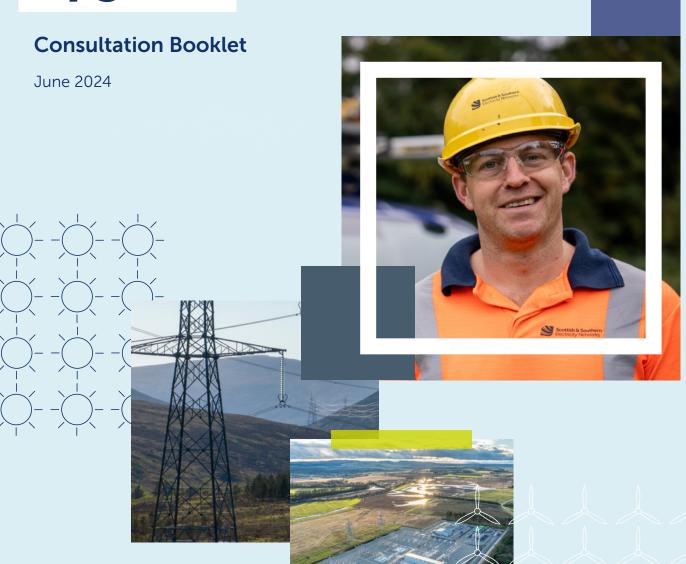


TRANSMISSION

Alyth - Tealing Overhead Line 400kV Upgrade



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The consultation events will be taking place on:

Monday 3 June, 2–7pm, Errol Village Hall, Errol

Tuesday 4 June, 2–7pm, Tayside Institute, Newburgh

Wednesday 5 June, 2-7pm, Tealing Village Hall, Tealing

Thursday 6 June, 2–7pm, Alyth Town Hall, Alyth



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 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 **ten million UK homes** and **20,000 jobs, 9,000** of which will be here in Scotland.



Find out more

Scan the QR code with your smartphone to find out more about how these policies have been assessed and determined.

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 transmission network across our region which covers a quarter of the UK's landmass, 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 (OHL) 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 local 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

The Pathway to 2030

Building the energy system of the future will require a 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 you?

The east of Scotland will play a key role in meeting these goals. The extensive studies that informed the ESO's Pathway to 2030 HND confirmed the requirement to increase the power transfer capacity of the onshore corridor from Kintore to Tealing.

This requires a 400kV connection between these sites to enable the significant capability needed to take power from onshore and large scale offshore renewable generation, connecting on the east coast of Scotland before transporting power to areas of demand.

As part of these plans, we're proposing to build a new 400kV OHL between Kintore and Tealing. This also requires two new 400kV substations to be constructed in Fetteresso Forest and Tealing to enable future connections and export routes to areas of demand.

In addition, two of the existing 275kV OHL out of the existing Tealing substation to Alyth and Westfield require upgrades to 400kV operation and to be connected to the proposed new Tealing 400kV site.

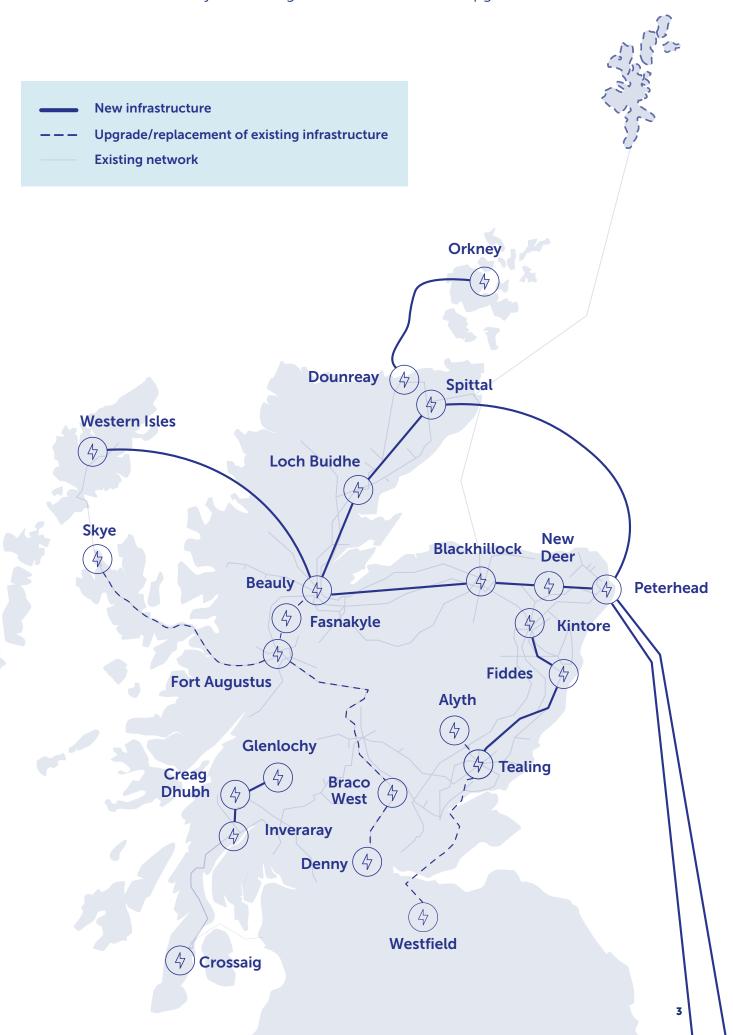
These five projects, collectively are called the Kintore to Tealing 400kV projects, and are seen as critical to enable the delivery of the UK and Scottish Government's targets.

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

As the transmission network owner for the north of Scotland, Scottish and Southern Electricity Networks Transmission (SSEN Transmission) are responsible for the maintenance of the existing transmission network and also ensuring that the current network can facilitate connection requests from developers when necessary.

The reconductoring of the existing Alyth to Tealing OHL has been identified as part of the National Grid ESO's Holistic Network Design (HND).

This project will upgrade the line from 275kV to 400kV to facilitate the transition to Net Zero in line with the UK Government targets of achieving net zero by 2050.

This booklet focuses on the upgrades required between Alyth and Tealing substations.

Approach to consenting

An application for Section 37 (S37) consent will be made under the Electricity Act 1989 for the upgrade of the existing OHL to operate at 400kV.

This application is made to the Energy Consents Unit (ECU) of the Scottish Government.

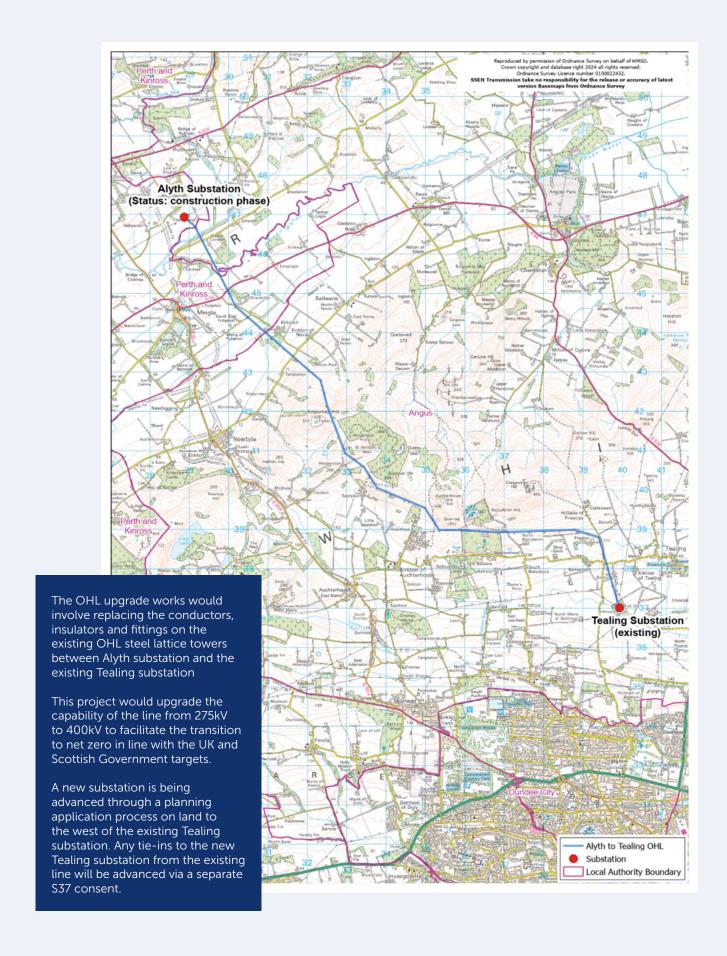
The S37 will cover all aspects of the OHL works, including replacement of insulators and conductors, tower and foundation repairs, ground reprofiling, all associated works and the provision of access tracks to enable these works.

The application will be accompanied by an Environmental Impact Assessment (EIA) Report.

We will be submitting an EIA Scoping Report to the ECU soon, which, in collaboration with statutory and non-statutory consultees, will determine the scope of issues to be considered in the EIA Report.

The scope to carry out some of the works, either as permitted development or through separate planning consent, in advance of obtaining S37 consent is currently being explored.





Project details - Overhead Lines

Conductor replacement

The existing conductor is Twin Zebra Aluminium Conductor Steel Reinforced (ACSR) Conductor. This conductor has been in place since the OHL was constructed in 1963 and 1973 and is due for replacement.

The replacement conductor that will be used is a Triple Upas All Aluminium Alloy Conductor (AAAC) consisting of stranded construction.

Insulator replacement

The existing 275kV insulators will be replaced with 400kV insulators.

These are slightly longer than the existing insulators as they have more discs. The insulator and conductor replacement will allow the OHL to transfer a higher capacity of power.

Tower refurbishments

The new conductor is heavier than the existing conductor therefore some of the tower steelwork and foundations will need to be strengthened.

The refurbishments and upgrades to the steelwork and foundations will take place ahead of replacing the conductors.

Access requirements

To access the towers, we will use a variety of methods including the construction of new stone access tracks, use of existing tracks, laying of trackway panels on favourable terrain or by all-terrain vehicle.

We will agree any access requirements with the relevant landowners and secure consent, where required, before commencing works.

Operational corridor requirements

The operational corridor is calculated based on achieving OHL resilience from tree fall. The uprating from 275kV to 400kV will result in the need for a wider operational corridor which could equate to a potential 89m full operational corridor width from woodland edge to woodland edge. Requirements will be assessed through the detailed design process.

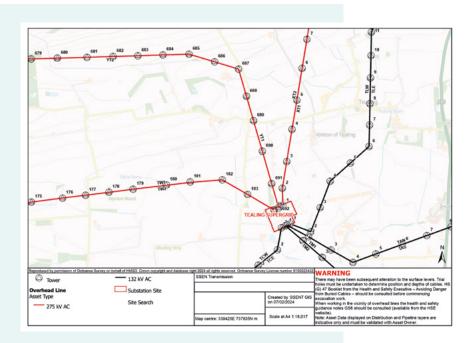


Project interfaces

Tealing substation

The existing OHL will be upgraded from Alyth substation to Tower 685, north-west of the existing site. To enable the operation of the OHL at 400kV, the existing OHL will be connected into the new 400kV substation being developed. This will be achieved by the construction of a new OHL originating at some point between the existing line between Tower 680 and Tower 682. This will enable the removal of approximately 1.5km of redundant OHL between tower 682 to the existing substation.

A separate Section 37 consent for the new build tie-in and removal of existing towers will be submitted to the Energy Consents Unit.

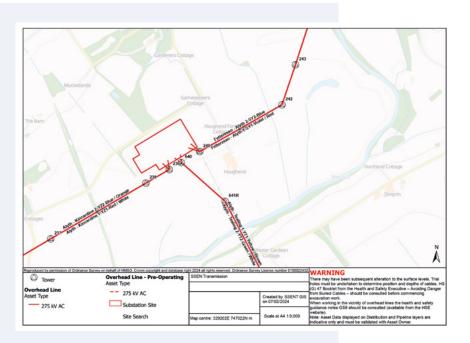


Alyth substation

Alyth substation is currently under construction and will be energised for operation at 400kV in 2026.

A Section 37 consent was granted in March 2020 for a new OHL configuration to connect the substation into the network for 2023.

When the OHL is ready for energisation some additional works will be required within the substation, including the removal of the transformers, to enable operation at 400kV.



Environmental considerations

This project is proposed as an upgrade to the existing OHL network between Alyth substation and Tealing substation and does not involve the construction or introduction of any new steel lattice towers. An Environmental Impact Assessment is required as part of the Section 37 consent application under the Electricity Act 1989. An EIA Scoping Report will be prepared and submitted to the Energy Consents Unit of the Scottish Government to agree which environmental elements should be taken into consideration as part of the assessment.

Ornithology

The OHL does not pass through any sites designated for ornithological interests. There are however likely to be breeding birds in the vicinity of the existing OHL, in particular lekking black grouse, raptors and upland waders. There will also be bird flight activity in proximity to, and across the line.

Mitigation measures will be required to avoid or minimise effects on these birds during the construction phase and a full suite of required bird surveys will be carried out and the scope agreed with NatureScot.

Water environment

The OHL passes over or near to a number of river catchments and watercourses. Several towers are located in areas of potential flood risk but with mitigation measures the project is not anticipated to increase flood risk or have a detrimental impact on water quality.

Private water supplies will be identified and assessed to determine the potential risk to any supplies.

Where required, measures will be put in place to ensure that the quality and quantity of water from these supplies would not be adversely affected.

Visual effects

There would be limited material change to the appearance of the OHL following the reinforcement works as the associated fittings will be visually similar to those present already, albeit the existing twin conductors would be replaced with triple conductors.

Some visual effects would result during the construction from temporary works as crew and machinery move along the line to replace the conductors and fittings and works and from tree felling associated with the creation of a 400kV operational corridor.

Terrestrial and aquatic ecology

The OHL crosses primarily agricultural land, utilised for arable crops and pasture, as well as areas of woodland, running and standing water.

Within the corridor there is a single Special Area of Conservation (SAC) (River Tay SAC - Dean Water and River Isla), and three Ancient Woodland Inventory (AWI) woodlands of Long-Established Plantation Origin (LEPO). There are no other designated sites, including Locally Designated Sites. A single area of peat is present.

Surveys identified a number of habitats that are listed on the Scottish Biodiversity List and are therefore considered to be of principal importance for biodiversity conservation in Scotland. Most are also Tayside Local Priority habitats.

Targeted surveys and species protection plans would be put in place to minimise potential effects on protected species during construction.





Cultural heritage

A limited number of non-designated assets have been recorded within 100m of the current OHL, although most are set some distance away from the existing towers.

As a result, physical impacts should be limited to the access tracks and other associated supporting works that might be required.

In addition, there is the potential for physical impacts on Cardean Roman Camp at the north end of the Scheme (SM4337) as one of the existing towers fall within the scheduled monument. Any works in this area will require careful consideration and potentially require Scheduled Monument Consent.

Further consultation will be required with Statutory Consultees with regard to any direct impacts and suitable mitigation that may be required.

A programme of archaeological works will be implemented, and recommendations provided to minimise the potential effects on assets during construction will be presented in the Construction Environmental Management Plan (CEMP), identifying known cultural heritage assets within close proximity to existing towers and proposed access routes.

Traffic and transport

A Construction Traffic Management Plan (CTMP) will be developed and used to specify construction traffic routes to suitable roads and appropriately signed diversions, where required during the construction phase of the works. This will be prepared in agreement with Perth and Kinross and Angus Councils.

Noise

Construction noise is considered to be short-term and intermittent and will be controlled through the implementation of a Noise Management Plan. An assessment of operational noise will be undertaken, in discussion with the Environmental Health Departments of Perth and Kinross and Angus Councils.

Electromagnetic fields

Electromagnetic Fields (EMF) arise from electric charges and current flow. Exceedance of EMF exposure limits are not expected, but an assessment of the change in EMF strengths due to the OHL operating at 400kV will be undertaken and the results will be presented alongside exposure limits.

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, including changes made since we last consulted with you.

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, concerns about the impact of our work and what you think of any changes and refinements we've made.

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).



Feedback

The following feedback was received during the first of two series of public consultation events held between 4-7 March 2024 in relation to the Section 37 consent applications for the upgrade of the Alyth to Tealing and Tealing to Westfield overhead lines from 275kV to enable operation at 400kV. A total of 163 people attended the events.

During the 6 week feedback period which closed on 15 April 2024, 15 responses were received and these are set out using a theme based approach below. We have included both event feedback and statutory stakeholder feedback received through the consultation process within the next three pages.

Theme

Electro Magnetic Field (EMF)

Concerns regarding people living close to the Overhead Lines (OHL) and the health risk associated with the increase in voltage.

Response

We would like to reassure the public and communities that we develop, build and operate our infrastructure to meet all health and safety legislation and guidance set by relevant bodies - including the UK Government, Scottish Government, the Health and Safety Executive and our regulator, Ofgem – including that associated with Electro Magnetic Fields (EMFs).

In respect of EMFs, we strictly follow the guidance as set by the UK Government, which in turn is informed by international guidance.

As well as setting exposure limits that protect against known, established effects of EMF; the UK Government's guidance also includes precautionary measures to protect against possible effects below the exposure limits that have not been established by science.

In addition to this, the UK Health Security Agency and Department of Health have a remit to review new research in this area and ensure that current guidelines and policies are reflective of that research.

Furthermore, the UK Government's latest policy on EMF is set out in **National Policy Statement EN-5**, (NPS EN-5) which was reissued in November 2023 and came into force on 17 January 2024. This latest policy is reflective of that review process and in line with the NPS EN-5, the current UK Government guidance, informed by relevant international guidance, is therefore still considered appropriate by the UK Government and their public health experts. Whilst electricity consenting decisions are devolved to Scottish Ministers and the NPS EN-5 is therefore not all relevant in Scotland, we can confirm compliance with all EMF guidance as set out in the NPS EN-5.

There have been over four decades of research looking into whether EMF can cause health effects and there are no established effects below the exposure limits. When we design our overhead lines, substations and cables we do so to ensure they will not exceed those exposure limits, even when operating at 100% capacity. We also ensure that precautionary measures are also applied to the design where required. We will provide information on compliance as part of the consenting process, which will be publicly available.

In summary, the guidance we follow, which remains subject to ongoing review as required, ensures that safety measures will be applied to our 400kV overhead line infrastructure protecting us all against EMF exposure, keeping our network safe for the public.

Feedback

Theme

OHL noise

Concerns regarding noise from operation of OHLs.

Response

A Noise Impact Assessment is currently being prepared and will be submitted as part of the forthcoming S37 consent application.

This will identify any adverse noise impacts that may result from construction activities and will propose appropriate mitigation in response that will be finalised in agreement with the relevant Planning Authorities and the Energy Consents Unit (ECU).

Benefit to local population

Queries regarding how the local population might benefit from the proposals i.e. cleaner, cheaper energy.

The proposed development forms part of the Pathway to 2030, a series of projects to increase the capacity of the transmission network in northern Scotland. It is part of the national effort to upgrade power lines across Great Britain to connect and transport renewable electricity to communities around Scotland and beyond, especially from offshore wind farms.

In terms of Community Benefit, we have consulted on a **Community Benefit Fund** for projects until 2026, a first for a transmission operator in Scotland. This fund lets us work directly with local communities to support initiatives in northern Scotland.

We want to give back to the communities hosting our transmission network and to help fund projects that can leave a lasting, positive legacy in those areas. We're encouraging the UK Government and Ofgem to recognise the crucial role the north of Scotland plays in energy targets in any upcoming guidance, ensuring that community benefits will reflect this significance.

Additionally, our projects will boost the economy, supporting local jobs and businesses. Recent studies show our Pathway to 2030 programme could contribute over £6bn to the UK's economy, support 20,000 jobs across the UK, and **benefit Scotland by around £2.5bn**, supporting 9,000 jobs.

Consultation events

It was raised that consultations should occur over a number of weeks to give more people the chance to attend.

In March 2024, a series of consultation events were held at four locations along the project routes Alyth to Tealing OHL and Tealing to Westfield OHL. Information was displayed at each of those events and staff were on hand to answer queries. All information is also available to view on the SSEN Transmission project webpage and each consultation period is open for six weeks. Additional consultation is due to take place in early June 2024 with an additional six week consultation period open for people to view material and provide feedback.

Consultation with landowners

Concern raised that there hasn't been direct communication with all those closely affected. In addition to the series of public consultation events taking place in March and June 2024, specific to the proposed development, the SSEN Transmission's team of Land Managers are in the process of identifying and contacting all potentially affected landowners.

Energy at the point of need

Concern raised that the work being carried out will ultimately not be for Scotland's benefit noting that projects should be located where energy is required.

SSEN Transmission is responsible for where and how the high voltage transmission network operates in the north of Scotland. However, we don't determine where energy is generated – nor where it is needed.

We have a legal obligation to provide electricity generators access to our network, so that the electricity they generate can be transported across the GB to meet the energy demand of homes and businesses.

The north of Scotland is rich in renewable energy, especially wind, water, and marine sources meaning this region is vital for the UK and Scotland's climate goals. Our area covers a quarter of the UK landmass and will be crucial in the move towards a low carbon future.

Theme

Undergrounding of OHLs

A query raised regarding the potential undergrounding of OHLs to reduce impact.

Response

Whilst we are committed to exploring the possibility of undergrounding at sensitive locations where there is clear evidence to justify it, this presents significant challenges due to a range of technical, operational, environmental and economic factors and may not always be the best option from an environmental perspective. In particular, it may not represent the best solution for landowners due to the greater footprint and associated impact on agricultural land as well as the requirement for additional above ground infrastructure to manage system requirements. Further information on the challenges and costs involved can be found in our undergrounding briefing note: 2030 challenges

(ssen-transmission.co.uk/globalassets/projects/2030-projects/2030-project-documents/2030-challenges-doc.pdf)

Wildlife and biodiversity

Concerns that there will be a detrimental impact on wildlife and biodiversity.

We prioritise environmental protection in our infrastructure projects, strictly adhering to environmental policies and regulations. We follow a mitigation hierarchy strategy of "avoid, minimise, mitigate and restore" to safeguard local, national and internationally designated environmentally protected areas.

We also acknowledge that minimising impacts is not enough on its own, and we have therefore committed to delivering a Biodiversity Net Gain (BNG) on all our projects; as well as compensatory planting for any trees felled during the construction phase, where possible with native species.

During our assessments, comprehensive surveys identify potentially affected wildlife, guiding mitigation efforts. Ecology survey work is ongoing.

We also assess habitats and other species along our routes. Our consultation process to date has highlighted sensitive areas, and we continue to work with environmental experts and seek community feedback to refine our approach.

Cultural heritage

Concern regarding impact on Scheduled Monuments.

When planning our overhead line projects, we consider environmental, cultural, and built heritage impact.

We make use of national archives and data sources as well as gathering data from Local Authorities and detailed site surveys to identify and assess the potential impact on archaeological sites, listed buildings, and other heritage assets.

Environmental Impact Assessment Reports (EIARs) detail these findings and recommend ways to lessen any potential adverse effects. We've received feedback about sensitive archaeological and cultural sites from a range of stakeholders all of which our environmental experts have considered. Where there is the potential for direct impact on a Scheduled Monument, we will discuss this with Historic Environment Scotland and seek Scheduled Monument Consent where required.

Construction

Concerns about impact on the local area.

Construction working hours will typically be restricted to 0700 hours to 1900 hours Monday to Friday and 0700 hours to 1300 hours on Saturday, with only some continuous activities carried out by exception.

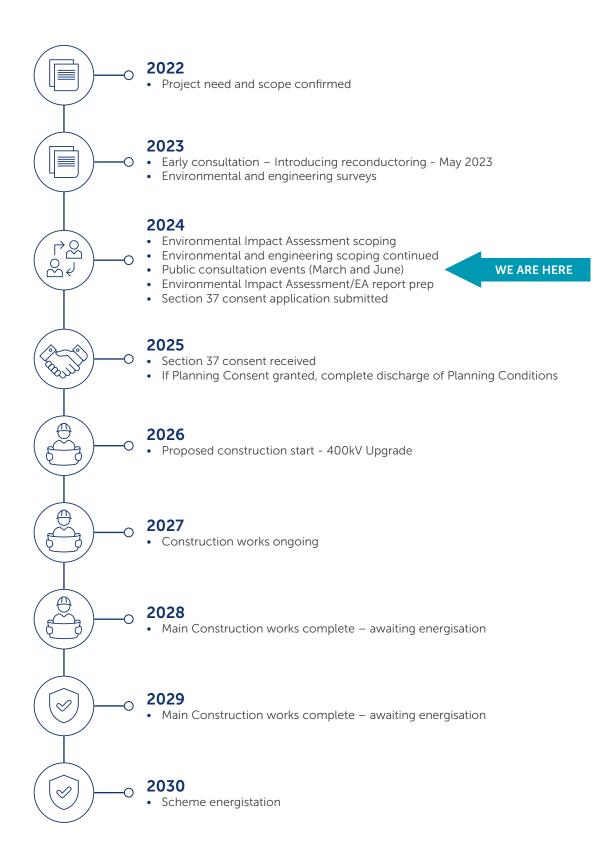
The Contractor will prepare and adopt a Construction Environmental Management Plan (CEMP) to minimise any potential impacts during construction. These documents will be approved by the Planning Authority and ECU in advance of construction starting and will include contact details for the Construction Site Manager, who will be the main point of contact with the local community during construction.

In addition the Contractor will prepare and adopt a Construction Traffic Management Plan (CTMP) to ensure that appropriate mitigation and management strategies are identified and implemented. This will include the identification of any road widening, junction improvements or repairs that will be required. Condition surveys of the public highway will be carried out before works start on site, and again upon completion, with any defects repaired to ensure the public highway is left in no worse state once the works are complete.

Other statutory and non-statutory consultees

Additional feedback was also received from statutory and non statutory consultees which will be taken into account as the projects progress. Discussion with consultees and others will continue as required at the pre application stage and thereafter.

Project timeline



Have your say

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

The feedback period

We will accept feedback from now until 18 July 2024.

How to provide feedback

Submit your comments and feedback by emailing or writing to your Community Liaison Manager

Any comments made to us as the Applicant are not representations to Scottish Ministers as the decision makers. There will be an opportunity to make formal representations to Scottish Ministers via the Energy Consents Unit following the submission of the section 37 applications.

What we're seeking views on

During our last public consultation events in March 2024, we wanted to know your thoughts on our project plans, where you thought we could make improvements, and any changes and refinements we'd made.

We are now asking for any final comments or feedback ahead of submitting planning applications for the Alyth - Tealing OHL 400kV upgrade project.

Recite. **

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

Rhiannon Merritt Community Liaison Manager

SSEN Transmission 10 Henderson Road, Inverness, IV1 1SN

E: tkup@sse.com



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/alyth-tealing

You can also follow us on social media





SSEN-Transmission



SSETransmission

Notes

Notes

