Scottish & Southern Electricity Networks

TRANSMISSION

Report on Consultation (Alignment Stage)

Connagill Cluster Grid Connections

September 2024

REF: LT559, LT560, LT319, LT522, PT961 and LT421

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GLOSSARY

Term	Definition
Alignment	A centre line of an overhead line (along with location of key angle structures) or underground cable.
Alignment (optimal)	An alignment for the overhead line or underground cable taken forward to stakeholder consultation following a comparative appraisal of alignment options.
Alignment (proposed)	An alignment taken forward to consent application. It comprises a defined centre line for the overhead line (or underground cable) and includes an indicative support structure (tower or pole) schedule, also specifying access arrangements and any associated construction facilities.
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of SSEN Transmission's works on communities, such as the effects of noise and disturbance from construction activities.
Biodiversity Net Gain (BNG)	A process intended to leave nature in a better state than it started using good practice principles established by the Business and Biodiversity Offset Programme (BBOP) and organisations including CIRIA, CIEEM and IEMA.
Conductor	A metallic wire strung from structure to structure, to carry electric current.
Consultation	The dynamic process of dialogue between individuals or groups, based on a genuine exchange of views and, normally, with the objective of influencing decisions, policies or programmes of action.
Corridor	A linear area which allows a continuous connection between the defined connection points. The Corridor may vary in width along its length; in unconstrained areas it may be many kilometres wide.
Design Solution	The design of the transmission infrastructure (e.g. structure type).
Environmental Impact Assessment (EIA)	A formal process set down in The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 used to systematically identify, predict and assess the likely significant environmental effects of a proposed project or development.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities.
Habitat Management Plan (HMP)	Sets out habitat enhancement measures proposed as part of a development.
Kilovolt (kV)	A unit of electrical power equal to one thousand watts.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the 'Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997' and other planning legislation. Classified categories A – C(s).
Megawatt (MW)	A unit of electrical power equal to one million watts.
Micrositing	The process of positioning infrastructure to avoid localised environmental or technical constraints.
Mitigation	Term used to indicate avoidance, remediation or alleviation of adverse impacts.
NVC	National Vegetation Classification (NVC), is a common standard developed for the classification and description of plant communities.
Overhead line (OHL)	An electric line installed above ground, usually supported by steel lattice towers or wood poles.
Plantation Woodland	Woodland of any age that obviously originated from planting.

Term	Definition
Route	A linear area of approximately 1 km width (although this may be narrower/wider in specific locations in response to identified pinch points / constraints), which provides a continuous connection between defined connection points.
Route (optimal)	A route for the overhead line or underground cable taken forward to stakeholder consultation following a comparative appraisal of route options.
Route (proposed)	A route taken forward following stakeholder consultation to the alignment selection stage of the overhead line or underground cable routeing process.
Routeing	The work undertaken which leads to the selection of a proposed alignment, capable of being taken forward into the consenting process.
Scheduled Monument	A monument which has been scheduled by the Scottish Ministers as being of national importance under the terms of the 'Ancient Monuments and Archaeological Areas Act 1979'.
Sites of Special Scientific Interest (SSSI)	Areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species across Britain.
Span	The section of overhead line between two structures.
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Special Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive74/409/EEC) to protect important bird habitats.
Special Landscape Area (SLA)	Landscapes designated by the Highland Council which are considered to be of regional/local importance for their scenic qualities.
Stakeholders	Organisations and individuals who can affect or are affected by SSEN Transmission works.
Study Area	The area within which the Corridor, route and alignment study takes place.
The National Grid	The electricity transmission network in the Great Britain.
Underground Cable (UGC)	An electric cable installed below ground, protected by insulating layers and marked closer to the surface to prevent accidental damage through later earthworks.
Volts	The international unit of electric potential and electromotive force.
Wayleave	A voluntary agreement entered into between a landowner upon whose land an overhead line is to be constructed and SSEN Transmission.
Zone of Theoretical Visibility (ZTV)	The computer-generated theoretical visibility of an object in the landscape

EXECUTIVE SUMMARY

Scottish and Southern Electricity Networks Transmission (SSEN Transmission) is proposing to construct new transmission infrastructure in the Strathy area of Sutherland in the north of Scotland, that is required to connect a number of consented and/or proposed wind farms, all located in proximity to each other, to the existing transmission network at Connagill 275/132 kV substation. Together the projects are known as the 'Connagill Cluster Grid Connections'.

The connection projects are recognised as National Development under National Planning Framework 4. To facilitate the grid connections, a new switching station would also be required, known as Strathy Switching Station.

SSEN Transmission has aimed to streamline the pre-application consultation and alignment process of each connection to allow stakeholders the opportunity to review the Cluster as a whole, allowing the opportunity to consider the consolidation of infrastructure and construction practices where practicable.

A Consultation Document[1] was published in May 2024 which sought comments from stakeholders on the proposals, the approach to alignment / site selection, the analysis of alignment / site options and identification of optimal alignments / sites for grid connections for the consented Strathy South and Strathy South wind farms, and the proposed Armadale and Kirkton wind farms. Due to the optimal design solution for Melvich Wind Farm Grid Connection proposed to be via 132 kV underground cable, as this is anticipated to be permitted development, this was not captured in the Consultation Document.

Prior to the publication of the Consultation Document, a public exhibition was held in May 2024, providing attendees with an opportunity to view exhibition boards, maps and a chance to share views and ask questions about the proposals by directly engaging with the project team. Exhibition materials remain available via the project website.

This Report on Consultation describes how the feedback from consultation has informed the identification of the proposed alignments / site to be taken forward to the Environmental Impact Assessment (EIA) and consenting stages of the project. This Report on Consultation also provides a summary of how SSEN Transmission have responded to comments received from key stakeholders during the consultation process and details the actions that will be taken as the project progresses through the EIA and consenting stages.

The comments received throughout the consultation process have illustrated a general acceptance of the optimal alignments and design solutions put forward for the Strathy Wood, Strathy South Grid Connections (both northern and southern extents, including the northern alternative) and Kirkton Grid Connection.

Some concerns were expressed by Scottish Environment Protection Agency (SEPA) with the optimal site chosen for the Strathy Switching Station given its location in deeper peat compared to other site options, and lack of flood risk modelling of the adjacent Allt an Reidhe Rudidh watercourse. SSEN Transmission intend to model the flood risk associated with the watercourse, to establish the floodplain extent both now and in the future, and this will be used to steer the design of the switching station. Additional peat probing in the area of Strathy Switching Station is proposed to assist with the positioning of infrastructure.

Since publication of the Consultation Document in May 2024, the developer of Armadale Wind Farm has withdrawn the section 36 application and consequently no longer a require a grid connection. As such, this project is removed from the Connagill Cluster Grid Connections. Consequently, this Report on Consultation has not responded to comments that were raised during the consultation process in relation to the Armadale Wind Farm Grid Connection.

The optimal alignments for each connection and the optimal site for Strathy Switching Station identified within the Consultation Document are shown on **Figure 1**. Following review and consideration of responses received during the consultation period (May to July 2024), SSEN confirm that the optimal alignments identified for the

[1] Connagill Cluster Grid Connections: Consultation Document (Alignment Stage) (May 2024), produced by SSEN Transmission

Strathy Wood and Strathy South (both northern and southern extents, including the northern alternative) and Kirkton Grid Connections will be taken forward as the Proposed Alignments to the EIA and consenting stage. Further review of the Strathy Switching Station will be carried out, in liaison with statutory consultees.

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1. INTRODUCTION

1.1 Background and Purpose of Document

1.1.1 Scottish and Southern Electricity Networks (SSEN Transmission), operating under licence held by Scottish Hydro Electric Transmission plc, owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands.

1.1.2 SSEN Transmission is proposing to construct grid connections to connect a number of consented and/or proposed wind farm developments to the existing transmission network at Connagill 275/132 kV substation, all located within proximity to each other, in the Strathy area of Sutherland. Together, the projects are known as the 'Connagill Cluster Grid Connections project'. The wind farms include:

- Consented Strathy South Wind Farm (comprising 39 turbines with 208 MW capacity);
- Consented Strathy Wood Wind Farm (comprising 11 turbines with 62.4 MW capacity);
- Proposed Melvich Wind Energy Hub and BESS (comprising 12 turbines with 99.6 MW capacity); and
- Proposed Kirkton Energy Park Farm and BESS (comprising 11 turbines with 72.8 MW capacity).

1.1.3 The proposed connections are in accordance with agreements between SSEN Transmission, National Grid Electricity System Operator (as operator of the National Grid), and each wind farm developer.

1.1.4 To facilitate the grid connections, a new switching station, known as Strathy Switching Station, would also be required.

1.1.5 Although the connections are under separate connection agreements, SSEN Transmission has decided to streamline the pre-application consultation and alignment process in order to allow stakeholders to review the connections that make up the Cluster as a whole. This also provides the opportunity to consider the consolidation of infrastructure and construction practices where practicable. This Report on Consultation documents the consultation process for the project between May to July 2024, during the alignment selection stage of the project. The programme of consultation was designed to engage with key stakeholders including statutory and non-statutory consultees, local communities, landowners and individual residents in order to invite feedback on the rationale for and approach to, the selection of the optimal alignment option for each connection[2].

1.1.6 This report describes the key responses received and details the actions taken in response to the issues raised. The report also confirms the Proposed Alignments / Site to be taken forward to the EA / EIA and Consenting stage of the project.

1.1.7 The proposed Armadale Wind Farm was originally included within the Connagill Cluster Grid Connections project. However, in May 2024 the developer of the proposed Armadale Wind Farm withdrew the section 36 application and consequently no longer require a grid connection. As such, this project is removed from the Connagill Cluster Grid Connections. Consequently, this Report on Consultation has not responded to comments that were raised during the consultation process on the Armadale Wind Farm Grid Connection.

1.2 Objectives

1.2.1 The objectives of this report are:

- To document the consultation process between May and July 2024;
- To summarise feedback received from stakeholders;
- To document actions undertaken in response to feedback where relevant; and

[2] Identified within the Connagill Cluster Grid Connections: Consultation Document (Alignment Stage) (May 2024), produced by SSEN Transmission

- To clearly set out how the proposed alignment and design solution has been informed by the consultation process.

1.3 Document Structure

1.3.1 This Report on Consultation is structured as follows:

- Section 1: Introduction – setting out the purpose of the Report on Consultation;
- Section 2: Project Overview – outlines the background to the project and provides a description of the key elements;
- Section 3: Consideration of Alignment Options – describes how the optimal alignments were identified for each connection;
- Section 4: The Consultation Process – describes the framework for consultation and methods which have been employed;
- Section 5: Consultation Responses from Statutory and Non-Statutory Consultees – summarises the responses from these bodies;
- Section 6: Identification of a Proposed Alignment – summarises the key comments and issues raised during consultation and how they will be addressed, and provides confirmation of the proposed alignment and design solution for each grid connection; and
- Section 7: Conclusions and Next Steps – provides a summary of the conclusions reached and actions going forward.

2. PROJECT OVERVIEW

2.1.1 A summary of the project history, the need for the project and the optimal technology solution is provided below. More detailed information is set out in the Consultation Document**Error! Bookmark not defined.**.

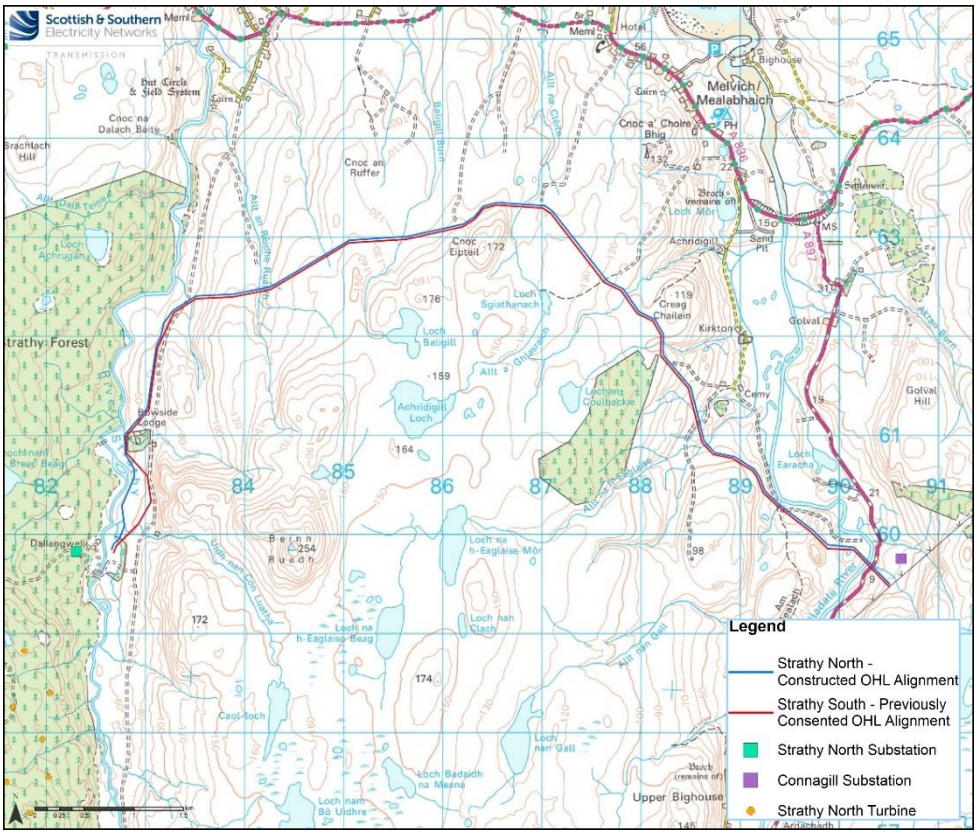
2.2 Project History

2.2.1 In 2013, SSEN Transmission sought consent for the construction of two parallel 132 kV trident wood pole OHL's; one to connect the consented Strathy North Wind Farm to the National Grid and the other to provide a connection for the (at the time) proposed Strathy South Wind Farm. These connections were collectively referred to as Strath Halladale to Dallangwell 132 kV Connection (see **Plate 2.1**).

2.2.2 Consent was granted by the Energy Consents Unit in February 2014 and construction of one of the OHLs (to connect Strathy North Wind Farm to the national grid) was completed in 2015. The second consented OHL was not constructed due to delays in consenting of Strathy South Wind Farm, and as such, the Section 37 consent for the second OHL has now lapsed.

2.2.3 The point of connection consented in 2013 for the Strathy South OHL was to Strathy North Wind Farm, near Dallangwell. The wind farm developer has since opted to change the point of connection to the on-site Strathy South wind farm substation which has resulted in additional studies being required.

Plate 2.1: Consented Strath Halladale to Dallangwell 132 kV Grid Connection



2.2.4 In 2021, SSEN Transmission commenced optioneering studies to connect the consented Strathy Wood and Strathy South wind farms (and at the time, proposed Armadale wind farm) to the transmission network at Connagill 275/132 kV substation. The optimal technological solution for each of these connections was initially via OHL's supported by trident H-wood pole, and it was on this basis that SSEN Transmission completed a routeing exercise, which was presented at a virtual consultation event in February 2022.

2.2.5 Since the February 2022 consultation, SSEN Transmission have received requests to provide two further connections in the area; for the proposed Melvich and Kirkton projects, both of which would also connect into Connagill 275/132 kV substation. It became clear that the addition of two further OHLs, alongside the Strathy Wood, Strathy South (and at the time, Armadale) connection proposals, as well as the existing Strathy North trident H-wood pole 132 kV OHL, would not be the optimal solution from a technical or environmental perspective, particularly where all connections would converge within the vicinity of Connagill 275/132 kV substation. As such, a review of the connection requirements for each project was undertaken with the aim of identifying a rationalised approach across the connections.

2.3 Optimal Technology Solution

2.3.1 Following a review of the various technology options available, SSEN Transmission concluded that a rationalised approach would be most appropriate across the connection projects[3]. The table below sets out the proposed approach for each connection and the consenting approach.

Table 3.1: Optimal Technology Solutions and Consenting Approach

Project	Technology Solution	Description	Consenting Approach
Strathy South and Strathy Wood Wind Farms	132 kV underground cable	From Strathy South Wind Farm on-site substation to a point in the vicinity of Strathy Wood Wind Farm on-site substation.	Anticipated to be Permitted Development Submission of a Habitat Regulations Appraisal (HRA) Screening. (Requirement for a cable sealing end (CSE) compound would fall under ancillary development of the section 37 submission for Strathy Wood Grid Connection)
	132 kV OHL supported by steel structure	From Strathy Wood substation, a new 4.25 km double circuit 132 kV OHL supported by steel structures would be constructed to a 'T' on to the existing Strathy North 132 kV trident H-wood pole OHL near Dallangwell. This would transport electricity generated by Strathy Wood wind farm initially. This arrangement of T-ing onto the existing wood pole OHL would be a temporary arrangement until the next section of connection (as described below) is constructed, at which point electricity generated by Strathy South wind farm would also utilise the OHL.	Section 37 of the Electricity Act (1989)
	132 kV OHL supported by steel structure	A new 12 km double circuit 132 kV OHL supported by steel structures would be constructed to continue the connection between the Strathy North 'T' (at Dallangwell) to Connagill 275/132 kV substation. The structures would be capable of operating at 275 kV in the future, if required. A short section of new 132 kV UGC (approx. 500 m in length) would complete the connection into Connagill 275/132 kV substation.	Section 37 of the Electricity Act (1989)

[3] The approach to rationalisation considered the Armadale Wind Farm Grid Connection at the time, but the wind farm has since been withdrawn and there is no longer a requirement for the development of a grid connection.

Project	Technology Solution	Description	Consenting Approach
		Following completion of this section, Strathy Wood and Strathy North would be transferred over to the new structure and redundant parts of the existing trident H-wood pole OHL removed.	
Melvich Wind Farm	132 kV underground cable	From Melvich wind farm on-site substation to the existing Strathy North 132 kV trident H-wood pole OHL.	Anticipated to be Permitted Development (Requirement for a CSE compound would fall under ancillary development of the section 37 submission for Strathy South Grid Connection)
Kirkton Wind Farm	132 kV trident wood pole OHL	The works would include a short span (<1 km) of single circuit 132 kV trident wood pole OHL between Kirkton wind farm substation and a 'T' on the existing Strathy North 132 kV trident H-wood pole OHL.	Section 37 of the Electricity Act (1989)
Existing Strathy North OHL	132 kV trident wood pole OHL	Once the 132 kV double circuit OHL is constructed, to further rationalise the project, the existing Strathy North 132 kV trident H-wood pole OHL would be removed between Strathy North substation, to a point, yet to be determined, but likely in proximity of Melvich substation. The section of wood pole OHL that would remain in place would be re-purposed for use by the Melvich and Kirkton connections into Connagill 275/132 kV substation.	This would fall under ancillary development of the section 37 submission for the Strathy South Grid Connection
Strathy Switching Station	Switching station	To facilitate the connections, a new switching station would also be required to collect all incoming circuits onto a double busbar before taking these through the double circuit 132 kV OHL supported by steel structure	Town and Country Planning (Scotland) 1997

2.4 Proposals Overview

Overhead Line Design – Steel Lattice Tower

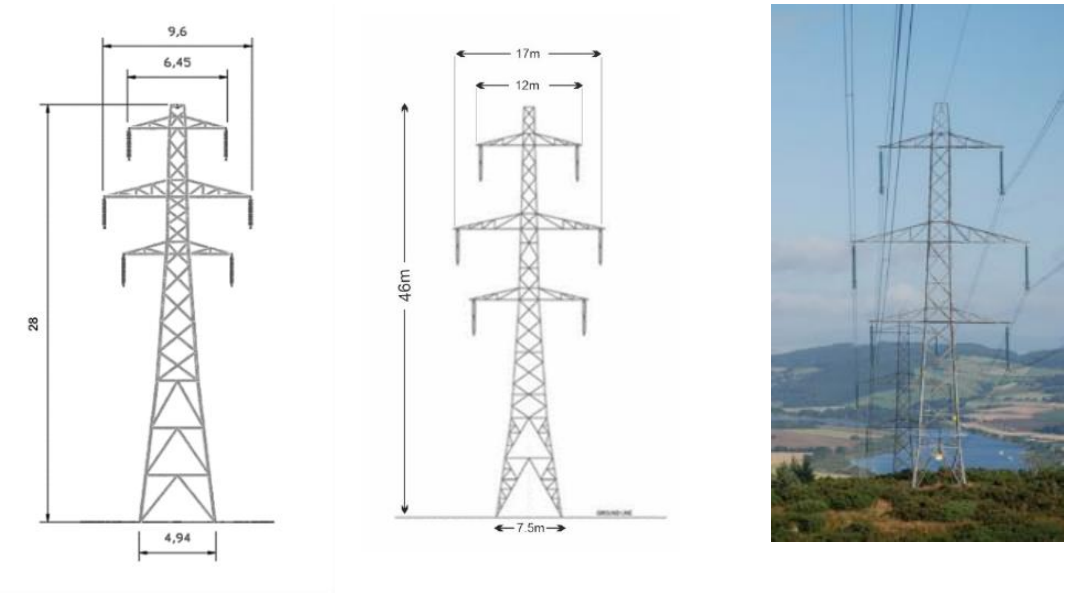
2.4.1 Where steel structures are proposed, these will be of steel lattice design from the SSEN Transmission 'L7' series or 'L8' series of steel lattice tower. The span length (distance between towers) would vary slightly depending on topography and land usage. For an L7 series of tower the span lengths would be between approximately 200 - 280 m whereas for an L8 series of tower it would be approximately 250 m.

2.4.2 Tower heights would also vary, depending on local topography, but would typically be 28 m in height for an L7 series of tower and 46 m in height for an L8 series of tower. Exact heights of and the distances between towers would be determined after a detailed line survey and confirmed prior to submission of an application for consent. The towers would carry two circuits, each with three conductors supported from either glass, porcelain, or composite insulators attached to the horizontal cross arms on both sides of each steel lattice tower. An Optical Ground Wire (OPGW)4 would be suspended between tower peaks, above the conductors.

[4] Optical Ground Wire is a dual functioning cable, providing a 'shield' to conductors from lightning, whilst also comprising optical cables for telecommunication purposes.

2.4.3 A schematic of the proposed L7 and L8 series of steel lattice towers is shown in **Plate 3.1** below.

Plate 3.1: Proposed L7 (left hand image) and L8 (right hand image) Steel Lattice Tower Typical Schematic and Example Photograph



Overhead Line Design – Trident H-wood Pole

2.4.4 The trident wood poles would have a height of approximately 16 m (including insulators and support). The proposed trident wood pole would support three conductors in a horizontal flat formation. The spacing between poles would vary depending on topography and altitude. The specific distances would be determined after a detailed line survey but would be approximately 100 m apart. A photograph showing a typical wood pole trident line is shown in **Plate 3.2** below.

Plate 3.2: Proposed Trident H-wood poles Typical Schematic and Example Photograph

Underground Cable

2.4.5 As stated in **Table 3.1**, sections of UGC would be required for the Strathy South Wind Farm Grid Connection. Between Strathy South Wind Farm substation and Strathy Wood Wind Farm substation an UGC is required primarily to avoid impacts to sensitive bird species, as discussed with NatureScot during consultation. A short section of UGC would also be required at the end of the 132 kV double circuit OHL to enable connection into the Connagill 275/132 kV substation.

3. CONSIDERATION OF ALIGNMENT OPTIONS

3.1 Introduction

3.1.1 The Consultation Document[1] sets out the approach to the consideration and appraisal of alignment options, informed by SSEN Transmission's guidance '*Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above'*. The guidance sets out SSEN Transmission's approach to selecting a route and alignment for an OHL and UGC.

3.1.2 The approach to site selection for Strathy Switching Station is set out within the Consultation Document and informed by SSEN Transmission's *guidance 'Substation Site Selection Procedures for Voltages at or above 132 kV'*.

3.1.3 In line with the principles outlined in the guidance document, the method of identifying an optimal alignment for each connection / switching station site has involved the following 4 key tasks:

- Identification of the baseline situation;
- Identification of alignment options / switching station site options;
- Environmental and engineering analysis of alignment options / site options; and
- Identification of an optimal alignment / switching station site.

3.2 Identification of Optimal Alignments

3.2.1 The optimal alignment for the Connagill Cluster Grid Connections and optimal site of the Strathy Switching Station have been selected on the basis that they are considered to provide an optimum balance of environmental, technical, and economic factors. The optimal alignments / optimal site presented within the Consultation Document are shown on **Figure 1**.

4. THE CONSULTATION PROCESS

4.1 Route Selection Stage

4.1.1 In accordance with SSEN Transmission's guidance[5] a process of consultation on the optimal routes has previously been undertaken, seeking comments from statutory and non-statutory consultees, and members of the public. This included a virtual Major Pre-application Meeting arranged by The Highland Council (THC) in August 2023 and a public consultation event that took place in November 2023 to further engage stakeholders. The Report on Consultation (Routeing Stage)[6] summarises the feedback received during these consultations, and how these were to be considered and actioned by SSEN Transmission. This led to the confirmation of the proposed routes for the grid connections.

4.2 Alignment Selection Stage

4.2.1 In accordance with SSEN Transmission's guidance a similar process of consultation on the optimal alignments / site has also been undertaken, as set out below.

Public Consultation Event

4.2.2 To engage stakeholders on the project, SSEN Transmission undertook a public consultation event on the 20th May 2024 at Strathy Village Hall, between 15:00 – 19:00.

4.2.3 Visitors were able to engage directly with the project team where they could ask any questions, they might have about the project and share their feedback on the current proposals.

4.2.4 The consultation event was advertised on SSEN Transmission's social media channels and the dedicated project website were also used to advertise the consultation event. In addition, a letter mail drop letter informing of the event was also carried out to over 500 households within the vicinity of the Connagill Cluster Grid Connections proposals.

4.2.5 A total of 14 visitors attended the consultation event. A feedback form was distributed to visitors at the event to provide comments, and feedback was requested to be returned to SSEN Transmission by 21st June 2024.

4.2.6 No feedback forms were received during or following the consultation event.

4.2.7 Any further comments received by the local community will be considered as the project is taken forward into EA / EIA and consenting stage. This process will remain inclusive, seeking further consultation where appropriate.

Consultation Document

4.2.8 The Connagill Cluster Grid Connections: Consultation Document (Alignment Stage)[1]**Error! Bookmark not defined.** was produced in May 2024 detailing the selection process for the optimal alignments / site, taking account of environmental and technical factors. The Consultation Document was made available for download on the dedicated project website: www.ssen-transmission.co.uk/projects/project-map/Connagill-Cluster/

4.2.9 The stakeholders in receipt of the Consultation Document or otherwise informed of the website included:

Statutory Consultees

- The Highland Council
- NatureScot

[5] SSEN Transmission (September 2020), Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above
[6] SSEN Transmission (April 2024) Connagill Cluster Grid Connection – Report on Consultation (Routeing Stage)

- Scottish Environment Protection Agency (SEPA)
- Historic Environment Scotland (HES)
- Transport Scotland
- The Scottish Government's Energy Consents Unit (ECU)

Non-Statutory Consultees

- RSPB Scotland (RSPB)

Councillors and Ward Councillors

- Various Councillors
- Strathy and Armadale Community Council
- Bettyhill, Strathnaver and Altnaharra Community Council

4.2.10 Community Councils and councillors were made aware of the Consultation Document, and updates were issued via email to project website subscribers.

4.2.11 Feedback on the Consultation Document was requested by 21st June 2024. However, a week extension was agreed with HES until 28th June 2024.

4.2.12 Stakeholders were invited to provide feedback through the following methods:

- A series of questions were asked within the Consultation Document requesting comments on specific aspects of the project as follows:
    - Have we explained the need for this Project adequately?
    - Have we explained the approach taken to select the optimal alignments / optimal site adequately?
    - Are there any factors, or environmental features, that you consider may have been overlooked during the optimal alignment / site selection process?
    - Do you feel, on balance, that the optimal alignments / optimal site selected is the most appropriate for further consideration at the EA/EIA and Consenting stage?

5. CONSULTATION RESPONSES FROM STATUTORY AND NON-STATUTORY CONSULTEES

5.1 Introduction

5.1.1 The following part of this report sets out a summary of the feedback received from statutory and non-statutory consultees following the consultation period (May to July 2024), together with the response by SSEN Transmission, summarising any actions to be taken, where relevant.

5.1.2 No feedback forms were received from individuals or the local community during or following the consultation event.

Table 5.1: Statutory and Non-Statutory Consultee Feedback

Stakeholder	Summary of Feedback	Response by SSEN Transmission
Statutory Consultees		
NatureScot (NS)	NS consider the need for the Project and the approach taken to select the optimal alignments / optimal site has been adequately explained. NS don't consider that any factors have been overlooked during the selection process.	These comments are welcomed.
	Strathy South and Strathy Wood Grid Connections	
	NS confirmed that they have provided scoping comments to ECU on the Strathy South Grid Connection and Strathy Wood Grid Connection.	This is acknowledged and scoping comments received.
Scottish Environment Protection Agency (SEPA)	**Strathy Switching Station**	
	SEPA noted a preference for Site Option D as it is on much shallower peat, with site specific peat probing recording peat depths of between 0.1 m and 0.4 m. Whereas for Site Option A (the optimal site noted in the Consultation Document), site specific peat probing recorded peat depths of between 0 m and 2 m, with the deepest peat depths noted within the centre of this Site Option.	This has been noted and while Site Option D was the environmental preference, partly due to being positioned on much shallower peat, from an engineering perspective this site option was less preferred. This was primarily due to the irregular shape meaning it would be unable to accommodate all technology types without modification or relocation. It is positioned on undulating ground and would require significant earthworks to construct, and being adjacent to the Alltan nam Muc watercourse also presents a surface water flood risk, and limits the ability for future expansion, should this be required. The 'tucked in' position of this site in relation to surrounding topography may also pose issues for tie-ins of future connections. Site Option D is directly on the alignment of the proposed Strathy North to Connagill 132 kV OHL and would require the OHL to be temporarily diverted while a switching station is constructed at this location. Nevertheless, as the design for the switching station is developed, further environmental and engineering analysis will be undertaken to refine the design and minimise impacts on peat, where possible and this will be informed by additional peat probing.
	SEPA outlined that in relation to flood risk, it appears that neither Site A nor Site D have been assessed in relation to the neighbouring watercourses and suggest that flood risk is assessed before an optimal site is identified.	This comment is acknowledged. SSEN Transmission intend to model the flood risk associated with the Allt an Reidhe Rudidh watercourse, which is in proximity to the optimal site (Site Option A) to establish the floodplain extent both now and, in the future. This data will be used to inform the design of the switching station.

Stakeholder	Summary of Feedback	Response by SSEN Transmission
	SEPA noted that the following statements in the Consultation Document are confusing and it is not clear how the conclusions have been reached: 'Site Option A is not considered to be at flood risk, however, it is likely that flood risk associated within the Allt an Reidhe Rudidh has not been modelled by SEPA (and this would need to be established if the option was to be taken forward). Site Option D: has a greater potential for flood risk due the proximity of a nearby watercourse'.	As set out above, SSEN Transmission intend to establish the flood risk associated with the Allt an Reidhe Rudidh watercourse, which is in proximity to the Optimal Site (Site Option A), to inform the siting and design of the switching station.
	SEPA have made no comments at this stage on the alignments for the Strathy South and Strathy Wood Grid Connections – Southern Section; Strathy South and Strathy Wood Grid Connection – Northern Section; or Kirkton Grid Connection.	This is noted.
Historic Environment Scotland (HES)	**Strathy Wood and Strathy South - Northern Section**	
	HES are content that the Optimal Alignment as identified in the Consultation Document would not raise significant impacts for our remit.	These comments are welcomed.
	Strathy Wood and Strathy South - Northern 'Alternative' Section	
	HES suggest that the Optimal Northern 'Alternative' Alignment has the potential to impact on the setting of category A listed Bighouse, garden pavilion and walled garden (LB7160). HES provided details of the setting of the listed building and the potential impacts of the connection on the setting of this asset in their Routeing Stage response. HES recommend that photomontages are produced to demonstrate and support the assessment of impacts on the setting of this asset. HES have separately responded to a consultation regarding the details of the location for this visualisation and have provided details of a location to show the view from the garden pavilion looking west along the designed axial view towards where the proposed OHL may be visible.	As confirmed with HES in separate consultation, SSEN Transmission are happy to produce a visualisation from Bighouse garden pavilion (from an agreed viewpoint location) to be included within the EIA Report for the Alternative Alignment.
	Other Grid Connections	
	HES are content that all of the other Optimal Alignment options considered within the Consultation Document for the Strathy Wood and Strathy South - Southern	These comments are welcomed.

Stakeholder	Summary of Feedback	Response by SSEN Transmission
	Section and Kirkton Wind Farm would not raise significant impacts for their interests. HES are also content that the underground cables proposed for the Melvich wind farm connection and between the Strathy South Wind Farm Substation and Strathy Wood Wind Farm Substation would not raise significant issues for their interests.	

6. IDENTIFICATION OF A PROPOSED ALIGNMENT

6.1 Overview

6.1.1 This part of the Report on Consultation provides a summary of the responses received from stakeholders relevant to each part of the Connagill Cluster, the actions to be taken by SSEN Transmission, and confirmation of the proposed alignments and sites to progress to the next stage of the project (see **Figure 1**).

6.2 **Strathy South and Strathy Wood Grid Connection - Southern Section** (between Strathy South substation and Strathy North substation)

6.2.1 No concerns were raised by stakeholders and as such the optimal alignment for this section of the connection (*Alignment Option 1 (UGC) – Alignment Variant 1 (UGC) – Alignment Variant 3 (OHL) – Alignment Variant 2 (OHL)*) will be taken forward as the proposed alignment. This will comprise a combination of 132 kV underground cable and 132 kV double circuit OHL supported by steel lattice towers.

6.3 **Strathy South and Strathy Wood Grid Connection - Northern Section** (between Strathy North substation and Connagill 275/132 kV substation)

Optimal 'Northern' Alignment (assuming Melvich Wind Farm does not gain consent and is not constructed)

6.3.1 No concerns were raised by the stakeholders and as such the optimal alignment for this section of the connection (*as per the 2014 section 37 consent for the Strathy South Grid Connection (which has now lapsed) which runs parallel to the existing Strathy North 132 kV wood pole OHL, with some modifications, including capturing the alignment of 'Alternative Northern' Alignment 4)* will be taken forward as the proposed alignment. This will comprise a 132 kV double circuit OHL supported by steel lattice towers (and capable of operating at 275 kV in the future, if required).

Optimal 'Alternative Northern' Alignment (assuming Melvich Wind Farm does gain consent and is constructed)

6.3.2 HES suggested that the Optimal 'Alternative Northern' Alignment has the potential to impact on the setting of Bighouse Garden Pavilion and Walled Garden (a Category A listed building). SSEN Transmission have consulted with HES separately confirming that a visualisation will be produced in support of the EIA Report for the 'Alternative Alignment' and have agreed the viewpoint location from within the garden pavilion.

6.3.3 No specific comments were received by stakeholders on the alignment options presented and as such the Optimal 'Alternative Northern' Alignment for this connection (*Baseline Alternative Alignment – Alignment Variant 1 – Alignment Variant 5 (in combination with the Optimal 'Northern' Alignment – Alignment Variant 4*) will be taken forward as the proposed alignment. This will comprise a 132 kV double circuit OHL supported by steel lattice towers (and capable of operating at 275 kV in the future, if required).

6.4 Kirkton Grid Connection

6.4.1 No comments were received by the stakeholders and as such the optimal alignment for this connection (*Alignment Variant 2*) will be taken forward as the proposed alignment which will comprise a 132 kV trident 'H' wood pole OHL.

6.5 Strathy Switching Station

6.5.1 SEPA raised concerns with the optimal site (Site A) presented in the Consultation Document due to it being located on peat depths recorded to be of 2 m or less. SEPA noted a preference for Site Option D, as it is located on much shallower peat depth (less than 0.4 m).

6.5.2 Whilst this is acknowledged, there are engineering challenges with Site Option D that make this less preferred. This include the irregular shape of the site meaning it would be unable to accommodate all technology types

without modification or relocation; the undulating ground requiring significant earthworks to construct; the 'tucked in' position of this site in relation to surrounding topography posing issues of tie-in for future connections; and being directly on the alignment of the proposed Strathy North to Connagill 132 kV OHL would require the OHL to be temporarily diverted while a switching station is constructed at this location. For these reasons, SSEN Transmission will not be progressing Site Option D.

6.5.3 Nevertheless, as the design for the switching station is developed, peat depth data will be considered to refine the design and minimise impacts on peat, where possible. In addition, SSEN Transmission will model the flood risk associated with the Allt an Reidhe Rudidh watercourse, which is in proximity to the optimal site, to establish the floodplain extent both now and in the future, and this will be used to inform the design of the switching station.

6.5.4 No further specific comments were received from stakeholders on the site options presented in the Consultation Document. Subject to the outcome of the flood risk modelling, SSEN propose that the optimal site (Site Option A) be taken forward as the proposed site.

7. CONCLUSIONS AND NEXT STEPS

7.1 Conclusion

7.1.1 This Report on Consultation documents the consultation process which has been undertaken for the Connagill Cluster Grid Connections between May and July 2024. The programme of consultation was designed to engage with stakeholders including statutory and non-statutory consultees, local communities, landowners and individual residents in order to invite feedback on the rationale for and approach to, the selection of the optimal alignment and site options.

7.1.2 This report has described the key responses received and provides detail on the actions proposed in response to the issues raised. The consultation process has confirmed that, subject to some minor alterations, the optimal alignments / site, as set out within the Consultation Document, should be taken forward as the proposed alignment / site into Stage 4: EIA / EA and consenting.

7.2 Next Steps

7.2.1 The various grid connection projects will now progress into Stage 4 (EIA / EA and consenting). Should further site and desk-based analysis at the EA / EIA and consenting stage identify a particular constraint, a further review of the proposed alignment / site and design solution may be required.

Scottish & Southern Electricity Networks

TRANSMISSION

Legend

Strathy South and Strathy Wood Grid Connections - Southern Section

- 132 kV Underground Cable
- 132 kV Overhead Line (steel structure)

Strathy South and Strathy Wood Grid Connections - Northern Section (Optimal)

- 132 kV Overhead Line (steel structure)

Strathy South and Strathy Wood Grid Connections - Northern Section (Alternative)

- 132 kV Overhead Line (steel structure)

Kirkton Grid Connection

- 132 kV Overhead Line (trident H-wood pole)

Strathy Switching Station

- Switching Station

Existing OHL Infrastructure

- Strathy North 132kV OHL (to be dismantled)
- Strathy North 132kV OHL (to be repurposed)

Other Infrastructure

- Connagill Substation (Existing)
- Strathy North Substation (Existing)
- Strathy Wood Substation (Consented)
- Strathy South Substation (Consented)
- Melvich Substation (Proposed)
- Kirkton Substation (Proposed)
- Strathy North Wind Turbines (Operational)
- Strathy Wood Wind Turbines (Consented)
- Strathy South Wind Turbines (Consented)
- Melvich Wind Turbines (Proposed)
- Kirkton Wind Turbines (Proposed)

Project No: LT230 / LT319 / LT559 / LT560 / LT522 PT969 / LT421

Project: Connagill Cluster Grid Connections Report on Consultation (Alignment Stage)

Title: Figure 1 - Combined Connagill Cluster - Optimal Alignments

Drawn by: MT Date: 02/09/2024

Drawing: 121008-AROC-D1-1.0.0

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Scale - 1:55,000 @ A3