

# 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

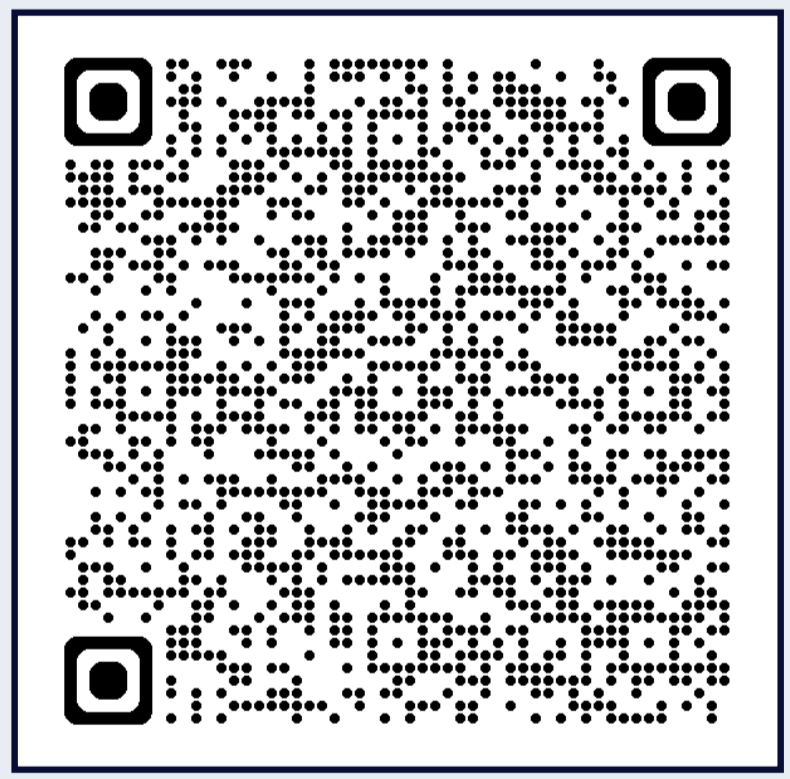
When it comes to net zero, we have to be in it together. The UK and Scottish governments have ambitious net zero targets, and we're playing our part in meeting them.

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 energysystem 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](https://ssen-transmission.co.uk/talk-to-us/contact-us)



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# 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 Kinardochoy 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.



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# The Pathway to 2030

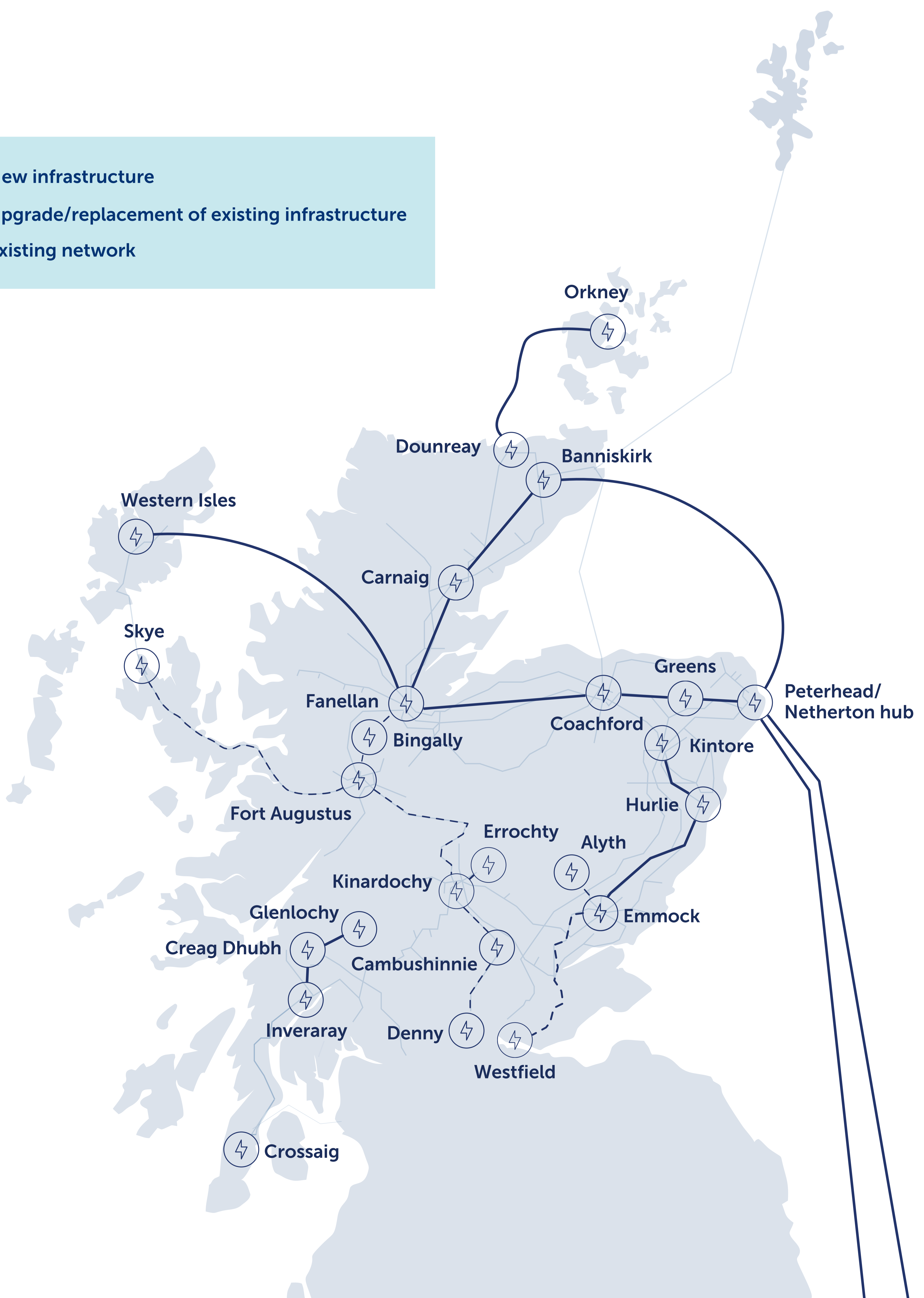
## Future network investment requirements

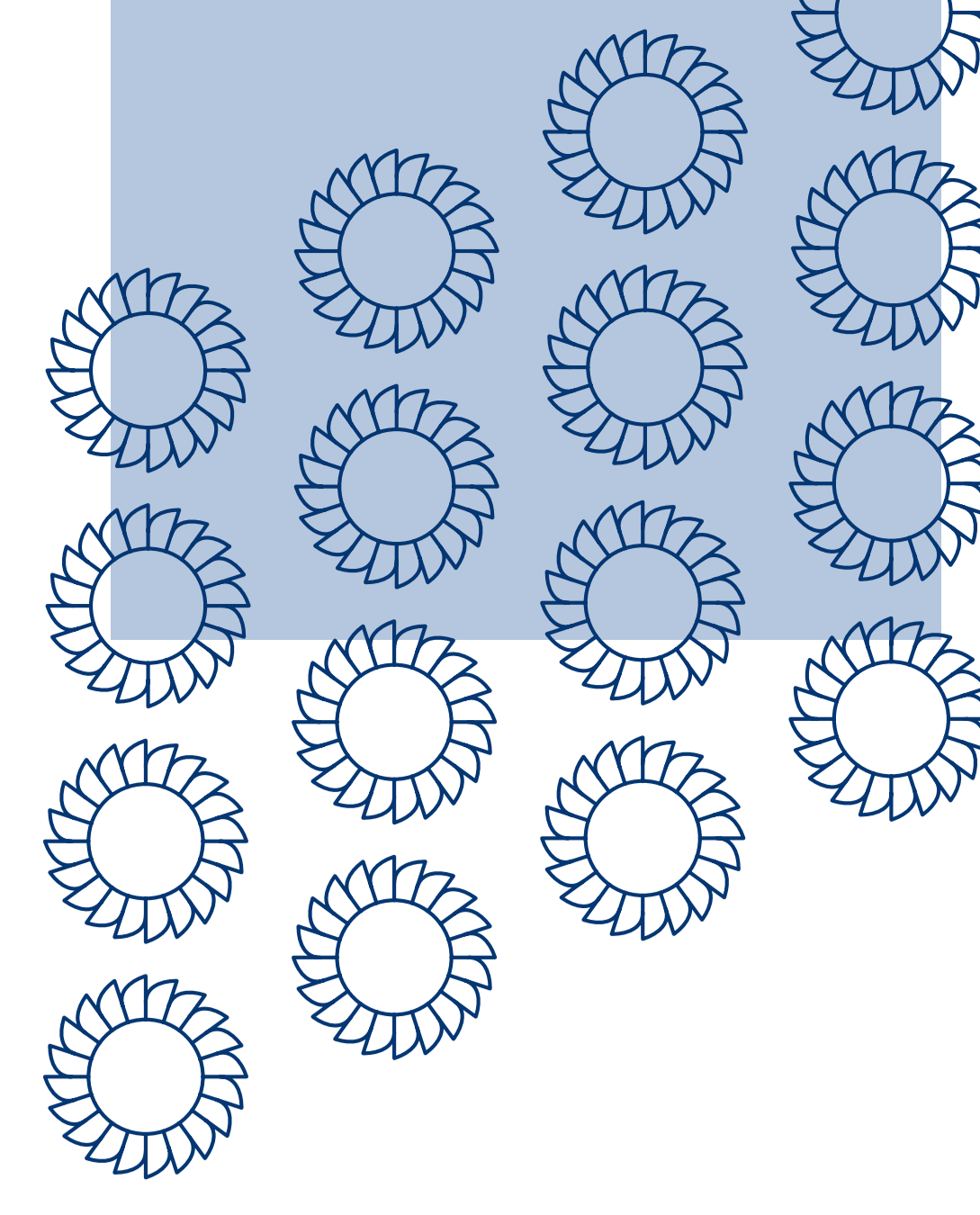
Our 2030 targets are the first step on the transition to net zero. The UK Government has a target to decarbonise our electricity system by 2035 and fully decarbonise our economy by becoming net zero by 2050, with the Scottish Government committing to net zero five years earlier, by 2045.

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.

- New infrastructure
- Upgrade/replacement of existing infrastructure
- Existing network





# Project overview

## Beaully-Denny 400kV upgrade

The Beaully-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 Beaully - 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 Kinardochoy.

## Kinardochoy – Errochty underground cable

This consultation event is related to the proposed underground cable between Kinardochoy 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 Kinardochoy 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.



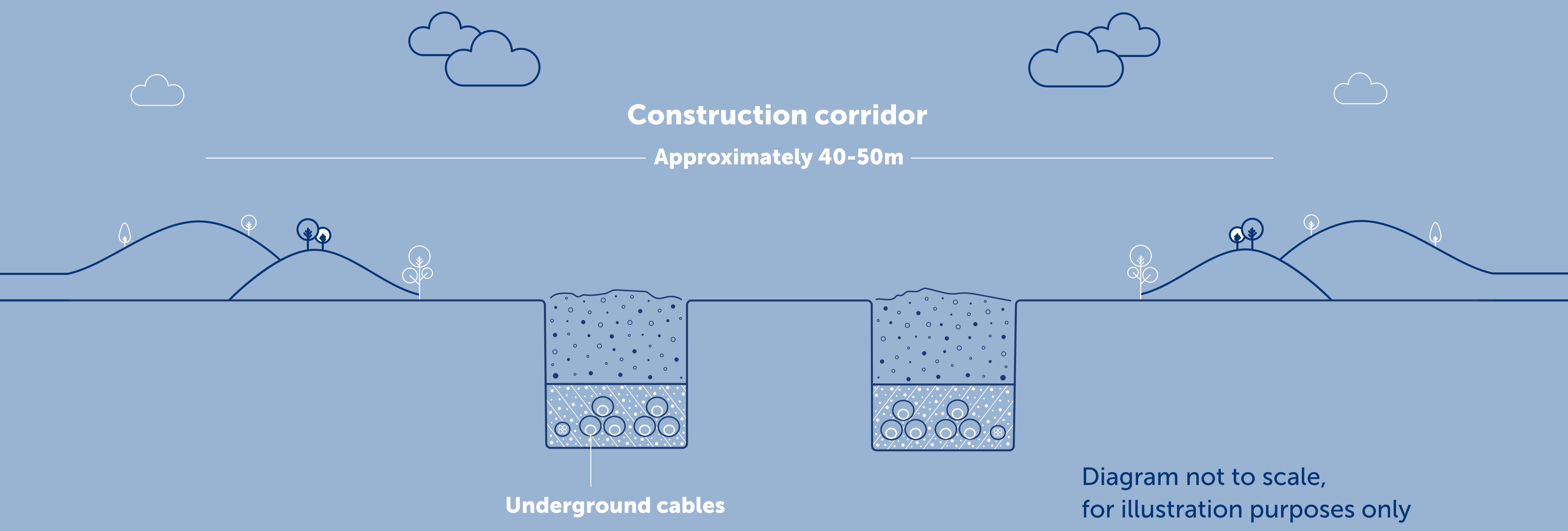
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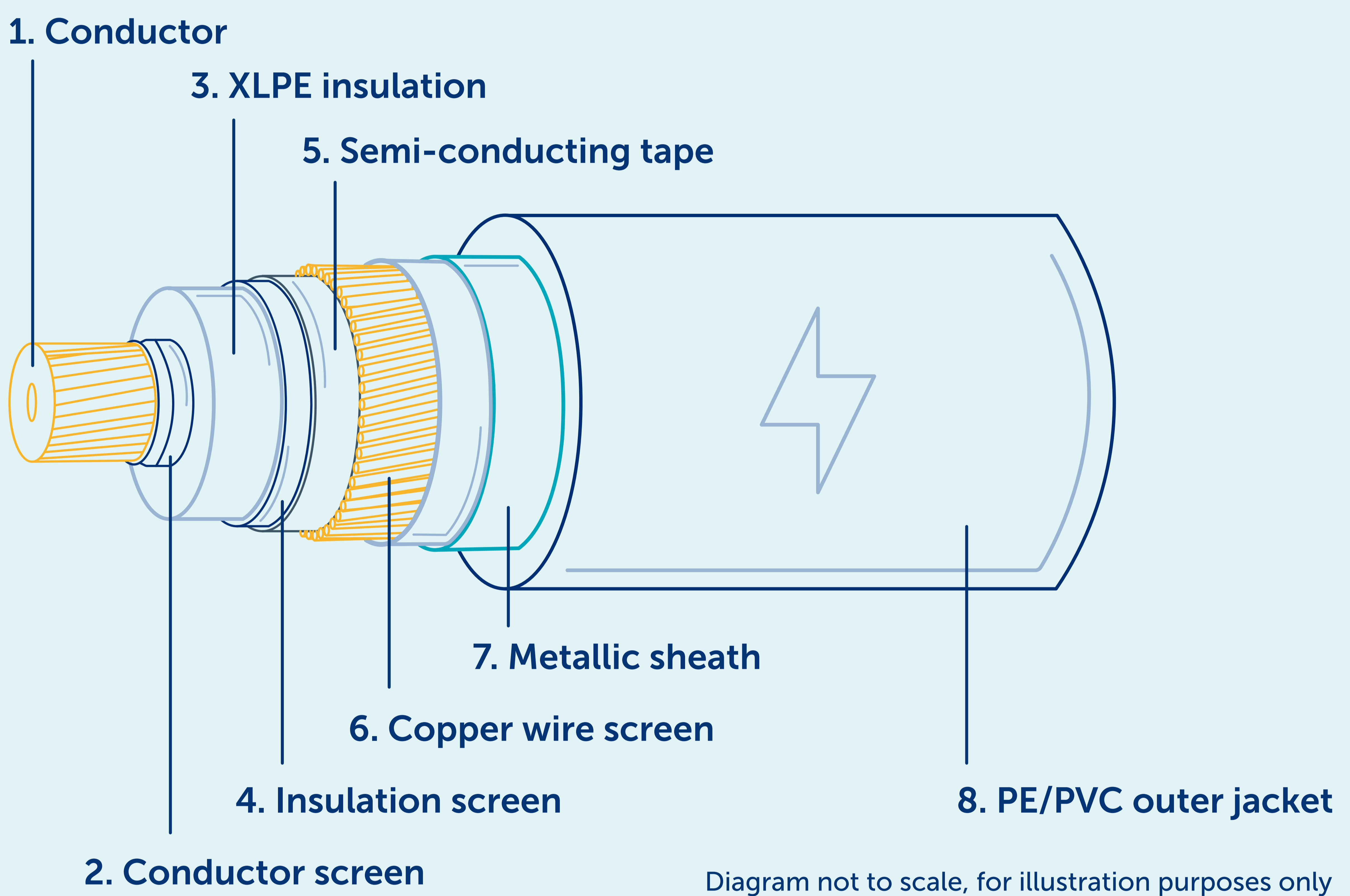
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# Project Overview

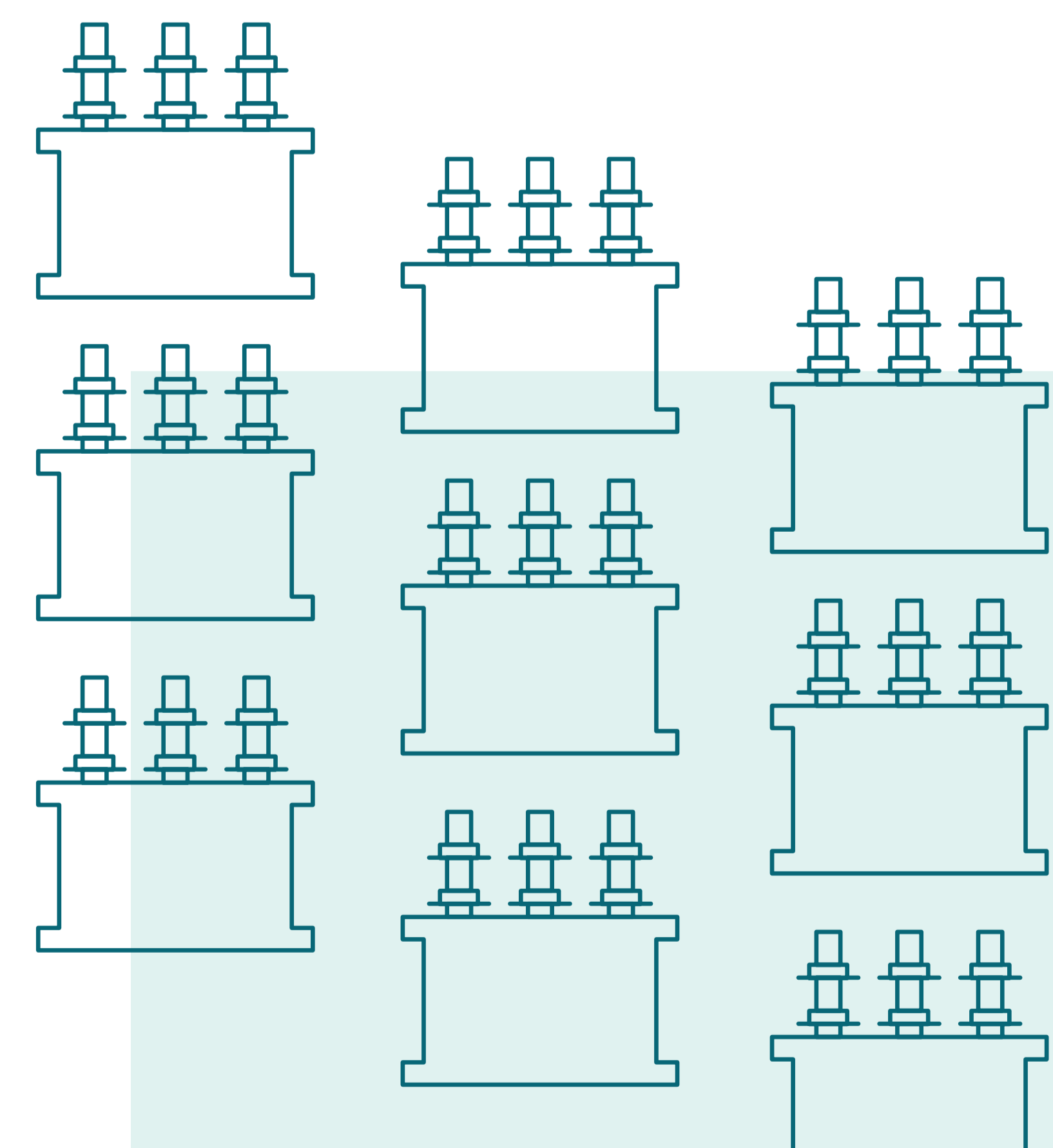
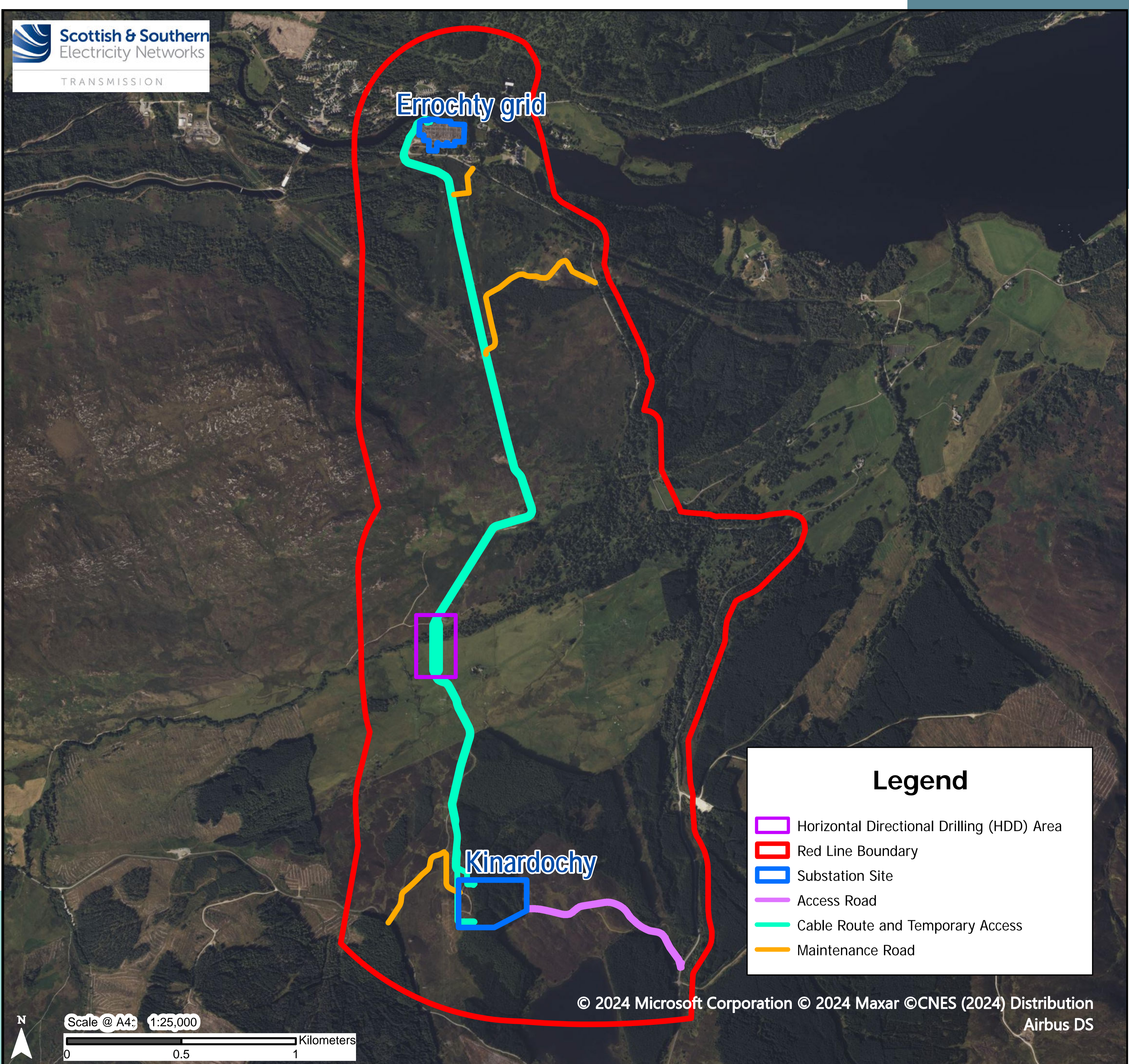
## Cross sectional view of proposed cable



## Illustration of typical 132kV 2000mm<sup>2</sup> cable



# Kinardochy- Errochty underground cable route



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# Kinardochy- Errochty Underground Cable Route-Wider Area

