Scottish & Southern Electricity Networks
TRANSMISSION

Why we are here today

We are at the alignment stage of the development of our Kintore to Tealing 400kV Overhead Line project and have identified the Proposed Alignment we are taking forward to further develop and submit as part of an application for consent. The Proposed Alignment has been refined from the various options that we have investigated during the development of the project.

We are implementing the Scottish Government's Best Practice Guidance which can be found **here** for pre-application consultation with stakeholders who may be affected by our development proposals. The pre-application consultation comprises two consultation events that should be held in advance of applying for Section 37 consent.

Our first event was held in September 2024, where we presented the Potential (preferred) and Alternative Alignment options. Following that event we considered stakeholder feedback, completed further survey and review of our appraisals, and identified the Proposed Alignment, which is the alignment we intend to take forward to a Section 37 application.

This second event presents further detail on the Proposed Alignment and provides feedback to stakeholders in respect of comments they have provided on the proposals. The feedback is also provided in the Alignment Selection Report on Consultation.

Prior to the pre-application consultations, we have held consultations (during 2023 and 2024) on the corridor and routeing stages of our project development. These consultations were in addition to the pre-application consultation events and the feedback received has been fundamental in shaping the design of the Proposed Alignment that we are now presenting.

We will provide updated 3D visualisations and maps to show what the proposed overhead line will look like and where it will be located. These are available to view and download from our project website: **ssen-transmission.co.uk/TKUP**

We want to know if you have any further comments in relation to how we have responded to feedback and how you would like us to best engage with you in the future, prior to the submission of our Section 37 application.

It should be noted that our alignment proposals presented at this event are the result of extensive engagement and project design, as such, there is limited scope to make significant changes to the proposals at this stage.

Working with you

The work we have planned is significant and has the potential to deliver wide ranging benefits in your community, Scotland, and beyond. We know that delivering our projects will require a lot of work that has the potential to impact on you. That's why we want to work with you at every step of the way throughout the planning and delivery stages of these essential works. We are committed to ensuring a meaningful engagement 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. We appreciate all feedback received to date which has been analysed by the project team. Feedback has been actioned where constraints allow.

A more detailed appraisal of feedback regarding our alignment, can be accessed via our Alignment Selection Report on Consultation, published January 2025.

Scan the QR code to access our Report on Consultation (ROC)

TKUP@sse.com

ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks

TRANSMISSION

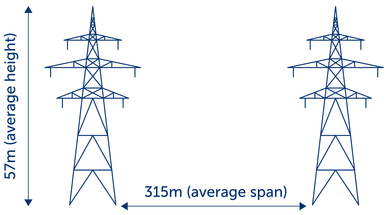
About the overhead line

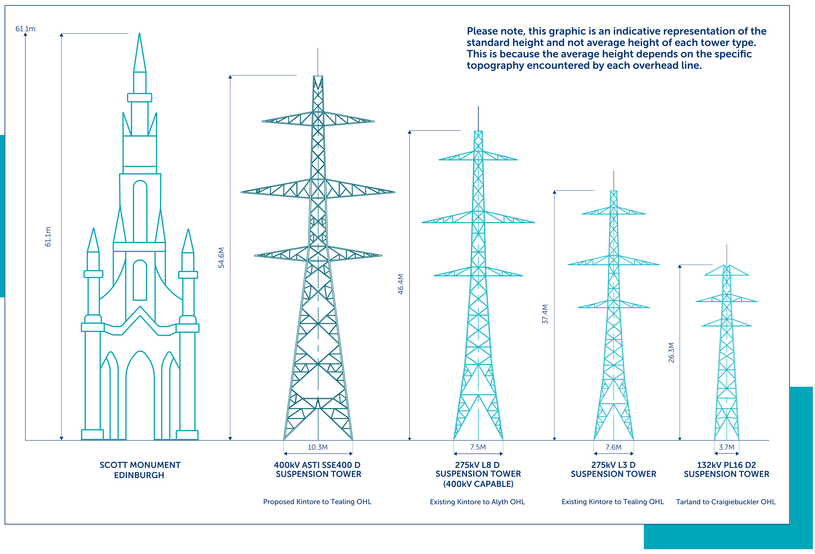
400kV double circuit overhead line

The required technology for the new Kintore – Tealing 400kV OHL connection has been determined to be a new double circuit 400kV HVAC (High Voltage Alternating Current) overhead line.

The overhead line would consist of steel lattice towers with an average height of approximately 57m which would support six conductor bundles on six cross arms and an earth wire between the peaks for lightning protection. The average distance between towers is expected to be 350m. Tower height and the distance between them will vary dependent on several factors such as altitude, climatic conditions and topography.

On the proposed Kintore - Tealing 400kV OHL, 55% of the towers are below 57m. Towers range from 49.5m in height to 69.6m in height. One tower, situated within Hurlie substation, is 72m to overcome the change in elevation.





TKUP@sse.com

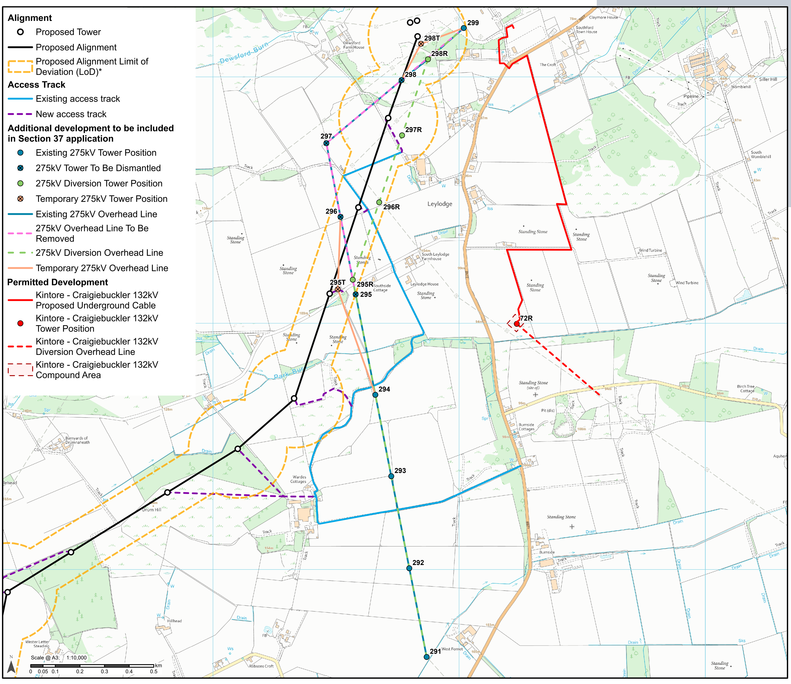
ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks

TRANSMISSION

About the overhead line

Works required around Kintore substation



Ancillary development

Additional works that will also be required as part of the construction of the new overhead line include the following:

- Upgrade of existing and creation of new access tracks, described in more detail on page 22;
- Vegetation clearance and management;
- Temporary working areas around the proposed tower locations to facilitate construction;
- At some tower locations, the formation of temporary flat areas from which the conductors (wires) will be pulled through during construction. These areas will contain earthed metal working surfaces referred to as Equipotential Zones (EPZs);
- Other temporary measures required during construction, such as measures to protect road, railway and water crossings during construction (e.g. scaffolding);
- Temporary construction compounds will also be required at locations along the overhead line route; The final location and design of temporary site compounds will be confirmed by our Contractor and separate planning consents will be sought as required.

TKUP@sse.com

ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks
TRANSMISSION

About the overhead line

The challenges with undergrounding at 400kV

The environmental, technical, and operational constraints associated with undergrounding at 400kV make it extremely challenging to deliver in many areas of Scotland. For underground cables at this capacity, longer than 1-2km, additional substation infrastructure would also be needed, enlarging the project's footprint.

Underground cables at 400kV are estimated to be between 5 and 10 times more expensive than overhead lines, and since these costs are reflected in consumer bills, it is a factor that needs to be considered. To deliver the necessary capacity, up to 30 parallel cables will be required. To achieve the required spacing, a trench of over 40m wide would need to be excavated, typically between 1m and 7m deep. During construction, a working corridor of over 70m wide is required for cable installation. This can result in significant land use constraints, typically more so than overhead line construction activities, particularly for farming operations.

Trench of **OVER 40M WIDE AND 1–7M DEEP** would need to be excavated

UP TO **30** Parallel cables required

BETWEEN 5–10x More expensive than overhead lines

OVER 70M WIDE working corridor, which can result in **significant land use constraints**

Why the development cannot be placed offshore

In its assessment of what is required to meet 2030 targets, the National Energy System Operator (NESO) concluded there is a need for both onshore and offshore projects. Overhead lines can carry roughly three times more power than subsea cables, making them more efficient and cost effective for energy bill payers, whilst technical challenges and constraints limit the use of only offshore solutions.

Moreover, onshore energy infrastructure helps support local electricity needs and improves the network's reliability across northern Scotland. Visit our Frequently Asked Questions page to find out more about our engineering and technology considerations including more details regarding underground and offshore cables: **ssen-transmission.co.uk/2030-faqs**

Managing construction impacts

We are committed to minimising the impact of construction through avoiding potential issues by designing them out, undertaking thorough environmental assessments and working closely with the local community. Our focus includes mitigating effects, for example to people, biodiversity, water, soil, and traffic disturbances. A Construction Environment Management Plan will be set up, to ensure mitigation is put in place and its effectiveness is monitored throughout the construction phase.

During construction, expected short-term impacts may include noise and traffic disruptions. Before starting, we will have a plan to manage these, including organising deliveries and travel to avoid busy times and sensitive areas. We will work closely with community groups and contractors to ensure adherence to mitigation measures. Typically, most project components will take around four years to complete, however these works will be phased across the length of the overhead line with bursts of activity and quiet periods.

TKUP@sse.com

ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks
TRANSMISSION

Our access strategy

Constructing and maintaining our overhead line

We are currently developing our access strategy, which considers access requirements for construction and maintenance of the overhead line. Access requirements have also informed the Proposed Alignment selection process, as a key engineering consideration. We are now determining the proposed access routes for each tower location to establish which existing access tracks can be used and which existing access tracks need to be upgraded alongside locations for the installation of new temporary or permanent access tracks. Maps showing our current plans for access are available and further information on our access strategy will be provided in the EIA as part of the application for Section 37 consent. A detailed traffic and transport assessment will also form part of the EIA, which assesses potential impacts of construction traffic and the capacity of local roads to accommodate this traffic. A Construction Traffic Management Plan (CTMP) will be agreed with the local authorities prior to works commencing.

We have commissioned an experienced OHL contractor, enabling construction access considerations to be at the forefront of this stage in the design process.

The table below explains the different types of tracks that are typically considered and what they are required for.

Type of access	What does it mean?
Existing tracks and bellmouths	In general, proposed construction site access would be taken via the existing public road network and would make use of existing forest and estate or farm tracks as far as practicable, upgraded as required. Existing bellmouths would be utilised where possible, subject to improvements. New bellmouths will be constructed, where required, to ensure safe entry and exit from an access track and the public road.
Stone tracks	Typically, new temporary stone tracks are likely to be required to access each tower location. Stone tracks are designed for the heavy plant loads required for construction works for towers, and to suit the varied ground conditions along the route. On completion of construction, unless required for operational access, the stone tracks would be removed and the original material reinstated. Where access to tower positions is difficult due to steep terrain, or the presence of peat, alternative methods would be proposed such as floating access tracks, using smaller items of plant, specialist tracked plant, and in some cases using helicopters for moving materials.
Public road improvements	Public road improvements (PRI) will be required in some locations to facilitate construction traffic travelling along existing public roads. These works could include upgrades such as road widening, installation of temporary or permanent passing places, new or upgraded road junctions, and upgrades to or replacement of existing bridges. Further information on PRI works will be provided in the EIA as part of the application for Section 37 consent.
Access tracks	Where operational access is required, this would likely range from All Terrain Vehicle (ATV) routes with no formal track, to stone road suitable for 4x4 and wagon access. The selection of the type of track required (whether it be temporary or permanent, existing upgraded tracks or new tracks) will consider the proximity to a public road, environmental impacts, structure type, required vehicle use, and potential maintenance activities, including vehicles required in future to a given location (taking health and safety requirements into account). General access track details will be included in the Environmental Impact Assessment (EIA) stage of the project and presented to illustrate where each access type will be deployed, and the rationale for that selection.
Temporary trackways	Temporary trackways are an alternative method of providing access, dependent on ground conditions. Although there may be localised areas where trackways may be suitable, it is not considered an appropriate solution for the construction of steel lattice towers on this project in its entirety, due to the length of time they are required to be in place and the weight and size of construction plant that would be required to track over them. Stone tracks generally afford greater reliability and stability compared to trackway solutions. Similarly, the extensive use of wide tracked excavators and other plant without prior ground preparation are unlikely to be a viable solution for this project in its entirety, although they may be used for certain tasks during construction.

TKUP@sse.com

ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks
TRANSMISSION

Addressing feedback

Consulting on the alignment

In September 2024, we launched our Alignment Consultation, seeking comment on the Potential Alignment and Alternative Alignment options identified for the new proposed Kintore to Tealing 400kV overhead line.

We sought comments from statutory authorities, key stakeholders, elected representatives, the public and landowners on the alignment selection process undertaken and the Potential Alignment and alternative alignments.

Comments received then informed further consideration of the Potential Alignment with a view to confirming a **Proposed Alignment** to be taken forward to consent application.

Feedback

When we consulted in September 2024, we held events in **12 locations** along the length of the alignment between 23 September and 10 October. A total of **1,444** attendees were recorded.

During the 10 week feedback period, which closed on 21 November 2024, **872** written responses were received. This feedback was then analysed and reviewed by the project team to determine where changes could be considered.

Overall, feedback indicated support for the Government's Net Zero policy and energy security aims. In addition, respondents generally noted and understood the rationale behind our Pathway to 2030 programme as a way to help deliver on the Government's targets and aims. However, based on those that responded, feedback from the community was generally not supportive of the approach to delivering the Pathway to 2030 programme, or of the required 400kV OHL connection between Kintore and Tealing across the Potential Alignment in each of the Sections A – F and/or the eight Alternative Alignments. The feedback, on balance, did not significantly indicate that the alternative alignments presented were more favourable to the Potential Alignment (however, as indicated above, there was little support for the project to be taken forward as an OHL in general).

Following our consideration of the consultation feedback, further survey and review of our appraisals, no changes were made to the Potential Alignment, with the exception of Location 7 Schoolhill. At this location we have changed the Potential Alignment and will now take forward Alternative Alignment 7c.

As well as the change at Location 7, minor amendments to tower positions were implemented to the Potential Alignment based on consultation feedback. These changes are reflected in the Proposed Alignment and explained in the Alignment Selection Report on Consultation.

The Proposed Alignment to take forward to our Section 37 consent application can be viewed on the banner titled *'Proposed Alignment overview'* and is available online **here.** Or scan the QR code below.

We have included a summary of key feedback about our alignment received from communities, landowners and statutory stakeholders, alongside our response to this feedback on pages 25 and 26 in the consultation booklet.

Our Report on Consultation (ROC)

A detailed appraisal of feedback received in response to our alignment as presented during the September-October 2024 consultation can be accessed via our Alignment Selection Report on Consultation, published January 2025. Scan the QR code to access our Report on Consultation.

Scan the QR code to access our Report on Consultation (ROC)

TKUP@sse.com

ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks
TRANSMISSION

Addressing feedback

Feedback	Response
Section A There were various responses from stakeholders including landowners, members of the community and consultees. We have considered the feedback provided on the alternative alignments and reviewed the findings of the environmental, technical and cost appraisals which were presented in the Consultation Document. We have also taken into account relevant feedback from statutory consultees on the constraints for each alternative alignment including those relating to areas of population, archaeological resources, landscape character and natural heritage. For further detail please see the Report on Consultation.	Having reviewed consultation feedback for Location 1, we will take forward the Potential Alignment 1a identified in the Consultation Document as part of the Proposed Alignment in Section A. The design of the Potential Alignment near Upper Hayston has been adjusted to screen a proposed tower with existing trees, minimising its visibility from residential properties at Jericho. The proximity to properties for the alternatives has been reviewed, and the findings from the Consultation Document remain applicable.
Section B Feedback on alternative alignments has been considered, and the findings from the environmental, technical, and cost appraisals in the Consultation Document have been reviewed. The proximity to properties for the alternatives has also been assessed, and the appraisal findings remain applicable. We have also taken into account relevant feedback from statutory consultees on the constraints for each alternative alignment including those relating to areas of population, cultural heritage designations, landscape character, visual amenity and natural heritage.	After reviewing consultation feedback, including statutory consultee views, Potential Alignment 2a will be adopted for Section B. This alignment is preferred due to its potential to minimise tree loss in the Woodside LNCS woodland. It is considered slightly less constrained in terms of environmental and technical criteria and is the slightly lower cost option. Having reviewing consultation feedback, Potential Alignment 3a will be adopted for Section B. This alignment is preferred due to its potential to minimise tree loss in the sensitive river crossing area (a designated SAC) and its fewer environmental and technical constraints. After reviewing consultation feedback, Potential Alignment 4a will be adopted for Section B. This alignment is preferred due to its ability to mitigate constraints related to LEPO woodland and avoid ecologically important wetland habitats. Despite having slightly higher environmental constraints than Alternative Alignment 4d, Alignment 4a is the least constrained overall, shortest in length, and lowest in cost.
Section C Feedback on the alignment location raised concerns regarding impacts on residential areas, Ancient Woodland, protected species, cultural heritage sites, high quality agricultural land, local infrastructure and flooding risks. suggestions included moving the overhead line away from communities and adding cycle paths and tree planting to reduce visual impact.	Having reviewed consultation feedback for this alignment section we have made adjustments to the alignment. These have been shown in the ROC as deviations, we have also had micrositing carried out to address the key issues of concern from feedback. In addition to this the proposed alignment was relocated up to 300m west to provide greater separation from area providing important habitat for protected species.

TKUP@sse.com

ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks
TRANSMISSION

Addressing feedback

Feedback	Response
Section D We have considered the feedback provided on the alternative alignments and reviewed the findings of the environmental, technical and cost appraisals which were presented in the Consultation Document. We have also taken into account relevant feedback from statutory consultees on the constraints for each alternative alignment including those relating to areas of population, archaeological resources, landscape character and natural heritage.	Having reviewed consultation feedback for this alignment section we have adjusted the alignment. These have been shown in the ROC as deviations as well as micrositing carried out. The proposed alignment was relocated up to 80m west for a distance of 3240m near Monboddo and to provide greater separation from a major gas pipeline. We also moved the alignment 160m east of the Potential Alignment for a distance of 1130m near Elf Hill.
Section E Residents in Drumoak and Durris raised concerns about the overhead line's impact on communities, landscape, and proximity to schools, suggesting alternative routes to minimise these effects. Ecological issues included potential impacts on breeding raptors, protected sites like Fowlsheugh SPA, and migratory fish near the River Dee. Cultural heritage concerns were noted by HES and ACAS, highlighting potential impacts on features such as the Nether Auquhollie Standing Stone and Cairn-Mon-Earn cairn.	Having reviewed consultation feedback for this alignment location, we will take forward the Potential Alignment 5a identified in the Consultation Document, as part of the Proposed Alignment in Sections E and F. The existing Kintore to Fetteresso OHL is to be relocated up to 190m west of its current alignment near Wester Durris to provide space for the proposed alignment of the Kintore to Tealing OHL between the existing line and properties to the east. He proposed alignment has also been moved 110m to the west at a different part of the alignment.
Section F Respondents expressed concerns about the overhead line's proximity to communities like Echt, Dunecht, and Drumoak, particularly near schools and woodland areas. They felt the 170m buffer was not being maintained, raising visual impact issues on Aberdeenshire countryside and wildlife. Cultural heritage concerns included potential impacts on sites like King's Well and Barmekin of Echt hillfort. Flooding risks were noted, with tree felling and construction potentially worsening the situation. Ecological impacts on local ecosystems, such as peat bogs and ancient woodlands, were highlighted, with specific sites like Loch of Skene SPA and Old Wood of Drum SSSI mentioned. Technical concerns involved the security of the overhead line near existing gas pipelines. Community benefits included suggestions for improving outdoor learning areas at Drumoak school and nursery.	After reviewing consultation feedback and recent design developments, Alternative Alignment 7c will be adopted for Section F. This decision is based on the determination that Potential Alignment 7a is not less constrained than 7c. Alternative Alignment 7c has fewer technical constraints, particularly regarding flood risk and interaction with a high-pressure gas pipeline. It also offers greater separation from residential properties near Quiddies Mill and Milton of Cullerlie, with similar environmental and cost constraints.
	After reviewing consultation feedback, Potential Alignment 8a will be adopted for Section F. This alignment is considered the least constrained option overall and provides greater separation of the OHL from a larger number and density of residential properties, particularly at Echt, including a school.

TKUP@sse.com
ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks
TRANSMISSION

Project timeline

2022
- Project need and scope confirmed
- (OHL) corridor and route options appraisal started

2023
- Consultation on corridor and routes
- Environmental and engineering surveys

2024
- Environmental Impact Assessment scoping
- Environmental and engineering surveys continue

2024 (continued)
- Additional routeing consultation and consultation on alignment
- Environmental Impact Assessment

2025
- Environmental Impact Assessment report preparation
- Pre-application consultation
- Section 37 application submitted

2026
- Receive consents decision
- Agree discharge of consent conditions if successful consent received
- Proposed construction start

2027–2029
- Phased construction: ongoing

2030
- Construction complete and energisation Kintore to Tealing 400kV OHL

TKUP@sse.com

ssen-transmission.co.uk/TKUP

Scottish & Southern Electricity Networks
TRANSMISSION

Next steps

We value community and stakeholder feedback. Our final alignment proposals are the result of extensive engagement with a wide range of different stakeholders and we believe the Proposed Alignment strikes a balance between the various different considerations that we must take into account.

As part of the Section 37 application process, we are expected to hold at least two pre-application consultation events prior to submitting the application. This is the second and final event providing the opportunity for members of the public to respond to the Proposed Alignment and consider our responses to the feedback we have received from our previous consultation events.

Earlier additional public consultation was also undertaken at the corridor, route and route refinement stages.

Submitting your final comments to us:

We intend to submit our application for consent in Spring 2025. Prior to this, you can submit your final formal comments to us before our feedback period closes on **Friday 28 March.** We welcome final comments from members of the public, statutory consultees and other key stakeholders regarding our proposals until such time as we submit our consent application.

Once an application for consent has been submitted, there will be an opportunity for the public to make formal representations directly to the Scottish Government's Energy Consents Unit before it takes a decision.

What we are seeking views on

During our last public consultation event in September/October 2024, we wanted to know your thoughts on our potential and alternative alignments.

Now that we have selected our Proposed Alignment, we are asking for any final comments or feedback ahead of submitting our Section 37 consent application for the Kintore to Tealing 400kV OHL project. It would be helpful to share any opportunities to deliver a local community benefit or biodiversity projects you would like us to consider.

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/TKUP**

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/TKUP**

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

Our Community Liaison team

Each project has a dedicated Community Liaison Manager who works closely with community members to make sure they are well informed of our proposals and that their views, concerns, questions, or suggestions are put to our project teams.

Throughout the life of our projects, you will hear from us regularly. We aim to establish strong working relationships by being accessible to key local stakeholders such as community councils, residents' associations, and development trusts, and regularly engage with interested individuals.

Community Liaison Manager

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

Rob Whytock

SSEN Transmission
200 Dunkeld Road,
Perth, PH1 3GH

TKUP@sse.com

You can also follow us on social media:

@ssentransmission

@SSETransmission