Quoich Tee Switching Station Replacement Project

Public Consultation Event



TRANSMISSION



Who we are

We are Scottish and Southern Electricity Networks Transmission (SSEN Transmission), operating under licence as Scottish Hydro Electric Transmission Plc (SHE Transmission) for the transmission of electricity in the north of Scotland.



In total we maintain about 5,000km of overhead lines and underground cables – easily enough to stretch across the Atlantic from John O'Groats all the way to Boston in the USA.

Our network crosses some of the UK's most challenging terrain – including circuits that are buried under the seabed, are located over 750m above sea level and up to 250km long.

The landscape and environment that contribute to the challenges we face also give the area a rich resource for renewable energy generation. There is a high demand to connect from new wind, hydro and marine generators which rely on Scottish and Southern Electricity Networks to provide a physical link between the new sources of power and electricity users. Scottish and Southern Electricity Networks is delivering a major programme of investment to ensure that the network is ready to meet the needs of our customers in the future.

Our responsibilities

We have a licence for the transmission of electricity in the north of Scotland and we are closely regulated by the energy regulator Ofgem.

Our licence stipulates that we must develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

What is the difference between transmission and distribution?

Electricity transmission is the transportation of electricity from generating plants to where it is required at centres of demand. The electricity transmission network, or grid, transports electricity at very high voltages through overhead lines, underground cables and subsea cables.

Our transmission network connects large scale generation, primarily renewables, to central and southern Scotland and the rest of Great Britain. It also helps secure supply by providing reliable connection to the wider network of generation plans.

The electricity distribution network is connected into the transmission network but the voltage is lowered by transformers at electricity switching stations, and the power is then distributed to homes and businesses through overhead lines or underground cables.

Overview of transmission projects





Project need and overview

Project need

The existing 132kV switching station at Quoich Tee contains obsolete equipment that has reached the end of its life and it is no longer possible to obtain spare parts for some of the switchgear. This site forms a critical part of the electrical infrastructure supplying Skye and the Western Isles and a replacement is essential to ensure continuity of supplies and to allow for the connection of renewable generation on the route to net zero.

The small size of the existing site and the operational need to keep the site in service means that it is not possible to install new equipment in the current location while keeping customers on supply during the construction period. It is therefore necessary to construct a new switching station close to the existing site to allow an off-line build of the new equipment while keeping customers securely connected to the electricity network. On completion of the works all connections will be transferred to the new site and the existing switching station will be decommissioned April 2025. The design of the existing switching station does not meet with current design standards and it is not possible to comply with the current technical and legislative requirements within such a small footprint. Designing the new switching station to comply with the current standards will result in an increase in the footprint of the switching station. This increase in size is driven by a need to install more equipment and larger equipment that takes up more room and to allow additional space within the switching station to ensure modern safety standards can be maintained during routine operational work at the site.

Developing a new switching station is essential to ensure continued security of supply and to provide one element of the works necessary to allow the connection of more renewable energy schemes as part of the decarbonisation of our energy supply system.

Project overview

- Construction of a new switching station near the existing tee off.
- The installation of circuit breakers and replacement of the existing 132kV switchgear.
- The diversion of existing overhead lines to the new switching station.
- Permanent access to the site.

Project timeline





Switching station site selection process

SSEN Transmission has developed and implemented formal site selection procedures for the selection of switching stations and switching stations.

The main aim of the guidance is to provide a consistent approach to the selection of new sites and is underpinned by our statutory obligations to: 'develop and maintain an efficient, coordinated and economical electricity transmission system in its licenced area' and in so doing, to 'have regard to the desirability of preserving the natural beauty, of conserving flora, fauna and geological and physiographical features of special interest and protecting sites, buildings and objects of architectural, historic or archaeological interest; and do what we reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites buildings or objects'.

These duties capture the principal objective of the process which is to balance technical and cost considerations with environmental considerations, to select a proposed site which is economically viable, technically feasible, minimises impacts on important resources or features of the environment and reduces disturbance to those living in it, working in it, visiting it or using it for recreational purposes.

For new site selection projects, the process follows four principal stages, each iterative and increasing in detail and resolution, bringing cost, technical and environmental considerations together in a way which seeks the best balance.

The stages that are carried out can vary depending on the type, nature and size of a project and consultation is carried out at each stage of the process as appropriate. This project is currently at Stage 2: Detailed Site Selection, the objective of which is to identify technically feasible, economically viable and environmentally acceptable site options within a defined area.

The guidance splits the principal site selection into stages, as follows:

- i. Stage 0: Pre-Site Selection Activities Strategic Connections Options Appraisal.
- ii. Stage 1: Initial Site Screening.
- iii. Stage 2: Detailed Site Selection.
- iv. Post Site Selection Activities Consenting Process.

In consideration of the principles outlined in the guidance document, the method of identifying a preferred site in this study has involved the following key tasks:

- i. Identification of the baseline situation.
- ii. Identification of switching station site options.
- iii. High level environmental appraisal of site options.
- iv. Identification of a preferred switching station site.



Quoich site selection search area and options



The locations of the three considered site options are as follows:

- Site option A is located immediately north of the existing switching station.
- Site option B is located approximately 500m west of the existing switching station on an area of open ground.
- Site option C is located immediately north of Quoich Power Station, close to the shore of Loch Poulary.

Key environmental sensitivities are anticipated to be around the River Garry, Loch Garry, Loch Quoich and designated sites of nature conservation importance including West Inverness-shire Lochs Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and nearby ancient woodland habitat.



Quoich site selection search area and options

Landscape and visual

A landscape and visual impact appraisal is currently being undertaken to help inform the final switching station design and appropriate landscape mitigation measures that will incorporated in the design.

The appearance of the switching station within the landscape and how it would be seen is being carefully considered as part of the site selection process.

The sensitivity of this location is such that site selection will need to be substantially guided by the aim of minimising effects landscape effects, with Loch Garry, Loch Quoich and River Garry being popular recreation and tourism destinations.

Landscape character, visual amenity and heritage assets are key considerations in the site selection process.

Mitigation would include using the existing landform features as screening and the creation of sympathetic hard and soft landscaping.

The natural landform, specifically existing areas of woodland, offers opportunities for screening views of the proposed development from key visual receptors.

Cultural heritage

The site has a potential for setting impacts to the nearby undesignated heritage assets such as the Doire Na H'Airidh Structure, Quoich Hydroelectric Power Station and Salmon Catch and Darvogil Farmstead.

There is also the potential for impacts on known and unknown archaeological remains.

Any potential setting impacts will be considered as part of the ongoing switching station design development process with screening measures potentially proposed to reduce any visual intrusion.

Ecology and ornithology

West Inverness-shire Lochs SSSI and SPA are within the search area, approximately 110 m south of Site Option C.

Key habitats in the area include acid grassland, ancient woodland, wet heath and blanket bog, the latter two of which are protected habitats. The area of search has the potential to support protected species including badger, red squirrel, pine marten, and bats.

Rivers in the area also have the potential to support otter, water vole and fish. Loch Poulary also has been known to support black-throated diver and common scoter, which are protected bird species.

A habitat survey has been undertaken and the findings used to inform the site selection process. This survey considered opportunities for ecological enhancement.

Hydrology and geology

The following hydrological aspects are being considered as part of the ongoing site selection process:

- Private water supplies
- Groundwater dependent terrestrial ecosystems
- Potential for flood risk
- If any designated sites are hydrologically linked to the site

An appropriate site drainage plan for both the construction and operational phases will be developed to ensure no adverse impacts on the surrounding water environment.

Land use, access and recreation

Two of the three site options are located within or near areas of woodland and therefore, depending on the preferred option, felling could be required to facilitate the development. No long-distance routes, core paths or public rights of way are located within the site.



Site option A





Торіс	PROS	POSSIBLE CONSTRAINTS
Natural heritage – ecology	 Proximity to existing switching station may provide baseline level of disturbance that birds could become accustomed to. Greatest potential for ecological enhancements out of all site options. 	 SSSI and SPA within 1km of site. Woodland has potential foraging/resting habitat for protected species. Schedule 1 birds could nest in proximity to site. Despite opportunities for environmental net gain, blanket bog and deciduous woodland could be disturbed.
Natural heritage – geology, hydrology and hydrogeology	• Flood risk unlikely.	
Cultural heritage	No designated sites directly affected.	
Landscape and visual	Option offers most opportunity for screening and would likely lead to least change in pylon alignment.	Potential removal of woodland which would impact the landscape character.
Land use	 No best and most versatile agricultural land, not an area of commercial forestry, site would not impede highland recreation. 	• Potential loss of native woodland.
Planning	No planning applications within the site.	
Engineering	• There is good availability of space.	 This option is located on sloping hillside, adding complexity to construction of platform. The elevation of this site option relative to the public road adds complexity to the design of the access track.



Site option B





Торіс	PROS	POSSIBLE CONSTRAINTS
Natural heritage –		• SSSI and SPA within 1km of site.
ecology		• Riparian area suitable for fish and otter may be disturbed.
		Blanket bog habitat would be lost.
		Limited ecological enhancement possible.
		Schedule 1 bird species could be disturbed.
Natural heritage – geology, hydrology and hydrogeology		Medium risk of flooding.
Cultural heritage	No designated sites directly affected.	
Landscape and visual		 Would introduce unsightly infrastructure into open pasture landscape.
Land use	 No best and most versatile agricultural land, not an area of commercial forestry, site would not impede highland recreation. 	
Planning	No planning applications within the site.	
Engineering	 Good availability of space, relatively gentle topography and close to public road for access. 	 A watercourse is indicated to flow through the eastern portion of the site option, resulting in complexity for platform construction.



Site option C





Торіс	PROS	POSSIBLE CONSTRAINTS
Natural heritage – ecology		 SSSI and SPA within 100m of site. Ancient woodland has potential foraging/resting habitat for protected species. Biodiversity enhancements not possible due to presence of ancient woodland. Schedule 1 birds could have nesting territories within site. Wet heath and marsh habitat could be disturbed.
Natural heritage – geology, hydrology and hydrogeology	• Flood risk unlikely.	
Cultural heritage	No designated sites directly affected.	
Landscape and visual		 Screening would not limit impacts on nearby visual receptors due to site elevation.
Land use	 No best and most versatile agricultural land, not an area of commercial forestry, site would not impede highland recreation. 	• Site overlaps area of ancient woodland.
Planning	No planning applications within the site.	
Engineering	Gentle topography and lower elevation than alternative site options.	 Space by public road, access road and hydro-electric power station. Adjacent land use may add complexity to construction.



What happens now and how do I have my say?

We understand and recognise the value of the feedback provided by members of the public during all engagements and consultations. Without this valuable feedback, the project development team would be unable to progress projects and reach a balanced proposal.

We are keen to receive your views and comments in regards to the following questions:

- Have we adequately explained the need for this project?
- Do you feel sufficient information has been provided to enable you to understand what is being proposed and why?
- Are you satisfied that our approach taken to select our preferred site for the new Quoich Switching Station options have been adequately explained?
- Do you agree with our preferred site, if not, why?
- Are there any factors, or environmental features, that you consider may have been overlooked during the preferred site selection process?
- Do you have any particular concerns or queries on the proposed switching station project?
- Do you have any other comments (positive or negative) or concerns in relation to the need for the project, the transmission infrastructure requirements or about the preferred site selection option?

Comments

Your views and comments can be provided to the project team by completing the feedback form or by writing to our Community Liaison Manager. All feedback received will be assessed and the proposed options adapted where necessary.

Feedback

We will be seeking feedback from members of the public on this exhibition and the virtual exhibition until 29th July 2022.

Feedback is welcomed throughout the development of the project. To provide comments on the proposal or to gain further information on the project, visit our virtual event or contact our Community Liaison Manager.

Community Liaison Manager, **Ryan Davidson**



ryan.davidson@sse.com





Ryan Davidson Scottish Hydro Electric Transmission, 1 Waterloo St, Glasgow, G2 6AY

Additional information

Information will also be made available via the project webpage and social media channels:

Project website:

www.ssen-transmission.co.uk/projects/ quoich-tee-switching-station-replacement/

Follow us on Twitter: @ssetransmission

Follow us on Facebook: @ssencommunity





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)

Yes No Unsure	
Comments:	
Q2 Do you feel sufficient information has been provided to enable you to understand what is bein proposed and why? Yes No Unsure Comments:	ıg
Q3 Are you satisfied that our approach taken to select our preferred site for the new Quoich Switching Station options have been adequately explained? Yes No Unsure Comments: Unsure	
Q4 Do you agree with our preferred site, if not, why? Yes No Unsure Comments:	
Q5 Are there any factors, or environmental features, that you consider may have been overlooked during the preferred site selection process? Yes No Unsure Comments: Unsure	I

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Q6 Do you have any particular concerns or queries on the proposed switching station project? Yes No Unsure Comments: Unsure Unsure
Q7 Do you have any other comments (positive or negative) or concerns in relation to the need for the project, the transmission infrastructure requirements or about the preferred site selection option? Comments:
Full name
Address
Telephone
Email
If you would like to be kept informed of progress on the project please tick this box.
If you would like your comments to remain anonymous 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: Scottish Hydro Electric Transmission, 1 Waterloo St, Glasgow, G2 6AY
Email: ryan.davidson@sse.com
Online: www.ssen-transmission.co.uk/projects/quoich-tee-switching-station-replacement/
Download: Comments forms and all the information from today's event will also be available to download from the project website.
The feedback form and all information provided in this booklet can also be downloaded from the project websites.
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.
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