

**Spittal to Loch Buidhe to Beaully 400
kV OHL Connection
Environmental Impact Assessment
Volume 5, Appendix 13.1 – AM:
Woodland Reports
Small Parcels Southern Line**

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 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 The properties impacted by the Proposed Development are:
- Kinellan Farm;
 - Kinnahaird Farm;
 - Strathvaich Farm;
 - Cnoc Croit na Maoile hill;
 - East to Breachachy Farm;
 - Farley hill at Hatfield Farm; and
 - River Beauly bank.

3.2 These properties involved in the Proposed Development have differing levels of access to the affected areas. Several of the sites are served by existing tracks that provide access to the vicinity of the woodlands impacted by the Proposed Development, and in some cases, directly to them. Some others will undergo the creation of new temporary or permanent access tracks. 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 OHL sections relevant to the different properties and the associated potential tower locations are outlined below-

- Kinellan Farm – From approximately 150 m north of Tower S164 to around 150 m south of Tower S165.
- Kinnahaird Farm – From approximately 250 m north of Tower S166 to about 60 m south of Tower S174.
- Strathvaich Farm- No towers are proposed within this ownership.
- Cnoc Croit na Maoile Hill – No towers are proposed within this ownership.
- East of Breachachy Farm – No towers are proposed within this ownership.
- Farley Hill at Hatfield Farm – From approximately 80 m north of Tower S204 to about 220 m south of Tower S218.
- River Beaulay Bank – No towers are proposed within this ownership.

4.1.2 The individual breakdown of areas per ownership can be seen in **Table 9.4**.

4.1.3 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.

4.1.4 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.

4.1.5 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 An existing infrastructure network within some of these properties provides access to various areas of the woodlands and is in proximity to the Proposed Development features; however, in some cases, 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 within the ownership.
- 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

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).

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 route intersects one classified woodland site at the edge of the River Beaully, within this ownership. The woodland is located on the eastern bank of the River Beaully and is classified as Native Woodland – Upland Birchwood under the NWSS, and as an Ancient Woodland Site of Semi-Natural Origin (AWSNO 2a, 1860) under the AWI. This area comprises mature broadleaved woodland dominated by birch and ash, with occasional species such as rowan and Scots pine, interspersed with scattered non-native mature conifers, including fir, spruce, and larch. While the mature conifers on the steep gorge slopes can exceed 25 m in height, the native broadleaved species typically range between 5 and 12 m, with visible signs of natural regeneration throughout. This woodland forms part of the same habitat type assessed in the Aigas Community Forest Woodland Report. Refer to **Table 5.1**.

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.

Table 5.1: Woodland Designations			
Item	Type of Infrastructure	Woodland Designations	Area (ha)
Operational corridor	Permanent	AWI- AWSNO (2a)	0.02

5.4 The remaining woodlands across the other properties do not hold any formal designation or classification.

5.5 The woodland within Kinellan Farm primarily consists of a commercial conifer plantation, dominated by Sitka spruce. Located within the OC, this woodland is at the pole immature stage, with trees reaching an average height of approximately 14 m. Refer to **Plate 1**.



Plate 1- Commercial conifer plantation within the OC at Kinellan Farm. Grid reference NH 46468 57525.

5.6 The woodlands within Kinnahaird Farm predominantly consist of shelterbelts composed of mixed broadleaved species exhibiting a range of age classes and maturities. Mature ash and beech trees reaching approximately 25 m in height are present, alongside younger sycamore, birch, and alder, which generally average around 13 m. Refer to **Plate 2**. Additionally, a plantation of horse chestnut is

observed, likely established as a field boundary within the property. Refer to **Plate 3**.



Plate 2- Shelterbelt at Kinnahaird property, featuring mature ash and beech trees lining the edges of the access track, with younger alder and sycamore visible in the background to the right of the photograph. Grid reference NH 47096 56306.



Plate 3- Shelterbelt at Kinnahaird property, composed primarily of pole-stage horse chestnut trees, with occasional larch and birch interspersed throughout the belt. Grid reference NH 46938 56551.

- 5.7 The woodland affected by the Proposed Development within Strathvaich Farm comprises a small cluster (0.12 ha) of native broadleaved trees, primarily semi-mature birch, located along the edge of the Blackwater River.
- 5.8 The property located on Cnoc Croit na Maoile hill includes woodland affected by the proposed new permanent access road. This woodland consists of a commercial conifer plantation, primarily composed of spruce, with some pine and minor inclusions of larch. The trees are at the pole stage, reaching maturity and average approximately 13 m in height.
- 5.9 The woodlands at the property east of Breakachy Farm are affected by the proposed temporary access road associated with the Proposed Development. These woodlands are of a shelterbelt shape and comprise a mixed composition of broadleaved trees, mainly birch, with some rowan and oak, intimately mixed with conifer trees, mainly Scots pine and spruce. The conifer trees reach an average height of 12 m, while the broadleaved species average around 8 m.
- 5.10 At Hatfield Farm, woodlands are impacted by two separate features of the Proposed Development: a proposed permanent access track featuring very young conifer plantation coupes to the north of the property, in proximity to Tower S205, and a small cluster of conifer woodland featured by Scots pine of average 2 m tall located to the south of the property, south of Tower S218.
- 5.11 The woodland affected by the proposed permanent access within the Hatfield Farm track consists of young conifer trees averaging approximately 1 m in height. The conifer cluster to the south, where the OC is proposed to be located, is a young Scots pine plantation with an intimate mix of similarly sized birch trees.
- 5.12 The site soils are predominantly composed 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. Felling outwith the OC to a windfirm boundary is termed Management Felling and is presented within the Kinellan Farm property, refer to **Figure 1: Woodland Impacted by the Proposed Development.**

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

6.2 Given the nature of the rest of the woodlands, their nature, height and structure, 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 between 12 and 17, which is classified as sheltered to moderately exposed. The sites have mineral soils with shallow rooting which are mostly cool and moist.

6.4 Woodlands in these ownerships contain rather 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.

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 across the affected properties has been carefully considered. These properties generally consist of relatively small and non-contiguous woodland areas, most of which are not under intensive woodland management. The Proposed Development is anticipated to have only a minor impact, as in most cases, the overhead line OC is situated along the edges of woodland blocks or passes through small, isolated patches of trees that are not functionally connected to larger woodland areas. Given the limited scale and marginal position of the affected woodland areas, the Proposed Development is not expected to significantly compromise forest operations or ongoing management. No meaningful fragmentation or disruption to woodland continuity is anticipated.
- 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**. 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	Conifer woodland	0.66
		Broadleaved woodland	1.00
Access track corridor	Permanent	Conifer woodland	1.74
	Temporary	Conifer woodland	0.08
		Broadleaved woodland	0.90

Table 9.2: Compensatory planting

Compensatory Planting Area	4.38
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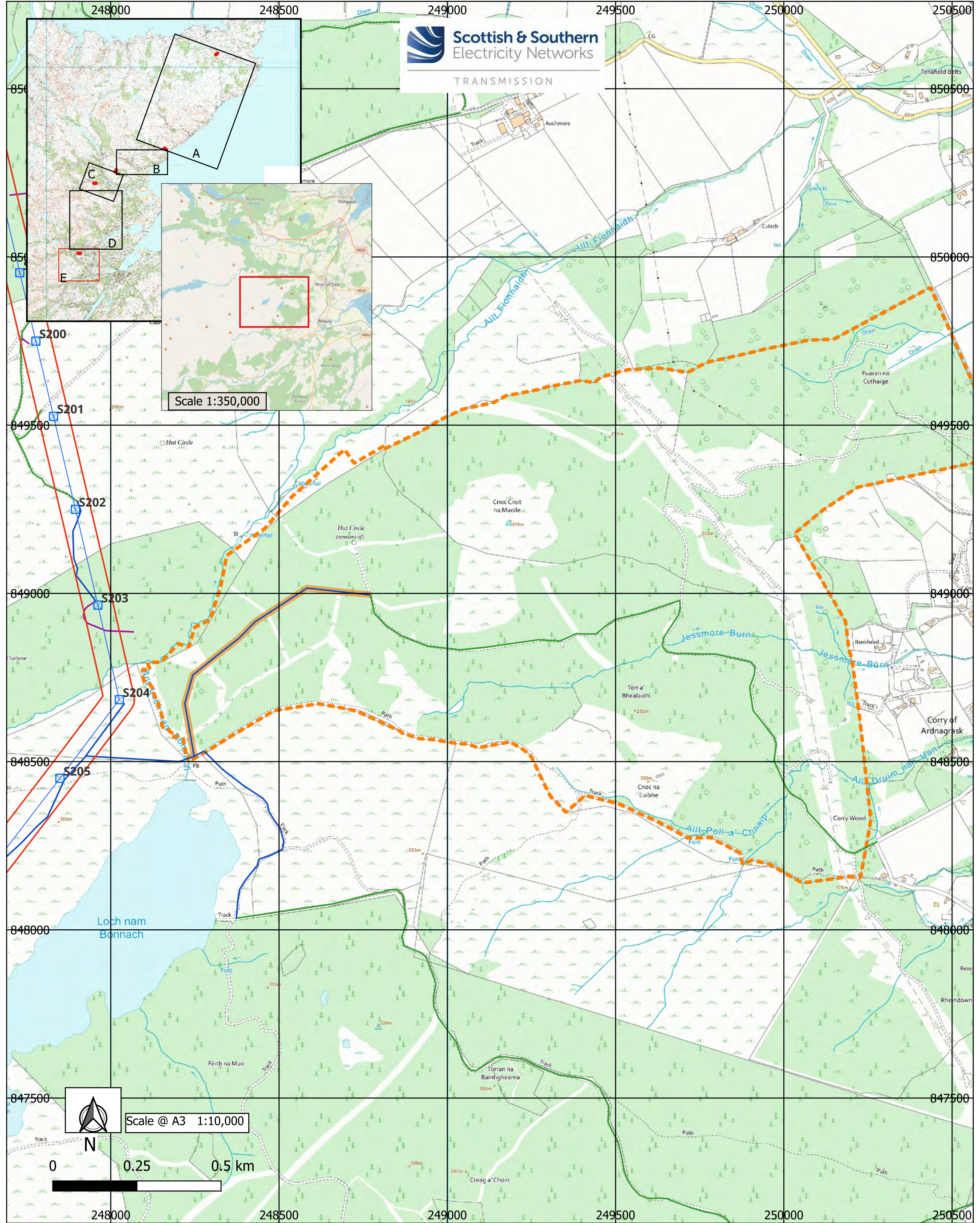
Table 9.3: Woodland Removal Impact of Infrastructure

Item	Woodland type	Area (ha)
Total Loss of Woodland Area	Conifer woodland	2.48
	Broadleaved woodland	1.90
Total Compensatory Planting Area off-site	Conifer woodland	2.4
	Broadleaved woodland	1.00
Total Restocking/ Replanting Area on-site	Conifer woodland	0.08
	Broadleaved woodland	0.90
Total Net Loss of Woodland Area		0

Table 9.4 Woodland breakdown (ha)	Operational Corridor		Temporary access tracks		Permanent access tracks
Woodland name	Conifer woodland	Broadleaved woodland	Conifer woodland	Broadleaved woodland	Conifer woodland
River Beauly bank		0.02			
Farley Hill at Hatfield farm	0.41				0.58
East to Breackachy farm				0.90	
Cnoc Croit na Maoile hill					1.16
Kinnahaird farm		0.86			
Kinellan Farm	0.25		0.08		
Strathvaich Farms		0.12			
Total	0.66	1.00	0.08	0.90	1.74

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

Access Tracks- New Stone Perm

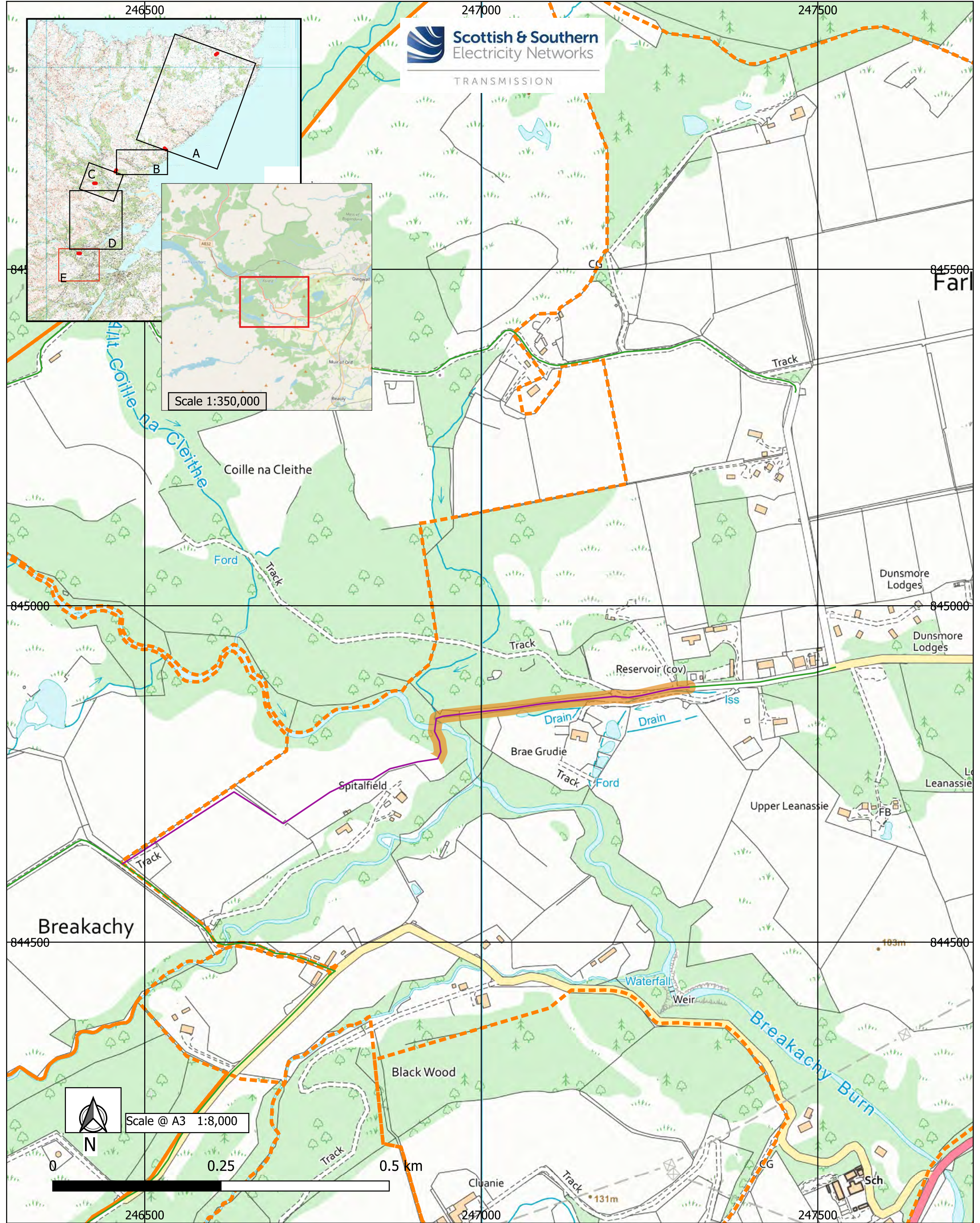
Access Tracks- New Stone Temp

Access Tracks- Existing Upgrade

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Woodland report
Project No- LT000132
Spittal- Loch Buidhe - Beaully 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section E- Small areas South Line
Cnoc Croit na Maoile hill

Ref No: 29-06-2025



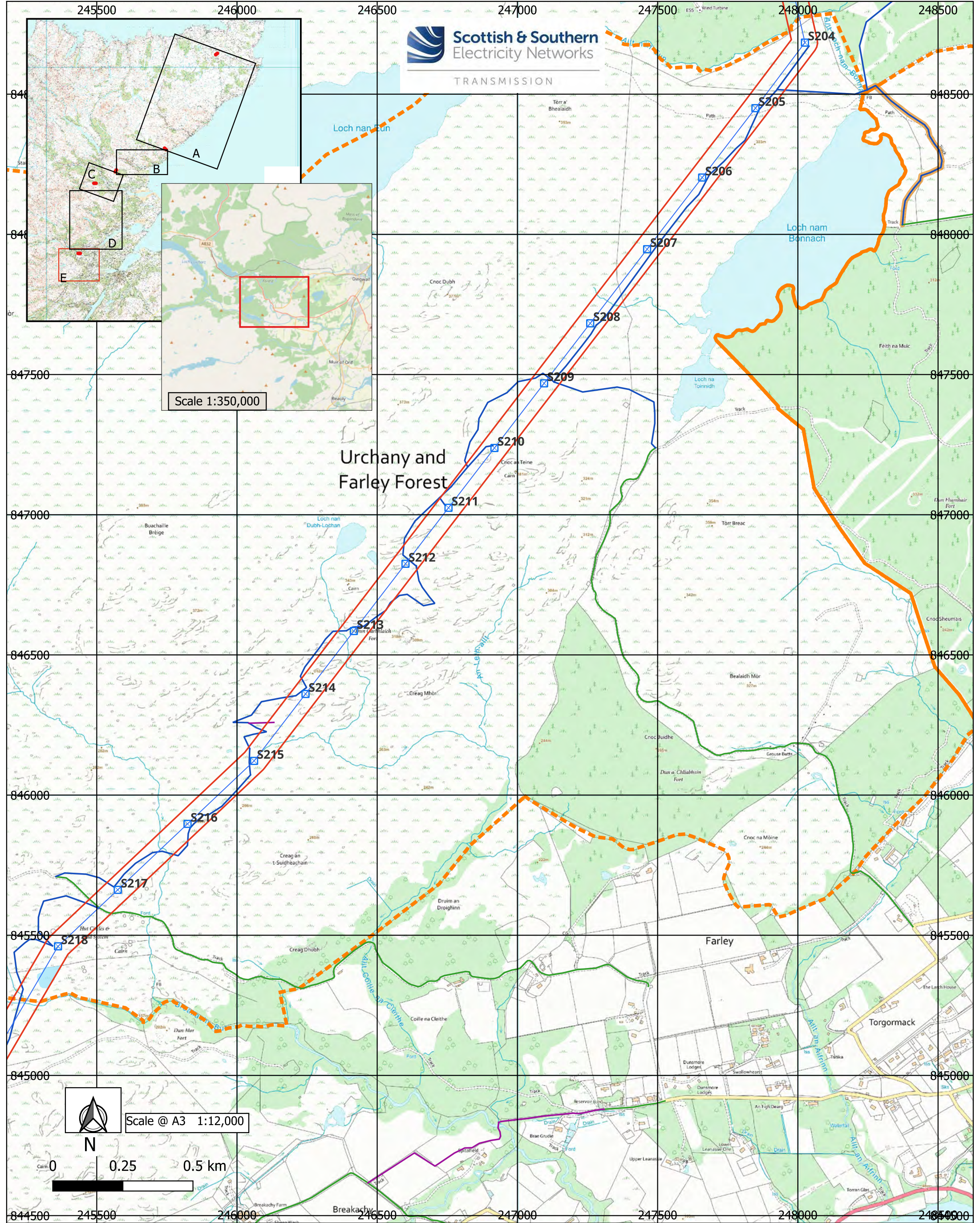
Legend

Landownership boundary/parcel	20m Access Corridor	Access Tracks- New Stone Temp
Central line Operational Corridor	Access Tracks- Existing Upgrade	
Proposed 400kV OHL Towers	Access Tracks- New Stone Perm	

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Woodland report
Project No- LT000132
Spittal- Loch Buidhe - Beaully 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section E- Small areas South line
East of Breakachy farm

Ref No: 29-06-2025



Legend

Landownership boundary/parcel

Operational Corridor

Central line Operational Corridor

Proposed 400kV OHL Towers

20m Access Corridor

Access Tracks- Existing Upgrade

Access Tracks- New Stone Perm

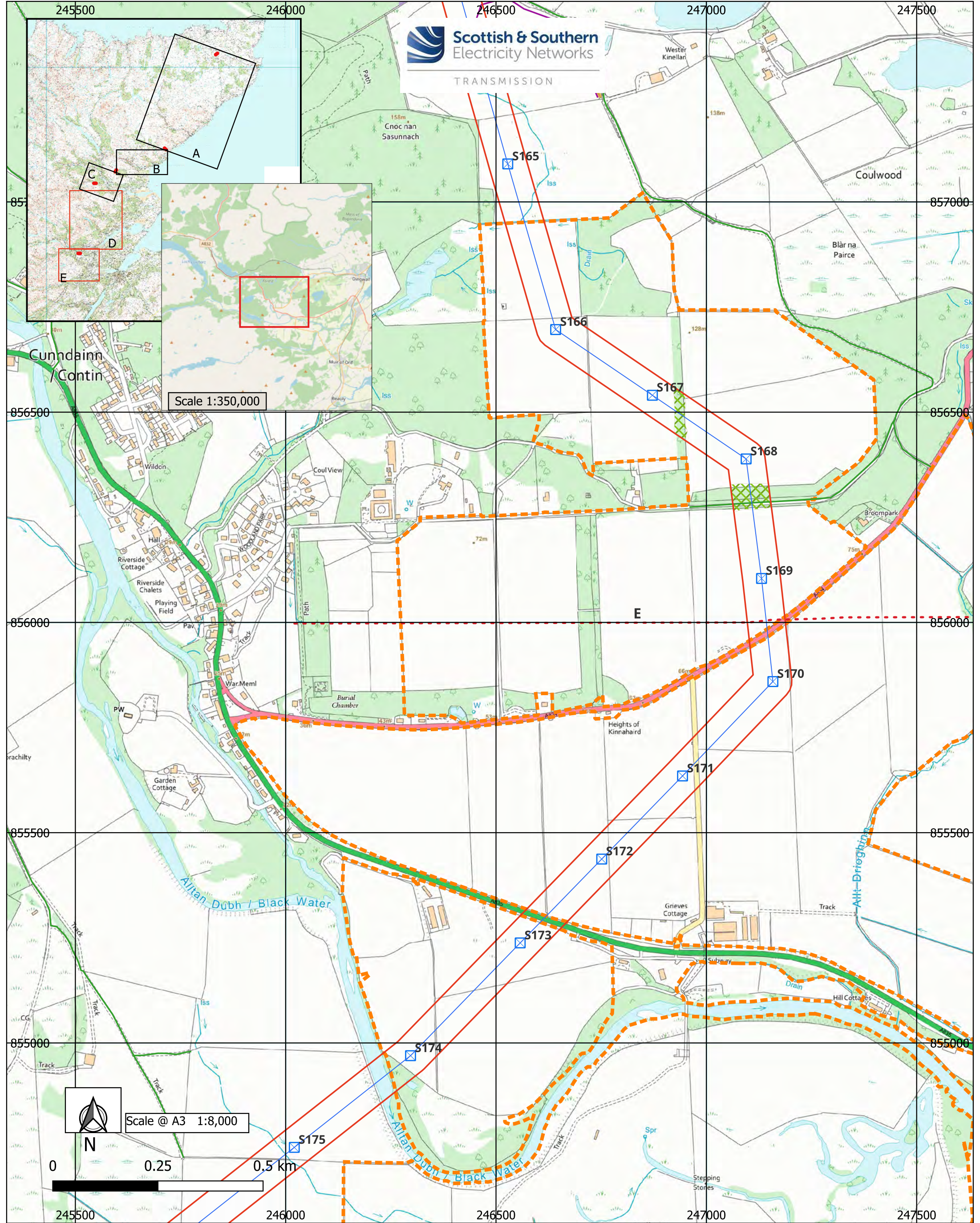
Access Tracks- New Stone Temp

Conifer woodland- Operational Corridor 90m

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Spittal- Loch Buidhe - Beaully 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section E- Small areas South Line
Hatfield farm

Ref No: 29-06-2025



Legend

Landownership boundary/parcel

Operational Corridor

Central line Operational Corridor

Proposed 400kV OHL Towers

Access Tracks- Existing Upgrade

Access Tracks- New Stone Perm

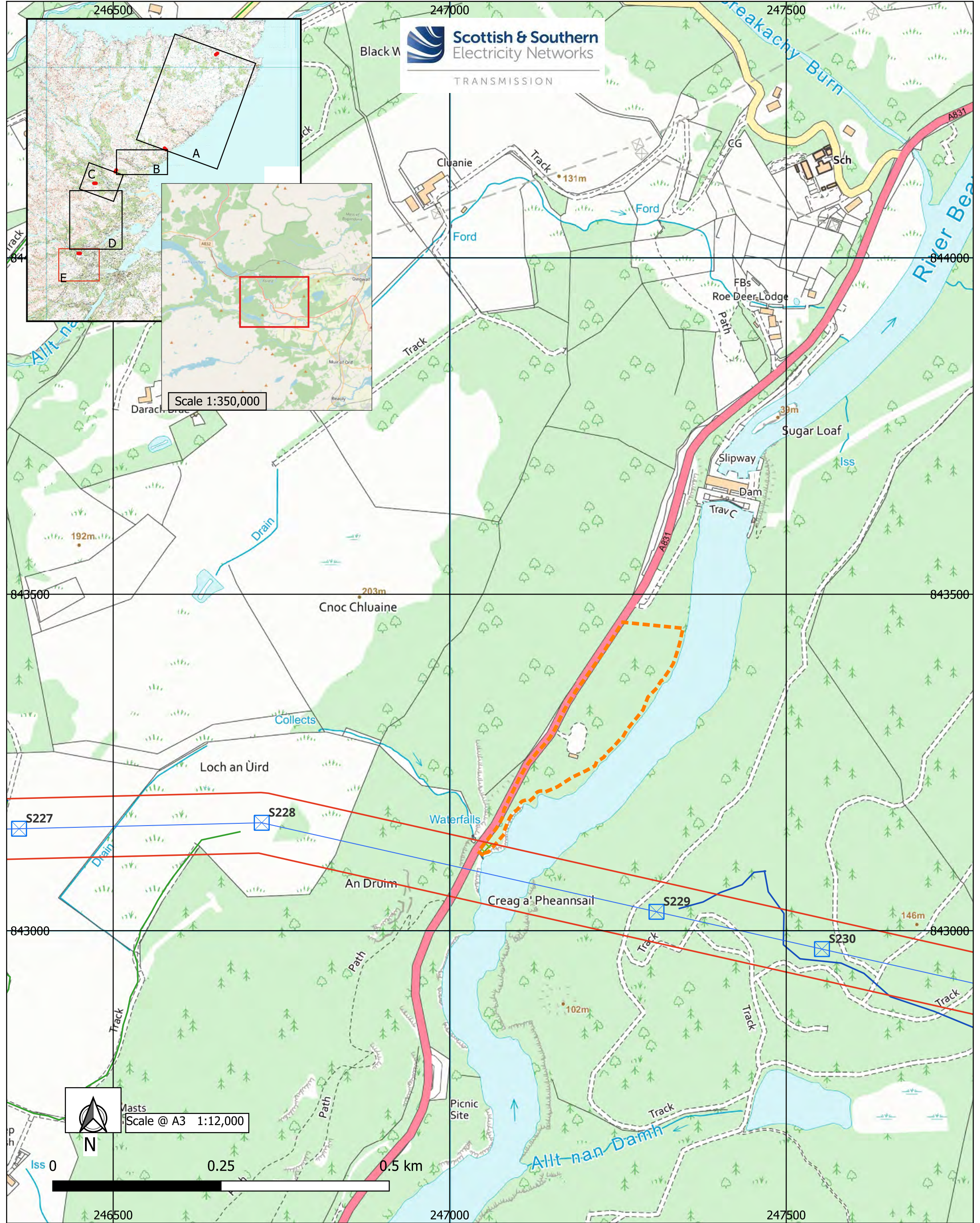
Access Tracks- New Stone Temp

Broadleaved woodland- Operational Corridor 90m

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Woodland report
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Spittal- Loch Buidhe - Beaully 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section E-Small areas South Line
Kinnahaird Farm

Ref No: 29-06-2025



Legend

Landownership boundary/parcel

Operational Corridor

Central line Operational Corridor

Proposed 400kV OHL Towers

Access Tracks- Existing Upgrade

Access Tracks- New Stone Perm

Access Tracks- New Stone Temp

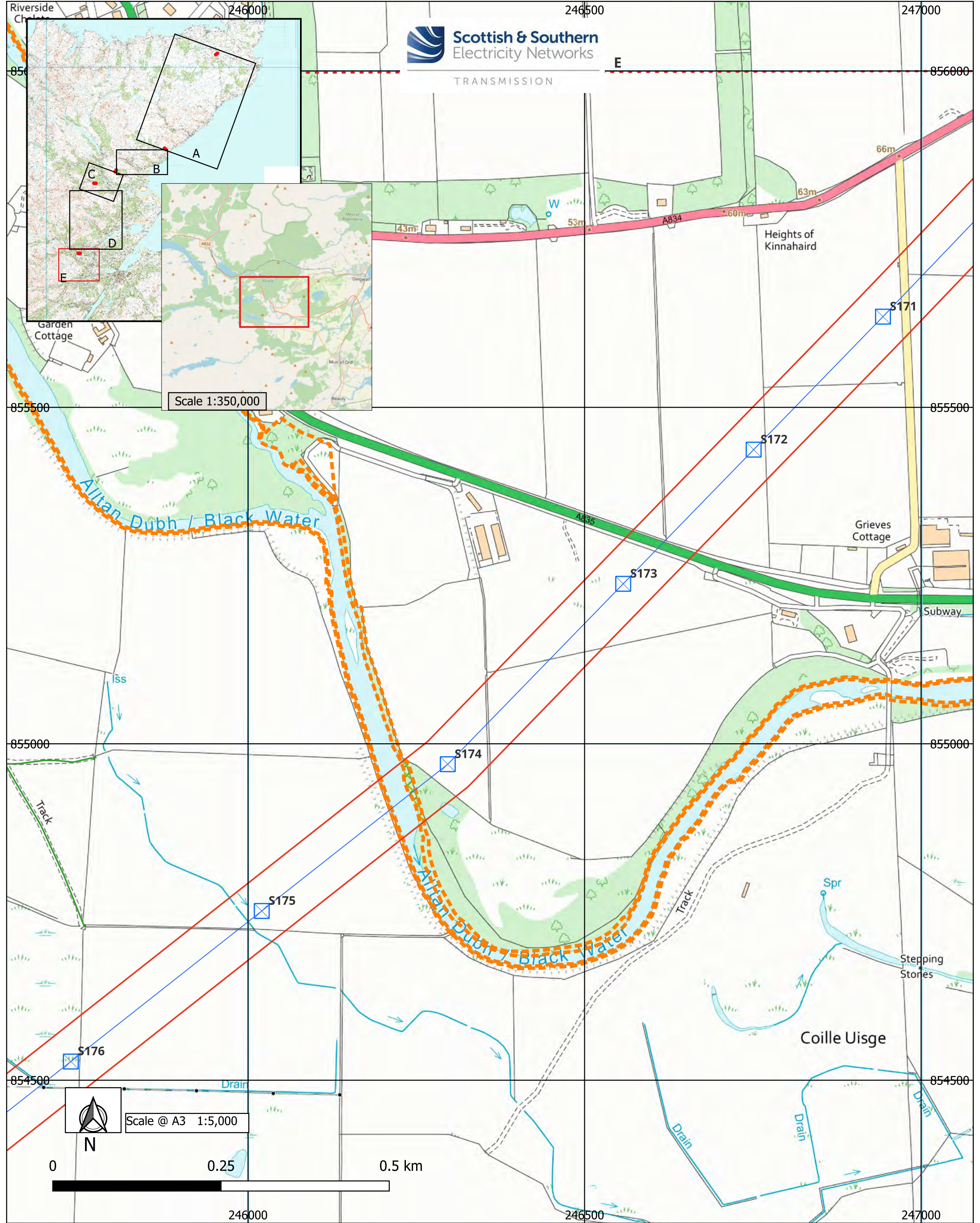
NWSS- Native woodland

Broadleaved woodland- Operational Corridor 90m

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Project No- LT000132
Spittal- Loch Buidhe - Beaulie 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section E-Small areas South Line
River Beaulie bank

Ref No: 29-06-2025



Legend

Landownership boundary/parcel	Central line Operational Corridor
Operational Corridor	Proposed 400kV OHL Towers
	Broadleaved woodland- Operational Corridor 90m

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Woodland report
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Spittal- Loch Buidhe - Beaully 400kV Connection
Figure 1. Woodland Impacted by the Proposed Development
Section E- Small woodlands Southern Line
Strathvaich farm

Ref No: 28-06-2025