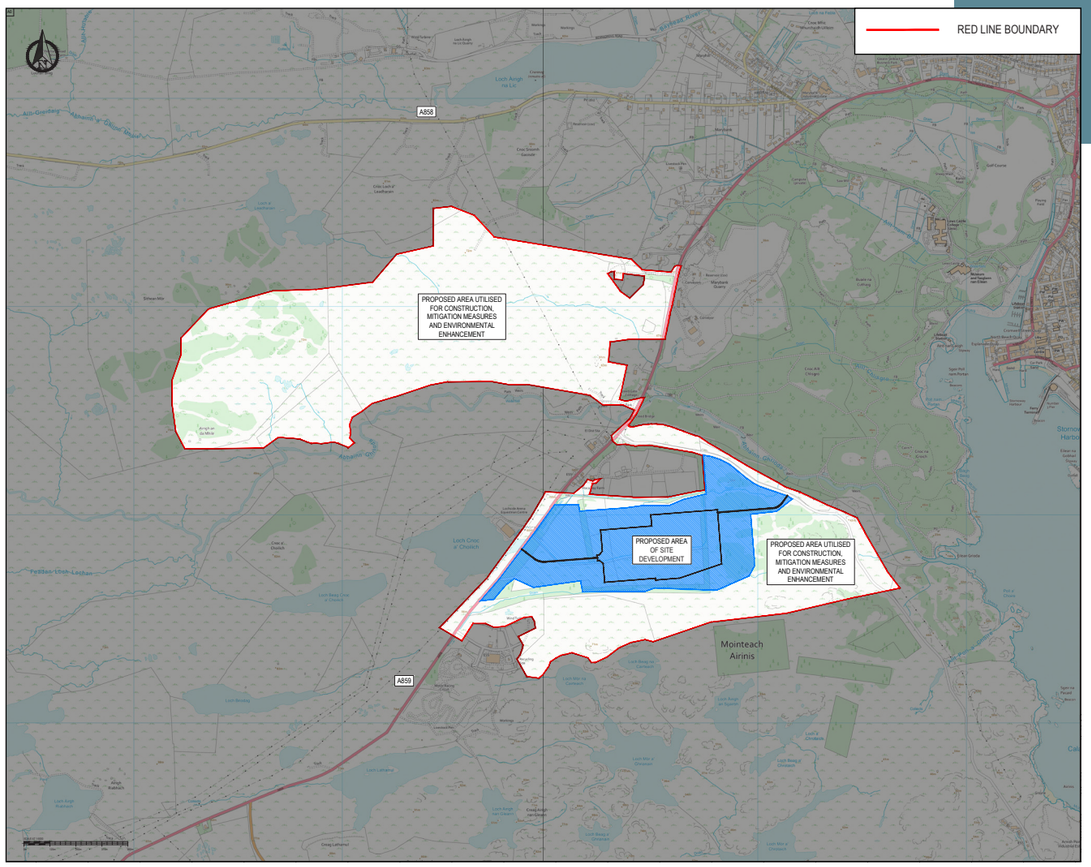
Development boundary map



Please note: The wider Red Line Boundary (RLB also includes areas which have been identified for environmental enhancement, which encompasses some of the moorland close to the previous potential converter station site at Creed North.

This has been included in the PAN as a potential site on which the projects commitments to improve and enhance the environmental impact of the site could be met.

The PAN boundary, therefore, does not represent the permanent footprint of the substation itself but indicates the full development area.

Although identified in blue hatch above is the permanent infrastructure area, encompassing access, platforms, buildings and drainage features.

Download a copy of the map by scanning the QR code or by visiting the following URL:

ssen-transmission.co.uk/western-isles

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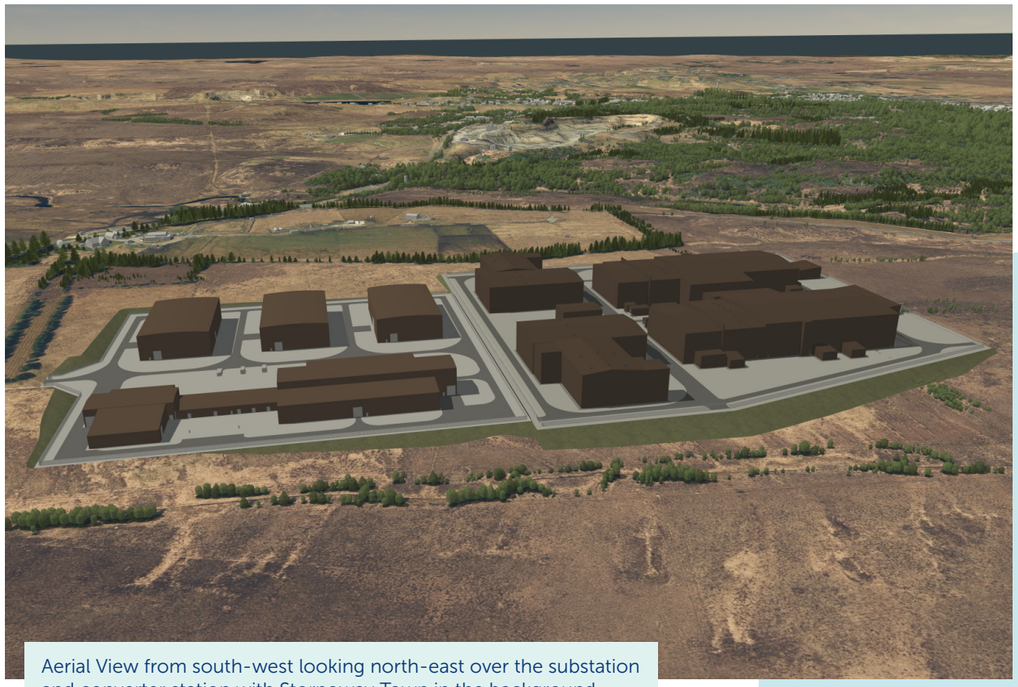
3D visualisations

We understand that local stakeholders need to be able to visualise what the development may look like in their local area. We've commissioned 3D visualisations which model Lewis Hub into the local landscape to help understanding of the proposals in terms of the visual impact, distance and height.



Aerial View from south-west looking north-east over the substation and converter station with Stornoway Town in the background

'The layout and colour of our proposals may change based on feedback and further refinement of the design. If that happens, we'll update our model and video and share this on our webpage and with you at the next event.

These visualisations are shown without screening. We are currently working with a landscape architect to develop landscape forms and planting design to help to screen the substation and converter station from view.

Development considerations

During our last consultation, we outlined many of the engineering, environmental and social considerations we take account of when establishing a practical site for the substation. Now that we have identified a proposed site, we are able to share further details regarding many of our development considerations.

Local wildlife

We recognise the need to understand the local environment and ensure that we put suitable measures in place during construction to protect wildlife from disturbance.

- **Bird Surveys:** Vantage point surveys started in Spring 2024 and we have also been engaging with NatureScot and the local Raptor Study Group
- **Habitat Survey:** river habitat surveys were carried out on the River Creed in July 2024. Detailed habitat site survey of the site is planned for September 2024
- **Protected Species Survey:** Otter surveys are to be carried out to inform the EIA and also prior to development commencing at the site.

Surveys will inform the ecological and ornithological assessment in the Environmental Impact Assessment (EIA).

For all identified protected species the design will seek to avoid/minimise impacts wherever possible and where this is not possible, provide the appropriate levels and types of compensation. Where necessary, relevant species licences will be sought from NatureScot and construction will be undertaken in accordance with species specific management plans. This will ensure the careful management of protected species is undertaken by qualified ecologists.

Traffic

Two new access points to be proposed for the site for operational control and safety, one to the AC Substation from the A859 and one to the DC Converter from Arnish Road.

During the initial site works it is anticipated the primary access to the site will be from the Arnish Road to reduce the volume and heavier vehicles on the public road. The port facilities at Arnish and the Port will be utilised for delivery of construction materials and equipment.

Landscape and visual impact

The appearance of the substation within the landscape and where it will be seen from is being carefully considered. We have appointed an independent chartered Landscape Architect to assist us with the design. A landscape and Visual Impact Assessment (LVIA) is required as part of the Environmental Impact Assessment (EIA) process, to assess the impact of this substation and converter station on the landscape and visual amenity. Any impacts will be minimised and/or mitigated where possible.

Photomontages will be generated by the landscape architects, showing what the development will look like from these key viewpoints. This information will help inform the final design of the landscape forms to reduce the visual impact of the new substation as far as possible. The photomontages will be included as part of the EIA.

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Water and drainage

The following hydrological aspects are being investigated as part of the ongoing EIA:

- Groundwater and surface water bodies
- Potential for flood risk—a flood risk assessment is being produced and will form part of the EIA Report
- Site drainage—a Drainage Impact Assessment (DIA) is being produced and will form part of the EIA report
- Public and private water supplies
- Drinking water protection areas
- Groundwater dependent terrestrial ecosystems

A site drainage plan for both the construction and operational phases will be developed to mitigate the impact on the surrounding water environment.

Peat and soils

The design of the converter station and substation platform, as well as all temporary works, has been informed by peat probing at the site, with the areas of deepest peat avoided.

The mitigation hierarchy described in NPF4 recommends first avoiding and then minimising the amount of disturbance to soils on undeveloped land. It is understood that approximately 50% of the blanket bog has been cut and is heavily modified and cut and fill calculations may indicate the site would provide an opportunity to minimise disturbance to soils.

It is expected that earthworks will generate excess peat, and we are looking at options for the reuse of peat both onsite, and at locations where peat has already been modified offsite.

Lighting

We will fully assess the requirements for construction and operational lighting as part of the Environmental Impact Assessment. The EIA will include site specific recommendations to mitigate any impacts of lighting on nearby properties.

We will produce a lighting strategy for the operation of the site as part of the planning application. Construction lighting will follow best practice to minimise light spillage. Our substations are not permanently floodlit but instead have motion security lighting, plus work lighting in case of urgent repairs during hours of darkness.

Cultural heritage

Archaeological site walkovers will be undertaken to inform the Environmental Impact Assessment of the site.

The environmental impact assessment may recommend measures such as excavating target features in advance of construction commencing, and having a qualified archaeologist (Archaeological Clerk of Works) on site during earthworks to monitor excavations.

A written scheme of investigation will be developed to satisfy any planning condition associated with archaeology, and this will be approved by CnES prior to works commencing on site.

As well as direct physical impacts from the construction process, the EIA will undertake an assessment of the operational effect of the new substation and converter station on changes within the setting of cultural heritage assets.

The assessment will include visualisations from key viewpoints of these heritage assets, in agreement with CnES and Historic Environment Scotland, and potential impacts through changes within the setting of heritage assets will be considered as part of the ongoing design development process.

Noise

Baseline noise monitoring surveys have been undertaken at noise sensitive receptors within the vicinity of the site to inform an operational noise assessment.

Construction and operational noise assessments will be undertaken.

Appropriate mitigation measures will be considered to attenuate noise from the development.

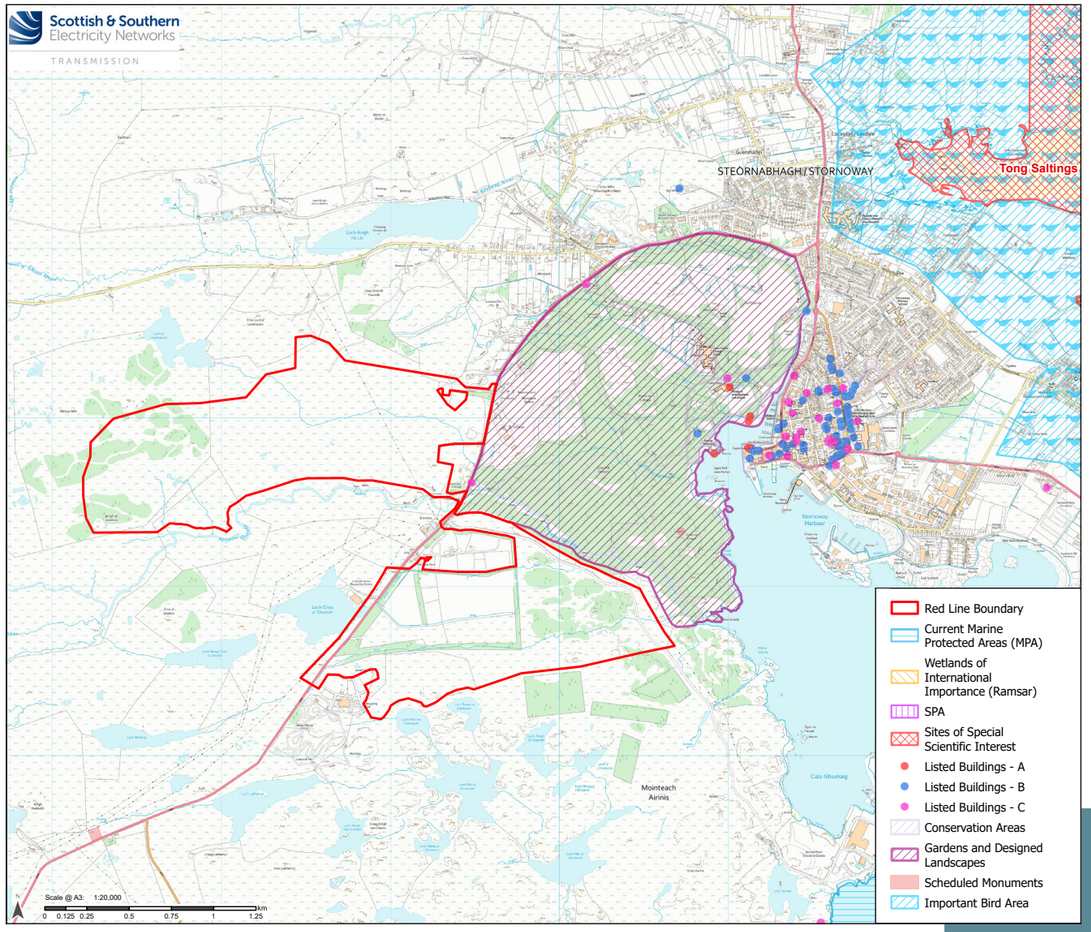
Biodiversity net gain

To mitigate/compensate for losses where unavoidable, we are looking to identify areas for peat restoration in the vicinity of the site, but also in other parts of Lewis. This reflects our commitment to achieving a 'Net Gain' in biodiversity terms.

Land use and recreation

No long-distance routes, core paths or public rights of way have been identified within the site boundary. Fishing, shooting and deer stalking is known to take place in the surrounding area.

Environmental designations and features map



This map indicates environmental features and designations identified in the wider area. A copy of this map is available to download from the project webpage.

Visual mitigation

Below are some indicative colours for the buildings.

As part of the consultation process and discussions with the Local Authority we are exploring building colour and visual mitigation. The feasibility of other potential mitigations to screen the site, including landscape bunding and tree and scrub planting, are being reviewed with landscape and visual specialists as part of the planning process.

We are looking for feedback and suggestions as part of this consultation and have initially looked at building colours as presented below to begin the conversation.

Building colour examples

Van Dyke Brown

Olive Green

Delivering a positive environmental legacy

On every project we deliver, we always need to consider how we impact the environment in that area. As we enhance the transmission network in the North of Scotland, we have a responsibility to design and build our projects to protect and enhance the environment. We will always look to minimise the potential impacts from our activities and achieve Biodiversity Net Gain (BNG).

As the first developer to consult upon and implement an award-winning approach to deliver BNG on all new sites, we're committed to delivering a "greener grid", focusing on habitat restoration and creating biodiversity growth as we invest in our network. We are committed to delivering 10% Biodiversity Net Gain on all sites gaining consent going forward. This ensures that we don't just restore our natural habitats but actively improve them for the benefit of local communities.

During the development, construction and operation of our projects, we will leave the environment in a measurably better state than before development started, ensuring a positive environmental legacy at all our sites.

As this project progresses through the development process, we will actively seek ways to avoid and minimise impacts on biodiversity, through careful routeing and site design to avoid impacting areas of highest biodiversity value.

Where avoidance is not possible, we will offset this by introducing new habitats along with restoration efforts. These can be achieved within the boundary of the development site, or by providing support to local groups involved with habitat restoration or creation projects, within the locale of the development site.

Thurso South substation - Bee-Friendly Habitat enhancement area

If there are biodiversity improvement projects in your local area that we could get involved with, please get in touch. Contact details for the Community Liaison Manager can be found on page 29.

Example projects

Thurso South substation and The Bumblebee Conservation Trust

We created approximately 10 hectares of bee-friendly habitat to support the pollination of the rare endemic great yellow bumblebee. This contributed to wider conservation efforts for this bee species. A collaboration with The Bumblebee Conservation Trust facilitated research on food availability for bumblebees, identifying the need for a diverse seed mix containing key flowering species to enhance early, main and late food supply to support the full lifecycle of bumblebees.

Argyll Coast and Countryside Trust (ACT)

Argyll's rainforest is a unique and rare habitat of ancient and native woodland. This collaboration with ACT will help deliver our compensatory tree planting and BNG commitments in Argyll. It also aligns with ACT's woodland planting ambitions, supporting its charitable objectives including biodiversity gain, health and wellbeing, improvement for local people, outdoor learning opportunities and climate change workshops.

Western Isles Connection Project

Project timeline

2023
- Site selection public consultation event: Spring 2023.
- Cable route selection consultation and converter station site selection update: Autumn 2023.
- Ground Investigation and Environmental Surveys: Autumn/Winter 2023.

2024
- Pre-application consultation 1: September 2024.
- Pre-application consultation 2: November 2024.
- Additional Ground Investigation and Environmental Surveys: Autumn 2024.
- Pre-application submission: Autumn 2024.

2025
- Anticipated planning decision: Summer 2025.
- Commence proposed discharge of Planning Conditions: Summer 2025.

2026
- Complete proposed discharge of Planning Conditions: Spring 2026.
- Proposed construction start: Spring 2026.
- Installation of onshore underground cable starts: Spring 2026.

2027
- Subsea route preparation: Spring 2027.
- Construction and installation continues: 2027.

2028
- AC/DC substation construction continues: 2028.
- Delivery and installation of key converter station equipment: 2028.
- Subsea cable installation starts: Spring 2028.

2029
- Onshore cable installation complete: Summer 2029.
- Proposed construction complete: Autumn 2029.
- Subsea cable installation complete: Winter 2029.

2030
- Test and Commissioning of HVDC Link: Spring/ Summer 2030.
- Connection: Winter 2030.

Our projects in the Outer Hebrides

As the transmission operator in the north of Scotland, we need to maintain and invest in the high voltage electricity transmission network in our area to provide a safe and reliable electricity supply to our communities.

We also need to offer terms for connections to the transmission network for new generation such as wind farms and pumped storage schemes and for new sources of electricity demand. Therefore, as well as the Lewis Hub and converter station, we have a number of other projects within the local area we are currently progressing, described below.

Harris to Stornoway 132kV overhead line

A replacement 132kV overhead line, approximately 58km in length connecting Harris Grid Supply Point and Stornoway Grid Supply Point replacing the single pole trident line with a new H pole trident line.

This overhead line was granted S37 Consent by the Scottish Ministers on 23 February 2024 and is now in construction.

Balallan switching station

A new 132kV Switching Station at Balallan to accommodate the connection of the 132kV overhead line from Muaitheabhal Wind Farm and the 132kV overhead line between Harris and Stornoway.

The switching station will enable the Muaitheabhal Wind Farm to connect onto the new 132kV overhead line to the Lewis Hub and export electricity to the mainland via the proposed HVDC cable link.

Stornoway wind farm connection

132kV overhead line connection from the Stornoway Wind Farm to the west of the Lewis Hub.

This overhead line will allow Stornoway Wind Farm to export electricity to the mainland via the new HVDC cable link.

Muaitheabhal wind farm connection

132kV overhead line connection between the new Balallan Switching Station and Muaitheabhal Wind Farm.

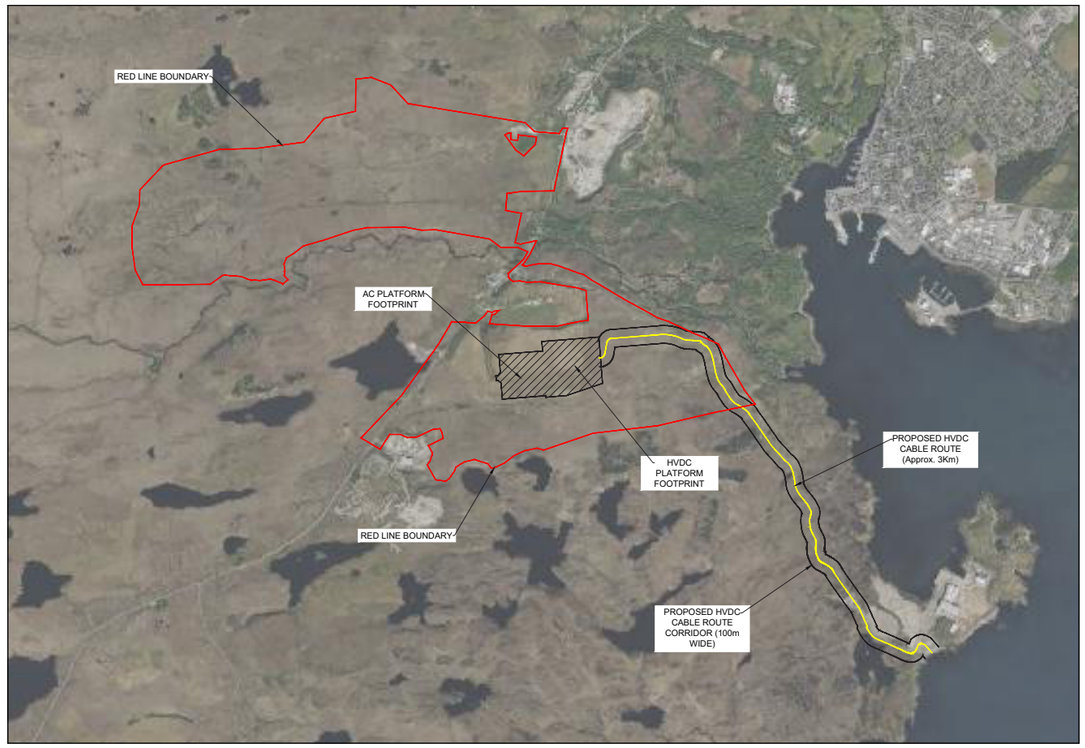
Search our projects by scanning the QR code or by visiting the following URL: **ssen-transmission.co.uk/western-isles**

Western Isles HVDC underground cabling

As part of our proposals, we plan to install circa 4km of onshore underground cables to provide a link between the Lewis Hub on the Western Isles and the subsea cable coming from the mainland.

This will consist of High Voltage Direct Current (HVDC) underground cables from a landfall at Arnish Point to the Lewis Hub converter station. The cable duct works may be undertaken during the Stornoway Port Authority's road upgrade works, to widen the single-track road to a single carriageway.

The current proposed route for this can be seen on the image below. This underground cabling will not form part of the formal planning application for the Lewis 400kV AC substation and DC converter station and will be progressed under Permitted Development.



Proposed HVDC underground cable route to Arnish landfall

Other developments

We know that local stakeholders want to understand the full extent of renewable developments being proposed in their local area.

Applications to connect to the transmission network in our licence area are made to National Grid ESO and undergo a lengthy process of assessment before we begin to develop a network connection for those developments. We aim to be transparent about the renewable developments looking to connect to our network but are not permitted to disclose any details of these developments until they are in the public domain.

A list of projects that hold contracts for Transmission Entry Capacity (TEC) with National Grid, the Electricity System Owner is available from their website: **nationalgrideso.com**

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 be seeking final comments and feedback from members of the public, statutory consultees and other key stakeholders regarding our proposals until **28th November 2024**.

How to provide feedback

Submit your comments and feedback by completing and returning the feedback form at the back of this booklet which is also online via the project webpage, emailing or writing to your Community Liaison Manager.

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.

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."

You can also follow us on social media:

@ssentransmission @SSETransmission

What we're seeking views on

During our last public consultation event in November 2023, we wanted to know your thoughts on the substation sites under consideration and if you agreed with the one we'd identified as best.

We want you to share your thoughts and opinions and let us know where you think we can make improvements. We also want you to let us know any concerns you might have about the impact of our work, including during the construction period.

It would be helpful to understand what you believe we should be doing to help minimise the impact of the development. We would also ask you to identify any opportunities for local community benefit or environmental enhancement we may be able to deliver alongside this project.

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.

Community Liaison Manager

Kevin Morrison

Scottish Hydro Electric Transmission, Battery Point, Stornoway, Outer Hebrides, HS1 2RT

+44 7586 237 814

kevin.morrison@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/western-isles

Western Isles Connection Project

Your feedback

Thank you for taking the time to read this consultation booklet. In order to record your views and improve the effectiveness of our consultation, please complete this short feedback form.

Please complete in BLOCK CAPITALS. (Please tick one box per question only)

Q1. **Did you attend our event in Stornoway in person on** 14th November, **or did you look at the consultation materials online?**

☐ In person ☐ Online ☐ Neither

Q2. **Do you agree with the proposed location of the Lewis Hub substation and HVDC Converter Station development?**

☐ Yes ☐ No ☐ Unsure

Comments:

Q3. **Do you have any comments on the location of the development?**

Comments:

Q4. **Do you have any comments on the proposed design or layout of the Lewis Hub HVDC Converter Station development?**

Comments:

Q5. **Do you have any comments on the appearance of the substation, or preference on colour of the substation buildings?**

Comments:

Q6. **Is there anything you would like more information on regarding the project?**

Comments:

Full name: ..... **Email:** .....

Telephone: ..... **Address:** .....

We would like to send you relevant communications via email such as invitations to stakeholder events, surveys, updates on projects, services and future developments from the Scottish and Southern Electricity Networks group listed below. If you are happy to receive email updates please opt in by ticking the box below. You can unsubscribe at any time by contacting us at stakeholder.admin@sse.com or by clicking on the unsubscribe link that will be at the end of each of our emails.

☐ **If you would like to be kept informed of progress on the project, please tick this box.**

Thank you for taking the time to complete this feedback form.
Please submit your completed form by one of the methods below:

Post: Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ

Email: kevin.morrison@sse.com

Online: ssen-transmission.co.uk/western-isles

For information on how we collect and process your data please see our privacy notice available at today's event. This can also be obtained online at: ssen-transmission.co.uk/privacy

Comments forms and all the information from today's event will also be available to download from the project website.

We intend to use Artificial Intelligence (AI) to assist our experienced teams in the analysis of your feedback, so we can categorise key points raised more quickly. You can learn more about how we're utilising AI at: ssen-transmission.co.uk/AIFAQ

Any information given on the feedback form can be used and published anonymously as part of Scottish and Southern Electricity Networks consultation report. By completing this feedback form you consent to Scottish and Southern Electricity Networks using feedback for this purpose.

Notes

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