

**Spittal to Loch Buidhe to Beauly 400
kV OHL Connection
Environmental Impact Assessment
Volume 5, Appendix 13.1 – O:
Woodland Reports
Achinduich Farm**

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 Achinduich Farm is a privately owned farmland located approximately 6.5 km north of Bonar Bridge (in a direct line across hills and woodlands). The nearest public road, the A836, provides access to the Achinduich farm buildings and the farm track leading to the Proposed Development. Refer to **Figure 1: Woodland Impacted by the Proposed Development**.
- 3.2 The property within the Proposed Development is located at NH 61188 97909, situated between open moorland to the northeast and Balblair woodland to the southwest. Four towers, from Tower S10 to Tower S13, are to be located within this ownership, as shown on **Figure 1: Woodland Impacted by the Proposed Development**.

- 3.3 Most of the area within Achinduich Farm affected by the Proposed Development consists of open ground, with the exception of a young conifer plantation and small, scattered clusters of broadleaved trees, which intersect the OC near Towers S12 and S13.

4. Development Requirements

4.1 400 kV Operational Corridor

- 4.1.1 With reference to **Figure 1: Woodland Impacted by the Proposed Development**, the sections of the OHL relevant to Achinduich Farm extend from 150 m east of Tower S10 to over 40 m northeast of Tower S14, with the latter located outside the ownership boundary.
- 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 strategies¹.

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 Access Track Route Design

- 4.2.1 The nearest public road is the A836, which provides access to Achinduich Farm. Sections of permanent road will be constructed both within and outside the OC to connect to the existing farm track, which leads to Achinduich farm across the open land. These roads will form part of the main vehicle access route for the Proposed Development and can be seen on **Figure 1: Woodland Impacted by the Proposed Development**, and will be subject to maintenance and upgrade works as part of the construction work scope.
- 4.2.2 Sections of new access track seen in **Figure 1: Woodland Impacted by the Proposed Development**, are required to be built as part of the construction work scope, to service the Towers S10 to S13.
- 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 roadway will consist of a similar composition to that found within the OC. 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 These roads 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.
- 4.2.7 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 woodlands within the Proposed Development at Achinduich consist of newly established woodland on open hill terrain, primarily composed of conifer species with small areas of broadleaved woodland.

5.4 There are no woodland classifications within this ownership.

5.5 These newly established woodlands consist of productive conifer plantation alongside small clusters of native broadleaved woodland, planted between 2007 and 2013. They were developed under the RDC Woodland Creation Scheme by Scottish Forestry (formerly the Forestry Commission).

5.6 The scheme predominantly comprises single blocks of pure Sitka spruce and Lodgepole pine, spaced along the glen and to the south of the existing electric overhead line within the estate. The spruce trees average around 1.3 m in height, while the pine trees reach approximately 2 m. Refer to **Plate 1**. The Lodgepole pine appears to be establishing well, whereas the spruce shows a high failure rate, especially in areas where ground preparation was carried out by mounding. Refer to **Plate 2**.

5.7 The conifer woodland blocks appear to be generally well established, although the spruce areas have shown poor performance. In contrast, the broadleaved element is more irregular, with scattered clusters of trees forming a very open canopy, particularly within the Operational Corridor between Towers S12 and S13. Refer to **Plate 3**.

5.8 A protective fence was installed around the new woodland creation area near Loch Leisgein.

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.



Plate 1- Sitka spruce within the woodland at Grid Reference NH 60920 97832 are at the establishment stage, with an average height of approximately 1.3 m. The area exhibits high levels of establishment failure, resulting in a variable canopy structure with trees of differing sizes and noticeable gaps throughout.



Plate 2- Lodgepole pine at Grid Reference NH 61134 97831 appear to be healthy and vigorous, with an average height of approximately 2 m. The stand is fully stocked, indicating successful establishment and uniform growth.



Plate 3- At Grid Reference NH 61573 97840, near the location of Tower S13, there are clusters of broadleaved trees located along the edges of the plantation. The dominant species observed are Alder and Rowan, with an average tree height of approximately 1.5 m. The area shows high levels of establishment failure, resulting in a sparse and irregular canopy.

5.9 The Proposed Development will impact woodland areas through sections of the OC, the construction of permanent new access roads, and the establishment of Equipotential Zone (EPZ) Pulling Positions as part of the overall development works.

5.10 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 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 these young woodlands present on this site along with the local 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 15, classified as moderately exposed. The site presents mineral soils with shallow rooting that 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 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 at Achinduich forms part of a sparse conifer plantation comprising conifer blocks. The woodland managed commercially will benefit from the construction of new access tracks through the plantation, as currently the existing path finishes 250 m north between Towers S12 and S13. Overall, the level of intervention is

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)

expected to remain low, and the presence of the OHL is not anticipated to have any significant impact on the woodland's ongoing management.

- 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 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 The 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	0.22
		Conifer woodland	2.14
Access track corridor	Permanent	Conifer woodland	0.96
	Temporary	Conifer woodland	0.08
Equipotential Zone (EPZ) Pulling Positions	Temporary	Conifer woodland	1.07

Table 9.2: Compensatory planting

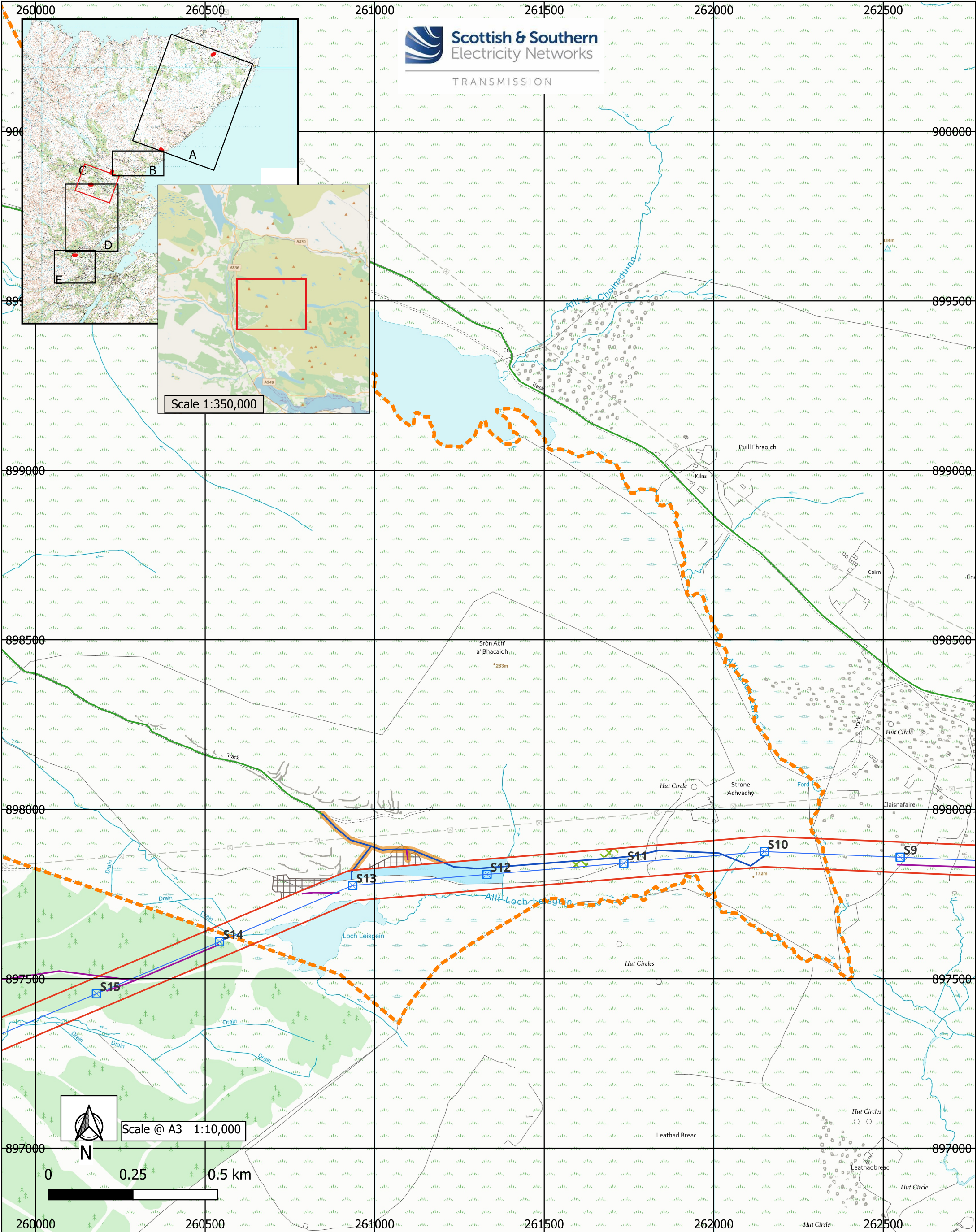
Compensatory Planting Area		4.47
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Table 9.3: Woodland Removal Impact of Infrastructure

Item	Woodland type	Area (ha)
Total Loss of Woodland Area	Broadleaved woodland	0.22
	Conifer woodland	4.25
Total Compensatory Planting Area off-site	Broadleaved woodland	0.22
	Conifer woodland	3.10
Total Restocking/ Replanting Area on-site	Conifer woodland	1.15
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**.



Legend

Landownership boundary/parcel

Operational Corridor

Central line Operational Corridor

Proposed 400kV OHL Towers

20m Access Corridor

HLP/EPZs buffer

Access Tracks- Existing Upgrade

Access Tracks- New Stone Perm

Access Tracks- New Stone Temp

Conifer woodland- Operational Corridor 90m

Broadleaved woodland- Operational Corridor 90m

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Woodland report
Project No- LT000132
Spittal- Loch Buidhe - Beaulieu 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section C-Achindoch Farm

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