Scottish & Southern Electricity Networks

Spittal to Loch Buidhe to Beauly 400 kV OHL Connection

Environmental Impact Assessment

Volume 5, Appendix 13.1 – AG: Woodland Reports

Breakachy Farm

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 Breakachy wood is a privately owned woodland and farmland located approximately 2 km northwest of the village of Crask of Aigas. The nearest public road is the A831, with the closest access via a residential road through Breakachy farm.

3.2 The site itself has no formal infrastructure within the woods but has off-road vehicle farm tracks. Refer to **Figure 1: Woodland Impacted by the Proposed Development**.

3.3 The property is located at NH 44927 44343, west of Breakachy farm.

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 Breakachy extend from over 150 m north of Tower S219 to 200 m north of Tower S224, which lies outside this ownership.

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 strategies[1].

[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 Access Track Route Design

4.2.1 There is no adequate infrastructure leading to the proposed location for the OC; however, new sections of both temporary and permanent access tracks will be constructed within and outside the OC.

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 service Towers S219 to S223.

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 is situated on a steep sloping, southeast-facing terrain at an elevation of approximately 200 m above sea level on the shoulder of Breakachy hill, surrounded by hills and undulating lowlands with gentle and strong rocky slopes. Within this landscape, the Proposed Development primarily passes through pinewoods identified as Native Woodlands of established regenerated Pinewood, as classified in the NWSS.

Table 5.1: Woodland Designations

Item	Type of Infrastructure	Woodland Designations	Area (ha)
Operational corridor	Permanent	NWSS- Native woodland	3.53
Access track corridor	Permanent	NWSS- Native woodland	0.24
Equipotential Zone (EPZ) Pulling Positions	Temporary	NWSS- Native woodland	0.76

[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.

5.4 Within the OC, the NWSS shows the presence of scattered areas of Native Woodland primarily consisting of pole immature Scots pine plantations, averaging 7 m in height, with a rather close canopy as they are developing into a more mature structure. Within these pinewoods, there is no understorey but is surrounded by ranked heather and thick grasses and bracken, with minimal signs of recent regeneration. Refer to **Plates 1 and 2**.

Plate 1- Native Pinewood classified on the NWSS as pole immature of Scots pine. Grid ref: NH 44918 44255.

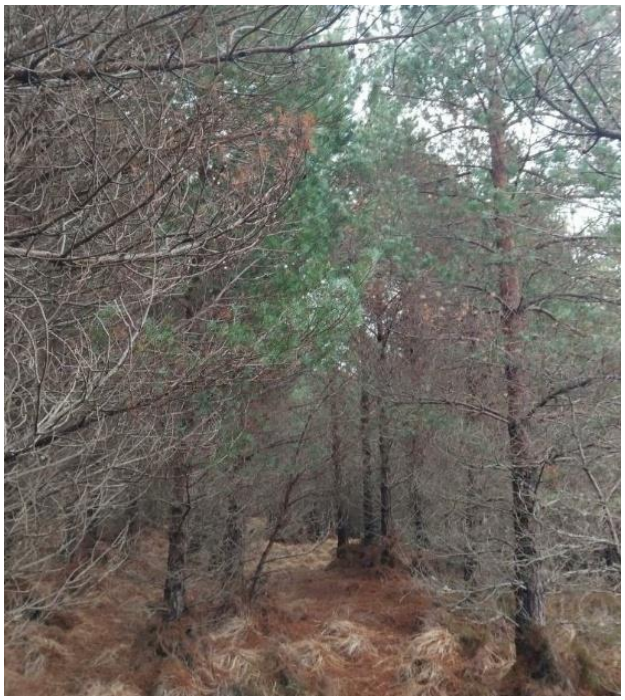

Plate 2- Native woodland within a pure Scots pine woodland plantation approaching canopy closure. Average of 7 m in height. Grid ref: NH 44965 44189.

5.5 Throughout the OC, there are clusters of broadleaves interspersed among the pinewood blocks, primarily consisting of pole-stage birch trees that average 6 m in height. Refer to **Plate 3**.

5.6 To the north of the main Breakachy Wood and Breakachy Hill, isolated groups of mature birch can be found, comprising a few individual mature birch trees in declining health, presenting cavities and broken limbs, surrounded by naturally regenerated younger birch. Refer to **Plate 4**.

Plate 3- The area features broadleaved woodland predominantly consisting of birch trees, accompanied by an understorey of bracken and seasonal grasses. The trees average about 6 m in height. Grid reference: NH 45062 44031.

Plate 4- Scattered group of birch of a combination of mature trees and young regeneration in the surroundings. Grid ref: NH 44985 44519.

5.7 The Native Woodland areas identified in the NWSS include 3.53 ha of Scots pine woods within the Proposed Development's OC and 0.97 ha associated with the new permanent access tracks and Equipotential Zone (EPZ) Pulling Positions. All these are classified as pinewood areas.

5.8 Scots pine within the Proposed Development area is at the pole stage, likely established through a combination of planting and natural regeneration.

5.9 Additionally, the broadleaved trees found within Breakachy are in clusters, primarily to the south of the main Breakachy conifer woodland, and were probably planted around the same time as the pine, approximately 12-15 years ago.

5.10 Overall, the woodland is characterised by a blend of pole-stage native pinewoods and birch woodlands. These trees contribute to the wooded landscape in the southern part of the property, transitioning into open ground and moorland to the north, near the Breakachy burn.

5.11 The site presents soils of the composition humus-iron podzols with 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 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' semi-developed structure of both coniferous and broadleaved woodlands, 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 11, which is classified as low to 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 due to the fact that 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

[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] 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)

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 within the Breakachy site consist of pinewood classified as native woodland, interspersed with small clusters of broadleaved trees scattered throughout the landscape which have been managed at a low intensity, and as such, the Proposed Development is not expected to interfere with ongoing or future woodland management. Although the proposed OC crosses several woodland compartments, it is not expected to disrupt forest operations. The Proposed Development includes the creation of new access infrastructure, which will provide access to the OC and ensure continued operational accessibility to woodlands to the western side. 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 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 broadleaved trees within Breakachy. 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 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	4.30
Access track corridor	Permanent	Broadleaved woodland	0.59
		Conifer woodland	0.79
Equipotential Zone (EPZ) Pulling Positions	Temporary	Conifer woodland	1.01

Table 9.2: Compensatory planting

Compensatory Planting Area		8.75

Table 9.3: Woodland Removal Impact of Infrastructure

Item	Woodland type	Area (ha)
Total Loss of Woodland Area	Broadleaved woodland	2.65
	Conifer woodland	6.10
Total Compensatory Planting Area off-site	Broadleaved woodland	2.65
	Conifer woodland	5.09
Total Restocking/ Replanting Area on-site	Conifer woodland	1.01
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

S214

S215

S216

S217

S218

S219

S220

S221

S222

S223

S224

S225

S226

S227

S228

Creag Mhòr

Creag an t-Suidheachain

Creag Dhubh

Druim an Droighinn

Coille na Cleithe

Dun Mor Fort

Breakachy Hill

Breakachy

Breakachy Farm

Sheep Wash

Loch nan Gobhar

Loch a' Ghiubhais

Loch an Uird

Lòn Duchalaidh

Darach Brae

Breakachy Burn

Allt na h-Athain

Allt na Crasgag

Allt Coille na Cleithe

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
- HLP/EPZs buffer

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

Ref No: 28-06-2025