and height.

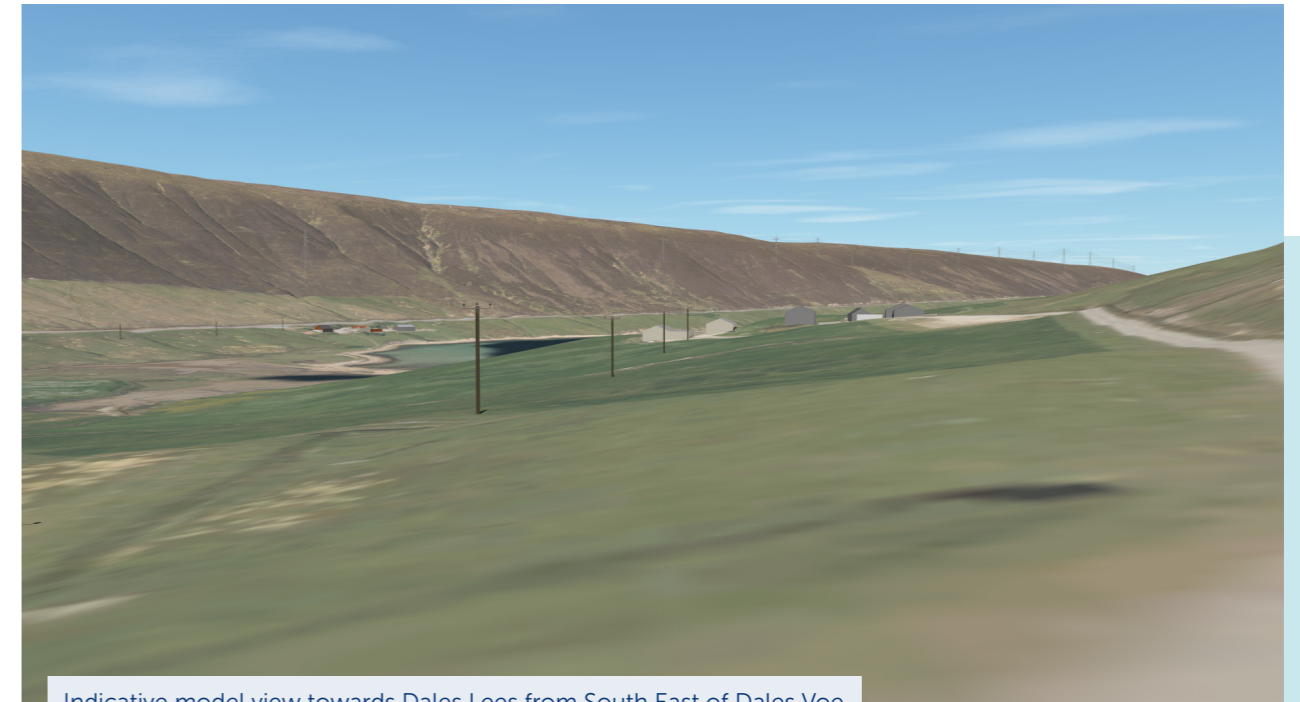
The following are some images taken from the 3D model created for the Kergord 132kV to Northern Shetland 220kV overhead line from a range of different vantage points.

To get a better sense of the proposals in full, a visualisation portal including a flythrough video is also available to view from the project webpage and our consultants, 3D Webtech, will be assisting us at our events with copies of the model that attendees can interact with during the events.

Photomontage visualisations will also be produced as part of the Environmental Impact Assessment (EIA). Once the EIA is completed and submitted as part of our Section 37 planning application, we will ensure these photomontages are available to view.



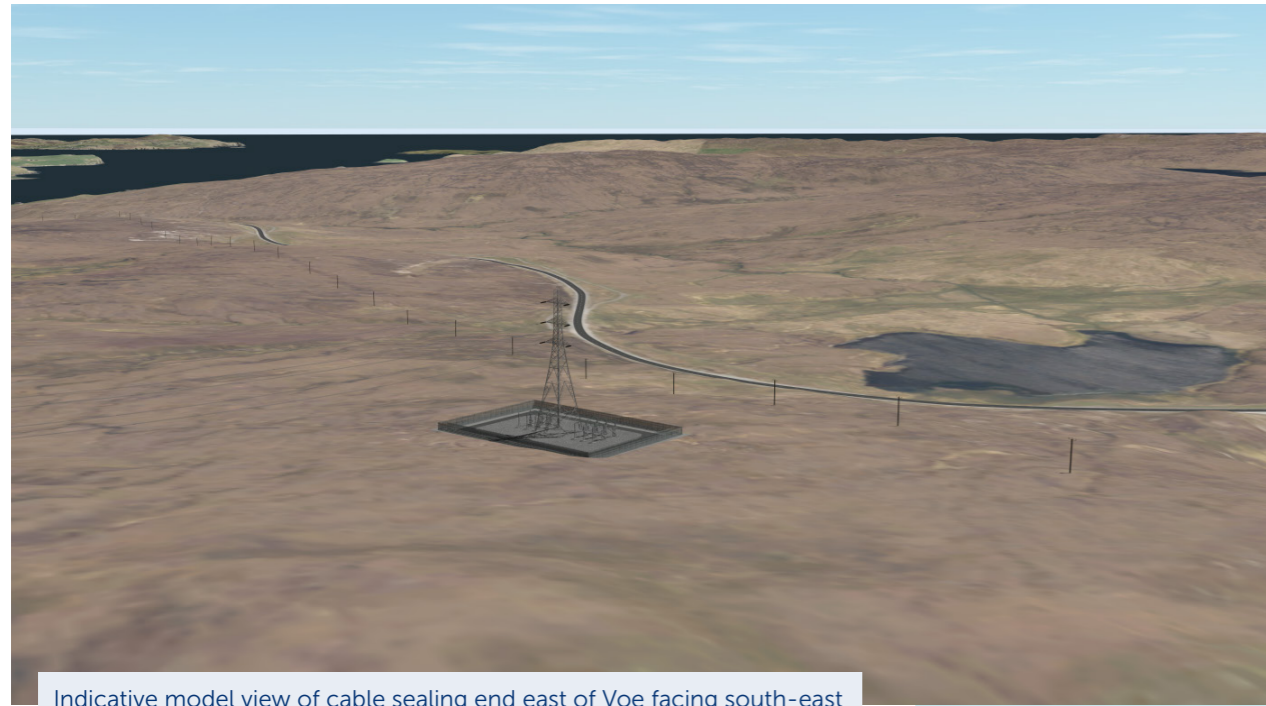
Indicative model aerial view of the 132kV alignment through the Kergord Valley



Indicative model view towards Dales Lees from South East of Dales Voe



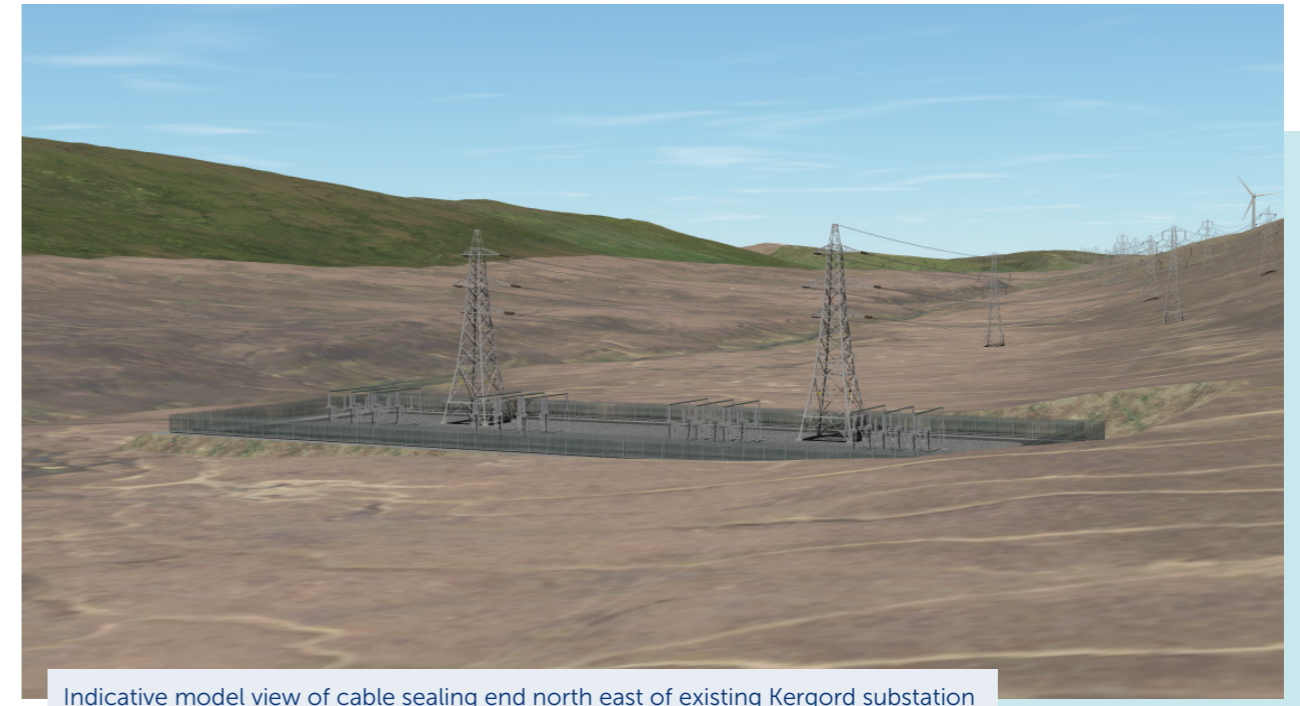
Indicative model view of 220kV alignment near Dales Lees from A968



Indicative model view of cable sealing end east of Voe facing south-east



Indicative model view of the 132kV alignment looking south through the Kergord Valley towards the existing Kergord substation



Indicative model view of cable sealing end north east of existing Kergord substation



Indicative model view of cable sealing end and 220kV alignment from A968 Mossbank junction heading South West

Section 37 consent process

The legislation governing the consenting of overhead line (OHL) projects in Scotland is the Electricity Act 1989. Applications for consent to construct and operate new overhead lines are made under Section 37 of this Act and are referred to as “Section 37 Consents”.

The Section 37 application will be accompanied by an Environmental Impact Assessment (EIA) Report, as well as standalone reports such as a planning statement, and detailed design drawings. A Pre-Application Consultation (PAC) Report will also be provided, and this will provide details of the public and stakeholder consultation undertaken, a summary of the feedback received, and our response to that feedback.

We plan to submit our Section 37 application to the Scottish Government’s Energy Consents Unit (ECU) in 2027. Once an application for consent has been submitted, all documents relating to the submission will be made publicly available on the ECU portal and our own website and printed copies will also be provided at publicly accessible locations.

Please note that feedback provided as part of this initial pre-application consultation event are not formal representations to the Energy Consents Unit (ECU).

Once an application for consent has been submitted, there will be an opportunity for the public to make formal representations to the ECU before it takes a decision.

We will update stakeholders once the application for consent has been submitted and we will also publish newspaper advertisements to inform local communities and the public of the applications being made to Scottish Ministers.

Determining a Section 37 application and communicating outcomes

Section 37 applications are determined on a case-by-case basis by the Scottish Ministers.

We anticipate receiving a decision on the consent application within 12 months from the application date, however timescales may vary.

When a decision is made, the ECU will send us a decision notice, copying in the local planning authorities and other consultation bodies. The decision notice is a record of the reasons for the decision and, if consent is granted, it contains the conditions that must be satisfied to implement the consent.

The ECU and local planning authorities will publish the decision notice via their own channels, and we must publicise the outcome on our website, in the Edinburgh Gazette and in a local newspaper. We will also communicate the decision by mainstream media and other various means, including email updates to Elected Members and those signed up to project updates, social media, and press releases.



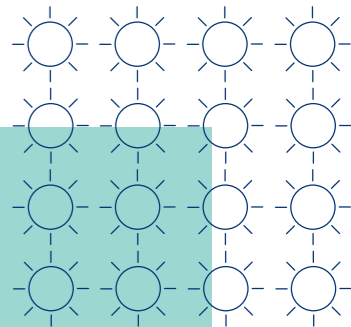
Working with landowners

SSEN Transmission recognises landowners and occupiers as key stakeholders in the development of our projects and is committed to consultation and engagement with all parties likely to have an interest in our proposals.

SSEN Transmission will be required to carry out engineering and environmental surveys to inform the design process. Consent will be sought from affected landowners and occupiers in advance of these surveys.

As the project design develops, we will work with landowners and occupiers to mitigate the impact of our infrastructure on their properties. Our team of dedicated land managers will be on hand to answer queries and address concerns throughout. Once the overhead line design and associated works is finalised, we will be required to secure the appropriate land rights from the relevant parties for all infrastructure.

Our land managers will provide updates to all affected landowners and residents once this process progresses.



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.

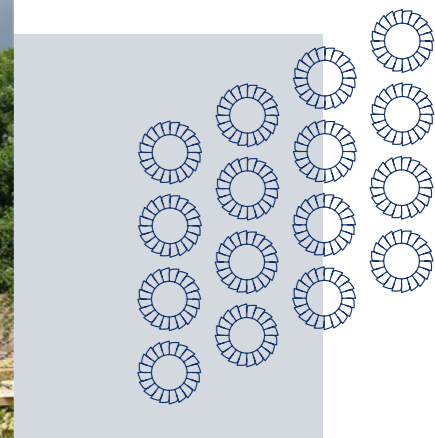
Our contractors' obligations will include how they can increase opportunities for local people either through training or jobs.

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.



Delivering a positive environmental legacy

We recognise that we have significant interaction with the environment through the activities we undertake in Scotland as we seek to develop and improve the transmission network. With this work comes a legal responsibility to design and build our projects in a manner which protects the natural and built environment.

We are committed to protecting and enhancing the environment by minimising the potential impacts from our construction and operational activities on biodiversity. To this end, we have committed to no net loss of biodiversity in non irreplaceable habitats for all of our projects gaining consent from 2020 onwards, and net gain of biodiversity on all projects gaining consent from 2025. This means that during the development, construction and operation of our projects, we will leave the environment no worse than when we found it, and where possible make it even better, leaving a positive environmental legacy at all of our SSEN Transmission sites. As this project progresses through the development process, we will actively seek ways to avoid and minimise impacts on biodiversity, through careful routing design to avoid areas of highest biodiversity value, to implementing habitat restoration and improvement measures in areas within and surrounding the proposed development.



Example projects

Shetland HVDC link 1

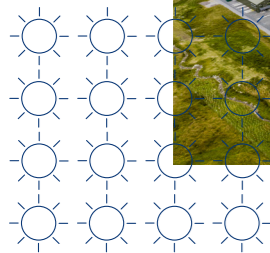
As part of our Biodiversity Net Gain (BNG) commitments, we've undertaken significant landscape and habitat creation works at both ends of our project—at the Kergord DC Converter Station in Shetland and the Noss Head Switching Station near Wick in Caithness, which were both energised in 2024.

Kergord Substation

With the site located at the base of the Kergord valley, we constructed two watercourses—one at the southern end and another at the northern boundary of the site. These were designed to collect and redirect several smaller natural watercourses that previously flowed into the Burn of Weisdale. To enhance the new watercourses at Kergord, we planted native woodland species along their banks and along the eastern boundary adjacent to the Burn of Weisdale, helping to stabilise the banks and reduce erosion. Across the site, we've also planted extensive areas of woodland, woodland edge, scrub, open grassland meadow areas and created a variety of wetland habitats—including scrapes, detention basins, and a swale. These have been enriched with native wetland plugs to support Shetland's unique biodiversity.

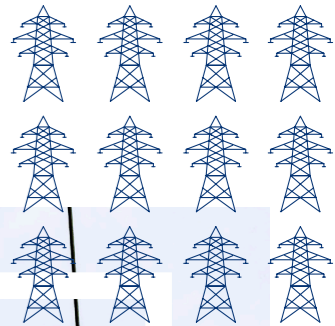
Noss Head Switching Station

At Noss Head, the former agricultural grassland has been transformed into a diverse landscape designed to support local biodiversity. Wildflower meadows and grasslands have been planted to attract pollinators, including the rare great yellow bumblebee, which is endemic to Caithness. To further enhance ecological value and visual screening, extensive woodland and scrub habitats have been introduced around the site's landscaped bunds. A swale and detention basin have been created to help manage surface water and reduce flood risk. These areas have been planted with a coastal meadow mix.



Our next consultation

Our next round of consultation will take place later this year. We will present the proposal that we intend to take forward for Environmental Impact Assessment (EIA) and subsequent submission to the Scottish Government's Energy Consents Unit as part of the Section 37 consenting process. This will include a detailed breakdown of the layout including structure locations, temporary and permanent access, construction compounds and associated services. Detail on where feedback from today's event has been incorporated into the refined proposals will also be covered.



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 events, 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

We want to know your thoughts on the alignments 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.




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:

 @ssentransmission  SSENTransmission

 SSEN Transmission

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/northern-shetland-kergord



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. Is there a specific section of the alignment that you are interested in: Section 1 Kergord Substation to Hamarigrind Substation, Section 2 Hamarigrind Substation to start of OHL infrastructure, Section 3, Alignment from the UGC to Northern Hub Substation?

Section 1 Section 2 Section 3

Comments:

Q2. Have we adequately explained the need for this project?

Yes No Unsure

Comments:

Q3. Do you feel sufficient information has been provided to enable you to understand what is being proposed and why?

Yes No Unsure

Comments:

Q4. Are you satisfied that our approach taken to select our proposed alignment has been adequately explained?

Yes No Unsure

Comments:

Q5. Do you agree with our proposed alignment, if not, why?

Yes No Unsure

Comments:

Q6. Are there any additional factors, or environmental features, that you would like to make us aware of within any of the three alignment options presented?

Yes No Unsure

Comments:

Q7. Do you have any other comments (positive or negative) in relation to the project?

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/northern-shetland-kergord

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

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