Scottish & Southern Electricity Networks

TRANSMISSION

Gills Bay to Thurso South Connection

Alignment Public Consultation - Feedback Event

October 2025

ssen-transmission.co.uk/projects/project-map/gills-bay-radial/

Contents

The consultation event will be taking place on:

Wednesday 1 October, 3–7pm
Mey Village Hall, Mey, Thurso, Caithness, KW14 8XH

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 our host 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. 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/**

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.

Figure 1: Gills Bay to Thurso South Connection - Indicative Alignment and Limit of Deviation (LoD)

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.

Gills Bay to Thurso South Connection

Project timeline

July 2019
- Section 37 consent granted

July 2024
- Section 37 consent expired

August 2024
- Recommencement of environmental assessments

September 2025
- Consultation on preferred alignment

We are here

October 2025
- Feedback consultation on preferred alignment

Quarter 1 2026
- Re-submission of section 37 application

Quarter 1 2027
- Section 37 consent determination

Quarter 4 2027
- Construction commences (subject to consent)

Quarter 1 2030
- Project completion

*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

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.

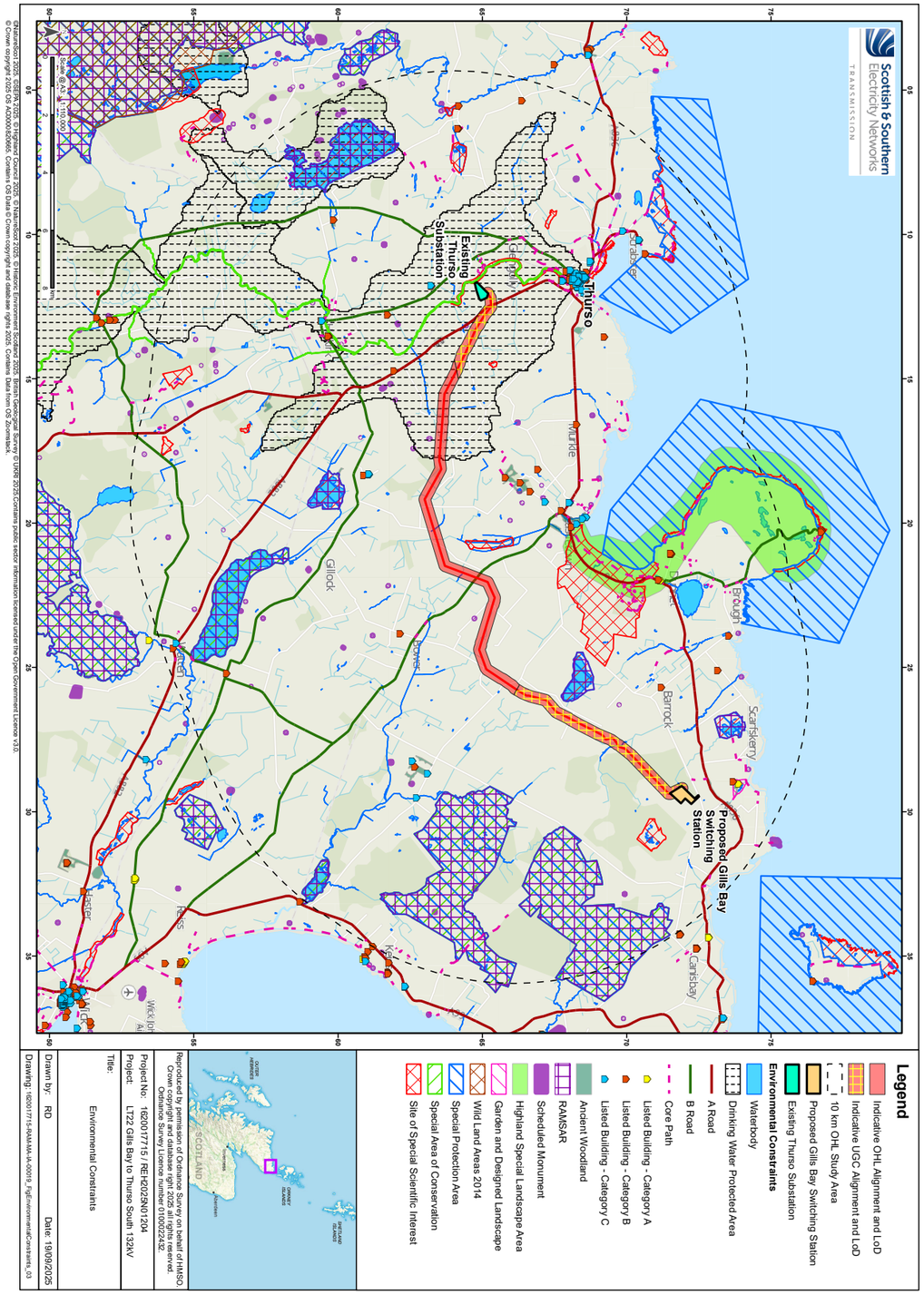


Figure 2: Gills Bay to Thurso South Connection - Environmental Designations and Constraints

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

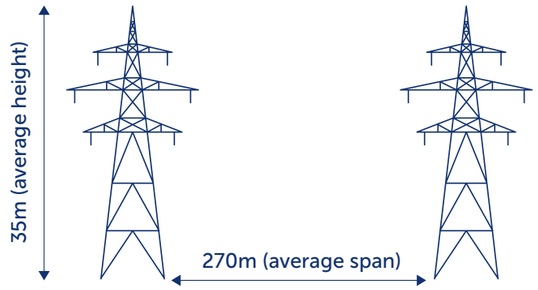
Existing access tracks will be utilised and upgraded where feasible and temporary access tracks will be installed where required. Permanent access will be required to CSE compounds. Short sections of permanent access may also be required for the OHL. The design of these tracks will vary depending on 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.

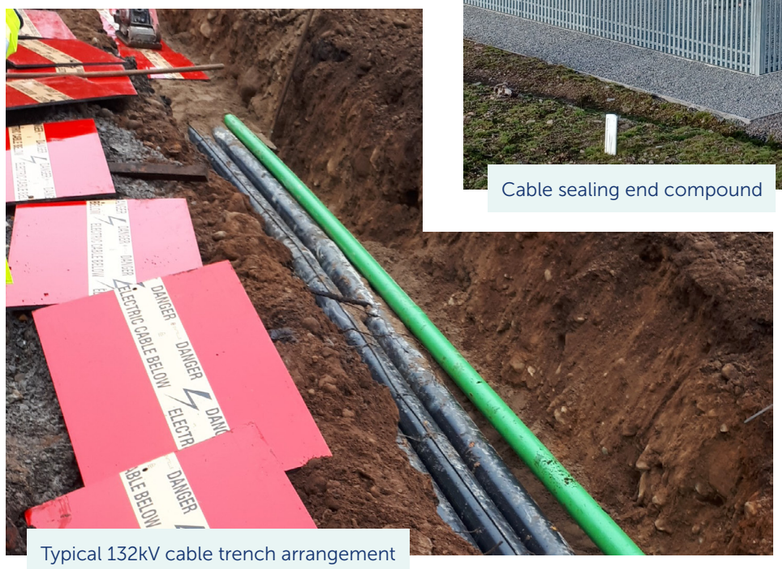


Installation of an underground cable

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

Gills Bay to Thurso South Connection

Stakeholder Engagement and Next Steps

As we prepare to submit a new Section 37 application, we have been engaging with statutory bodies, the public, and landowners on the previously consented design and reviewing feedback to finalise our updated proposal.

This is the final pre-application consultation (PAC) event for the project, the purpose being to share the feedback we have received and our responses. We are very grateful for the time taken to share your views with us, both in person and online.

Environmental assessments will continue as we move toward submission of our application in 2026.

Comments made to us throughout the consultation process do not constitute representation to the Energy Consents Unit (ECU). Once the Section 37 application has been submitted, there will be a formal opportunity for representations via the ECU online portal, as well as by email and post.

If you have any further questions, please contact the Community Liaison Manager who works closely with community members to make sure they are well informed of our proposals and that views, concerns, questions or suggestions are put to the project team.

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."

Community Liaison Manager

Lisa Marchi

SSEN Transmission 10 Henderson Road, Inverness, IV1 1SN

lisa.marchi@sse.com

07825 015 507

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:

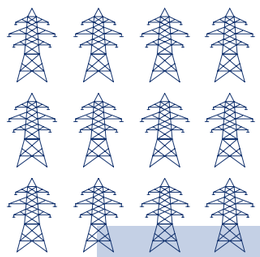
@ssentransmission @SSETransmission

What you told us at the public consultation event in September 2025

A consultation event was held at Mey Village Hall on Thursday 4 September, attended by 49 people.
An online feedback option was also available, and the consultation period closed on Friday 26 September.

A summary of feedback received and our responses are below.

Feedback	Response
Why is the Gills Bay to Thurso South Radial Connection needed?	This project is required to connect clean, renewable energy from wind, tidal, and solar projects into the wider transmission network. Proposed renewable energy projects will connect into the proposed Gills Bay Switching Station, which requires this connection to the existing Thurso South Substation for power to flow into the national grid. This will strengthen grid stability in the far north of Scotland and is a vital step in supporting net zero and energy security targets. It will also bring opportunities for local jobs, skills, supply chain contracts, and wider community benefits.
Why is there a lot of development in the north of Scotland?	We manage the high-voltage transmission network in the north of Scotland. While we don't decide where energy is generated or used, we have a legal duty to provide generators with access to our network so electricity can be transported across Great Britain. The north of Scotland is rich in renewable resources making it vital for Scotland's and the UK's climate targets. Covering a quarter of the UK's landmass, our region will play a crucial role in the transition to a low-carbon future.
Why can't all the infrastructure be undergrounded?	Underground cables (UGCs) are used where justified but installing them for the entire project has major challenges. Our licence requires us to deliver projects that are both efficient and economical for consumers - UGCs are far more expensive than overhead lines and these costs are passed on to bill payers. Installing UGCs can cause increased impacts on habitats, soils, and watercourses when compared to OHLs. If a fault occurs, this often requires extensive works, specialist resource, tools, and equipment to locate, followed by significant civil work to expose the damage, replace the damaged section, and then up to a month to carry out the repairs, posing risks to supply and reliability.
Why can't all infrastructure be placed offshore?	Offshore cables are vital for Scotland's electricity network, but not everything can be built at sea. Onshore infrastructure is required to ensure renewable power reliably reaches homes and businesses. • Infrastructure must still be on land to manage and distribute electricity • Offshore construction is more complex and costly for bill payers • Subsea cables can impact marine habitats, fishing grounds, and shipping routes The existing Thurso South Substation has been identified as the most efficient and economic point on the network for the proposed renewable energy projects to connect into.



Gills Bay to Thurso South Connection

Feedback	Response
How are landscape and visual impacts being considered?	We carefully consider how the project may affect local scenery and communities. A Landscape and Visual Impact Assessment is carried out as part of the EIA, which looks at views from towns, villages, walking routes, and tourist sites, and seeks to reduce potential visual impacts where possible. Once the Section 37 application is submitted, visualisations will be available to view on the ECU portal. The proposed design reflects key landscape and visual concerns that were raised during the previous consenting process and we have retained the UGC sections required as mitigation.
How is the environment being considered?	We prioritise environmental protection in all our projects, following strict policies and regulations. Our approach uses the avoid, minimise, mitigate, and restore hierarchy to safeguard protected areas and wildlife. We are currently updating the EIA to submit alongside the Section 37 application, which includes updated surveys such as ornithology. The previously consented design has 10km of UGC in two sections to mitigate impacts on ornithology and visual amenity. We are leading the way on Biodiversity Net Gain (BNG), committing to deliver at least 10% more biodiversity on all projects gaining consent.
How is ornithology being considered?	We recognise the diversity of wildlife in these areas. Bird surveys, including seasonal surveys to monitor and record breeding activity along with flight activity, were recently concluded. The Vantage Point surveys recorded the number, heights and direction of bird flights, which are then modelled and assessed against the proposed tower and line heights to assess the likelihood of bird collision. The EIA will include assessment of the potential impact on ornithology and identify mitigation as required.
How will archaeology be assessed?	We carefully consider environmental, cultural, and built heritage when planning projects. Using national records, local authority data, and detailed site surveys, we assess potential impacts on archaeological sites, listed buildings, and other heritage assets. The EIA Report will detail these findings and recommend ways to mitigate any potential adverse effects.
What can community feedback influence?	We value feedback from all stakeholders and use it to help shape our projects. While community feedback is not our only consideration, we wish to develop all projects sensitively and to reduce impacts as much as possible. Community feedback provides an essential insight into local issues that helps to refine the design. The current design has been informed by consultation undertaken during the previous consenting process.
Will there be any benefit to the community?	The project will contribute to wider investment in Caithness, supporting jobs, skills development, supply chain opportunities, and local spending. We are also keen to work closely with local communities to understand what opportunities there may be to leave a local legacy. All new transmission projects must also provide a Community Benefit Fund, which will bring positive benefits and a long-lasting legacy to communities across the north of Scotland. More information can be found here: **www.ssen-transmission.co.uk/information-centre/community-benefit-fund**

Feedback	Response
Is there a health risk associated with overhead lines?	We design, build and operate all our infrastructure in line with strict health and safety laws and guidance from the UK and Scottish Governments, the Health and Safety Executive, and Ofgem. For electromagnetic fields (EMFs), we follow UK Government guidance, which is based on international research and includes precautionary measures. Decades of studies have found no established health effects below the safe exposure limits, and our designs ensure these limits are never exceeded, even when operating at full capacity.
Where will the tower locations be and what is the limit of deviation (LOD)?	We have included a map of the indicative tower locations; however, exact locations won't be finalised until the Section 37 application is submitted. There may be some element of micrositing depending on environmental, technical, land, and community constraints. Once the Section 37 application has been submitted, you will be able to view all documentation on the ECU portal and there will be a formal opportunity for representations. When we apply for consent, we include an LoD which will be refined down from the currently shown indicative LoD to approximately 100m, to take account of sensitive receptors. This is a defined area or "corridor" within which the final infrastructure can be built.
What is the proposed construction access strategy?	An assessment of construction related traffic and associated impacts will be undertaken as part of the EIA. A Construction Traffic Management Plan will be developed in consultation with stakeholders and will set out how we will safely manage traffic during construction, to minimise disruption, protect communities, and keep roads safe. 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 cable sealing end compounds. Short sections of permanent access may also be required for the OHL.
Will the proposed development impact my property valuation?	We will look to mitigate impacts on residential properties as far as possible and these impacts will be assessed as part of the EIA Report that will accompany our application for consent. Concerns in relation to impacts on property are being noted by our team, however, as a regulated business, we are obliged to follow a statutory legal framework under the Electricity Act 1989 and Land Compensation (Scotland) Act 1963. If you are entitled to compensation under the legal framework we will assess any claim on a case-by-case basis under the direction of this legal framework. If this is the case, we will recommend that you engage a professional adviser and we generally meet reasonably incurred professional fees in these circumstances. However, for the avoidance of doubt, we should advise that we will not meet fees incurred in objecting to our proposed developments.
Does the proposed development affect my human rights?	We do not consider that the proposals we are consulting on are in breach of the European Convention on Human Rights (ECHR) provisions. Our proposals are in pursuance of legitimate requirements to ensure energy security and are in accordance with our licence provisions, supported by the consultation which is being carried out with all affected stakeholders. The application for consent for the proposed new connection, which will be accompanied by an EIA Report, will be submitted to the Scottish Ministers for determination and will be subject to necessary scrutiny and consultation as part of that process.