

Glendye Wind Farm Overhead Line Grid Connection

Environmental Impact Assessment

Volume 4 | Appendix 11.3

Overhead Line (OHL) Woodland Report

Property: National Forest Estate, Mearns

October 2025



Contents:

1	INTRODUCTION	3
2	PURPOSE OF THIS WOODLAND REPORT	3
3	REQUIREMENT AND OBJECTIVES OF THE REPORT	3
4	WOODLAND PROPERTY	4
5	DEVELOPMENT REQUIREMENTS	4
6	WOODLAND CHARACTERISTICS	5
7	WINDTHROW RISK IMPACT	6
8	WOODLAND MANAGEMENT IMPACT	7
9	MITIGATION OPPORTUNITIES	7
10	WOODLAND REMOVAL IMPACT	7
11	COMPENSATORY PLANTING	8

1 Introduction

This Technical Appendix (TA) presents information relevant to the Glendye Wind Farm Grid Connection. It should be read in conjunction with the **Chapter 2: Routing Process and Alternatives**, **Chapter 3: The Proposed Development** and **Chapter 11: Forestry** of the EIA Report for full details of the Proposed Development

Scottish and Southern Electricity Networks (SSEN) Transmission, hereafter referred to as 'the Applicant', owns and maintains the electricity transmission network across the north of Scotland. Due to the growth in renewable electricity generation in the north and north-east of Scotland, upgrade of the transmission network is required in order to provide the necessary increase in transmission capacity.

The Applicant is proposing to apply for consent under Section 37 of the Electricity Act 1989 to construct and operate a 19 kilometre (km) 132 kV single circuit overhead line (OHL) for the Glendye Wind Farm Overhead Line Grid Connection project.

2 Purpose of this Woodland Report

As part of the Environmental Impact Assessment (EIA) process, it was identified that the overhead line construction and the access tracks required to construct the Proposed Development would cross a number of woodland areas within private or state-owned landholdings, as shown on **Figure 11.1a-d** of the EIA Report (Volume 2).

This document provides a conceptual assessment of the woodland areas that are: (i) directly affected by the Proposed Development, including the requirement of woodland removal; and (ii) indirectly affected by the Proposed Development due to the need for woodland removal to create a wind farm edge (and therefore presents ~~and~~ management recommendations for the relevant landowner to mitigate the impact of the woodland removal).

Field surveys of the woodland areas have been undertaken and have been used to determine the various woodland characteristics in order to identify the woodland removal required and recommended. This document also sets out the area quantity (ha) to be compensatory planted to ensure no net loss of woodland is achieved.

3 Requirement and Objectives of the Report

This Woodland Report details the works required to the woodland, including the felling and any restocking, due to the construction and operation of the Proposed Development.

The objectives of this Woodland Report are to:

Describe the woodland baseline conditions within the relevant area of the operational corridor and in the immediate surrounding areas.

- Identify the potential windthrow risk in connection with the Proposed Development.
- Identify the short and long-term potential impacts on any current woodland management plans.
- Describe any mitigation measures proposed to address likely impacts relating to loss of woodland and windthrow risk; and
- Identify the required quantity for compensatory planting.

Limitations and assumptions.

All data included within has been gathered from field surveys or desk-based assessments, which includes analysis of nationally held datasets, up to date aerial imagery and field measurements and data collection.

Baseline data was derived from Scotland's environment web¹ and Scottish Forestry map viewer². These digital mapping tools enabled identification of woodland within the National Forest Inventory (NFI)³. The NFI definition of woodland is a minimum area of 0.5 ha with trees possessing, or with the potential to achieve, tree crown cover of more than 20% of the ground. Within the NFI some woodlands are identified as native woodlands, also identified within the digital mapping tools referred to above. The Native Woodland Survey of Scotland (NWSS) provides a baseline survey of all native woodlands (of minimum 0.5 ha), nearly native woodlands and plantations on ancient woodland sites in Scotland. A further subset of these woodlands is contained within the Ancient Woodland Inventory (AWI) of Scotland, which identifies ancient woodland, long established woodland of plantation origin and semi-natural woodlands. However, the AWI is based on woodlands over 2 ha. NFI, NWSS and AWI are identified within the baseline conditions.

Forests (or woodlands) comprise the land, of at least 0.1 ha, under areas of trees with a canopy cover of at least 20%, or having the potential to achieve this, including the integral open space, as well as any felled areas awaiting replanting. For the purpose of this report the term Forest refers to commercial conifer plantations (private and publicly owned), the term woodland refers to individual areas (blocks) of broadleaved trees and of mixed tree species (conifer mixed with broadleaved) where appropriate.

Woodland structure and age for the purpose of this report has been categorised into an age class matrix:

- Young – young trees, generally less than 5 years old,
- Immature – trees between approximately 5-15 years old,
- Pole Stage – trees between 15 – 30 years old, primarily conifer,
- Mature – trees considered to be of felling age, and
- Established – established range of age classes with mature trees and an understory of younger trees.
- Over mature – Older declining woodland with potential for veteran trees.

4 Woodland Property

Mearns Forest is managed by Forest and Land Scotland as part of the National Forest Estate as part of Moray and Aberdeenshire Forest District (see **Figure 11.1.3**) (NGR NO727789) and extends from approximately 3.5 Kilometres northwest of Stonehaven to approximately 4 Kilometres northeast of Fettercairn. The forest areas are roughly contained within the A90, A957 and B974 road network. Mearns Forest extends to 6,677 ha. It is located in the eastern foothills of the Grampians to the west of Stonehaven. The forest area lies in a north east to south west direction and extends from the A957 Slug road to the north east to the B974 in the south west. The forest is predominately an upland environment with poorer soils which have been planted with commercial conifers in the past, and forms one of the main production areas of the forest district. To the north of Fetteresso forest there is further extensive private woodland and open farmland to the south.

5 Development Requirements

132 kV single circuit overhead line (OHL)

The Study Area for this assessment is based on the required operational corridor (OC). The Applicant defines the area in which it has rights to remove woodland for the purposes of the safe construction, resilience and continued 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

¹ Scotland's Environment Web available at <https://www.environment.gov.scot/> [Accessed on 25/05/2025]

² Scottish Forestry Map Viewer available at <https://www.forestry.gov.scot/support-regulations/scottish-forestry-map-viewer> [Accessed on 25/05/2025]

³ National Forest Inventory available at <https://www.forestryresearch.gov.uk/tools-and-resources/national-forest-inventory/> [Accessed on 25/05/2025]

OC is defined with reference to the distance at which a tree could fall and cause damage to the overhead line, resulting in a supply outage. As a result, the final corridor width would be based on the safety distance required to allow for a mature tree falling towards the OHL at the mid-point on an OHL span between two Towers, taking account of topography and tree height at maturity. Standard falling distance for a mature conifer tree considered to be a minimum of 30 m. Where the OC passes through areas of native broadleaved woodland, it is noted that the width of woodland may be reduced, due to the general lower height and characteristics of the tree species present.

The proposed steel pole is based on a trident design requiring a matched pair of steel poles erected 2.5 m apart, with supporting crossarm steelwork linking the poles at the top to form a H pole. In addition to this, the safety vicinity zone from each conductor is a 3.5 m radius around the conductor.

The OC width that has been assessed and identified for the safe build and energisation of the new OHL through the areas of commercial conifer woodland is 72 m (36 m either side of the OHL centreline). Opportunities to reduce the OC width through native broadleaves will be considered where the height of the adjacent trees allows for a reduction on OC with whilst maintaining OHL resilience.

The OC lies within a 100 m Limit of Deviation (LoD), i.e. 50 m either side of the centre line of the OHL.

Access Track Route Design

There are no access tracks or ATV tracks which require additional tree felling.

6 Woodland Characteristics

The property is situated approximately 4.5 Kilometres to the North of the village of Glenbervie. The connected woodland to the North of the OC extends to 6,677 ha of first and second rotation productive coniferous forest.

A desk-based study of the woodland areas was conducted, utilising web-based National Forest Estate sub compartment data⁴ and referencing the Scottish Government's Ancient Woodland Inventory, to identify current woodland environmental designations and classifications.

The Mearns Land Management Plan (LMP)⁵ describes the intentions to manage a specific area of forest over a period of ten years. The main objectives of the area are to produce good quality timbers whilst dealing with *Dothistroma* needle blight (DNB) disease. DNB is an economically important disease of conifer trees and particularly pines (trees in the *Pinus* genus). It is caused by the fungus *Dothistroma septosporum* (*D. septosporum*). It causes premature needle defoliation, resulting in loss of timber yield and, in severe cases, tree death.

The recent LMP covered the period 2015 to 2024 and a revision was due in December 2024. This plan describes felling of 763.7 ha and replanting 924 ha during this period. The Mearns LMP is at the consultation stage with the timeline for submission to Scottish Forestry in August 2025. Proposed phase 2 felling coupes (2031-2035) include areas within the Proposed Development in the vicinity of Coresbauld.

⁴ National Forest Estate sub compartment data available at <https://spatialdata.gov.scot/geonetwork/srv/api/records/54693398-E51B-4958-8AA3-89C9FCDFE73A> [Accessed on 25/05/2025]

⁵ The Mearns Land Management Plan available at <https://forestryandland.gov.scot/what-we-do/planning/active/mearns> [Accessed on 25/05/2025]

Fetteresso Forest saw the start of the large scale planting of the 1950s and 60s. A final period of planting was carried out in the 1980s on areas lying above the 1950s and 60s upper margin. There is a great variety of trees along Drumtochty Glen and these are a legacy left by the Gemmel family, one-time owners of Drumtochty Castle.

Table 11.3.1 illustrates the spread of age classes across the plan area is not even. Mature high forest and Thicket & Pole stage makes up the largest proportion, with more than 40% of the design plan area, while there is significantly less in the Early thicket and Old Forest. Due to the production/clearfell element of the forest 7.2% of the forest area is currently felled. However, restructuring is well on the way and this will ultimately improve the sustainability of the forest area. 21.5% of the forest is currently open with the majority of this located on the upland heath land.

Age of Trees (years)	Successional Stage	Area (ha)	%
0-10	Establishment	816.59	12.3
11-20	Early thicket	554.85	8.3
21-40	Thicket & pole stage	1,318.00	19.7
41-60	Mature High Forest	1,484.90	22.2
61+	Old Forest	513.46	7.7
Felled		406.62	6.1
Open		1,575.70	23.6
Total		6,677.00	100.0

The LMP described a felling programme for the period 2015 to 2025 as 763.7 ha with a restocking programme of 924 ha.

7 Windthrow Risk Impact

When assessing the windthrow risk to adjacent areas likely to be exposed due to the clearance of the OC, consideration is given to the soil and moisture regime, the topography, tree species, top height, exposure and aspect in relation to the prevailing wind direction and any previous management regimes from either observation at a site level or via an approved management plan. Reference is also made to Forest GALES 2.5 Forest Research decision support system. Felling outside the OC to a windfirm boundary is termed Management Felling.

The woodland site affected by the Proposed Development has a 'Detailed Aspect Method of Scoring' (DAMS)⁶ windthrow hazard class average score of 12 (range 6-19) and is classified as moderately exposed with a moderate risk of windblow occurring.

Given the age ranges from mature 72-year-old plantations to more recent restocking in 2013 within the OC windblow is predictable and requires management felling to wind firm boundaries. The recommended areas of management felling are shown on Figure 11.3.1, and quantified in Table 11.3.5 below.

⁶ Detailed Aspect method of Scoring (DAMS) Ref. Forest Research, "Forest Gales software programme" and Forestry Commission Leaflet 85 "Windthrow Hazard Classification"

8 Woodland Management Impact

The OHL alignment is likely to have minimal impact for the future management. The constraint associated with the electrical hazard will be reduced by regular maintenance of the operational corridor, which will avoid the incidences of “Red Zone” trees.⁷

The Proposed Development will permanently remove existing planted woodland from the operational corridor.

9 Mitigation Opportunities

Further consideration, subject to engineering constraints, will be given to tree management following stringing of the conductors, and prior to energisation. Such management will likely involve arboricultural modifications to the structure of trees that would otherwise encroach into the OC.

The operational corridor woodland removal area is required for the construction and functioning of the new OHL infrastructure. Opportunities will be assessed for woodland replanting within the operational corridor, the identification of suitable areas cannot be guaranteed due to the requirement of maintaining the safe energisation of the OHL.

10 Woodland Removal Impact

Item	Woodland Type	Area
OHL	Young/Immature conifer plantation	3.94ha
	Mature conifer plantation	30.40
	Mixed broadleaved woodland	1.16ha
Access Track Corridor	Conifer plantation	0.0ha
	Native mixed broadleaved woodland	0.0ha
Total Woodland Removal for Infrastructure		35.5ha

Compensatory Planting Area	Mixed conifer or mixed broadleaved	35.5ha
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Total Loss of Woodland Area		35.5ha
Total Compensatory Planting Area		35.5ha
Total Net Loss of Woodland Area		0.00ha

Item	Woodland Type	Area
Management Felling	Conifer and broadleaved	60.11ha

⁷ 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 \(ukfisa.com\)](https://www.ukfisa.com/)

Replanting/Restocking	Conifer and broadleaved	60.11ha
Net Loss of Woodland Area		0.00ha
Note. Felling approval is via Scottish Forestry Felling Licence application process or Long-Term Forest Plan application or amendment process.		

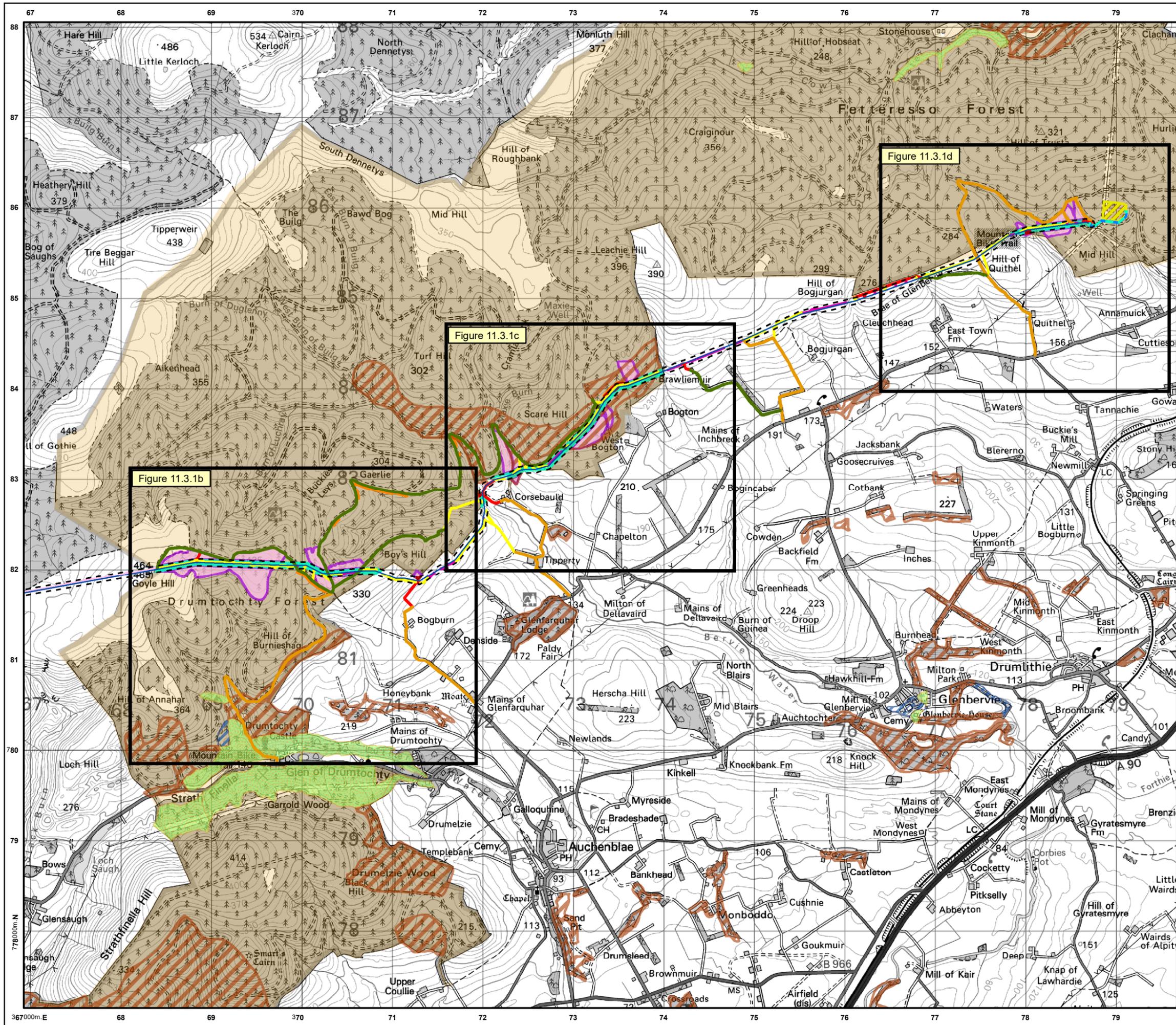
Table 11.3.6 Non-Permanent Woodland Removal for Infrastructure		
Item	Woodland Type	Area
Non-Permanent Woodland Removal	Conifer	59.87ha
Non-Permanent Woodland Removal	Broadleaved	0.24ha
Total Non-Permanent Loss of Woodland Area		60.11ha
Restocking of non-permanent removal areas		60.11ha
Net Non-Permanent Loss of Woodland Area		0.00ha
Note. Felling and restocking approval is via Scottish Forestry Felling Permission application process or Long-Term Forest Plan application or amendment process. This is to be sought by the landowner on whose land the management felling takes place, who is also responsible for all associated restocking operations.		

11 Compensatory Planting

Compensatory planting to achieve the area quantity (hectares) of woodland removal, referenced above will be provided for the OHL and access track Operational Corridor area and will be in accordance with the Scottish Government's Control of Woodland Removal Policy (CoWRP) of no net loss of woodland.

Compensatory planting will be detailed within the Compensatory Planting Management Strategy, Appendix 11.4 of **Chapter 11: Forestry** of the EIA Report.

Recommended areas of management felling will be replanted on site. Replanting of these sites will follow the conditions set out in the Scottish Forestry approved felling permission and will be the responsibility of the landowner.



- ### Legend
- #### S.37 Overhead Line (OHL) Works
- Proposed OHL Pole Locations
 - Proposed OHL Alignment
 - OHL Operational Corridor (36 m Either Side of the Proposed Alignment)
- #### Ancillary Development
- Proposed Permanent Tracks
 - Proposed Temporary Trackway Panels
 - Proposed Temporary New Stone Tracks
 - Existing Tracks
 - Existing Tracks to be Upgraded
 - Proposed ATV Routes
- #### Permitted Development
- Indicative 132kV Underground Cable Alignment
- #### Existing Development
- Existing Fetteresso substation
- #### Forestry
- Ancient Woodland Inventory (AWI)
- Ancient (of semi-natural origin)
 - Long-Established (of plantation origin)
 - Other (on Roy map)
- #### Felling
- Mixed Conifer Felling
 - Broadleaf Felling
 - Management Felling
- #### National Forestry Estate (NFE)
- National Forestry Estate Area

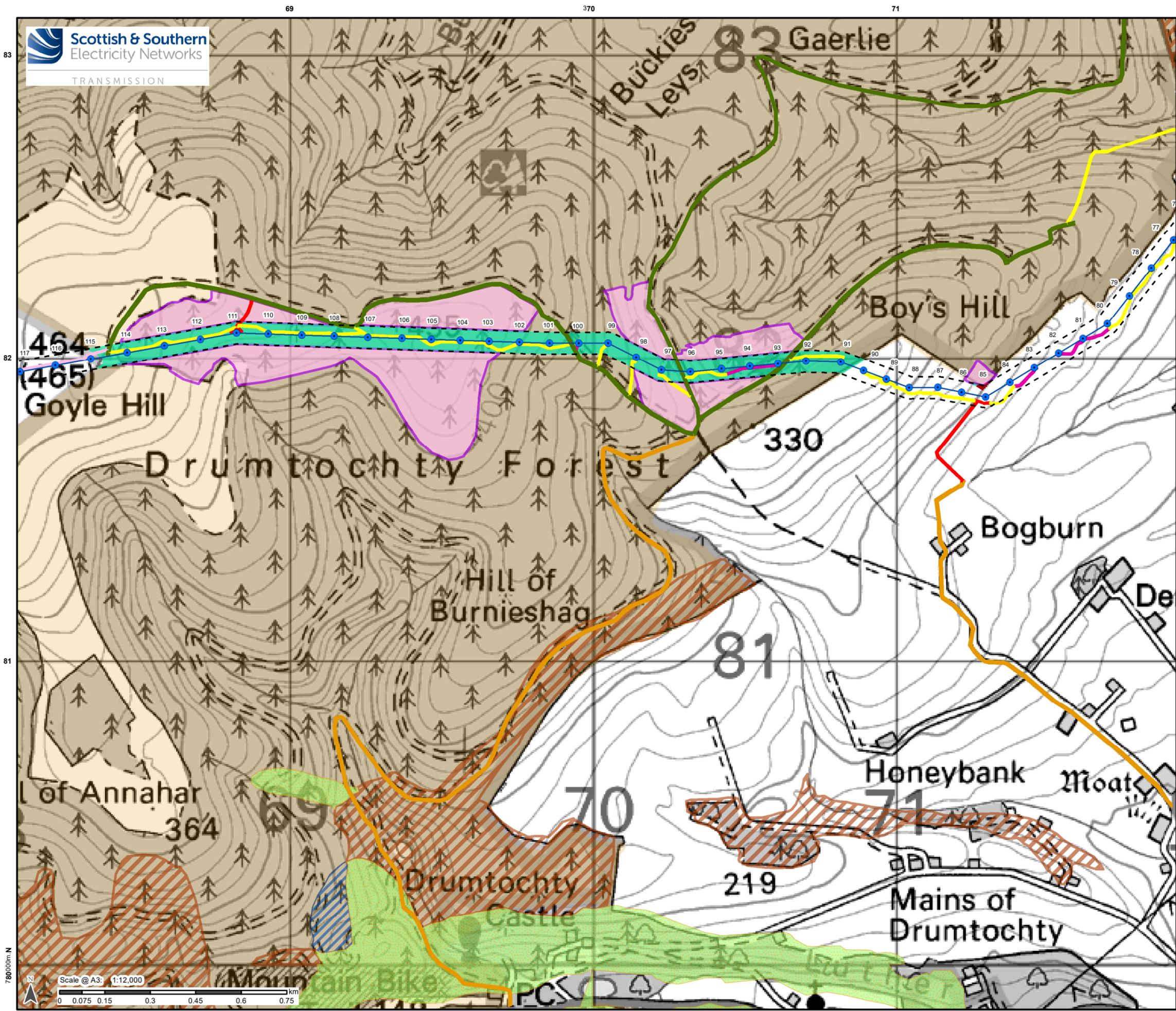
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Project No: LT468/ 469
 Project: Glendye Wind Farm Overhead Line Grid Connection

Title: EIA Report: Figure 11.3.1a - Forestry Felling - National Forestry Estate

Drawn by: CG Date: 08/10/2025

Drawing: 123008-F11.3.1a-EIA-1.0.0



Legend

S.37 Overhead Line (OHL) Works

- Proposed OHL Pole Locations
- Proposed OHL Alignment
- OHL Operational Corridor (36 m Either Side of the Proposed Alignment)

Ancillary Development

- Proposed Permanent Tracks
- Proposed Temporary Trackway Panels
- Proposed Temporary New Stone Tracks
- Existing Tracks
- Existing Tracks to be Upgraded
- Proposed ATV Routes

Forestry

Ancient Woodland Inventory

- Ancient (of semi-natural origin)
- Long-Established (of plantation)
- Other (on Roy map)

Felling

- Mixed Conifer Felling
- Broadleaf Felling
- Management Felling

National Forestry Estate (NFE)

- National Forestry Estate Area

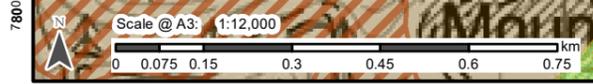
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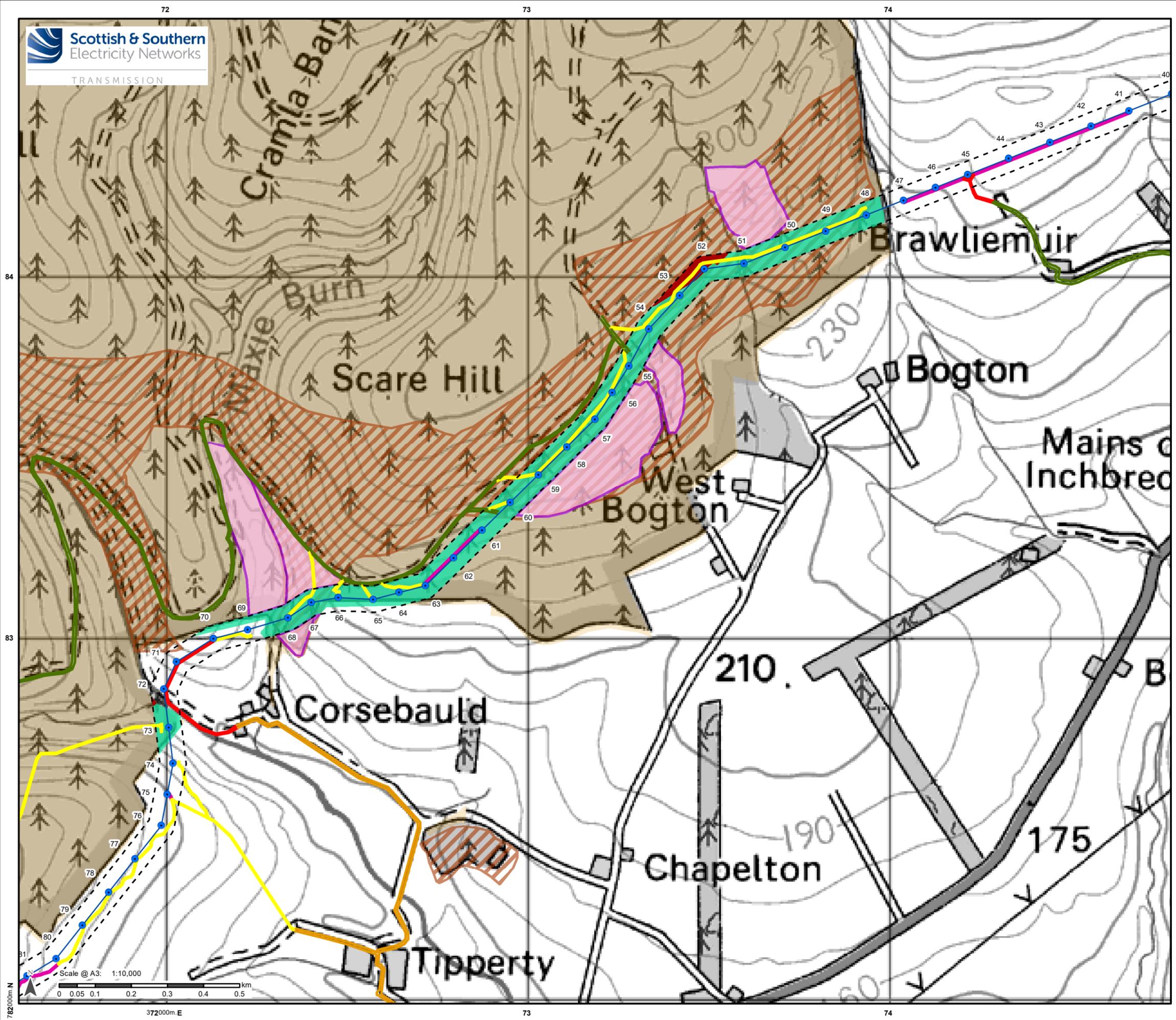
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 Figure 11.3.1b - Forestry Felling - National Forestry Estate

Drawn by: CG Date: 08/10/2025

Drawing: 123008-F11.3.1b-EIA-1.0.0





- Legend**
- S.37 Overhead Line (OHL) Works**
- Proposed OHL Pole Locations
 - Proposed OHL Alignment
 - OHL Operational Corridor (36 m Either Side of the Proposed Alignment)
- Ancillary Development**
- Proposed Permanent Tracks
 - Proposed Temporary Trackway Panels
 - Proposed Temporary New Stone Tracks
 - Existing Tracks
 - Existing Tracks to be Upgraded
 - Proposed ATV Routes
- Forestry**
- Ancient Woodland Inventory (AWI)
- Long-Established (of plantation origin)
- Felling**
- Mixed Conifer Felling
 - Broadleaf Felling
 - Management Felling
- National Forestry Estate (NFE)**
- National Forestry Estate Area

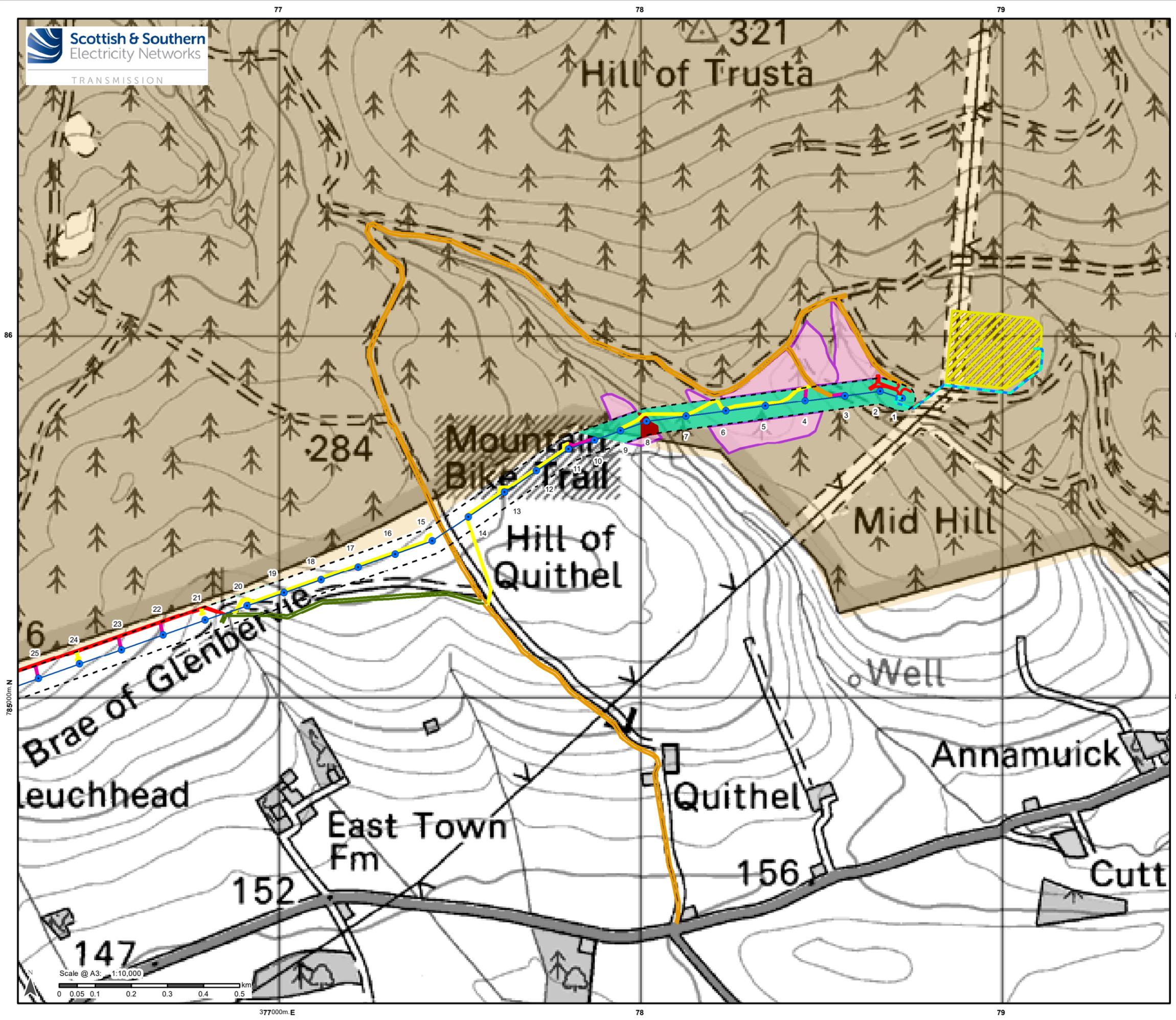
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 Figure 11.3.1c - Forestry Felling - National Forestry Estate

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Drawing: 123008-F11.3.1c-EIA-1.0.0



Legend

S.37 Overhead Line (OHL) Works

- Proposed OHL Pole Locations
- Proposed OHL Alignment
- OHL Operational Corridor (36 m Either Side of the Proposed Alignment)

Ancillary Development

- Proposed Permanent Tracks
- Proposed Temporary Trackway Panels
- Proposed Temporary New Stone Tracks
- Existing Tracks
- Existing Tracks to be Upgraded
- Proposed ATV Routes

Permitted Development

- Indicative 132kV Underground Cable Alignment

Existing Development

- Existing Fetteresso substation

Forestry

Ancient Woodland Inventory (AWI)

- Long-Established (of plantation origin)

Felling

- Mixed Conifer Felling
- Broadleaf Felling
- Management Felling

National Forestry Estate (NFE)

- National Forestry Estate Area

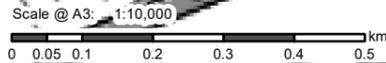
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 Figure 11.3.1c - Forestry Felling - National Forestry Estate

Drawn by: CG Date: 08/10/2025

Drawing: 123008-F11.3.1c-EIA-1.0.0



377000m E

78

79

785000m N

85

86

86