Scottish & Southern Electricity Networks

Spittal to Loch Buidhe to Beauly 400 kV OHL Connection

Environmental Impact Assessment

Volume 5, Appendix 13.1 – AA:

Woodland Reports

Strath Sgitheach North

July 2025

Scottish & Southern Electricity Networks

Contents

1. Introduction

1.1 Scottish and Southern Electricity Networks (SSEN) Transmission, hereafter referred to as 'the Applicant', owns, operates, develops and maintains the high voltage electricity transmission system in the north of Scotland and the Scottish islands. Due to the growth in renewable electricity generation in the north and north-east of Scotland, upgrade of the transmission network is required to provide the necessary increase in transmission capacity. The Applicant is applying for consent under Section 37 of the Electricity Act 1989 to construct and operate a new double circuit 400 (kilovolt) kV overhead line (OHL).

1.2 This report provides an assessment of woodland impact related to the Spittal to Loch Buidhe to Beauly 400 kV OHL Connection project (the 'Proposed Development'). The report details the woodland area affected by the Operational Corridor (OC), new access tracks (permanent), and additional felling required due to windblow risk within individual ownerships. It also includes mitigation considerations and compensatory planting recommendations.

2. Purpose of this Woodland Report

2.1 As part of the Environmental Impact Assessment (EIA) process, it was identified that construction of the OHL and associated access tracks would cross a number of woodland areas within both public and private landholdings. The landholding property boundaries are identified in **Figure 1: Woodland Impacted by the Proposed Development**.

2.2 This document provides an assessment of the woodland areas that are affected by the Proposed Development, including the requirement for woodland removal and management recommendations to mitigate the impact of the woodland removal.

2.3 Field surveys of the woodland areas have been undertaken and have been used to determine the various woodland characteristics to identify the woodland removal required and recommended. This document also sets out the area, in hectares (ha), of compensatory planting required to ensure no net loss of woodland is achieved.

3. Woodland Property

3.1 Strath Sgitheach North is situated approximately 5 km northwest of Dingwall. Although there is currently no direct access to the woodlands on this property, the nearest public road is the A834, which connects to Strathdiynie Road and terminates near the property's southern boundary. As there is no existing upgraded track network within the site, the current off-road tracks are not suitable for support the Proposed Development. Refer to **Figure 1: Woodland Impacted by the Proposed Development**.

Development Requirements

4.1 400 kV Operational Corridor

4.1.1 With reference to **Figure 1: Woodland Impacted by the Proposed Development**, the OHL sections relevant to Strath Sgitheach North extend from Tower S131 to 150 m southwest of Tower S139.

4.1.2 The Study Area for this assessment is based around an operational corridor of 90 m. The Applicant defines the OC as the area in which it has rights to remove woodland for the purposes of creation of new OHL, resilience and maintenance of OHLs, or protection of electrical plant as required by the Electricity Safety, Quality and Continuity Regulations (ESQCR) 2002 regulations and The Electricity Act 1989. The OC is defined as to the distance at which a tree could fall and cause damage to the OHL, resulting in a supply outage. As a result, the final OC width would be based on the safety distance required from the OHL centreline to allow for a mature tree falling towards the OHL, taking account of topography and tree height at maturity.

4.1.3 The OC width that has been assessed and identified for the safe build and energisation of the new OHL through areas of conifer woodland is 90 m (45 m either side of the OHL centreline). Further details can be found in **Section 13.3** of **Volume 2, Chapter 13: Forestry** which outlines the extent of the study area.

4.1.4 The OC width that has been assessed and identified for the safe build and energisation of the OHL through the areas of broadleaves is also 90 m (45 m either side of the OHL centreline). This has been assessed as a maximum OC width required at these woodland locations, with the potential of further narrowing of the OC prior to construction to allow greater tree retention depending on factors such as tree height, topography, crown reduction or other mitigation strategies[1].

4.2 Access Track Route Design

4.2.1 There is no current access to the Proposed Development features; however, new sections of permanent access tracks will be constructed within the OC.

4.2.2 These new access tracks will serve as the primary vehicle access route for the Proposed Development, as illustrated in **Figure 1: Woodland Impacted by the Proposed Development**, and will undergo maintenance and upgrades as part of the construction scope.

4.2.3 New access tracks will be built to service Towers S131 to S139.

[1]As specified by the 'Red Zone' set out in paragraph 41 of the Forest Industry Safety Accord. (2020) Safety Guide 804 Electricity at Work: Forestry. [pdf] Available at: FISA 804 (ukfisa.com).

4.2.4 Tree felling, stump removal and residue mulching will be required for the installation of new access tracks and at each tower location for the formation of temporary construction working areas.

4.2.5 These new access tracks can serve as the main arterial construction route. Tree felling and timber extraction would be able to utilise existing tracks where available, prior to any construction activity.

5. Woodland Characteristics

5.1 A desk-based study of the woodland areas was conducted, to identify current woodland environmental designations and classifications.

5.2 The web-based data provided by Scottish Forestry and referencing the Scottish Government's Ancient Woodland Inventory (AWI), and

- The Scottish Forestry Map Viewer provides spatial data on the Native Woodland Survey of Scotland (NWSS) and classifies the woodland types into four categories[2] [3]:

1. Native woodland
2. Nearly-native woodland
3. Open land habitat
4. Plantations on Ancient Woodland Sites (PAWS)

5.3 The route primarily passes through several patches of woodland within this ownership found north of Abhainn Sgitheach Burn and near historical hut circles.

5.4 The site experiences wet and saturated ground conditions, particularly during winter, with overflow burns flowing down from the steep slopes above the Proposed Development's OC.

5.5 The woodlands within the OC range in elevation from approximately 240 m to 300 m above sea level, with a gentle downhill slope on the northern side.

[2] Scottish Forestry Map Viewer URL https://scottishforestry.maps.arcgis.com/apps/webappviewer/index.html?id=0d6125cfe892439ab0e5d0b74d9acc18

[3] Scottish Forestry Native Woodland Survey of Scotland: Glossary of Terms; URL: Main Title (forestry.gov.scot)
Native Woodland – woods where the canopy cover is composed mainly of native species (i.e., over 50%).
Nearly Native Woodland - where native species make up between 40% and 50% of the canopy. These are woods that could have potential to be converted into native woodlands by altering their species mix.
Open Land Habitat – areas with <20% canopy cover of trees and shrubs adjoining a native woodland.
PAWS - Plantation on Ancient Woodland Sites. These are surveyed in the NWSS where they are recorded in the Scottish ancient woodland inventory (SAWI). These woodlands appear to have originated through natural regeneration sometime before the mid-19th century, but were later converted to planted wood.

5.6 These woodland patches are scattered throughout the Proposed Development, forming small clusters of conifers and broadleaved trees, predominantly on the southwestern side of the OC. In contrast, the northeastern side features a commercial woodland block dominated by spruce. A large amount of open ground is encountered within the OC refer to **Figure 1: Woodland Impacted by the Proposed Development.**

5.7 Within the OC, both Native Woodland and Nearly-Native Woodland have been identified through the Native Woodland Survey of Scotland (NWSS). While not all woodland blocks affected by the Proposed Development are classified as Native Woodland, they share similar characteristics, suggesting they have regenerated as natural extensions from the registered under the original Native Woodland survey. Refer to **Table 5.1**.

Table 5.1: Woodland Designations

Item	Type of Infrastructure	Woodland Designations	Area (ha)
Operational Corridor	Permanent	NWSS- Native woodland	2.80
		NWSS- Nearly Native woodland	1.10

5.8 The Native Woodland covers a total of 2.80 ha, comprising 0.93 ha of Native pinewood, 1.10 ha of nearly native woodland of conifer element and 1.87 ha of wet woodland as shown on **Table 5.1** above. Refer to **Plate 1.**

5.9 Within the wet woodland areas, clusters of birch and willow dominate. Most trees are at shrub size, with some birch reaching approximately 3.5 m in height. The woodland features an open canopy, as birch trees are sparsely distributed, while a denser willow understory provides additional coverage. Refer to **Plate 2**.

Plate 1- Native Woodland – Pinewood composed of young, immature Scots pine averaging 4.5 m in height, growing on wet ground with poor root systems and a heather-dominated understorey. Grid ref: NH 50662 62797.

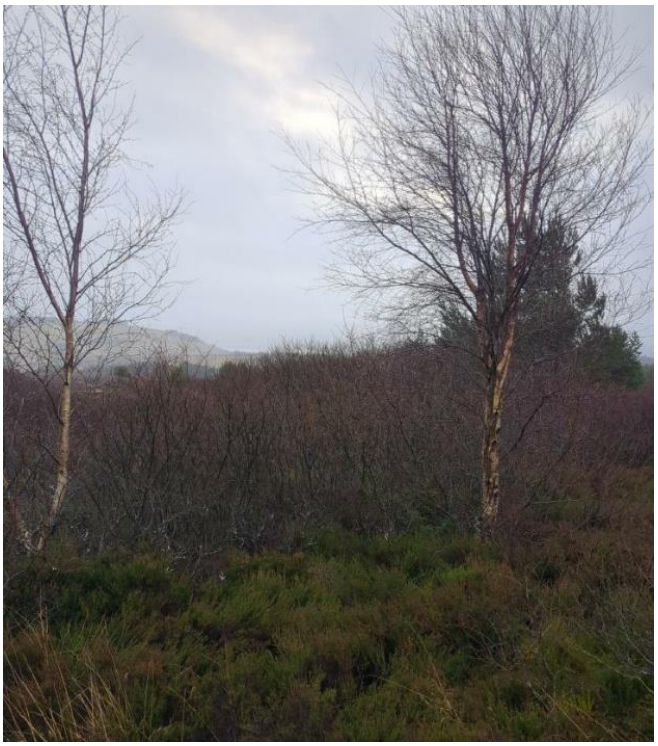

Plate 2- Native Woodland – wet woodland characterised by scattered birch and dense clusters of willow at shrub size. Grid reference: NH 50941 62937.

5.10 Towards the northeastern side of the property within the OC, there are patches of commercial conifer woodland dominated by spruce, with small clusters of broadleaved trees along the edges. These conifer plantations are classified as Nearly-Native Woodland in the NWSS, with spruce trees ranging from 10 to 14 m in height. Refer to **Plate 3.** However, as no native species have been planted in these areas, their classification and value as Native Woodland should not be considered. For the purposes of this document, this area has been classified as nearly Native Woodland and not native woodland itself.

5.11 Clusters of broadleaved are encountered on the edge of commercial spruce blocks, primarily composed of birch trees averaging 8 m in height. Refer to **Plate 4**.

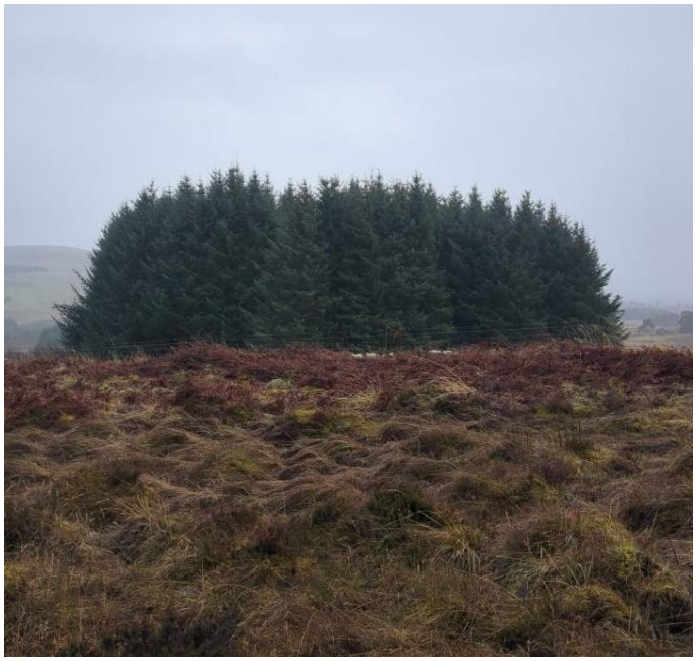

Plate 3- Commercial conifer plantation block consisting of spruce averaging 14 m in height, forming small, scattered coupes within the landscape. Grid ref: NH 52298 63872.

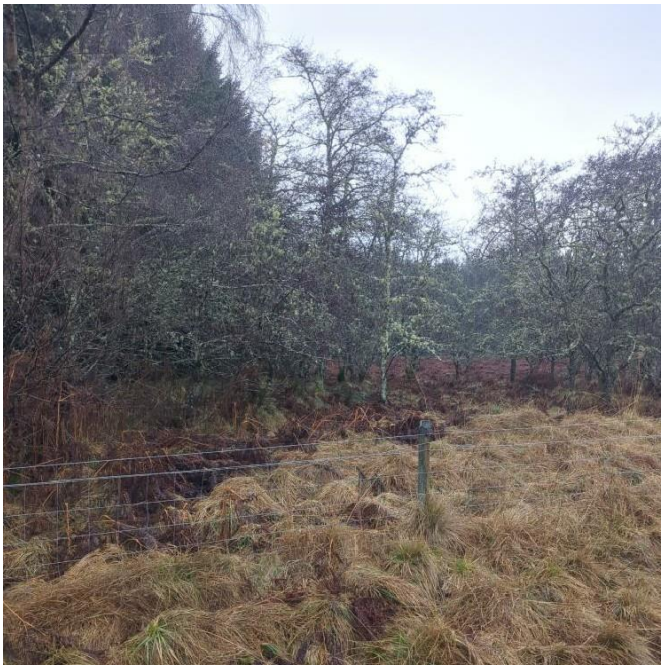

Plate 4- Scattered broadleaved clusters on the edge of commercial spruce blocks. Grid ref: NH 52356 63914.

5.12 Within the open ground of the remaining area in the Proposed Development at Strath Sgitheach, there are scattered clusters of willow, predominantly in shrub form.

5.13 The woodlands in the southwest area feature small clusters classified as Native Woodlands, primarily consisting of Scots pine, along with distinct groups of broadleaved species, mainly birch and willow shrubs. In contrast, the northeastern section is dominated by commercial spruce plantations scattered throughout the open ground, with trees reaching heights between 10 and 14 m.

5.14 The site presents soils of the composition of Humus-iron podzols [4].

6. Windblow Risk Impact

6.1 An assessment was undertaken of the risk of windblow to areas of woodland adjacent to the OC which would be exposed due to the tree clearance required for the OC. This assessment was based on the professional judgement of the forestry surveyor with consideration being given to the soil and moisture regime, the topography, tree species, top height, exposure, altitude and aspect in relation to the prevailing wind direction and any previous management regimes. This assessment was also based on site visits and observations, and available data of the site. Reference was also made to Forest GALES 2.5 Forest Research decision support system where appropriate.

[4] Scottish Government's Scotland's soils website https://soils.environment.gov.scot

6.2 Given the nature of the woodlands being immature pole stage scattered conifer woodlands and clusters of broadleaved trees of an average height of up to 12 m and the local characteristics of soils, topography and aspect, it is anticipated that the introduction of the OC will not result in future windblow to the adjoining woods. Refer to **Table 9.1**.

6.3 The woodland site affected by the Proposed Development has a 'Detailed Aspect Method of Scoring' (DAMS)[5] windblow hazard class score of 15, which is classified as moderately exposed. The site has mineral soils with shallow rooting which are mostly cool and moist.

7. Woodland Management Impact

7.1 The OHL will create additional challenges for the future management of the forest as it dissects existing management coupes and introduces an electrical hazard. The risks associated with the electrical hazard will be reduced by regular maintenance of the OC, so maintaining the compliance of the OC and reducing any need for future tree clearance operations within the "Red Zone".[6]

7.2 While the OC will result in the sterilisation of some woodland areas, this is not expected to impact forest restructuring. This is because native woodlands are generally not subject to commercial management. Opportunities for mitigation and woodland enhancement are outlined in **Section 8**.

7.3 The OHL will cross the woodland road network at either approximately 45 or 90 degrees and will be built to the regulatory safe height clearances above forest access tracks, which will reduce the hazard in respect of future timber haulage. It may still, however, impact on machine operations within the proximity of the OHL, such as stacking and loading. Mitigation of which could be incorporated into the access design, following discussions with the landowner.

7.4 The OHL may be restrictive to future in-forest machinery access. The requirement for dedicated forestry machine OHL crossing points will be discussed with the landowner and if required, will be identified once the OHL has been constructed, thus providing a safe OHL crossing point(s) for future working within the woodland.

7.5 The impact of the Proposed Development on the overall viability and continuity of woodland management has been considered. The affected woodland areas consist of small, scattered blocks within the Strath Sgitheach North property, historically managed at a low intensity. As such, the development is not expected to impede the implementation of woodland management in these areas. While the proposed OC crosses several woodland compartments, it is not anticipated to disrupt forest

[5] Detailed Aspect method of Scoring (DAMS) Ref. Forest Research, "Forest Gales software programme" and Forestry Commission Leaflet 85 "Windthrow Hazard Classification"
[6] As specified by the 'Red Zone' set out in paragraph 41 of the Forest Industry Safety Accord (FISA) Safety Guide 804. Electricity at Work: Forestry (2020) FISA 804 (ukfisa.com)

operations or ongoing management activities. The OC passes through central woodland sections with established access infrastructure on both sides, ensuring continued operational access. Therefore, significant fragmentation or isolation of woodland units is unlikely, and the development is not expected to materially affect the viability of current or future management practices.

7.6 The impacts arising from the Proposed Development are not anticipated to affect the wider woodland management regime, nor are they expected to necessitate any alteration to the current or planned species composition.

8. Mitigation Opportunities

8.1 The Applicant will be using a process of 'managed resilience' which will seek to retain naturally regenerated broadleaved trees and shrubs as close as possible to the line to keep as much tree cover as possible. Smaller- and lower-growing tree species and shrubs can be retained closer to the OHL. OHL vegetation maintenance would take place on a 4-yearly cycle as required.

8.2 Impacts on woodland restock opportunities, resulting from the OC sterilisation, could be addressed through the amendment of the Felling Licence Application or the Long-Term Forest Plan (LTFP), adhered to the regulations of the Forestry and Land Management (Scotland) Act 2018, and in line with the UK Forestry Standard guidance to utilise wayleave corridors as designed Open Ground, repurposing currently unplanted areas to maintain the commercial productivity of the woodland.

8.3 Before the construction phase, these areas, along with access tracks, will be assessed for selective felling and also crown reduction to determine if greater tree retention is feasible. The final extent of tree retention will depend on the requirements of the Proposed Development, particularly ensuring the safety of OHL wiring operations during construction.

8.4 The OC woodland removal area is required for the construction and operation of the new OHL infrastructure. Opportunities will be assessed for encouraging woodland regeneration within the OC, the identification of suitable areas cannot be guaranteed due to the requirement of maintaining the safe energisation of the OHL. Reference to **Tables 9.2 and 9.3** below, will fully mitigate the loss of forest resource within the OC through compensatory planting of the equivalent area (ha) of woodland removed.

8.5 Impacts on tree windfirm stability within the remaining crop have been assessed and considered as noted in **Section 6**. Woodland loss and management felling have been minimised through retention of crops identified as likely to be windfirm.

8.6 Impact of stability within the remaining crop has been assessed and reported on above.

9. Woodland Removal Impact

Table 9.1: Woodland Removal for Infrastructure			
Item	**Type of Infrastructure**	**Woodland type**	**Area (ha)**
Operational corridor	Permanent	Broadleaved woodland	2.30
		Conifer woodland	3.30

Table 9.2: Compensatory planting		
Compensatory Planting Area		5.60

Table 9.3: Woodland Removal Impact of Infrastructure		
Item	**Woodland type**	**Area (ha)**
Total Loss of Woodland Area	Broadleaved woodland	2.30
	Conifer woodland	3.30
Total Compensatory Planting Area off-site	Broadleaved woodland	2.30
	Conifer woodland	3.30
Total Restocking/ Replanting Area on-site		0
Total Net Loss of Woodland Area		**0**

10. Compensatory Planting

10.1 Compensatory planting to achieve the area quantity (ha) of woodland removal as a result of the Proposed Development will be in accordance with the Scottish Government's Control of Woodland Removal Policy of no net loss of woodland. A compensatory planting strategy is set out in **Volume 5, Appendix 13.3: Compensatory Planting Strategy.**

Scottish & Southern Electricity Networks

TRANSMISSION

A

B

C

D

E

Scale 1:350,000

S131

S132

S133

S134

S135

S136

S137

S138

S139

S140

Scale @ A3 1:10,000

N

0 0.25 0.5 km

Legend

- Landownership boundary/parcel
- Central line Operational Corridor
- Proposed 400kV OHL Towers
- Access Tracks- Existing Upgrade
- Access Tracks- New Stone Perm
- Access Tracks- New Stone Temp
- Conifer woodland- Operational Corridor 90m
- Broadleaved woodland- Operational Corridor 90m
- NWSS- Native woodland
- NWSS- Nearly Native woodland

Woodland report
Project No- LT000132
Spittal- Loch Buidhe - Beauly 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section D-Strath Sgitheach North

Ref No: 28-06-2025