



Scottish & Southern
Electricity Networks

**Spittal to Loch Buidhe to Beauly 400
kV OHL Connection
Environmental Impact Assessment
Volume 5, Appendix 13.1 – J:
Woodland Reports
Uppat Estate**

July 2025



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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 Beaully 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 Uppat Estate is privately owned and located approximately 7.5 km west of Brora. The estate’s woodlands are accessible via a c-class road along the southern edge of Loch Brora, with the River Brora situated 4 km west of the A9.
- 3.2 Uppat Estate’s woodlands are primarily located to the north of Carrol Farm, west of Loch Brora on its southern side. The woodlands impacted by the Proposed Development face northeast and are situated on a slope leading down to Loch Brora.
- 3.3 The estate presently has farm access tracks throughout the hill open ground; however, these do not provide direct access to the woodlands within the Proposed Development. New access tracks will need to be constructed, and existing tracks will

require upgrades to facilitate the construction and operational phases of the project. Refer to **Figure 1: Woodland Impacted by the Proposed Development**.

4. Development Requirements

4.1 400 kV Operational Corridor

- 4.1.1 With reference to **Figure 1: Woodland Impacted by the Proposed Development**, the Overhead Line (OHL) sections relevant to Uppat Estate extend from 220 m west to Tower N221 to over 210 m west of Tower N230.
- 4.1.2 The Study Area for this assessment is based around an OC 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 strategies¹.

4.2 Access Track Route Design

- 4.2.1 There is no infrastructure in place leading to areas within the Proposed Development, therefore new sections of both temporary and permanent roads will be constructed within and outside the OC. These roads 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.

¹As 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).

- 4.2.2 New access tracks, also detailed in **Figure 1: Woodland Impacted by the Proposed Development**, will be built to service Towers N221 to N230.
- 4.2.3 The access track corridor width required for clearing through the woodland is 20 m (10 m on either side of the centreline), but this will be evaluated in situ to determine the suitability for further tree retention.
- 4.2.4 The construction of these new access tracks will slightly increase the impact of woodland removal along routes located outside the OC. The affected woodland along the new roadways will consist of a similar composition to that found within the OC, featuring a combination of coniferous plantations and broadleaved woodlands, depending on the specific location of the roads. Refer to **Table 9.1** below.
- 4.2.5 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.
- 4.2.6 Where existing tracks require maintenance or upgrading, this may involve the removal of trees and scrub to facilitate the works, particularly to accommodate the creation of additional passing places. While much of the upgrade activity would fall within standard forest access maintenance, which typically involves the removal of scrub, regeneration, and crown management, some sections may require additional tree clearance within a corridor of up to 12 m in width.

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}:

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.

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

5.3 The woodlands within Uppat Estate are situated on a steep slope that gradually transitions to gentler terrain as it approaches the lower ground near Loch Brora. Elevations range from approximately 20 to 150 meters above sea level.

5.4 The route primarily passes through conifer plantations, although broadleaved trees are also encountered within the OC. All woodlands within this ownership affected by the OC are classified as Native Woodland under the Native Woodland Survey of Scotland (NWSS), specifically as native pinewoods and wet woodlands. Refer to **Table 5.1** and **Plate 4**.

5.5 The woodlands consist of a commercially managed Scots pine plantation, with scattered small patches of broadleaved trees located within the OC and the proposed new roads.

Table 5.1: Woodland Designations

Item	Type of Impact	Woodland Designations	Area (ha)
Operational Corridor	Permanent	NWSS- Native woodland	3.94
Access tracks corridor	Permanent	NWSS- Native woodland	3.21

5.6 The Native Woodland, classified as native pinewood, consists of young, immature Scots pine at the pole stage. This woodland type covers approximately 3.27 ha of conifer plantation, with an average tree height of 5 m. Trees at higher elevations tend to be slightly shorter, while those on lower ground are taller. The understorey varies with the terrain, featuring short heather on the slopes and tussock grasses in the wetter, flatter areas. Refer to **Plates 1 and 2**.



Plate 1- Native pinewood located on the slopes at higher elevations, consisting of a young, immature stand of Scots pine at the pole stage. Trees here average 5 m in height and present a semi-open upper canopy. Grid reference: NC 84077 06863.

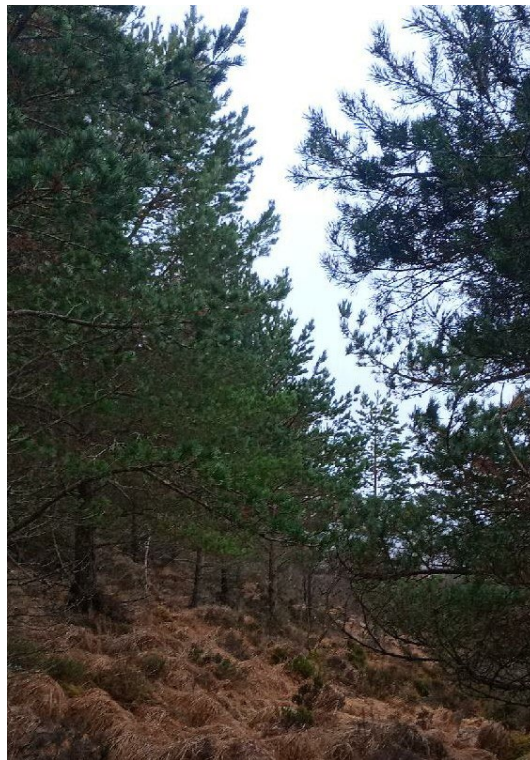


Plate 2-Native Woodland consisting of a Scots pine plantation established on cultivated ground, characterised by defined plough lines with open spaces between trees. Grid reference: NC 84330 07048.

5.7 The Native Woodlands classified as wet woodland are situated on wetter, flatter ground to the south of the conifer blocks, which are separated by a designated open ground strip. These woodlands are primarily composed of broadleaved trees planted simultaneously with the Scots pine, predominantly birch, with aspen and willow present as minor components. The size and form of the birch trees vary, with the tallest trees, averaging 6 m, located in the northern section of the woodland affected by the OC, while smaller specimens reach around 3 m in height. Refer to **Plate 3**.



Plate 3- Birch trees within the Native Woodland area, classified as wet woodland, located at the northern edge of the woodlands within the OC at Uppat Estate. These trees average 6 m in height and are sparsely distributed along the boundary of the conifer plantation. Grid reference: NC 84388 07108.



Plate 4- Photograph taken from outside the woodlands and the OC showing the conifer plantation of Native Woodland pinewood type and the broadleaved plantation of wet woodland type under the classification of NWSS. Grid reference: NC 84068 07076.

5.8 The northern conifer block exhibits slightly better growth, with taller Scots pine trees within the native pinewood, reaching up to 9 m in height. The understorey is saturated with groundwater and consists of seasonal grasses and tussocks. Trees here are more sparsely distributed throughout the conifer stand. Refer to **Plate 5**.



Plate 5- Native Woodland of the pinewood type within the northern conifer block features the tallest trees affected by the Proposed Development, reaching up to 9 m in height. Grid reference: NC 84239 07015.

5.9 The site soils are predominantly peaty gleyed 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

⁴ Scottish Government's Scotland's soils website <https://soils.environment.gov.scot>

available data of the site. Reference was also made to Forest GALES 2.5 Forest Research decision support system where appropriate.

6.2 Given the nature of some of the woodlands, mainly at young pole-stage conifer woodlands and patches of broadleaved trees, along with 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.

6.3 The woodland site affected by the Proposed Development has a ‘Detailed Aspect Method of Scoring’ (DAMS)⁵ windthrow hazard class score of 11, classified as low. The site presents mineral soils with shallow rooting that are mostly cool and moist.

6.4 All woodlands affected by the Proposed Development are believed to remain wind-stable. These rather open coupes have been assessed and are therefore considered stable in the current conditions.

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 The sterilisation of the OC, however, will have an impact on forest restructuring, potentially impacting the landowner's ability to utilise the forest's commercial viability in accordance with the UK Forestry Standard. Mitigation opportunities are discussed in the following **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.

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)

7.5 The impact of the Proposed Development on the overall viability and continuity of woodland management has been considered. The affected woodland comprises a native woodland scheme, with Scots pine as the primary species. Although the proposed OC intersects a portion of this woodland at its northwestern corner, it is not expected to compromise the implementation of forest operations, ongoing management, or result in isolation through fragmentation. As new access tracks are proposed, access will be improved, supporting future management activities. Consequently, no significant fragmentation or isolation of woodland units is anticipated, and the Proposed Development is not expected to materially affect the viability of the current or future woodland management regime

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 Mitigation to reduce the extent of tree felling within the OC will be considered and incorporated in areas of broadleaved woodlands as part of the proposal. This will consider specifically the broadleaved woodland within the Native Woodland areas. 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**.

8.6 The impact of stability within the remaining crop has been assessed and reported as likely to be windfirm.

9 Woodland Removal Impact

Table 9.1: Woodland Removal for Infrastructure			
Item	Type of Infrastructure	Woodland type	Area (ha)
Operational corridor	Permanent	Broadleaved woodland	0.67
		Conifer woodland	3.27
Access track corridor	Permanent	Conifer woodland	1.15
	Permanent	Broadleaved woodland	0.25

Table 9.2: Compensatory planting		
Compensatory Planting Area		5.34

Table 9.3: Woodland Removal Impact of Infrastructure		
Item	Woodland type	Area (ha)
Total Loss of Woodland Area	Broadleaved woodland	0.92
	Conifer woodland	4.42
Total Compensatory Planting Area off-site	Broadleaved woodland	0.92
	Conifer woodland	4.42
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**.

