

**Beauly to Blackhillock to New Deer to
Peterhead 400 kV Project
Environmental Impact Assessment Report
Volume 5 | Appendices**

**Appendix 12.1.49: Woodland Report Parcel 3510,
Glenferness**



APPENDIX 12.1.49: Woodland Report Parcel 3510, Glenferness

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1 Introduction

- 1.1.1 This Appendix presents information relevant to the Beauly to Blackhillock to New Deer to Peterhead 400 kV Overhead Line (OHL) Project (the Proposed Development). It should be read in conjunction with the Environmental Impact Assessment (EIA) Report, specifically **Chapter 12: Forestry**, for full details of the Proposed Development.
- 1.1.2 As part of the EIA, it has been identified that construction of the Proposed OHL Alignment and the associated access tracks would cross several woodland areas within private or publicly owned landholdings.
- 1.1.3 This woodland report has been prepared to assess the potential impacts of the Proposed Development on Woodland, Parcel 3510, Glenferness. It includes the requirements for woodland removal and management recommendations to mitigate the impact of the woodland removal. The report provides an overview of the characteristics of the affected woodland, including woodland composition, site conditions, soil conditions, exposure levels and existing felling approvals. The report also provides details of existing infrastructure, and potential constraints related to forestry operations. It aims to inform decision-making by identifying key environmental and logistical considerations associated with the Proposed Development. Additionally, it evaluates the feasibility of timber extraction and access whilst highlighting necessary mitigation measures to minimise disruption to the woodland ecosystem and surrounding landscape.
- 1.1.4 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 quantity hectares (ha) to be compensatory planted to ensure no net loss of woodland is achieved.

2 Woodland property

- 2.1.1 The landholding property boundaries are identified in **Figure 12.1.49a: Parcel 3510 Location Map**. The Glenferness Estate woodlands forest plantation are situated 14 km southeast of Nairn within the Highland Council region (NH 959051 442501). Forming a key component of the region's rural and ecological landscape.
- 2.1.2 The forest within the Proposed Development area form part of the wider estate forest holding, which consists predominantly of productive native conifer plantations. This plantation has been actively managed for commercial forestry.
- 2.1.3 The B9007 Duthil road runs through the east of the estate, serving as a key access route.

3 Development Requirements

3.1 400 kV Overhead Line Infrastructure Requirements

- 3.1.1 The Study Area for this assessment initially focussed on a 100 m width either side of the centreline of the Proposed OHL Alignment and ancillary infrastructure, where relevant, prior to the identification of an Operational Corridor (OC). The Applicant defines the OC as 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) 2002¹ and The Electricity Act 1989². The OC is defined based on two different factors as follows:
 - The first factor in which the OC is determined is with reference to the distance at which a tree could fall and cause damage to the OHL, resulting in a supply outage. As a result, the OC 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

¹ UK Gov (2002). The Electricity Safety, Quality and Continuity Regulations 2002. Available at: [The Electricity Safety, Quality and Continuity Regulations 2002](#)

² UK Gov (1989). Electricity Act 1989. Available at: [Electricity Act 1989](#)

mature conifer tree is considered to be a minimum of 45 m. Where the OC passes through areas of broadleaved woodland, it is noted that the width of woodland removal is likely to be reduced, due to the general lower height and characteristics of the tree species present.

- The second factor that is considered is the maximum distance that the OHL conductors can blow out from the tower under a 1 in 50-year return period wind condition, plus the required electrical clearance distance. This is to ensure that the OHL conductors do not come into contact with, or come close enough to, any object that could result in an electrical clearance infringement. This conductor blowout distance varies between each tower dependent on span length and must therefore be considered on a span-by-span basis.

3.1.2 The typical OC required within areas of commercial conifer forestry for a 400 kV OHL is 90 m (i.e. 45 m either side of the centre line). Where the OC passes through areas of broadleaved woodland, it is proposed that the extent of woodland removal is likely to be reduced due to the lower height of the tree species present. The OC for the Proposed OHL Alignment through areas of broadleaved woodland has been reduced to 70 m (i.e. 35 m either side of the centre line of the OHL). This has been based on the likely height of the woodland at maturity. Where any woodland removal within the OC is proposed to be reduced from the 45 m either side of the line, a site-specific assessment must be carried out to confirm that the conductor blowout does not exceed the OC width. If the conductor blowout exceeds the OC, then the width of the OC must be increased to meet the requirements of the blowout assessment as a minimum. This will ensure compliance with ESQCR requirements and that the required safety clearances are maintained.

3.1.3 A resilient OC of 70 m in width is required throughout the broadleaved woodland area and 90 m within the commercial conifer woodland within Woodland Parcel 3510 taking into account the requirements of the conductor blowout assessment. The OC is illustrated in **Figure 12.1.49b: Parcel 3510 Proposed Felling Requirement**.

3.2 Access Track Route Design

3.2.1 Temporary and permanent access tracks are proposed through woodland and open ground to facilitate access.

4 Woodland Characteristics

4.1 Woodland Composition and Site Conditions

- 4.1.1 The woodland was surveyed in November 2024. The estate forest plantation is managed under a Long-Term Forest Plan (LTFP), Case no.4886773. The OC will traverse a range of woodland types, from young commercial plantations to semi-mature and mature native and commercial plantation forestry.
- 4.1.2 Several of the forest areas between towers CB6-2 and CB6-6A are categorised within NatureScots Ancient Woodland Inventory³ as Long Established of Plantation Origin (LEPO). These areas retain structural and ecological characteristics indicative of long-term woodland cover.
- 4.1.3 At tower CB6-2, the OC intersects semi-mature native broadleaved woodland dominated by Downy birch (DBI) and willow (WL). This section also includes mixed semi-mature and mature conifer forest plantation, primarily Scots pine (SP), which has been managed for commercial timber production.
- 4.1.4 Between towers CB6-3 and CB6-4A, the OC impacts a mature mixed conifer forest composed of Scots pine (SP), Douglas fir (DF), and Norway spruce (NS). These stands have undergone several thinning cycles as part of active commercial management. To ensure the structural stability of the remaining forest area, additional management felling will be required to maintain a windfirm edge along the OC boundary, mitigating the risk of windthrow and further habitat degradation

³ NatureScot Ancient Woodland Inventory. Available at: <https://www.nature.scot/doc/guide-understanding-scottish-ancient-woodland-inventory-awi>

- 4.1.5 Between towers CB6-4A and CB6-6A, the OC crosses a combination of mature coniferous plantations, younger plantations of Sitka spruce (SS), Scots pine (SP), and larch (L), as well as recently restocked areas. Like the previous section, these stands have been managed commercially, undergoing periodic thinning to enhance growth and stability. However, due to the edge effect created by the OC, supplementary felling will be necessary to maintain a windfirm boundary and reduce the risk of further wind damage.
- 4.1.6 The line diversion and OC at towers CB6-7 and CA1 / CA2-160-05 will require felling of mature SS and SP conifer forest. There are no environmental designations in this forest plantation.
- 4.1.7 The area is sheltered with a maximum Detailed Aspect Method of Scoring (DAMS) score of 10^{4,5}, indicating a heightened risk of windthrow in felled or partially thinned stands. Strategic felling and retention plans will be necessary to stabilise stand edges.
- 4.1.8 The Ecological Site Classification⁶ describes the site as having a cool, sheltered and moist climate. The soils have a slightly dry moisture status and are of very poor nutrient status.
- 4.1.9 The Soil Map of Scotland⁷ identifies the soils as being predominantly humus-iron podzols. Soil conditions throughout the ownership are varied depending on altitude and slope. Within the higher ground podzols / podzolic ironpans dominate whereas the soils on the slopes towards the A939 appear more gleyed in nature.
- 4.1.10 The woodlands appear in the Native Woodland Survey of Scotland⁸.
- 4.1.11 The proposed section of OHL consists of a section of OC between towers CB6-1 and CB6-9.
- 4.1.12 The closest forest road suitable for haulage within the ownership is the B9007 Duthil Road. This is classed as a Consultation Route by the Timber Transport Forum^{9,10}. The existing internal forest roads and estate infrastructure can be utilised for timber extraction, minimising additional construction requirements. Considering the quality and quantity of the material and the landform operations can be carried out by harvester / forwarder combinations.

4.2 Photo Record – Operational Corridor Assessment

- 4.2.1 The following photographs provide a visual record of key locations along the OC. Each image illustrates existing vegetation types, land use, and notable landscape features relevant to the planning and management of the OC. Particular attention has been given to areas of mature woodland, natural regeneration, and locations where proposed works may intersect with ecologically or visually sensitive habitats. The photos are intended to support site assessments and inform mitigation strategies.

⁴ Forest Research (2025). Available at: <http://www.forestdss.org.uk/geoforestdss/>

⁵ The Detailed Aspect Method of Scoring (DAMS) is a system used to assess wind exposure in forestry and land management. It provides a numerical score that quantifies the level of exposure a site experiences based on factors such as elevation, topography, and aspect (the direction a slope faces). The DAMS score helps foresters predict wind risk, which is crucial for understanding tree stability, growth potential, and the likelihood of windthrow (trees being uprooted or broken by wind). The scoring system ranges from 0 to 24, with higher scores indicating more exposure to wind.

⁶ Ecological Site Classification, Available at: <http://www.forestdss.org.uk/geoforestdss/>

⁷ National Soil Map of Scotland. Available at: <https://soils.environment.gov.scot/maps/soil-maps/national-soil-map-of-scotland/>

⁸ Scottish Forestry. Native Woodland Survey of Scotland. Available at: <https://www.forestry.gov.scot/forests-environment/biodiversity/native-woodlands/native-woodland-survey-of-scotland-nwss>

⁹ The Timber Transport Forum. Introduction to Agreed Routes Map. Available at: <https://timbertransportforum.org.uk/agreed-routes-map/introduction-to-agreed-routes-map/>

¹⁰ Roads which are key to timber extraction but, for a variety of reasons, are not up to Agreed Route Standard. Consultation with the Local Authority is required before any timber haulage takes place and it may be necessary to limit the amount, timing or frequency of timber haulage, or to specify lower impact vehicles to prevent damage. All minor roads (B, C and unclassified roads) should be treated as Consultation Routes by default unless covered by one of the other categories (e.g. Severely Restricted Route).

Photo 1: View at NH 951461 447052 looking northwest into the mature Scots pine plantation. Showing the existing access track heading toward tower CB6-2 requiring upgrading.



Photo 2: View at NH 952671 448066 looking northwest towards tower CB6-2. Showing the mature and semi-mature conifer plantation.



Photo 3: View at NH 953541 447654 looking southeast towards tower CB6-4A. Showing semi-mature and mature mixed conifer plantation impacted by the OC felling requirements.



Photo 4: View at NH 955641 444612 looking west. Showing areas of previously thinned semi-mature Scots pine / Larch plantation and young Sitka spruce plantation.



Photo 5: View at NH 955731 443682 looking south towards tower CB6-5A. Showing the thinned Scots pine plantation impacted by the OC felling requirements.



Photo 6: View at NH 958451 441320 looking north along the B9007. Showing large Scots pine required to be felled and additional management felling area.



Photo 7: View at NH 965720 440401 looking west towards tower CB6-8. Showing the existing tower to be replaced. New tower will be sited within the semi-mature Scots pine.



Photo 8: View at NH 962461 439610 looking east towards tower CB6-8. Showing the Scots pine woodland / bog habitat to be removed.



5 Windblow Risk

- 5.1.1 It is acknowledged that the creation of the OC would result in wider potential indirect effects on the surrounding woodland areas. These areas would be subject to potential increased risk of damage (windblow). Each woodland report identifies further areas of felling to a windfirm edge, defined as 'Management Felling' (categorised as an indirect secondary impact), which is covered in more detail in the **Chapter 12: Forestry** in **Section 12.4**. Management felling would be considered as part of any application for felling permission. This would provide restocking as agreed with Scottish Forestry which would result in balancing the loss of woodland. Any felling undertaken outwith the OC would be solely under the control of the relevant landowner (and not the Applicant). It is the intention of the Applicant to encourage the landowners to follow this good practice in terms of redesign of their current Long-Term Forest Plans, which in-turn would aim to follow UK Forestry Standard (UKFS)¹¹ for the implementation of the works required.
- 5.1.2 There is an increased risk of windblow as a result of the proposed felling, as indicated by the DAMS score and the topography of the site.
- 5.1.3 The history of forest management has resulted in a forest which has higher individual tree stability. However, the mature nature of the forest along with the location, does mean that windblow risk is still significant.
- 5.1.4 In areas where the trees are smaller due to age or exposure then the windblow risk is reduced along with the requirement for additional felling to wind firm boundaries.

6 Woodland Management Impact

- 6.1.1 As a result of the felling of the OC it is expected that the forest edges along the OC will be severely destabilised and as such significant areas of management felling have been identified. The felling of the OC and the management felling will form a drastic shift in management strategy in areas affected resulting in loss of canopy and large clearfells.

¹¹ Scottish Forestry (2024). Available online at: <https://www.forestry.gov.scot/publications/sustainable-forestry/uk-forestry-standard-ukfs>

- 6.1.2 In the long-term woodland management will be impacted as the area of land available for commercial forestry is reduced. However, the OHL will result in green edges to which the landowner can work to in the future to split the management units into smaller forest areas.
- 6.1.3 The infrastructure built for this section of the OHL could provide a benefit to the landowner for future forest management as it could provide long term access. As part of construction works, dedicated crossing points and long-term access opportunities should be discussed with the landowner(s).
- 6.1.4 The Proposed OHL Alignment furthermore introduces an electrical hazard, but the constraint associated with the electrical hazard will be reduced by regular maintenance of the OC which will avoid the incidences of "Red Zone" trees (reference Forest Industry Safety Accord, FISA 804 "Electricity at Work: Forestry"¹²).
- 6.1.5 The total loss of Native Broadleaved woodland resulting from the proposed alignment is 4.34 ha.

7 Mitigation Opportunities

7.1 Woodland Mitigation Measures

- 7.1.1 To mitigate the landscape impact on this section of the Proposed Development, a replanting has been set out in **Appendix 7.6 Forestry Landscape Mitigation Principles** as demonstrated in **Figure 12.1.49c: Parcel 3510 Proposed Planting Areas**.

7.2 Restructuring

- 7.2.1 Considering the size of the felling the proposals will have a medium impact on forest structure within the forest. However, the forest is generally mature and extends far beyond the OC and management felling. The reestablishment of the felled areas as a result of the Proposed OHL Alignment, although large and contiguous, will lead to a different age category in the forest.
- 7.2.2 The felling of the OC for the proposed development, will create a new green edge, allowing the landowner to carry out future clear fell more safely in proximity to the new power line

7.3 Restocking

- 7.3.1 As set out in the Landscape chapter under the 'Landscape Replanting Proposals', restocking can potentially take place within the OC to mitigate the visual impact of the OC. Restocking within the OC will be carried out by the applicant. Detail shown in **Figure 12.1.49c: Parcel 3510 Proposed Planting Areas**.
- 7.3.2 Restocking will be carried out by the landowner in all areas outwith the OC with suitable species to continue the commercial viability of the forest.
- 7.3.3 It is anticipated that native broadleaved regeneration is likely to occur within the OC, as a result of its proximity to existing seed sources.

8 Net Effect / Summary

- 8.1.1 **Tables 8.1 to 8.4** outline the operational requirements for forestry management within the OC between towers CB6-1 and CB6-6A. They detail the areas designated for clear felling, both within the OC and additional recommended Management Felling outside the OC to address windthrow risks and forest design considerations.

¹² Forest Industry Safety Accord (2020), FISA 804 Electricity at Work: Forestry. Available at: <https://ukfisa.com/Safety/Safety-Guides/fisa-804>

Table 8.1: Woodland removal for Infrastructure, within OC

Item	Woodland Type	Area (ha)
OC felling	Native Broadleaved Woodland (70 m)	3.73
OC felling	Conifer Woodland (90 m)	11.22
Access Track Felling	Conifer Woodland (90 m)	0.81
Access Track Felling	Native Broadleaved Woodland (70 m)	0.61
Total area		16.37

Table 8.2: Compensatory Planting

Item	Woodland Type	Area (ha)
Compensatory Planting Area	Native Broadleaved Woodland	4.34
Compensatory Planting Area	Conifer Woodland	12.02
Total area		16.37

Table 8.3: Woodland Removal Impact of Infrastructure

Item	Area (ha)	
Total Loss of Woodland Area	16.37	
Total Compensatory Planting Area	16.37	
Total Net Loss of Woodland Area		0.00

Table 8.4: Woodland removal for Management Felling, outwith OC

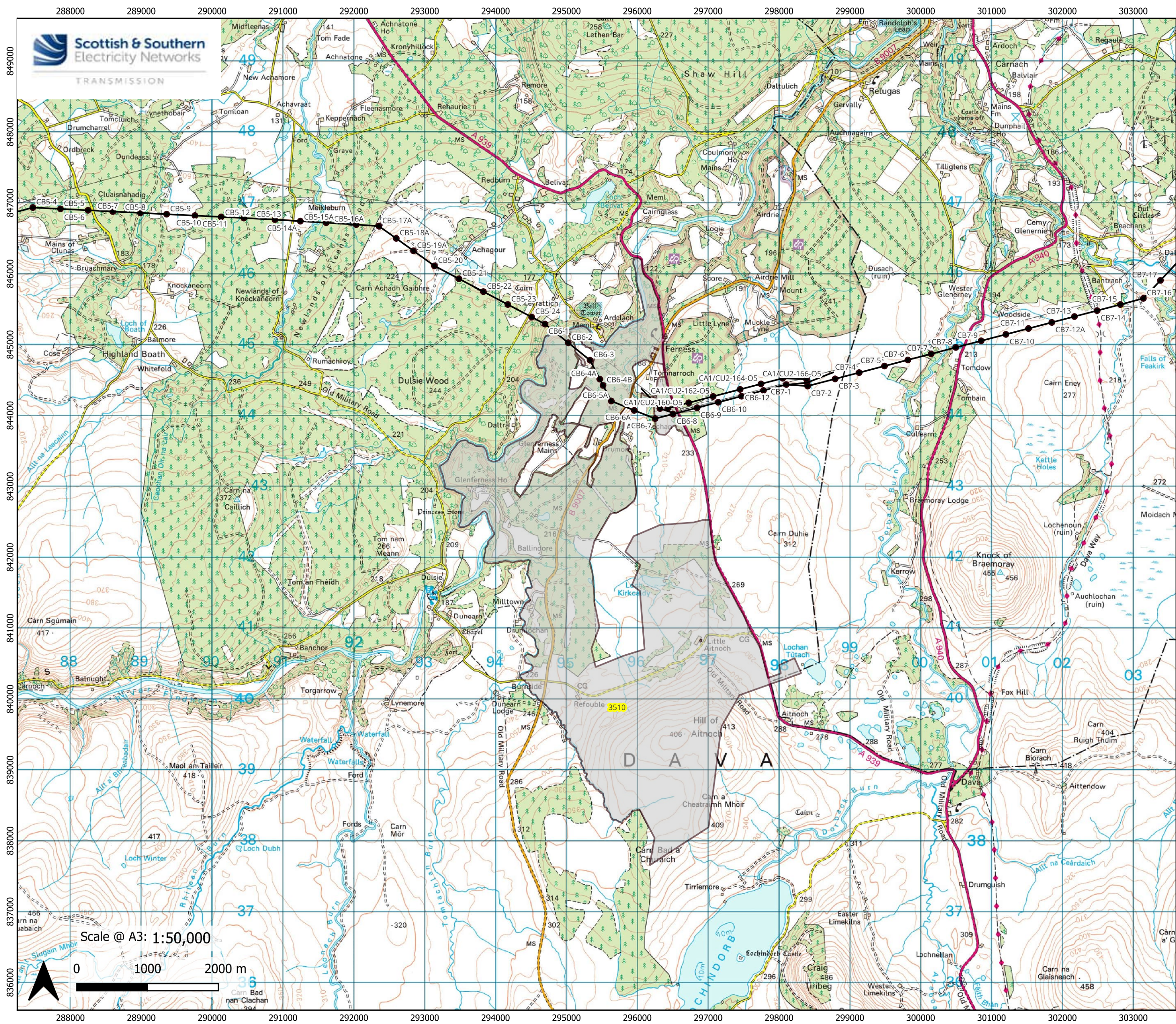
Item	Woodland Type	Area (ha)
Management Felling	Conifer Woodland	12.36
Replanting / Restocking Opportunities	Conifer Woodland	12.36
Net Loss of Woodland Area		0.00

9 Compensatory Planting

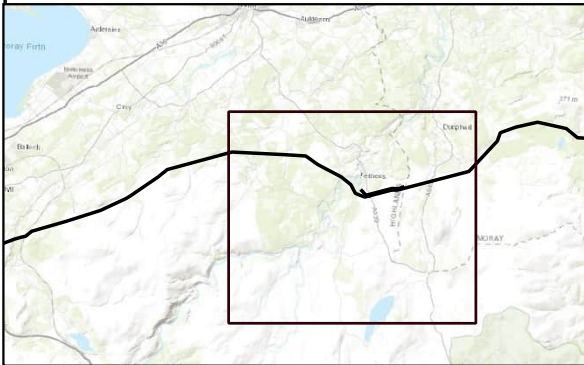
- 9.1.1 Only areas directly impacted by the OC will be included in the compensatory planting total, in accordance with the Control of Woodland Removal Policy (CoWRP)¹³. This policy ensures that woodland loss due to development is mitigated by appropriate replanting or regeneration efforts, but it specifically applies to areas where tree removal is necessary for the Proposed Development. See **Appendix 12.3 Compensatory Planting Management Strategy**.
- 9.1.2 Any additional felling outside the OC, such as areas cleared for windthrow management or forest design improvements, falls under the responsibility of the landowner and is not included in the compensatory planting requirements. Instead, these areas may be replanted under a forest plan revision or felling license at the landowner's discretion. This approach aligns with national forestry guidelines, balancing infrastructure development with sustainable woodland management.

¹³ Forestry Commission Scotland (2009). Control of Woodland Removal Policy. Available at: <https://www.forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal/viewdocument/285>

- 9.1.3 The total amount of net felling requiring compensation under the CoWRP's 16.37 ha.
- 9.1.4 In order to provide a greater balance limiting long-term impacts on forestry interests it is proposed that the majority of this woodland loss is compensated via off-site compensatory planting within the same local authority area. It is proposed that full details of the areas subject to this off-site compensatory planting is notified to Scottish Forestry prior to energising the OHL.



- ### Legend
- Proposed Tower - 400 kV
 - Proposed OHL Alignment - 400 kV
 - ▭ Landownership Boundary/Parcel



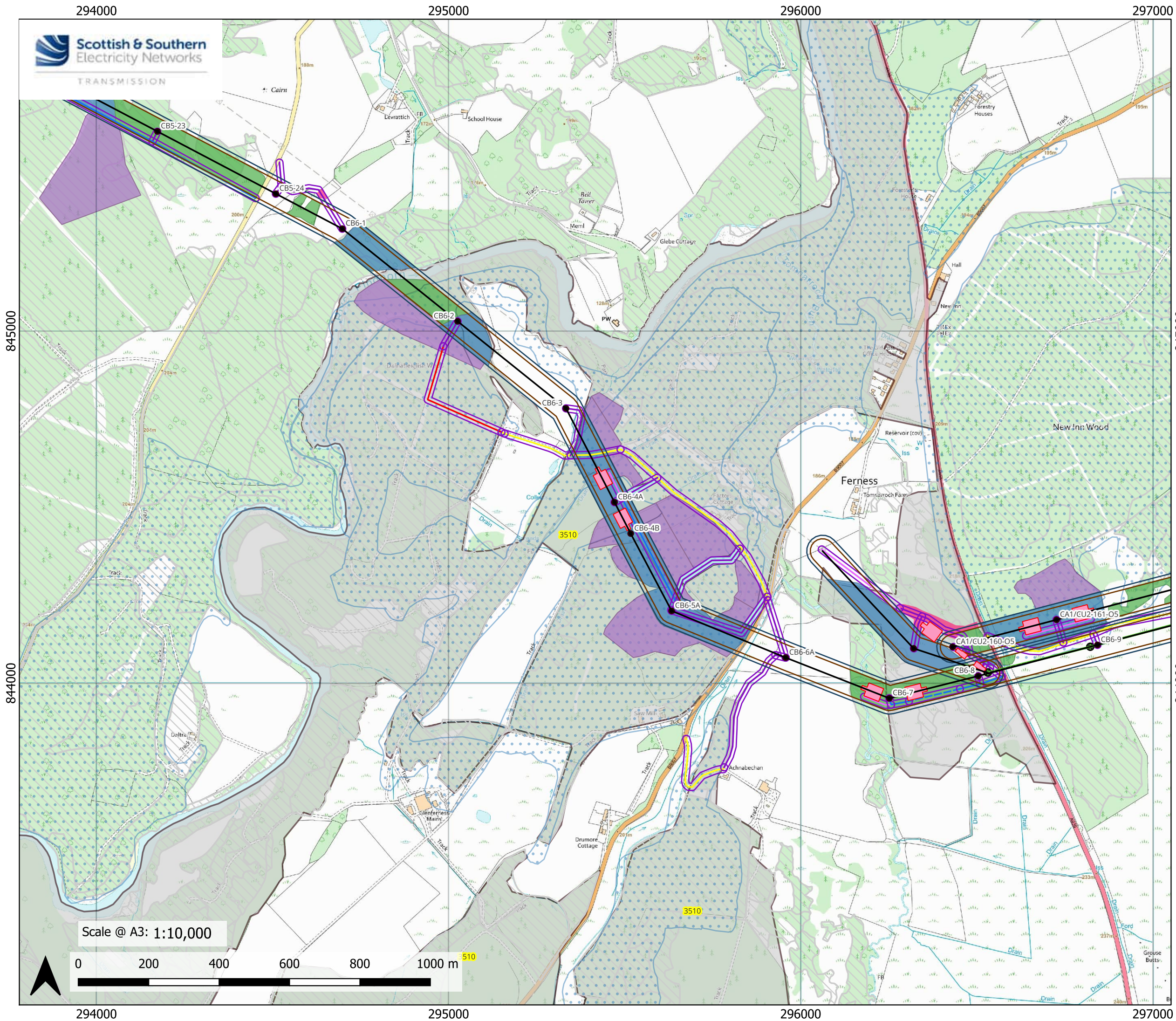
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Project:
Beaulieu to Blackhilllock to New Deer to Peterhead 400 kV
OHL Project

Title:
Figure 12.1.49a Parcel 3510 Location Map

Drawn by: LA

Scale @ A3: 1:50,000
0 1000 2000 m



Legend

- Proposed Tower - 400 kV
- Proposed OHL Alignment - 400 kV
- Proposed Conductor Pulling Area (EPZ)
- Tower to be Removed
- OHL to be Removed
- 70m Operational Corridor - Broadleaved Woodland
- 90m Operational Corridor - Commercial Woodland
- Access Track 20m Buffer

Proposed Access Tracks

- Existing Access – Upgrade – Good/Fair Condition
- Existing Access – Upgrade – Very Poor Condition
- Proposed Access – ATV or Temporary Trackway
- Proposed Access – Permanent
- Proposed Access – Permanent Floated
- Proposed Access – Temporary

Proposed Felling Requirements

- Native Woodland Operational Corridor Felling
- Mixed Conifer Operational Corridor Felling
- Mixed Conifer Management Felling
- Mixed Conifer Access Track Felling
- Native Woodland Access Track Felling
- Native Woodland Survey Scotland (NWSS)

Ancient Woodland Inventory

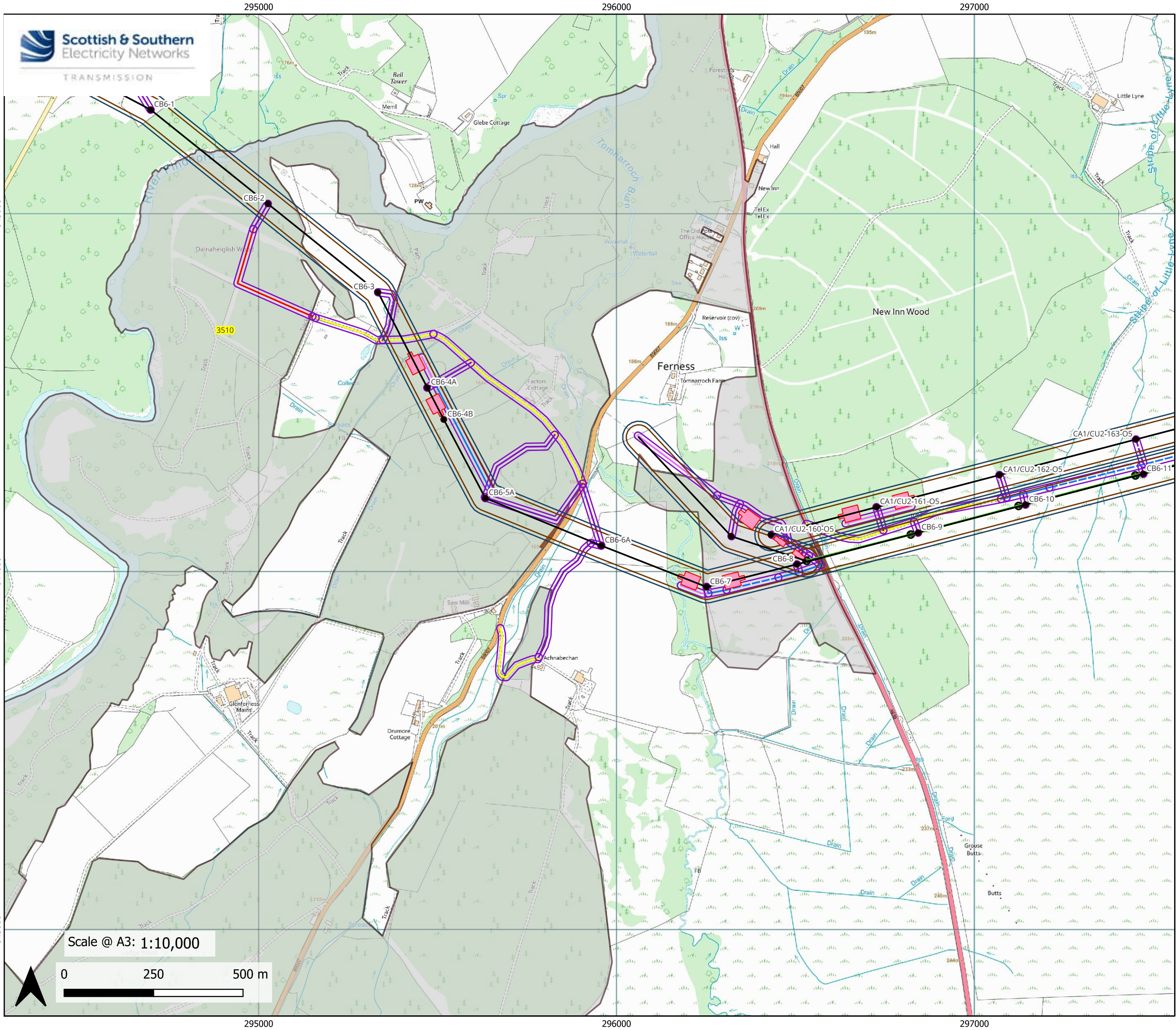
- Long-Established (of plantation origin)
- Landownership Boundary/Parcel
(Landownership boundary extends beyond map extent – relevant area shown)

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Project:
Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL Project

Title: **Figure 12.1.49b** Parcel 3510 Proposed Felling Requirements

Drawn by: LA



Legend

- Proposed Tower - 400 kV
- Proposed OHL Alignment - 400 kV
- Proposed Conductor Pulling Area (EPZ)
- Tower to be Removed
- OHL to be Removed
- 70m Operational Corridor - Broadleaved Woodland
- 90m Operational Corridor - Commercial Woodland
- Access Track 20m Buffer

Proposed Access Tracks

- Existing Access – Upgrade – Good/Fair Condition
- Existing Access – Upgrade – Very Poor Condition
- Proposed Access – ATV or Temporary Trackway
- Proposed Access – Permanent
- Proposed Access – Permanent Floated
- Proposed Access – Temporary
- Proposed Access – Temporary Floated
- Landownership Boundary/Parcel
(Landownership boundary extends beyond map extent – relevant area shown)
- Roadside Mitigation Planting Locations

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Project:
Beauly to Blackhillock to New Deer to Peterhead 400 kV OHL Project

Title:
Figure 12.1.49c Parcel 3510 Proposed Planting Areas

Drawn by: LA