

Powering change together

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

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

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



We all have a part to play

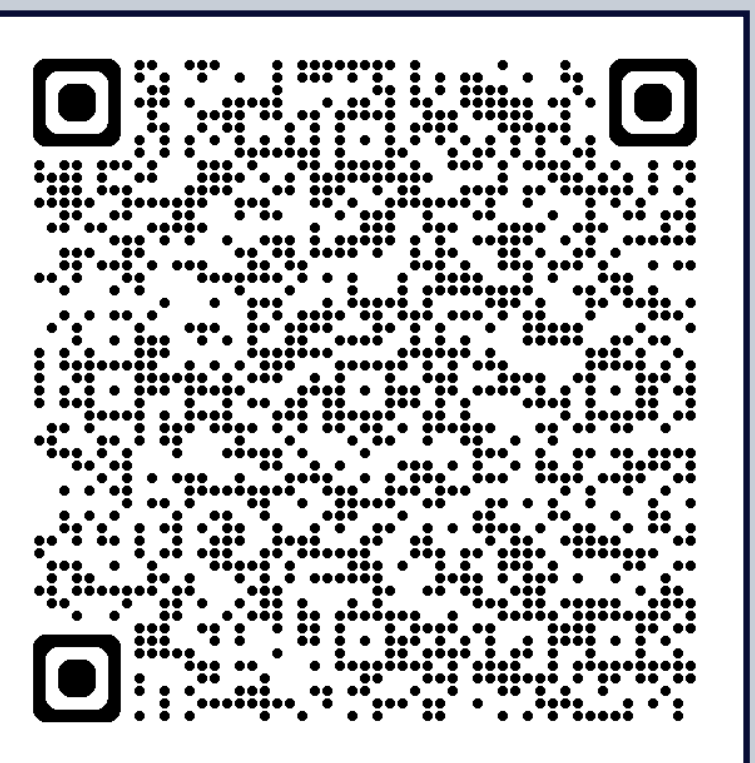
When it comes to net zero, we have to be in it together. The UK and Scottish governments have ambitious net zero targets, and we're playing our part in meeting them.

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

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

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

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



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



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Project need and overview

As the transmission licence holder in the north of Scotland we have a duty under Section 9 of the Electricity Act 1989 to facilitate competition in the generation and supply of electricity. We have obligations to offer non-discriminatory terms for connection to the transmission system, both for new generation and for new sources of electricity demand.

Subject to planning consent, we are required to connect new renewable energy generation projects in the Gills Bay area, Caithness, to the transmission network. To facilitate this, we are proposing to construct a new 132kV overhead line (OHL) and two sections of underground cable (UGC) between the existing Thurso South Substation and the proposed Gills Bay Switching Station at Phillips Mains.

Under our Network Operators Licence, this connection should be efficient, coordinated and economic, whilst having the least possible impact on the environment.

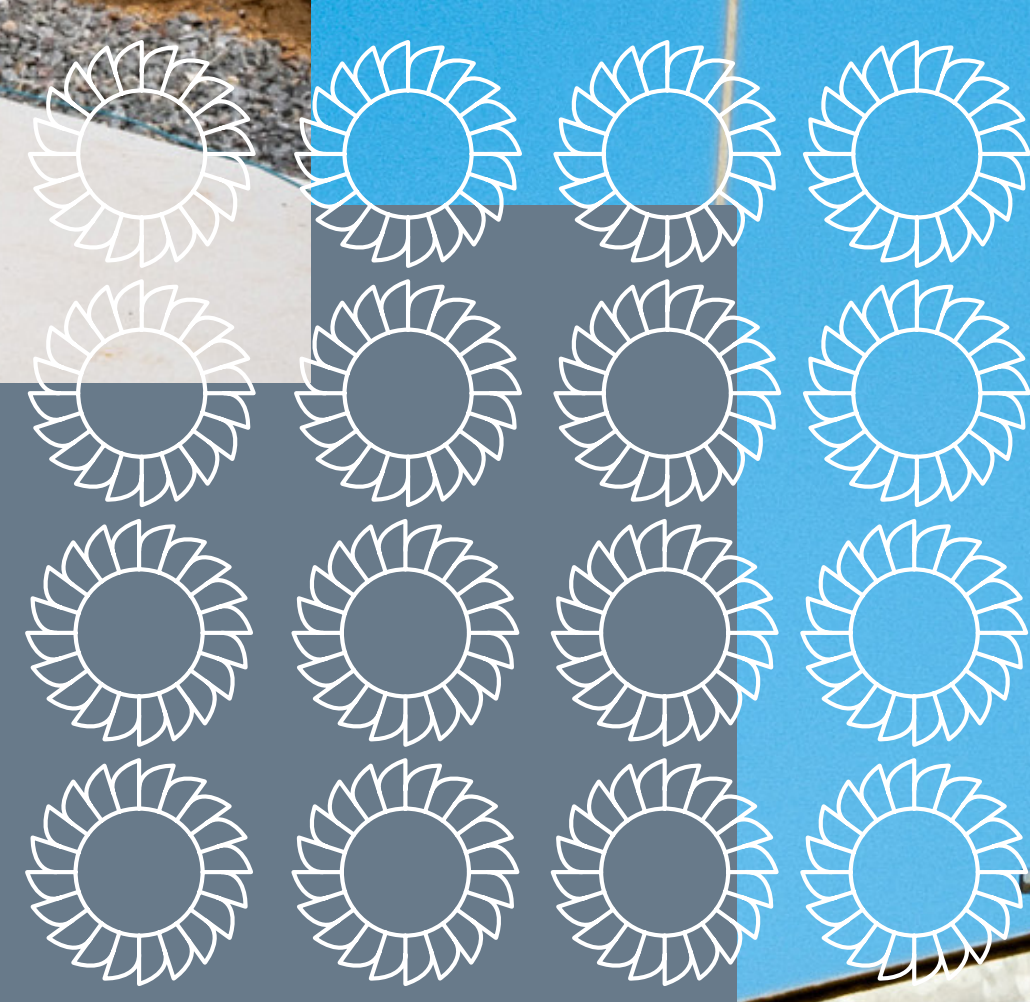
Overhead line

The proposed double circuit 132kV OHL is approximately 13.1km long supported by steel lattice towers. The proposed alignment is between Weydale and Reaster, where a cable sealing end (CSE) at each location will provide a transition point between the OHL and the UGC sections. The average height of the steel lattice towers are approximately 35 metres, with an average span of 270m between towers.

Underground cable

There are two proposed 132kV UGC sections – one is 3km long between the existing Thurso South Substation and the proposed CSE at Weydale, and the other is 7km long between the proposed CSE at Reaster and the proposed Gills Bay Switching Station.

Traffic management will be required during construction and consultation will be undertaken on this in due course.



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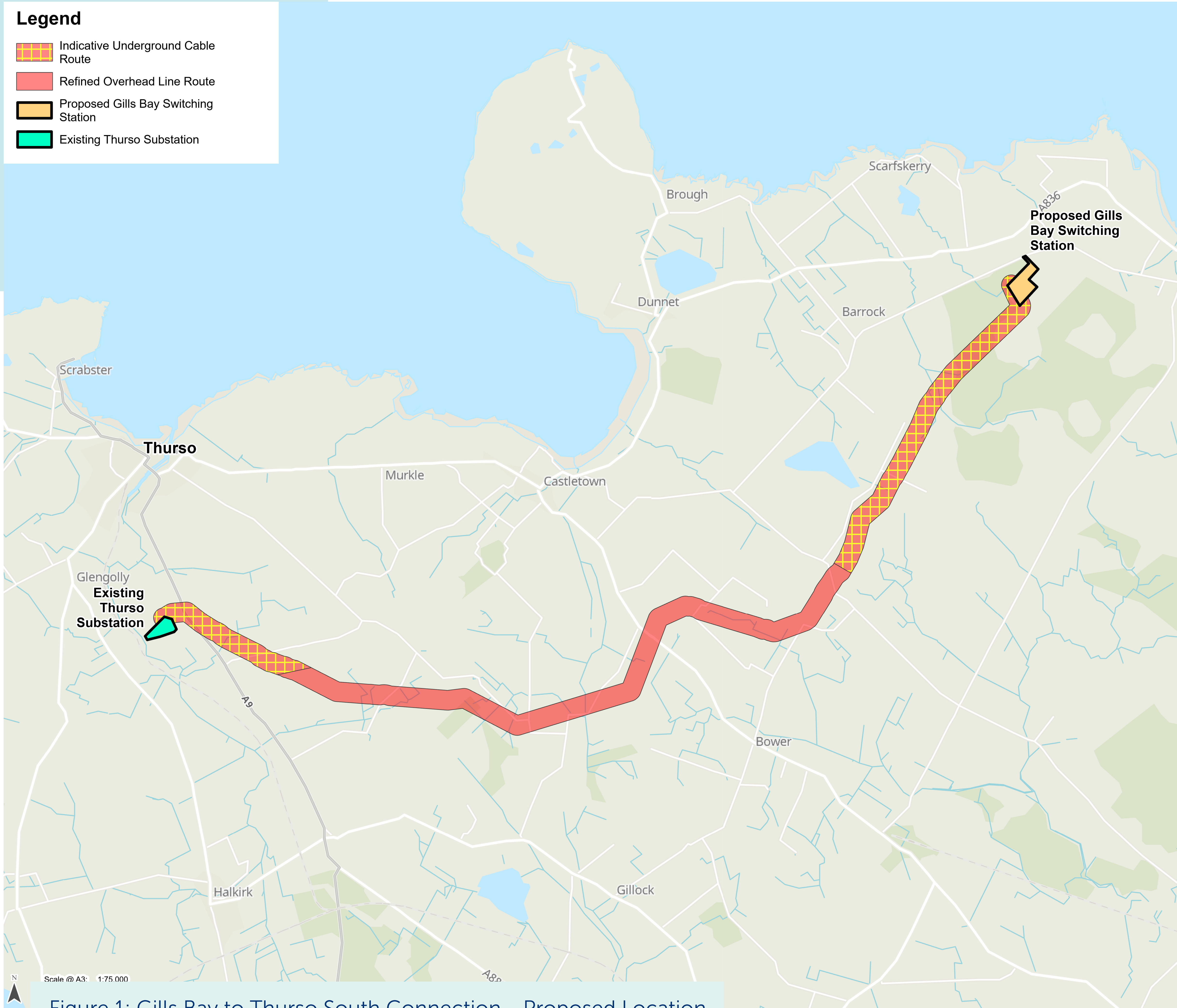


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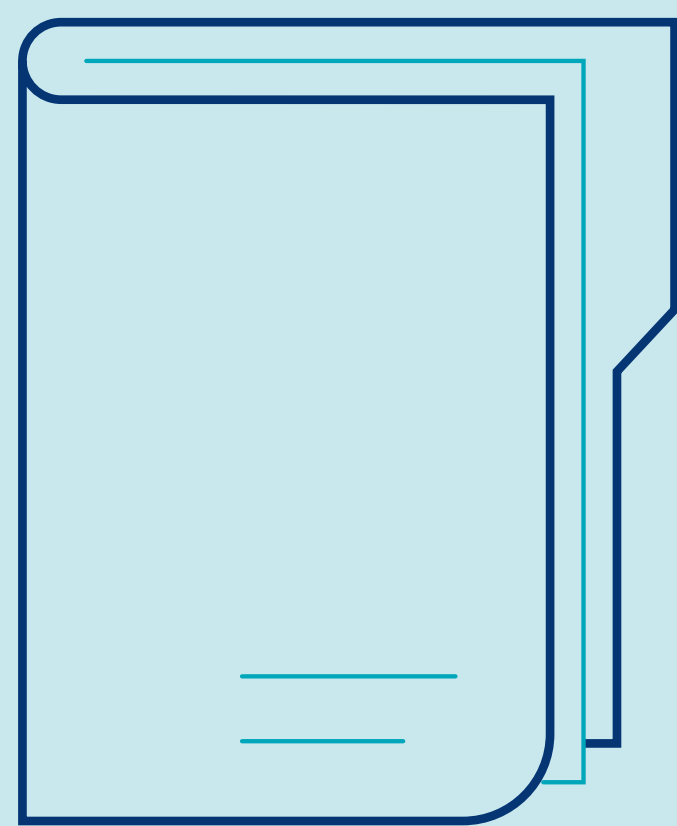


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Project need and overview

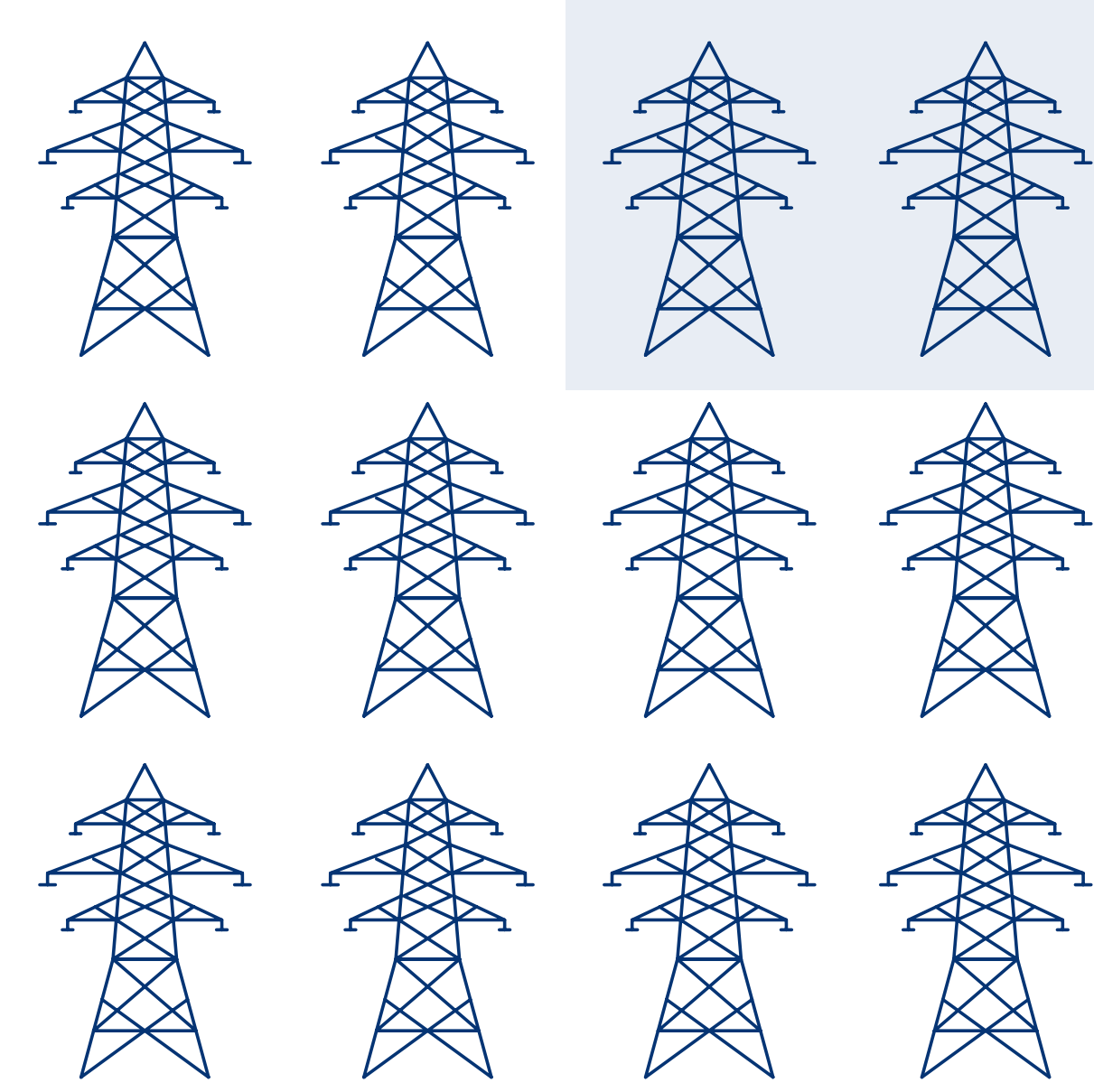


Previous section 37 consent

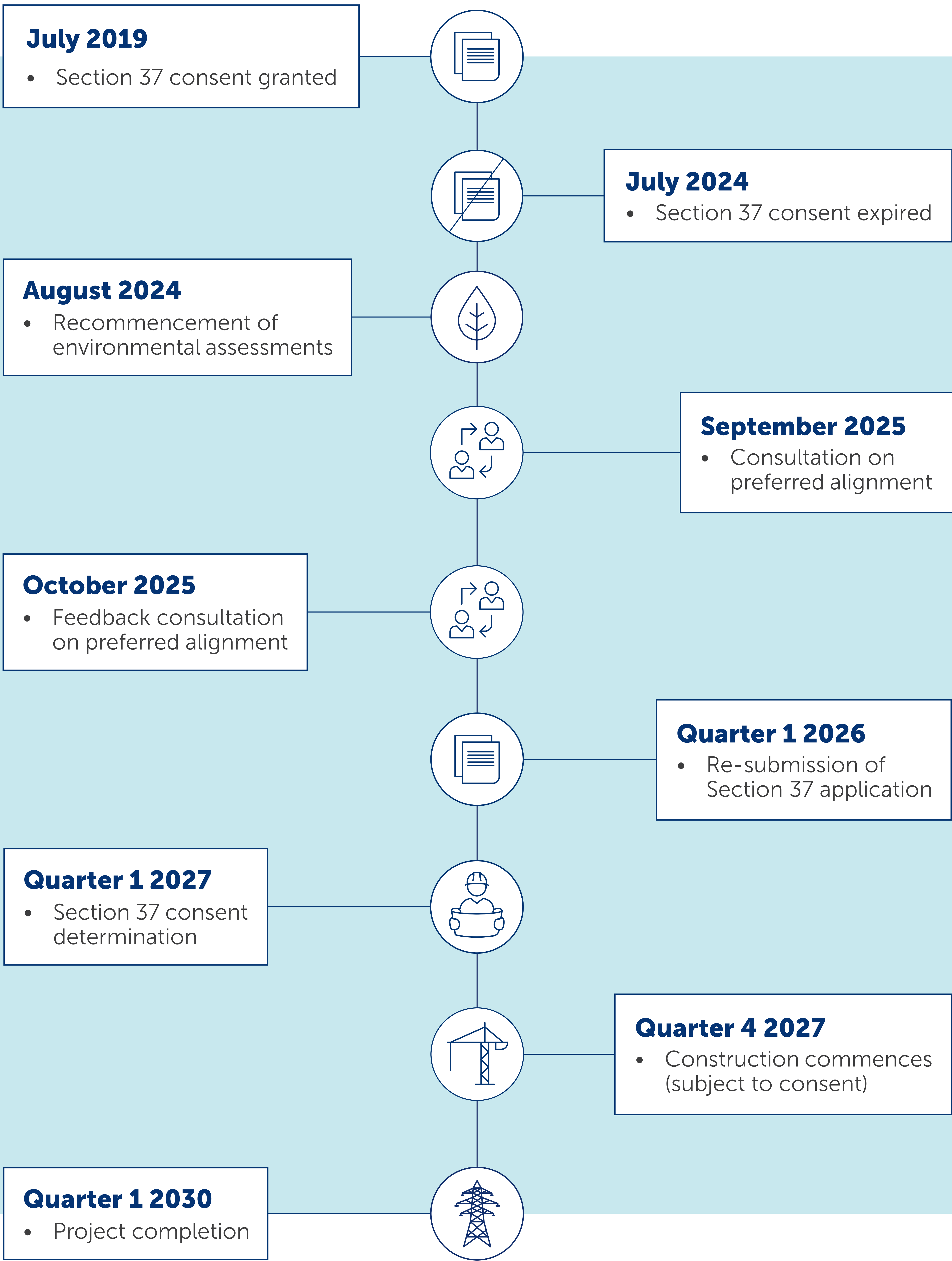


Consent for the proposed connection was previously granted in July 2019 (Energy Consents Unit Reference: EC00005260) under section 37 of the Electricity Act 1989. However, this consent expired in July 2024 and therefore we will be submitting a new application to the Scottish Ministers based on the previously consented design. An updated Environmental Impact Assessment (EIA) will be submitted alongside the new application.

The design includes 10km of UGC in two sections to mitigate potential environmental impacts on ornithology and visual amenity. The undergrounded sections are proposed between Thurso South Substation and Weydale, and between Reaster and the proposed Gills Bay Switching Station as shown in Figure 1.



Project timeline



*Please note that the timeline is indicative and subject to change.



Meeting our obligations

Our Transmission Operators licence requires us to provide best value for customers and GB consumers.

As a natural monopoly, SSEN Transmission is closely regulated by the GB energy regulator Office of Gas and Electricity Markets (OFGEM), who determine how much revenue we are allowed to earn for constructing, maintaining and renovating our transmission network.

These costs are shared between all those using the transmission system, including generation developers and electricity consumers.

We therefore work to strict price controls which means the following environmental, engineering and economic considerations form a key part of our routeing process.

Environmental assessments

Desk-based assessments using available mapping and GIS (Geographic Information Systems) data, together with site walkovers and survey work by specialists, have been undertaken to identify key environmental sensitivities, including landscape and visual amenity, sensitive habitats, protected ecology and ornithology, forestry, peat, and cultural heritage.

Further detailed studies and assessments are currently being undertaken as part of the EIA Report, which will support the resubmission of the section 37 application.

Consenting

The forthcoming application for consent (under section 37 of the Electricity Act 1989) will require a full EIA report. As the previous section 37 application was considered EIA development, we are proceeding with the current proposal on the basis that an EIA is required.

An EIA screening opinion to determine whether the project meets the EIA threshold, as set out in The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, was therefore not undertaken.

An EIA scoping opinion request was submitted to the Energy Consents Unit on **4 June 2025**, the responses to which will inform the content of the EIA report.

Permitted development

It is anticipated that the two sections of UGC will fall under permitted development rights as set out in Class 40 1(a) of the Town and Country Planning (General Permitted Development) (Scotland) Order 1992 (as amended). An environmental appraisal will be undertaken separately for these works and the main EIA report will consider the potential cumulative impacts of both the OHL and the UGCs.



Engineering and economic considerations

In addition to the suite of environmental assessments undertaken, the following engineering and economic considerations form a key part of our alignment process:

- Construction costs and buildability (largely affected by ground conditions such as peat, rock, flooding, contaminated land)
- Operations and maintenance requirements
- Outage requirements and network constraints
- Vicinity to other electrical OHL and underground structures
- Vicinity to any other utility (overhead or underground)
- Proximity to wind turbines and wind farm infrastructure
- Communications masts and infrastructure
- Urban development
- Forestry and biodiversity
- Technology costs and design parameters
- Site accessibility
- Alignment length



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Updating our overhead line alignment

As this is a resubmission of a previous section 37 consent, it was not necessary for the project team to revisit the route selection process. The project therefore progressed to alignment studies and we are currently engaging with stakeholders to review the existing design in light of any engineering and environmental policy changes. For example, updated engineering specifications and recently introduced planning policies, such as National Planning Framework 4.

Following stakeholder engagement with the public, statutory bodies, and landowners, this will be finalised as a proposed alignment to be taken forward for the application resubmission.

Environmental constraints

The key environmental constraints include landscape and visual, ecology, ornithology, cultural heritage, and peat. There are several local settlements surrounding the proposed project, such as Bower Madden, Durran, Castletown, Murkle, Rattar, Mey, Gills Bay / Upper Gills, and East Mey. In addition, there are a number of statutory designated sites within 2km, including Loch Heilen Site of Special Scientific Interest (SSSI), River Thurso Special Area of Conservation (SAC), and Loch of Durran SSSI. Peatland habitats are present in the area, along with protected species such as otter, pine marten, Scottish wildcat, water vole and bats. A number of cultural heritage assets have also been identified.

Detailed environmental surveys and assessments are taking place to understand any changes to the baseline environment and identify any constraints that may be significantly impacted during construction and/or operation. This may necessitate amendments or micrositing of the proposed alignment, and the mitigation hierarchy of avoid, minimise, restore, offset will be followed. An EIA Report will support the section 37 application and will detail the environmental assessments and proposed mitigation where sensitive receptors cannot be avoided.

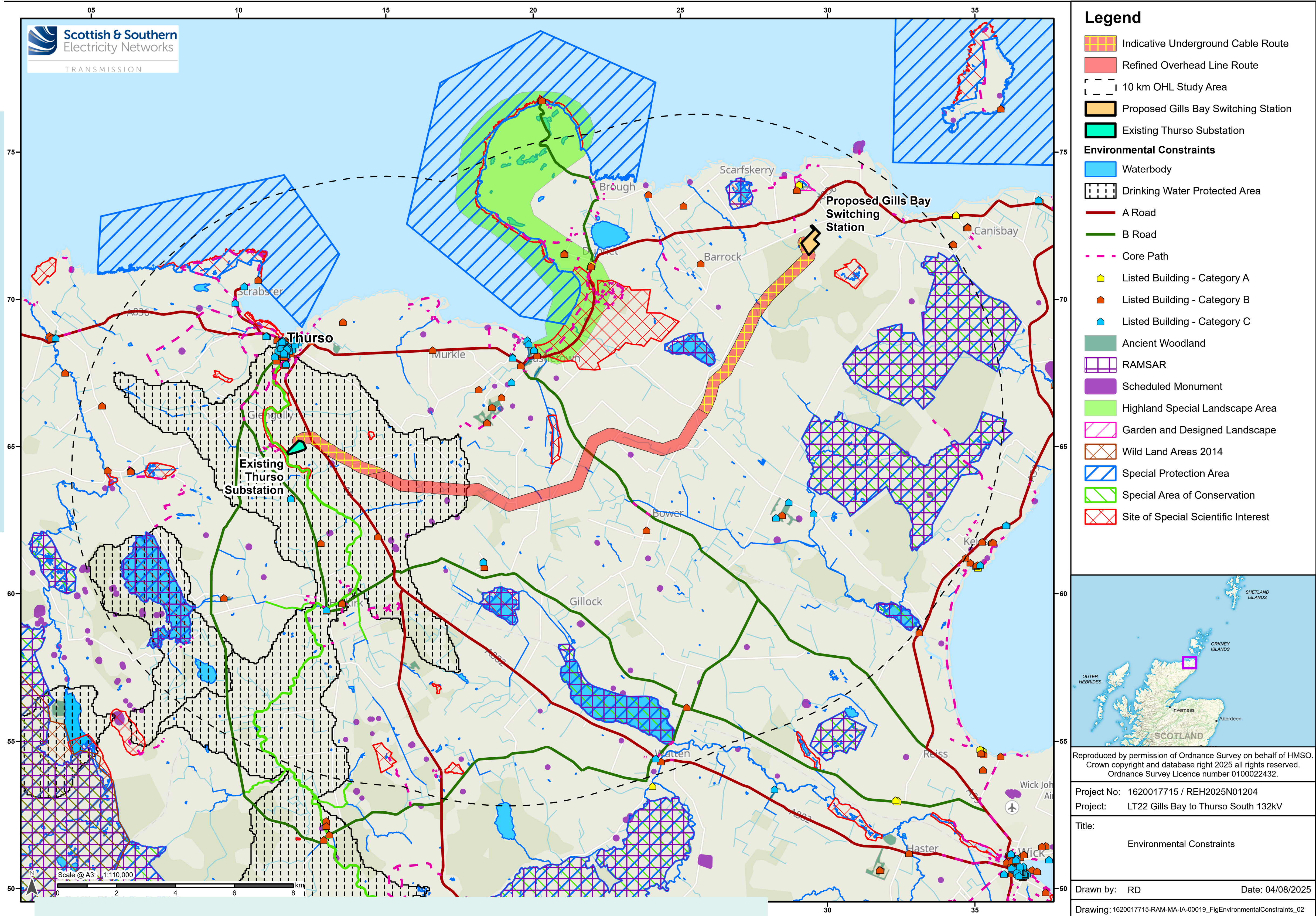


Figure 2: Gills Bay to Thurso South Connection - Environmental Designations and Constraints



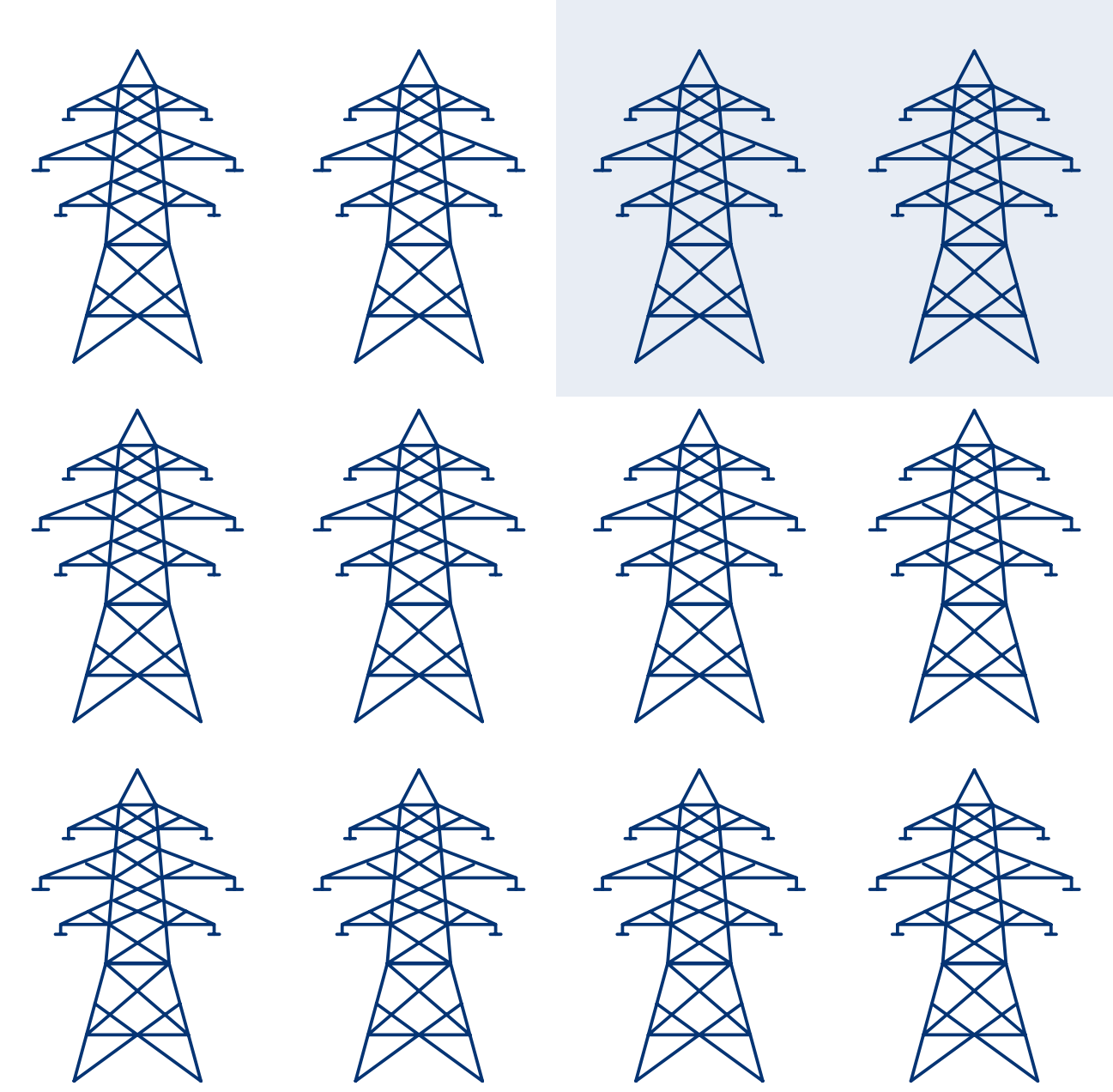
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Construction of an overhead line

Steel Lattice Towers

The proposed double circuit OHL will be supported by approximately 52 steel lattice towers. The towers will be an average height of 35m and have an average span of 270m, meaning there is an opportunity to microsite towers away from sensitive areas.

Foundation types, dimensions and locations will be confirmed following detailed geotechnical investigation and micro-siting. Individual foundations and associated construction activities will require a working area of approximately 50m x 50m around each tower location.

Two cable sealing end (CSE) compounds will be required to connect the OHL to the UGC sections. Each CSE compound will be approximately 40m x 40m and will be securely fenced.

Access tracks

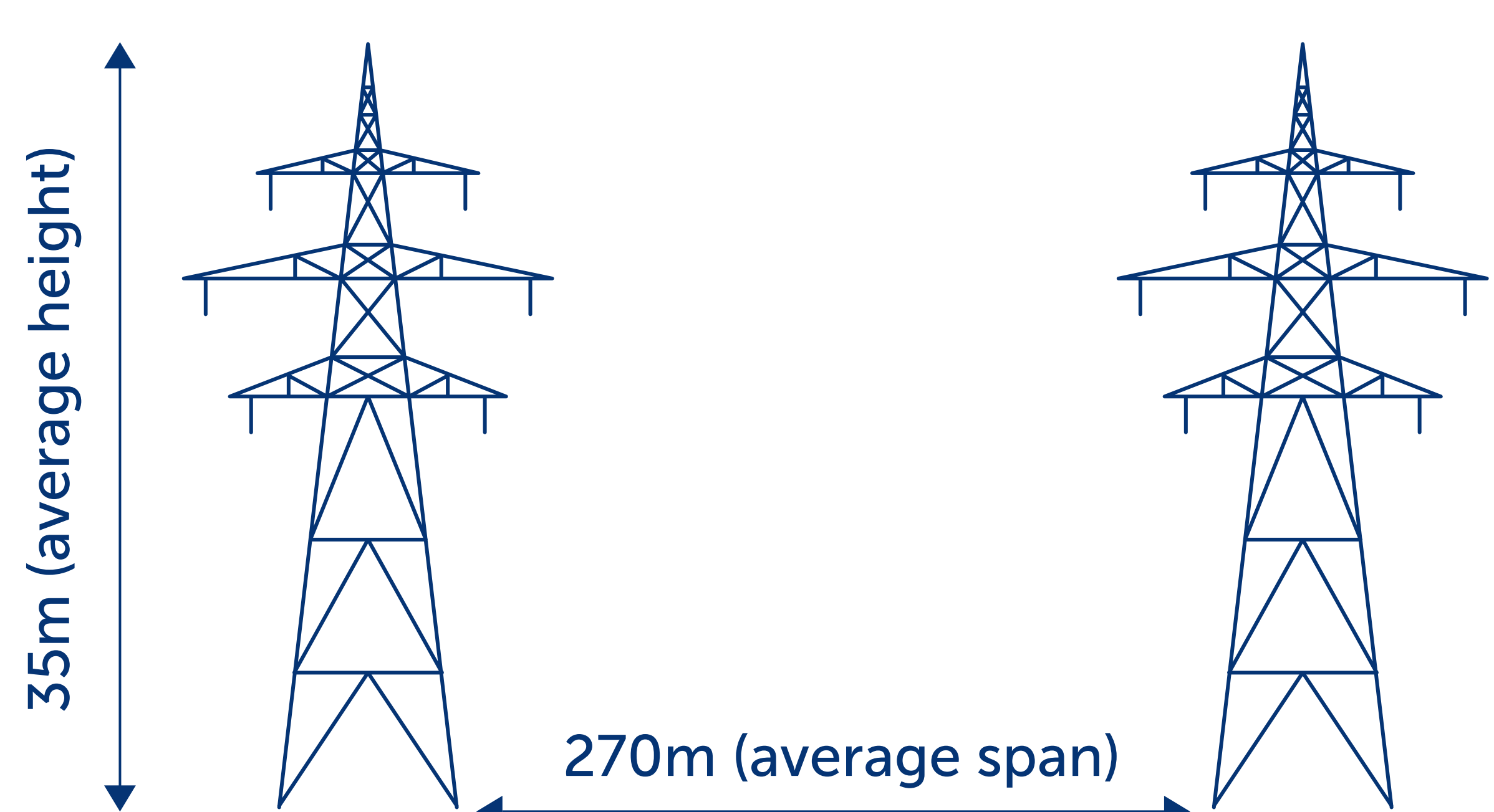
Existing access tracks will be utilised and upgraded where feasible and temporary access tracks will be installed where required. Permanent access will be required to CSE compounds. Short sections of permanent access may also be required for the OHL. The design of these tracks will vary depending on ground conditions, for example the use of floating roads over peatland.

Ancillary works

Certain ancillary works will be required to establish access for construction and maintenance, including vegetation clearance and infrastructure alterations, and temporary measures will be put in place to protect road and water crossings during construction.

Reinstatement

Following commissioning of the proposed project, all temporary construction sites will be reinstated. Reinstatement will include the removal of temporary access tracks, work sites around the tower locations, and the re-vegetation of construction compounds.



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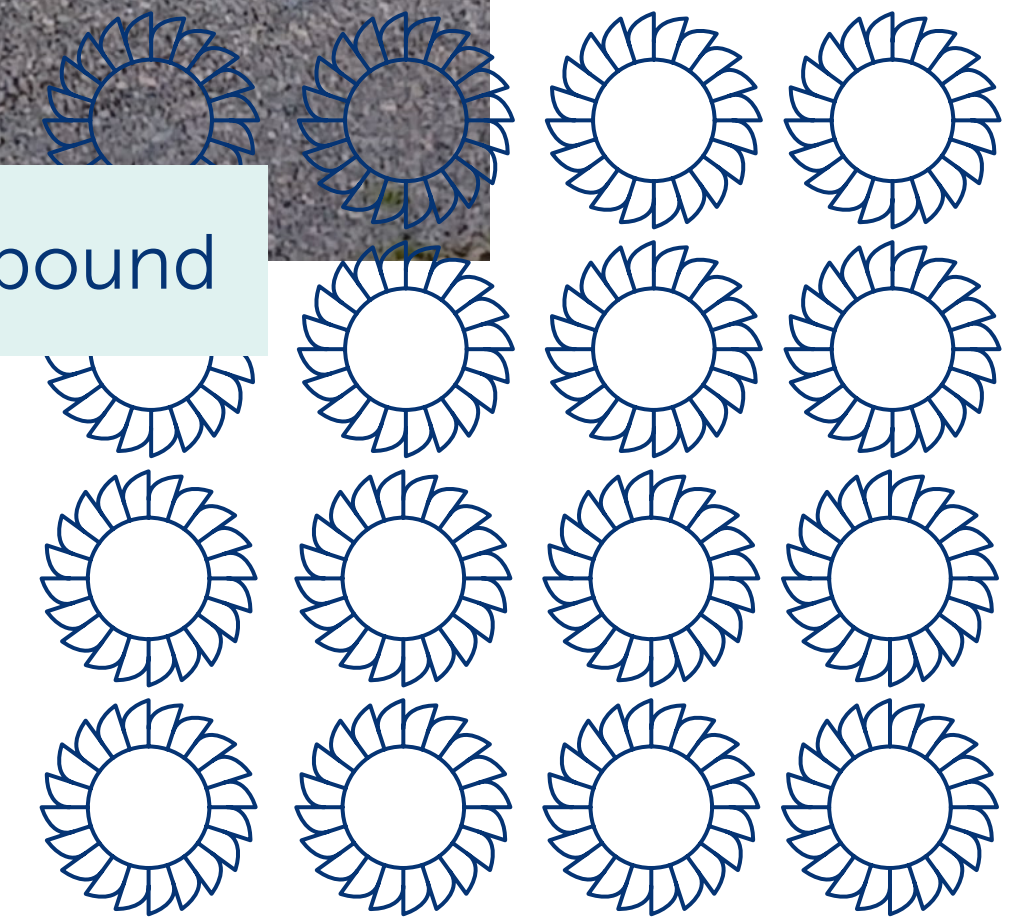
Installation of an underground cable

We are proposing two sections of UGC:

- 3km between Thurso South Substation and a cable sealing end (CSE) at Weydale
- 7km between a CSE at Reaster and the proposed Gills Bay Switching Station
- Two CSE compounds will be installed at the locations where the UGC and OHL transition – one at Weydale and one at Reaster. A CSE is a termination assembly used at the end of a high-voltage cable to provide a transition point between infrastructure, ensuring safe and reliable operation
- The cable installation will be carried out using the open trench method, with full reinstatement to restore the ground to its original condition. The anticipated working width is 40m with a trench depth of approximately 1.4m



Cable sealing end compound



Typical 132kV cable trench arrangement



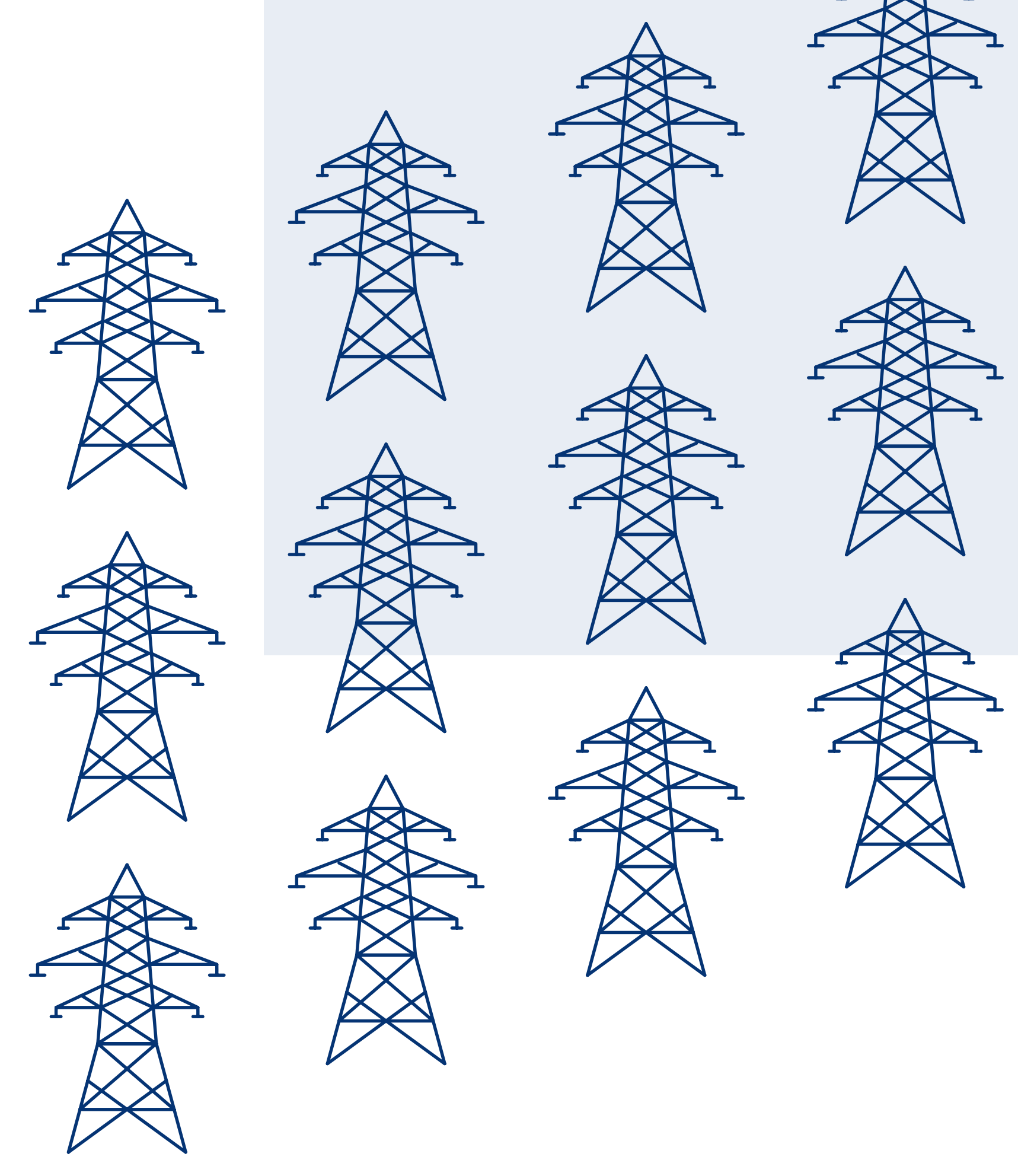
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Next steps

All comments on the alignment process are requested by Friday 26 September 2025.

Following the consultation event and a review of consultation responses, a Report on Consultation will be produced which will document the feedback/comments received and our responses.

A further consultation event will take place to feedback our responses in person and showcase the finalised proposal.

The environmental assessments will continue followed by the submission of a section 37 application in 2026. If further site or desk-based analysis during the EIA and consenting stage identifies specific constraints, a review of the proposed alignment may be necessary.



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Help shape our plans

The work we have planned is significant and has the potential to deliver massive benefits in your community, Scotland, and beyond. Yet we know that achieving our goals will require a lot of work that will impact your lives. That's why we want to work with you every step of the way throughout the planning and delivery stages of these essential and ambitious works.

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

Throughout the consultation, we'll present our approach to developing the project.

We will also provide some visualisations and maps to show you where everything will be located.

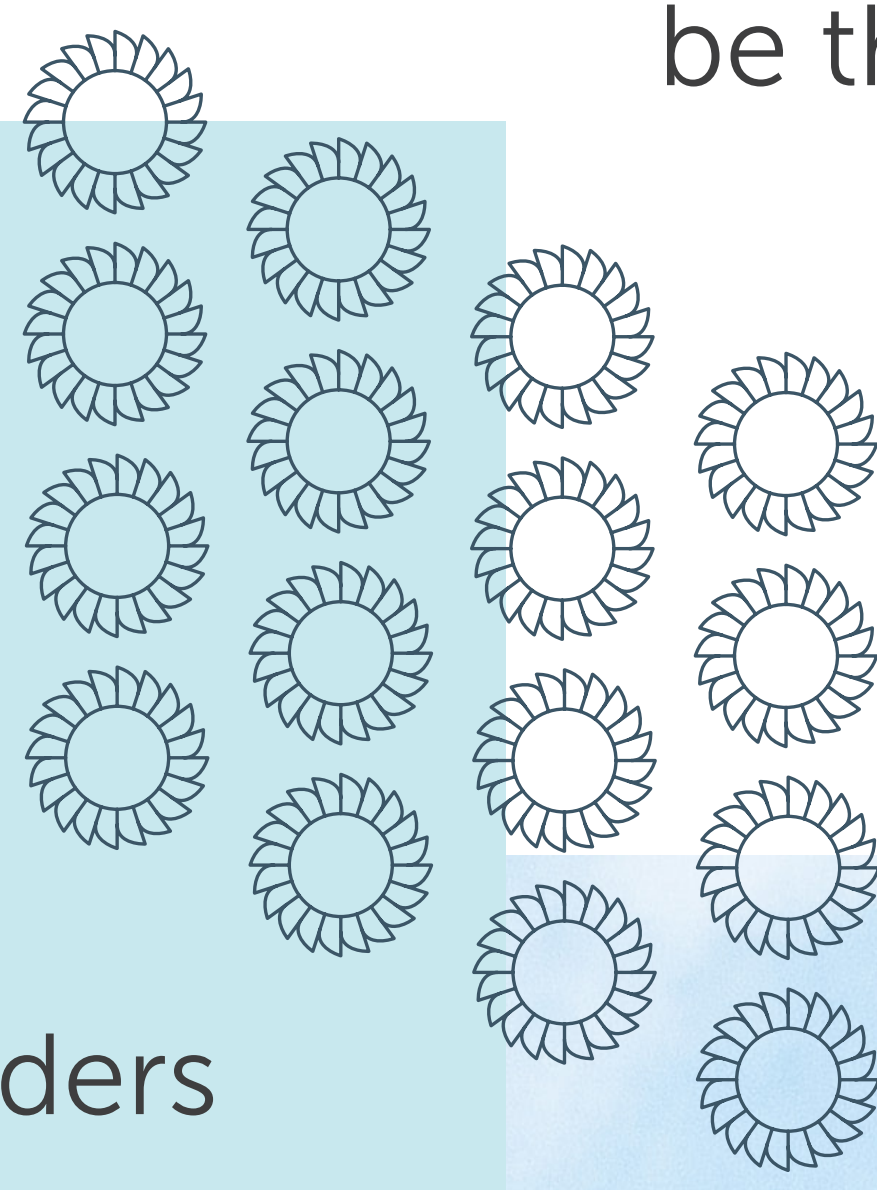
We want you to share your thoughts and opinions on our plans, where you think we can make improvements and any concerns about the impact of our work.

By telling us what you think, you will help shape our proposals. We want to harness your local knowledge so that we spot any unforeseen challenges early and maximise the potential benefits and opportunities for your communities.

Because, ultimately, we want you to work with us to ensure that the energy infrastructure we build will be the best it can possibly be.

Who we are consulting with

As well as communities, we are keen to hear feedback from a broad range of other stakeholders including but not limited to landowners, businesses, non-statutory consultees and statutory consultees such as local authorities, NatureScot, Scottish Environment Protection Agency (SEPA), Historic Environment Scotland (HES) and Scottish Forestry (SF).



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What happens next and how do I have my say?

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

The feedback period

We will accept feedback from now until **Friday 26 September 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/projects/project-map/gills-bay-radial/

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 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."

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

Lisa Marchi

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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/projects/project-map/gills-bay-radial/

You can also follow us on social media:

 [@assentransmission](https://www.instagram.com/assentransmission)  [@SSETransmission](https://twitter.com/SSETransmission)



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