Scottish & Southern Electricity Networks

TRANSMISSION

Kinardochy – Errochty Underground Cable

Pre-Application Consultation

November 2024

ssen-transmission.co.uk/kinardochy-errochty

Contents

The consultation event will be taking place on:

Tuesday 26 November, 2–7pm,
Kynachan Hall, Tummel Bridge, Pitlochry, PH16 5NT

Kinardochy–Errochty Underground Cable – November 2024

Powering change together

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

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

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

We all have a part to play

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

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

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

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

We're investing £20 billion into our region's energy infrastructure this decade, powering more than 10 million UK homes and 20,000 jobs, 9,000 of which will be here in Scotland.

More information about the policies and documents driving the need for the energy system for the future can be found here:

Who we are

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

What we do

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

Working with you

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

The Pathway to 2030

Building the energy system of the future will require delivery of significant infrastructure over the next few years. In partnership with the UK and Scottish governments, we're committed to meeting our obligation of connecting new, renewable energy to where it's needed by 2030.

Achieving net zero

By 2030, both the UK and Scottish governments are targeting a big expansion in offshore wind generation of 50GW and 11GW respectively. The Scottish Government has also set ambitious targets for an additional 12GW of onshore wind by 2030.

Across Great Britain, including the north of Scotland, there needs to be a significant increase in the capacity of the onshore electricity transmission infrastructure to deliver these 2030 targets and a pathway to net zero.

Securing our energy future

And it's not just about net zero. It's also about building a homegrown energy system, so that geopolitical turmoil around the world doesn't severely impact the UK and push up energy prices.

The UK Government's British Energy Security Strategy further underlines the need for this infrastructure, setting out plans to accelerate homegrown power for greater energy independence. The strategy aims to reduce the UK's dependence on, and price exposure to global gas wholesale markets through the deployment of homegrown low carbon electricity generation, supported by robust electricity network infrastructure.

Meeting our 2030 targets

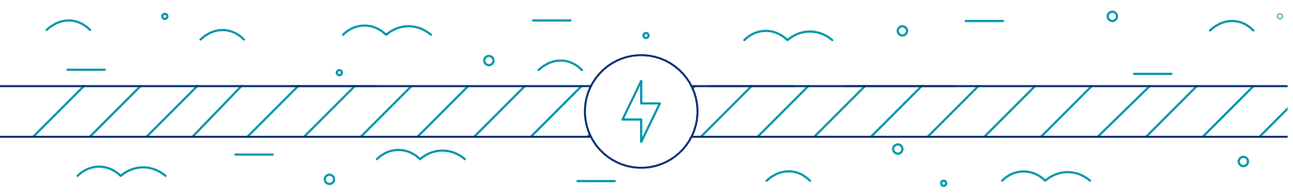
In July 2022, National Grid, the Electricity System Operator (ESO), published the Pathway to 2030 Holistic Network Design (HND). This set out the blueprint for the onshore and offshore transmission infrastructure that's required to support the forecasted growth in the UK's renewable electricity. It's an ambitious plan that will help the UK achieve net zero.

What does this mean for central Scotland?

Extensive studies informing the ESO's Pathway to the 2030 Holistic Network Design confirmed the need to upgrade the second circuit of the Beauly – Denny Overhead Line (OHL) from 275kV to 400kV.

To do this, we require a new underground cable between Kinardochy substation and Errochty substation, as well as two new 400kV substations near Braco and in the Fasnakyle area. We'll also require modifications or extensions to other substations along the route, including Fort Augustus and Tummel. The upgrade of the Beauly – Denny circuit will help deliver the significant increased capacity needed to transport energy from new large scale onshore and offshore renewable generation (mainly wind farms) to demand centres via onshore and High Voltage Direct Current (HVDC) subsea links.

These projects have been highlighted as critical to delivering the UK and Scottish Government's targets,with the development of them accelerated to meet the target dates of energisation by 2030.



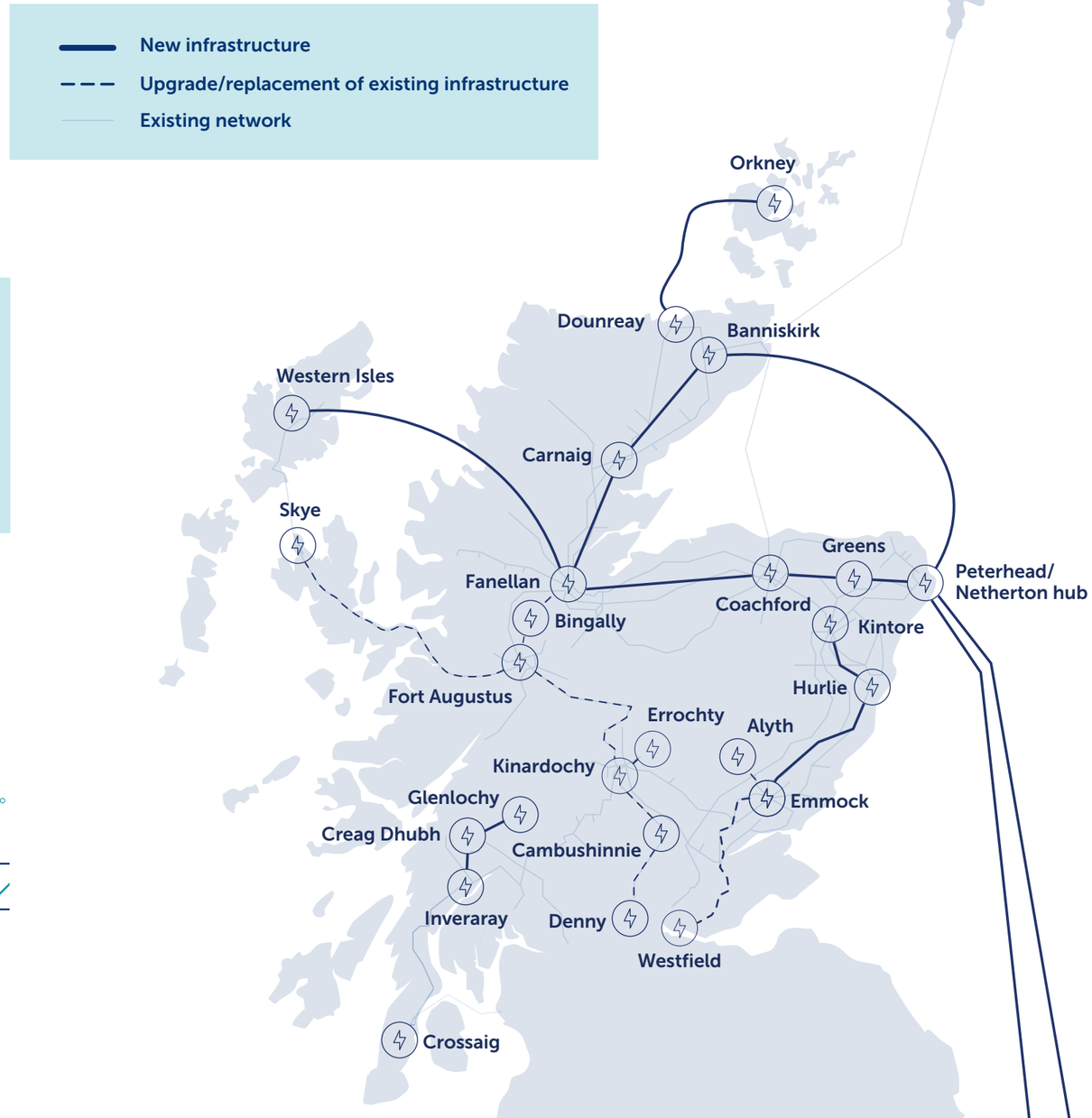
Kinardochy–Errochty Underground Cable – November 2024

Future network investment requirements

Our 2030 targets are the first step on the transition to net zero. The UK Government has a target to decarbonise our electricity system by 2035 and fully decarbonise our economy by becoming net zero by 2050, with the Scottish Government committing to net zero five years earlier, by 2045.

To achieve these targets, further investment in new low carbon electricity generation and the enabling electricity transmission network infrastructure will be required.

The next stage of strategic network planning across Great Britain has now been outlined in the independent Electricity System Operator, National Grid ESO's, 'Beyond 2030' report, published in March this year. For the north of Scotland, the ESO's plan recommends several new and upgraded onshore and offshore reinforcements that the ESO has assessed are required to help deliver net zero targets. These projects, which will be subject to extensive public consultation, are at the very early stages of development and further details will be set out in due course.



Project overview

Beauly-Denny 400kV upgrade

The Beauly-Denny line was constructed for 400kV operation on each of its two circuits but put into service with one operating at the lower voltage of 275kV. This project will see the second circuit being uprated from 275kV to 400kV, to allow new renewable energy generation to be connected to the transmission network in the coming years.

As the line was built to run at 400kV, no alterations are required to the existing Overhead Line (OHL). However, existing 275kV connections along the OHL will need to be upgraded to allow them to continue to connect to the uprated circuit.

This means the following will be required at sites along the route:

- A new 400kV substation near Braco, named Cambushinnie substation.
- A new 400kV substation in the Fasnakyle area, named Bingally substation.
- Connections from the new substations to both the Beauly - Denny OHL (via small diversions) and the existing substations (via underground cable).
- In addition, modifications or extensions are required to other substations along the route, including Fort Augustus, Errochty and Kinardochy.

Kinardochy – Errochty underground cable

This consultation event is related to the proposed underground cable between Kinardochy substation and Errochty substation. The project comprises a double circuit, each with a number of 132kV Underground Cables (UGC) laid within ducts below the ground surface within a trench, shown in a typical trench cross section opposite. The cables will be approximately 4km in length, with remote end works at the existing Errochty and Kinardochy substations.

Proposed development description

Permitted Development:

The Town and Country Planning (General Permitted Development) (Scotland) Order 1992 (GPDO) sets out SSEN Transmission's rights to undertake development without submitting a formal application for Planning Permission. The GPDO grants what is referred to as "Deemed Planning Permission" subject to the provisions and conditions of the Order. This project's proposals for the installation of 132kV underground cables benefit from these permitted development rights.

Town and Country Planning - Temporary and permanent access tracks

In order to facilitate the construction of the underground cable, a number of permanent and temporary access tracks are required. The alignment of the cable route has been developed considering existing access tracks where possible. Temporary access tracks will be removed on completion of cable installation and the area reinstated to its previous condition.

Kinardochy–Errochty Underground Cable – November 2024

Cross sectional view of proposed cable

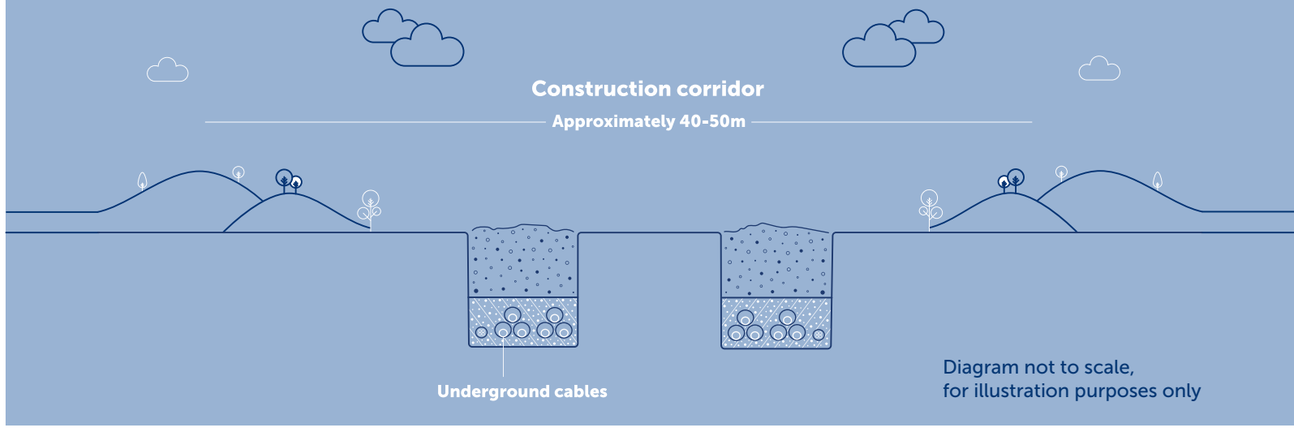


Illustration of typical 132kV 2000mm² cable

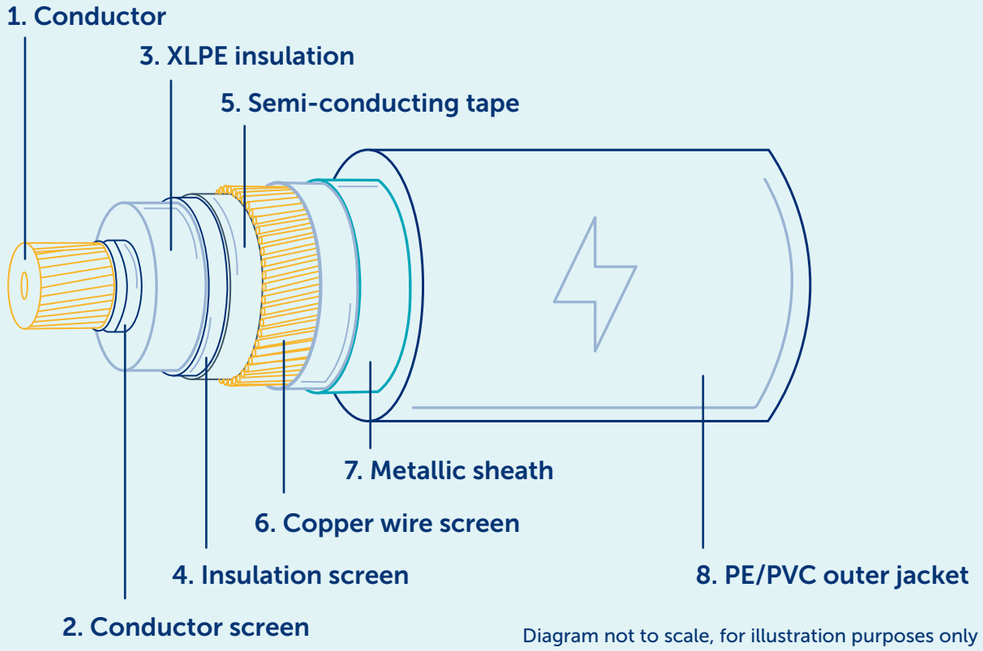
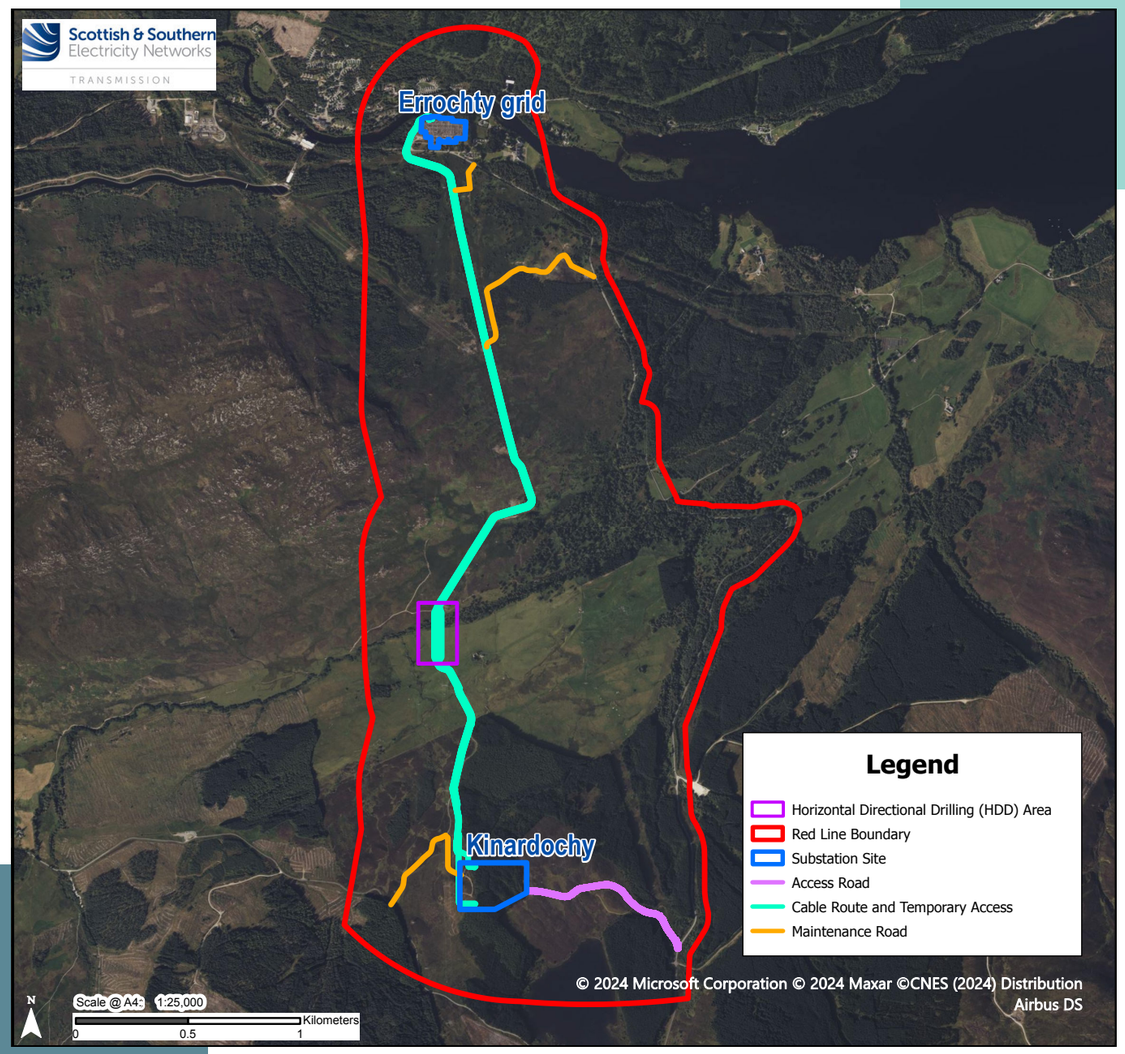


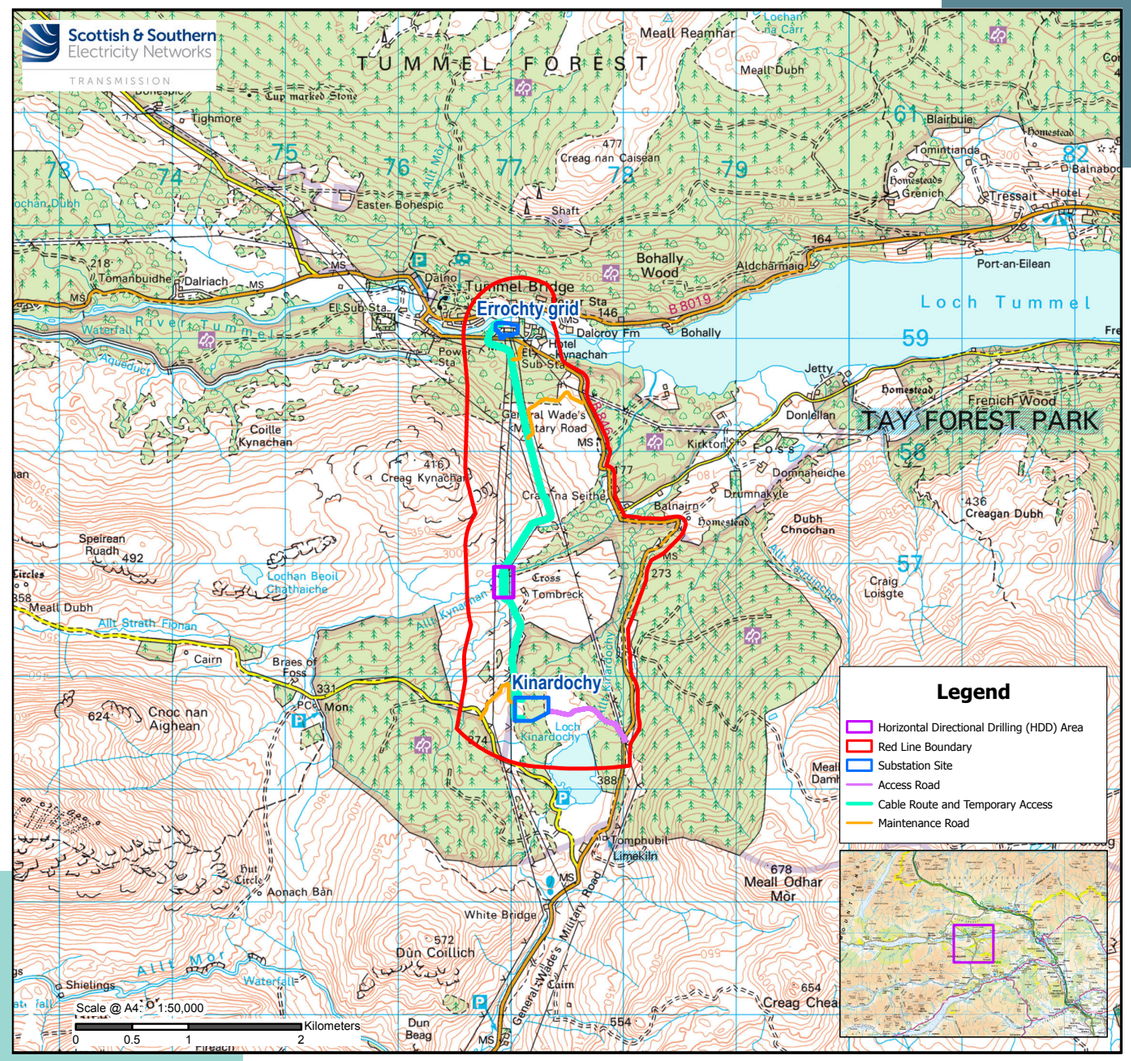
Diagram not to scale, for illustration purposes only

Kinardochy-Errochty underground cable route



Kinardochy–Errochty Underground Cable – November 2024

Kinardochy-Errochty Underground Cable Route-Wider Area



Development considerations

Environmental considerations

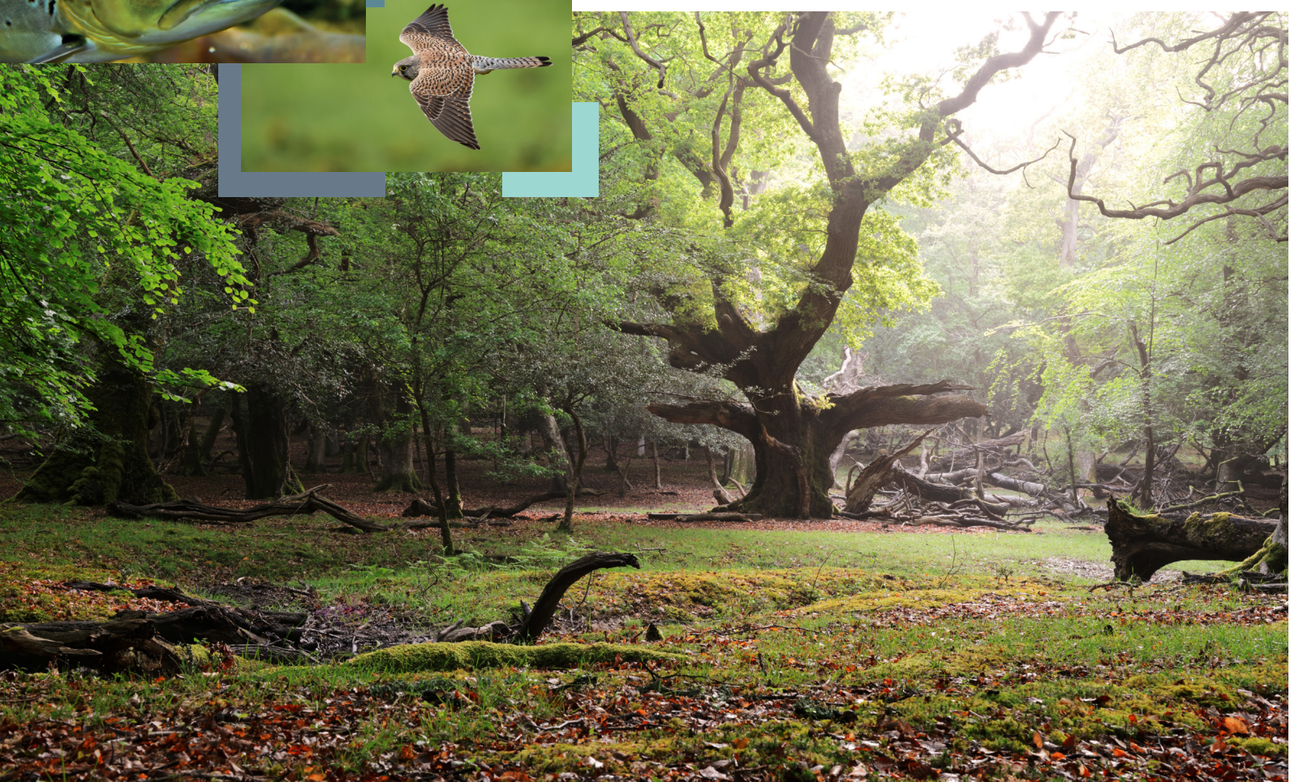
Forestry
Areas of commercial forestry and ancient woodland are present within the wider area of the proposed cable route and associated access tracks. Careful routeing of the proposed development has aimed to minimise the impact to forestry as much as possible. Any felling undertaken will be compensated by additional planting within the vicinity of the project.

Birds
There is the potential for disturbance to bird species during the construction period, particularly moorland and woodland species. Schedule 1 species including hen harrier, osprey and merlin have been recorded within the wider area, outwith the proposed development. Bird surveys have been undertaken to inform the environmental assessment.

Habitats
Woodland and freshwater habitats within the proposed development have the potential to support protected mammal species. The River Tay Special Area of Conservation (SAC) is designated for supporting otter and protected fish species including Atlantic salmon. Protected species surveys have been undertaken to inform the environmental assessment.

Cultural Heritage
Multiple cultural heritage assets have been identified within proximity of the proposed development. Careful routeing of the proposed cable route and associated access tracks has aimed to avoid impact to these cultural heritage assets where possible.

Watercourses
The proposed development crosses multiple watercourses and is in proximity to the River Tay. The proposed development is located within a drinking water protected area.



Kinardochy–Errochty Underground Cable – November 2024

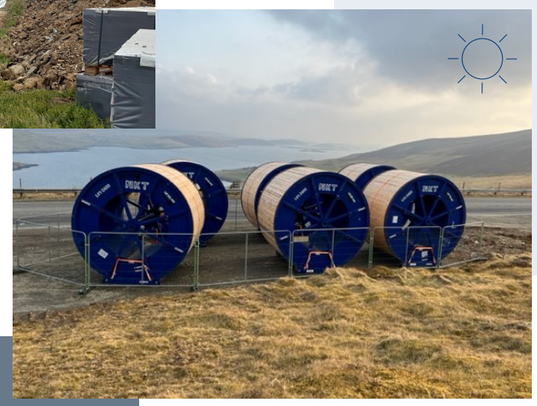
Engineering considerations

Cable bending radii
The cables have limited bending ability so sharp angles either on the horizontal or vertical axis can cause problems when installing and if the design parameters are exceeded, which is a risk to the integrity of the cable.

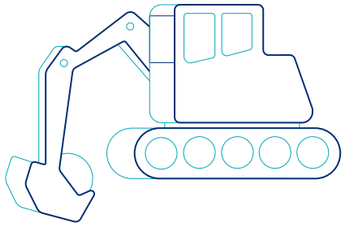
Thermal properties of soils
All electricity cables generate heat to some extent. If the soils around the cable do not allow the heat to dissipate then this can impact on the ability to run the cable at its intended capacity.

Ground conditions/terrain
It is typically favoured to put a cable through unmade ground as this is usually the best soil conditions with enough soil to bury in. If we encounter shallow rock for example, this requires further work to get the ducts and cables in the ground. Additionally underground cables should avoid gradients where possible due to the physical weight of the cable laid upon a gradient can put undue stress on the joints. Where steep gradients cannot be avoided, routing is then influenced by assessing alternatives, considering mitigation measures and then progressing with the most viable route/solution.

Drilling
We require Horizontal Directional Drilling (HDD) at the Allt Kynachan watercouse along the cable route, which includes a land requirement for associated drilling platforms. The ground conditions at these locations require consideration for the angle of the drill to cross the watercourse.



Construction of the underground cable



The installation of the cables will employ open-cut trenching techniques within an approximately 50-metre wide corridor, with the trenches being 5 to 6 metres wide, contingent on depth and ground conditions. A delineated boundary fence will be established along the entire route to separate construction activities from livestock.

The underground cable route will encompass two circuits, each comprising four 3 x single-core 132kV XLPE cables housed in PVC ducts, installed at a depth of approximately 1200mm below ground level in a trefoil formation. The trenches will be backfilled with thermally stabilised material to enhance heat dissipation during cable operation under load. The total length of each route is approximately 4 km, necessitating joint bays to be strategically located at regular intervals. Each joint bay will have installed an above-ground earth link pillar. If feasible and with landowner consent, protective barriers may be installed around the link pillar to prevent damage.

Fibre chambers will also be installed at intervals of every 450 to 500 meters along the route. Horizontal Directional Drilling (HDD) techniques will be utilised to install the cables beneath the deep ravine at the Allt Kynachan watercourse. A hard standing HDD launch and receive compound will be constructed either side of the drill location to house drilling plant and equipment.

Access

The project will require large vehicles to carry plant and the cable drums. Access into the cable working area may be restricted in places, so where possible we will utilise existing access tracks in the area, along with temporary access tracks long the cable route.

A temporary access haul road, approximately 6 metres wide, will be constructed adjacent to the cable trench where feasible, facilitating access along the route while minimising land disturbance and reducing traffic on public roadways. Topsoil and subsoils will be temporarily set aside for later reinstatement.

To ensure ongoing operation and maintenance access to each joint bay throughout the lifecycle of the circuit, existing and new permanent access tracks will be utilised for maintenance purposes.

Construction compounds

Our contractor has identified two potential construction compound locations: one utilising the existing Kinardochy overhead line compound at Tombreck Estate and another site to be confirmed at Kynachan Estate.

Traffic management

The project traffic management plan is to be developed for the delivery of plant and materials to the site. Currently, it is anticipated that approximately 72 cable drum deliveries to Errochty substation will utilise the same route as the transformer delivery to Kinardochy substation, specifically using the Strathtay Road between Strathtay and Weem junctions to circumvent Wades Bridge in Aberfeldy.

Input gathered from a recent local community meeting for another Transmission project suggested the use of Queens View Road for all construction deliveries to minimise construction traffic through Aberfeldy. At this stage, our contract partner has yet to assess and develop the transportation plan for the project for the specific routes to be used; however, a preliminary estimate indicates approximately 19,000 vehicle movements will occur throughout the project duration.

The project has committed to prohibiting the use of Foss Road for all construction-related traffic during the execution of the works.

Kinardochy–Errochty Underground Cable – November 2024

The Planning process

The legislation that enables the planning of projects like the Kinardochy – Errochty underground cable is the Town and Country Planning (Scotland) Act 1997.

Engaging the right people

Local Planning Authorities determine the outcome of any applications made under the Town and Country Planning Act and establish the planning pathway our projects must take, including which consents are required.

An environmental appraisal will be produced by us to support the consent application. This would be made publicly available once submitted.

The associated development works, including requirements for temporary and permanent access tracks, for the Kinardochy-Errochty underground cable is classed as "Major Development" under the Town and Country Planning process; therefore, pre-application consultation is required with the public and interested parties.

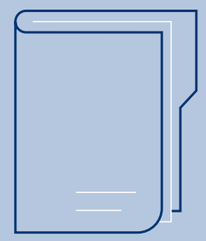
The pre-application consultation process

A Proposal of Application Notice (PAN) was submitted to Perth and Kinross Council on 22 October 2024. This is the first stage in the planning application process, and the beginning of a consultation period that must allow for at least 12 weeks between the start of the pre-application consultation and feedback, and submission of a planning application.

The plans we are consulting on at this event might change between now and the submission of a planning application.

The red line boundary that has been submitted with the PAN represents the maximum extent of the land potentially included in the application site, but this area may be reduced or rationalised as the development proposal becomes finalised.

There is a requirement to hold at least two events to provide the opportunity for members of the public to comment on the proposals. This public event is the first event. A second event will be held in Q1 2025 at which feedback will be given on the views obtained at the first event. There will also be a short opportunity for comment after this second event and comments will be included in a Pre-application Consultation (PAC) Report.



Submitting the planning application

The planning application for the permanent and temporary access tracks associated with the installation of the underground cable is due to be submitted to Perth and Kinross Council in Q1 2025.

Supporting information associated with the permitted development for the underground cable will be submitted at the same time.

A Pre-application Consultation Report will accompany the planning application providing details of the consultation undertaken and communicating how the consultation process has influenced the proposed development. Where comments are received that cannot be addressed in the final proposal, an explanation will also be given as to why this is the case.

Comments made through the pre-application consultation process are not formal representations to Perth and Kinross Council. When the planning application is submitted there will be an opportunity to make formal representations to Perth and Kinross Council.

Project timeline

The timeline below identifies key milestones for consenting and construction of the project.

Q4 2024
- Commencement of environmental assessment
- First statutory Pre-application Consultation event

Q1 - Q2 2025
- Second statutory Pre-Application Consultation event
- Town & Country Planning application submitted

Q4 2025
- Town & Country Planning application approved

Q1 2026
- Construction commences (subject to planning permission consent)

Q1 2028
- Construction completion

Q3 2029
- Project Energisation

Kinardochy–Errochty Underground Cable – November 2024

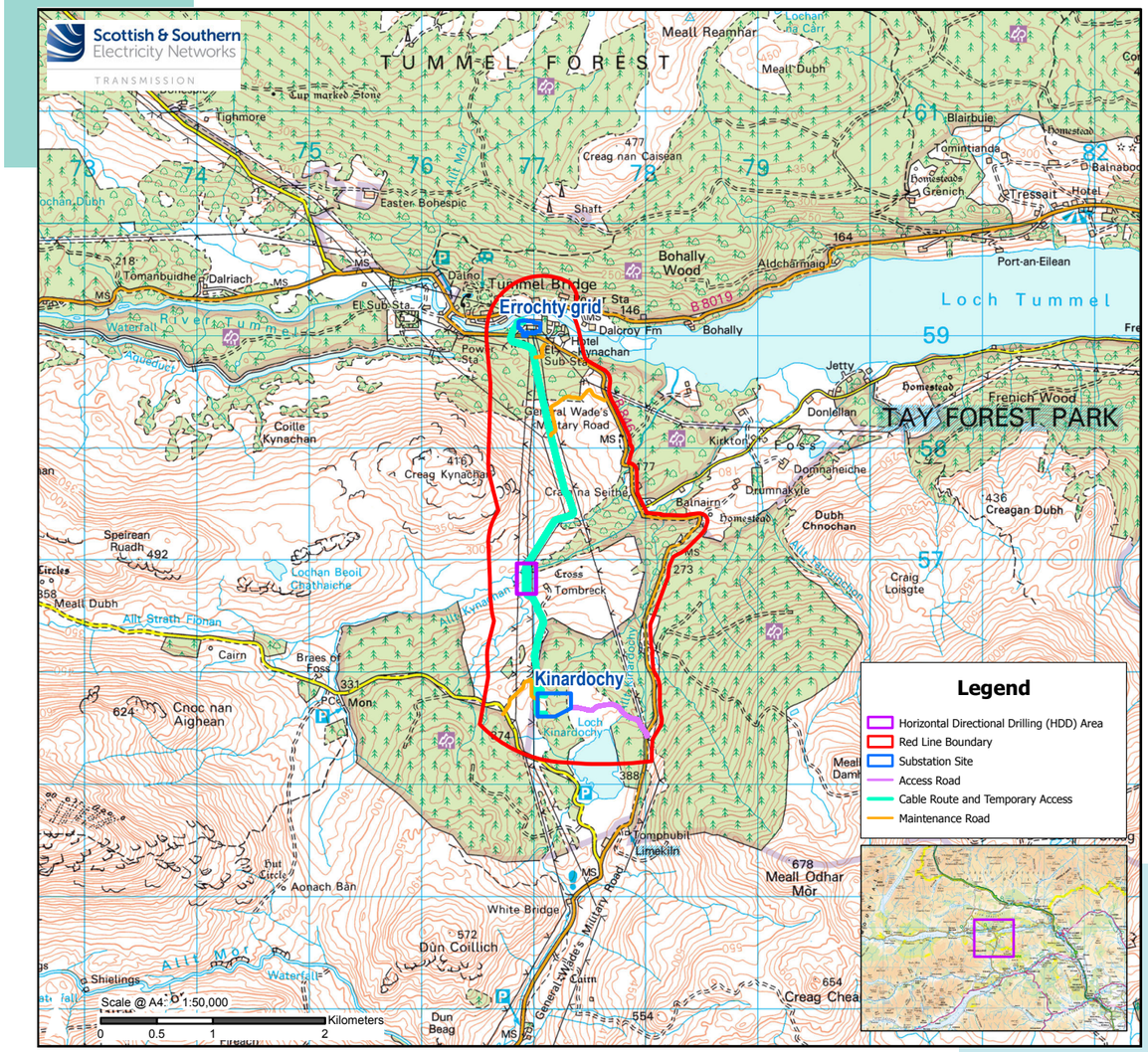
Other projects in the area

Kinardochy Substation Upgrade

This project includes an extension to the gas-insulated switchgear (GIS) board to install two new supergrid transformers, to facilitate the cable connection between Kinardochy – Errochty. Construction is due to start in January 2026 with completion of the cable civil works across the route end September 2027. Final energisation will be in 2029/30.

Errochty Grid Supply Point (GSP) Upgrade

This project includes the installation of two 90MVA 132/33kV transformers and other associated equipment at the new site adjacent to the existing Errochty 132kV substation. Construction started in November 2023 and is anticipated to be completed in August 2026.



Notes

Have your say

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

We intend to submit our planning application by Spring 2025 and we welcome comments from members of the public, statutory consultees and other key stakeholders regarding our proposals until we submit our planning application.

The feedback period

We will accept feedback from now until **14 January 2025.**

How to provide feedback:

Submit your feedback online by scanning the QR code on this page or via the form on our project webpage at: **ssen-transmission.co.uk/kinardochy-errochty**

Email the feedback form to the Community Liaison Manager. Or write to us enclosing the feedback form at the back of this booklet.

What we're seeking views on

We are seeking feedback on the underground cable proposals shared in this booklet. We would like to know if there are any factors or environmental considerations you consider important that you don't feel we have addressed in the proposals, or if you think we can make any improvements, changes or refinements to these 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.

By telling us what you think, you will help shape our proposals.

Recite me

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."

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.

Community Liaison Manager

The best way to contact us regarding this project is through our Community Liaison Team.

Rosie Hodgart

SSEN Transmission,
1 Waterloo St, Glasgow, G2 6AY

BDUP@sse.com

07879 793 652

Additional information:

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

You can also register for updates at our events, just ask our staff at the welcome desk.

ssen-transmission.co.uk/kinardochy-errochty

You can also follow us on social media:

@ssentransmission @SSETransmission

Your feedback

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

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

Q1. **Have we adequately explained the need for the Kinardochy-Errochty underground cable project?**

☐ Yes ☐ No ☐ Unsure

Comments:

Q2. **Do you feel enough information has been provided to understand what is being proposed and why?**

☐ Yes ☐ No ☐ Unsure

Comments:

Q3. **Are there any additional factors or environmental features that you consider important and should be brought to the attention of the project team?**

Comments:

Q4. **Do you have any particular concerns or queries on the proposed underground cable project?**

☐ Yes ☐ No ☐ Unsure

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: Rosie Hodgart, SSEN Transmission, 1 Waterloo Street, Glasgow, G2 6AY

Email: BDUP@sse.com

Online: ssen-transmission.co.uk/kinardochy-errochty

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

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 & Southern Electricity Networks

TRANSMISSION