Scottish & Southern Electricity Networks

Spittal to Loch Buidhe to Beauly 400 kV OHL Connection

Environmental Impact Assessment

Volume 5, Appendix 13.1 – AE: Woodland Reports

Auchmore wood

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 Auchmore Wood, owned and managed by Forestry and Land Scotland (FLS), is located approximately 4.5 km west of Muir of Ord. The nearest unclassified public road is a local route branching off the A832 at Muir of Ord. Access to the woodland is situated about 200 m southeast of Aultgowrie Bridge, with an existing forest road leading into the site (refer to **Figure 1: Woodland Impacted by the Proposed Development**).

3.2 The property is located at NH 47646 50124, and its entrance to the forest is from a local public "U" road from Muir of Ord to Aultgowrie Bridge.

4. 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 Auchmore Wood extend over 100 m south to Tower S197 on the southern boundary of Allt Goibhre burn to south of Tower S199.

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 An existing infrastructure network within the property provides access to various areas of the woodlands and is in proximity to the Proposed Development features; however, new sections of both temporary and permanent access tracks will be constructed within and outside the OC.

[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).

4.2.2 These 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, also detailed in **Figure 1: Woodland Impacted by the Proposed Development** will be built to serve the Towers S198 and S199.

4.2.4 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.

4.2.5 The construction of these new access tracks will increase the impact of woodland removal along routes located outside the OC. The affected woodland along the new access tracks will consist of a similar composition to that found within the OC, featuring a combination of coniferous plantations and broadleaved woodlands, depending on the location of the access Tracks. Refer to **Table 9.1** below.

4.2.6 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.

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

4.2.8 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]:

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

5.3 The forest lies on gently sloping, north-facing terrain at an elevation from 100 m up to around 250 m above sea level, bordered by steep hills to the west and relatively flat lowlands to the east.

5.4 The Proposed Development primarily traverses commercial conifer plantations of Sitka spruce as primary species, classified as Long-Established Woodland of Plantation Origin (LEPO 2b;1860) and areas of Native Woodland, predominantly upland birchwood, as identified in the Ancient Woodland Inventory (AWI) and the Native Woodland Survey of Scotland (NWSS). Refer to **Table 5.1**.

Table 5.1: Woodland Designations

Item	Type of Infrastructure	Woodland Designations	Area (ha)
Operational corridor	Permanent	AWI-LEPO 2b	7.01
		NWSS- Native woodland	0.53
Access track corridor	Temporary	NWSS- Native woodland	0.33
		AWI-LEPO 2b	1.67
Management Felling*	Temporary	AWI-LEPO 2b	10.46

*Management Felling reference and details described in **Section 6**- Windblow Risk Impact

[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.

5.5 Within the OC, the LEPO area covers approximately 7.01 ha, and 0.53 ha are classified as Native woodland.

5.6 Despite Auchmore Wood being entirely classified as LEPO, no remnant features of Ancient Woodland have been identified within the surveyed areas, including the Operational Corridor, new roads, or management felling zones.

5.7 The OC is mainly composed of commercial coniferous plantations classified as LEPO, with a broadleaved area following a minor burn that runs north to south through Auchmore Wood, separating the plantation coupes. This burn, a tributary of the larger Allt Goibhre burn running along the north boundary of the property, features distinct riparian topography. The surrounding vegetation consists of open ground with scattered birch at pole-stage maturity, averaging 6 m in height. This area is recognised as Native Woodland under the NWSS.

5.8 Where LEPO areas occur within conifer woodland, Sitka spruce is the predominant conifer species present. Refer to **Plate 1**.

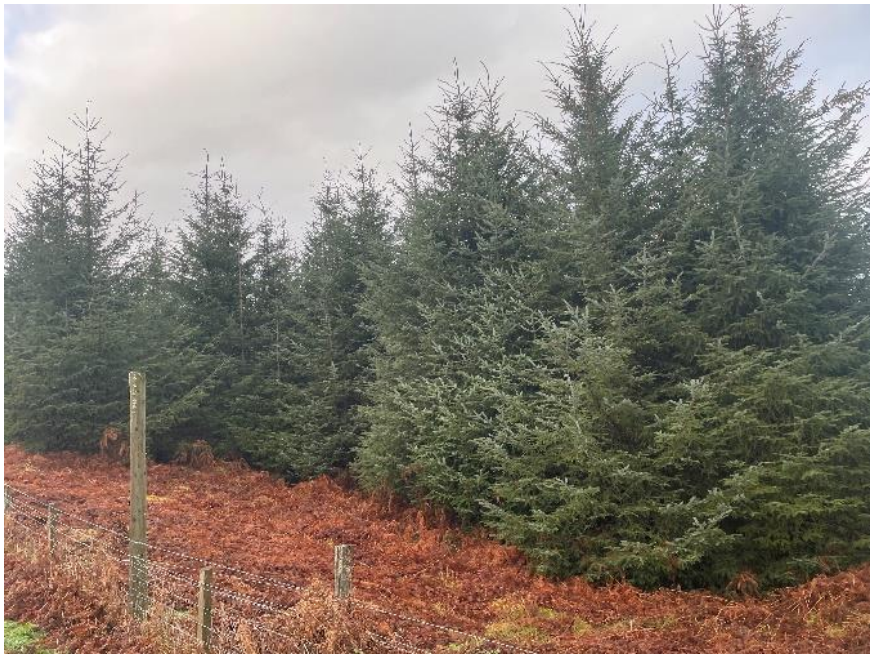

Plate 1 – The conifer plantation visible from the private access road along the southern boundary of Auchmore Wood, consisting primarily of dense stands of commercially managed conifers with spruce trees averaging 11 m. Grid ref: NH 47828 49908.

5.9 The Native Woodland area, classified as upland birchwood under the NWSS, comprises two distinct sections: one featuring densely packed young birch trees approximately 3 m tall (Refer to **Plate 2**), and the other consisting of pole-stage birch trees scattered throughout the riparian zone along the watercourses.

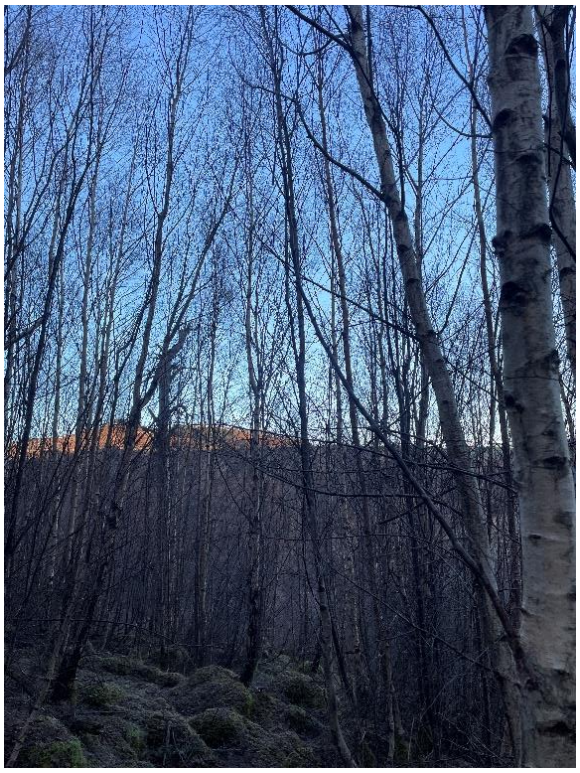

Plate 2- Upland birchwood under the NWSS, densely packed young birch trees approximately 3 meters tall. Grid Reference: NH 47613 50440.

5.10 To the north, the Allt Goibhre Burn defines the property boundary within an area of upland birchwood classified as Native Woodland under the NWSS. The riparian zone is characterised by scattered pole-stage birch trees interspersed with overmature conifers, and several areas show signs of windblow.

5.11 The conifer canopy is slightly open, with an estimated cover of around 70%, and is composed of Scots pine, larch, and Sitka spruce, reaching heights of up to 26 m. Refer to **Plate 3**. The understorey predominantly features regenerating broadleaved species, including willow and birch. A more mature woodland structure is present along the steep southern bank of the Allt Goibhre Burn, where remnants of overmature and decaying conifers remain, along with evidence of recent windblow disturbance.

5.12 The site's main conifer plantations are predominantly Sitka spruce, though some areas show signs of poor growth, with patches of checked trees throughout. Refer to **Plate 4.**

Plate 3 - A semi-mature commercial conifer plantation of Sitka spruce, established in 2002 (FLS database), with an average height of approximately 17 m. The canopy is slightly open on the edges of the coupe due to natural tree mortality and past windblow events, allowing light penetration and promoting natural regeneration. The understorey consists of young Sitka spruce and scattered birch. Grid reference: NH 47617 50373.

Plate 4- Beneath the commercial conifer canopy, the stand is dense, dark and tightly spaced, resulting in no understorey development. Grid reference: NH 47662 50232.

5.13 In areas affected by new roads, the woodland primarily consists of pole-stage to semi-mature commercial spruce plantations, also classified as LEPO. Similarly, the management felling areas within Auchmore Wood mainly comprise semi-mature spruce with similar commercial characteristics, with trees reaching heights of 15 - 18 m.

5.14 The site presents soils of the composition 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. Felling outwith the OC to a windfirm boundary is termed Management Felling and is presented within **Figure 1: Woodland Impacted by the Proposed Development.**

6.2 Given the nature of some of the woodlands- those of semi-mature and mature conifer woodlands of an average height of 17 m with unthinned stands and the local characteristics of soils, topography and aspect, it is anticipated that the introduction of the OC will 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 13, which is classified as moderately exposed. The site has mineral soils with shallow rooting which are mostly cool and moist.

6.4 Management felling is proposed in the areas adjacent to the OC and the access track corridors to minimise the future risk of windblow. However, certain areas within the woodland contain more open coupes, which are likely to remain wind-stable. These coupes have been assessed up to the nearest green-edge and are therefore considered stable in the current conditions. Refer to **Table 9.4**.

[4] Scottish Government's Scotland's soils website https://soils.environment.gov.scot
[5] Detailed Aspect method of Scoring (DAMS) Ref. Forest Research, "Forest Gales software programme" and Forestry Commission Leaflet 85 "Windthrow Hazard Classification"

6.5 While management felling is proposed by the Applicant as part of sound forestry practice, the decision to implement such operations ultimately rests with the forest owner, who must align any felling activities with their broader forest management plans and objectives. Felling permission for these areas must be obtained by the landowner through an application to Scottish Forestry. As part of this regulatory process, Scottish Forestry will consider the appropriateness of the proposed felling and will attach conditions requiring the restocking of felled areas to ensure continued sustainable forest management.

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.

7.5 The impact of the Proposed Development on the overall viability and continuity of woodland management has been considered. The affected woodland blocks are part of a larger woodland setting, primarily composed of commercial conifer plantations. While the proposed OC intersects several of these woodland compartments, it is not anticipated to affect forest operations or ongoing management activities. The OC primarily crosses the western sections of the property, where new access tracks will be constructed as part of the Proposed Development. These tracks will support and maintain operational accessibility, thereby ensuring continuity of woodland management without significant disruption. Consequently, no significant fragmentation or isolation of woodland units is

[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)

anticipated, and the Proposed Development is not considered to materially affect the viability of the current or future 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 Proposed Development. Refer to **Section 13.5.3** Good practice and **Section 13.7.1** Mitigation within **Volume 2, Chapter 13: Forestry**. This includes effects to the riparian broadleaved trees within the minor watercourse and the main Allt Goibhre Burn. 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 has 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	2.06
		Conifer woodland	3.59
Access track corridor	Temporary	Conifer woodland	1.67

Table 9.2: Compensatory planting		
Compensatory Planting Area		7.32

Table 9.3: Woodland Removal Impact of Infrastructure		
Item	**Woodland type**	**Area (ha)**
Total Loss of Woodland Area	Broadleaved woodland	2.06
	Conifer woodland	5.26
Total Compensatory Planting Area off-site	Broadleaved woodland	2.06
	Conifer woodland	3.59
Total Restocking/ Replanting Area on-site	Conifer woodland	1.67
Total Net Loss of Woodland Area		**0**

Table 9.4: Woodland Removal for Management Felling			
Item		**Woodland type**	**Area (ha)**
Management Felling	Temporary	Conifer woodland	10.46
Replanting / Restocking	Adhere to Forestry and Land Management (Scotland) Act 2018.	Conifer woodland	10.46
Net Loss of Woodland Area			0
Note: Felling approval is via Scottish Forestry Felling Licence Application process or Long-Term Forest Plan application or amendments process.			

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

S195

S196

S197

S198

S199

S200

S201

S202

Achnasoul Wood

Auchmore Wood

Faebait Wood

Scale @ A3 1:10,000

N

0 0.25 0.5 km

Legend

- Landownership boundary/parcel
- Central line Operational Corridor
- Proposed 400kV OHL Towers
- 20m Access Corridor
- Access Tracks- Existing Upgrade
- Access Tracks- New Stone Perm
- Access Tracks- New Stone Temp
- NWSS- Native woodland
- Conifer woodland- Operational Corridor 90m
- Broadleaved woodland- Operational Corridor 90m
- Management Felling

Woodland report
Project No- LT000132
Spittal- Loch Buidhe - Beauly 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section E- Auchmore wood

Ref No: 28-06-2025