

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

Appendix 12.1.93 – Woodland Report Parcel 2686



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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 2686. 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 hectare (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 12.1.93a: Parcel 2686 Location Map**. The forest plantations within Parcel 2686 are three medium sized commercial forestry blocks, Balloch Woods at NJ 460991 463432, Brownhill Wood at NJ 503051 458798 and Cumrie Plantation at NJ 519291 451542. Managed by Forestry and Land Scotland on behalf of the Scottish Ministers. Located 6.5 km southeast of Keith, within the Aberdeenshire council district.

3 Development Requirements

3.1 400kV 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)¹ 2002 and The Electricity Act² 1989. 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 mature conifer tree is considered to be a minimum of 45 m. Where the OC passes through areas of

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](#)

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 90 m in width is required throughout the commercial conifer woodland within Woodland Parcel 2686 and taking into account the requirements of the conductor blowout assessment. The OC is illustrated in **Figure 12.1.93b: Parcel 2686 Proposed Felling Requirement.**

3.2 Access Track Route Design

- 3.2.1 Proposed tracks in this section cut through short sections of existing woodland and make use of existing infrastructure.

4 Woodland Characteristics

4.1 Woodland Composition and Site Conditions

- 4.1.1 The woodland was surveyed in January 2025. The OC route between towers CB16-17 and BN1F-3B traverses a semi-mature plantation predominantly composed of Sitka spruce (SS), larch (L), and Lodgepole pine (LP). The plantation exhibits varied stand structure and density, characteristic of mid-rotation forestry. Along the OC corridor, there are several areas of internal windblow.
- 4.1.2 The OC between towers BN1F-4A and BN1F-6 crosses felled ground, naturally regenerating SS and L are establishing across the site. Some clearance of woodland will be required along the new access track between towers BN1F-3A and BN1F-2A, this may only require limb removal of semi-mature L.
- 4.1.3 The OC at Brownhill Plantation between towers BN1-17A to BN1-20 consists of plantation of mainly mature Scots pine (SP) and Norway spruce (NS), the site has been previously thinned and suffered from windthrow damage along the western boundary. Native broadleaves are regenerating across the site, the species present include Downy birch (DBI), willow (WL) and rowan (ROW). A younger plantation of SS is establishing to the east of the site at tower BN1-19, with planted native broadleaves including SOK, aspen (ASP) and DBI.
- 4.1.4 Cumrie Plantation, between towers BN2-2A and BN2-4A consists of mature SS, NS and SP. There is significant windthrow damage throughout the plantation.
- 4.1.5 To ensure the structural stability of the remaining woodland within Balloch Wood, Brownhill and Cumrie Plantations, additional management felling will be required to maintain a windfirm edge along the OC boundary, mitigating the risk of windthrow and further habitat degradation

- 4.1.6 Balloch Woodlands is managed under the Keith Wood Land Management Plan (LMP), Brownhill and Cumrie Plantation are managed under the Bin and Deveron Woods LMP. Both LMP's are active.
- 4.1.7 Windthrow is prevalent across all three sites. However, the exposure is moderately exposed with a Detailed Aspect Method of Scoring (DAMS) of between 12-14³.
- 4.1.8 The National Soil Map of Scotland⁴ indicates, the predominant soil type within the affected areas consists of peaty gleyed podzols. These soils are moderately to poorly drained, which can influence rooting depth and tree stability. The presence of gleying indicates potential seasonal waterlogging, which may impact wind firmness.
- 4.1.9 The Ecological Site Classification⁵ describes the site as having a cool, moderately exposed and wet climate. The soils have a fresh moisture status and a medium nutrient status.
- 4.1.10 Brownhills Plantation and Cumrie Plantation are both classified within the NatureScot Ancient Woodland Inventory⁶ as Long Established of Plantation Origin (LEPO). While these areas have been historically managed as plantations, they retain structural and ecological characteristics indicative of long-term woodland cover.
- 4.1.11 The proposed section of OHL consists of a section of OC between towers CB16-17 and BN1F-6, BN1-17A to BN1-20 and BN2-2A and BN2-4A. Proposed tracks in this section are within the OC and make use of existing infrastructure.
- 4.1.12 There is a good network of forest roads throughout all three sites. Regular forest operations are taking place in the blocks and the majority of roads are suitable for timber haulage.
- 4.1.13 Considering the quality and quantity of available timber, along with the landform characteristics, forestry operations can largely be carried out using harvester and forwarder combinations
- 4.1.14 The closest forest road suitable for haulage for the Brownhill and Cumrie Plantations is the unclassified C106S, to the north. This is classed as an Agreed Route by the Timber Transport Forum^{7, 8}. Timber will be extracted from the Balloch Wood to the A96 to the south, this is classed as an Agreed Route by the Timber Transport Forum.

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.

³ Forest Research (2025). Available at: <http://www.forestdss.org.uk/geoforestdss/>

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.

⁴ Scottish Government (2024). National soil map of Scotland. Available at: <https://soils.environment.gov.scot/maps/soil-maps/national-soil-map-of-scotland/>

⁵ Ecological Site Classification, Available at: <http://www.forestdss.org.uk/geoforestdss/>

⁶ NatureScot (2023). A guide to understanding the Scottish Ancient Woodland Inventory (AWI). Available at: <https://www.nature.scot/doc/guide-understanding-scottish-ancient-woodland-inventory-awi>

⁷ The Timber Transport Forum. Introduction to Agreed Routes Map. Available at: <https://timbertransportforum.org.uk/agreed-routes-map/introduction-to-agreed-routes-map/>

⁸ Agreed Routes can be used for timber haulage without restriction (other than as regulated by the Road Traffic Act 1988). "A" roads (e.g. the A9) are assumed to be Agreed Routes unless covered by one of the other TTG classifications (e.g. Consultation Route).

Photo 1: View from NJ 458241 459321 looking north toward tower CB16-17. Showing smi-mature plantation of SS and L. Showing signs of internal windthrow damage.



Photo 2: View from NJ 467581 462531 looking west into the felled area at tower BN1F5. Showing naturally regenerating SS and L. Neighbouring plantation is showing signs of windthrow damage.



Photo 3: View from NJ 503091 458032 looking southwest into the mature SP/NS plantation, showing windthrow damage and regeneration NBL.



Photo 4: View from NJ 503155 457801 looking west, towards tower BN1-17A, showing the naturally regenerating NBL and open ground.



Photo 5: View from NJ 504781 456792 looking southeast at tower BN1-18A, showing the mature SP and NS to be felled.



Photo 6: View from NJ 506821 456671 looking east into the young SS plantation. Additional management felling may be required in this area, to be assessed once OC has been cleared.



Photo 7: View from NJ 519571 450962 looking east into the mature SP/SS plantation, showing significant windthrow damage.



Photo 8: View from NJ 519602 451209 looking north west along the existing forest road into the semi-mature SS plantation that will additional management felling.



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 out with 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) for the implementation of the works ⁹required.
- 5.1.2 Considering the condition and maturity of the crop across the Balloch, Brownhill and Cumrie Plantations, there is a high risk of windthrow as a result of the felling of the OC

6 Woodland Management Impact

- 6.1.1 The felling of the OC is expected to significantly impact the structural stability of the remaining forest, particularly along the newly created forest edges. The sudden removal of tree cover will expose adjacent stands to increased wind exposure, making them more vulnerable to windthrow and progressive edge destabilisation. As a result, extensive management felling has been identified as a necessary intervention to establish windfirm boundaries and mitigate the risk of uncontrolled tree loss.

⁹ Scottish Forestry (2024). UK Forestry Standard (UKFS). Available at: <https://www.forestry.gov.scot/publications/sustainable-forestry/uk-forestry-standard-ukfs> (accessed 01/05/2025)

- 6.1.2 The combination of OC felling and management felling represents a substantial shift in the overall forest management strategy within the affected areas. This transition will lead to a marked reduction in canopy cover, creating large clear-fell areas that will alter both the landscape and ecosystem dynamic.
- 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 into currently poorly accessible areas. 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”¹⁰).
- 6.1.5 The total loss of Native Broadleaved woodland resulting from the proposed alignment is 0.00 ha.

7 Mitigation Opportunities

7.1 Woodland Mitigation Measures

- 7.1.1 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-growing species/shrubs thus being able to be retained closer to the line than larger growing species. OHL tree maintenance would take place on a 4-yearly cycle.

7.2 Restructuring

- 7.2.1 Considering the size of the felling the proposals will have an impact on forest structure within the forest. However, the block 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 block.
- 7.2.2 The felling of the OC for the development will create new green edges, which will allow the landowner to work to in the future if that is desired. In the long term this might benefit forest structure.

7.3 Restocking

- 7.3.1 In case the management felling of the OC takes place there will be a restock obligation on the landowner.

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 CB16-17 and BN1F-6, BN1-16A to BN1-20 and BN2-2A and BN2-4A. 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.

Table 8.1: Woodland removal for Infrastructure, within OC

Item	Woodland Type	Area (ha)
Operational corridor felling	Mature Conifer Plantation (90 m)	13.55
Total area		13.55

¹⁰ Forest Industry Safety Accord (2020), FISA 804 Electricity at Work: Forestry. Available at: <https://ukfisa.com/Safety/Safety-Guides/fisa-804>

Table 8.2: Compensatory Planting

Item	Woodland Type	Area (ha)
Compensatory Planting Area	Mature Conifer Plantation	13.55
Total area		13.55

Table 8.3: Woodland Removal Impact of Infrastructure

Item	Area (ha)
Total Loss of Woodland Area	13.55
Total Compensatory Planting Area	13.55
Total Net Loss of Woodland Area	0.00

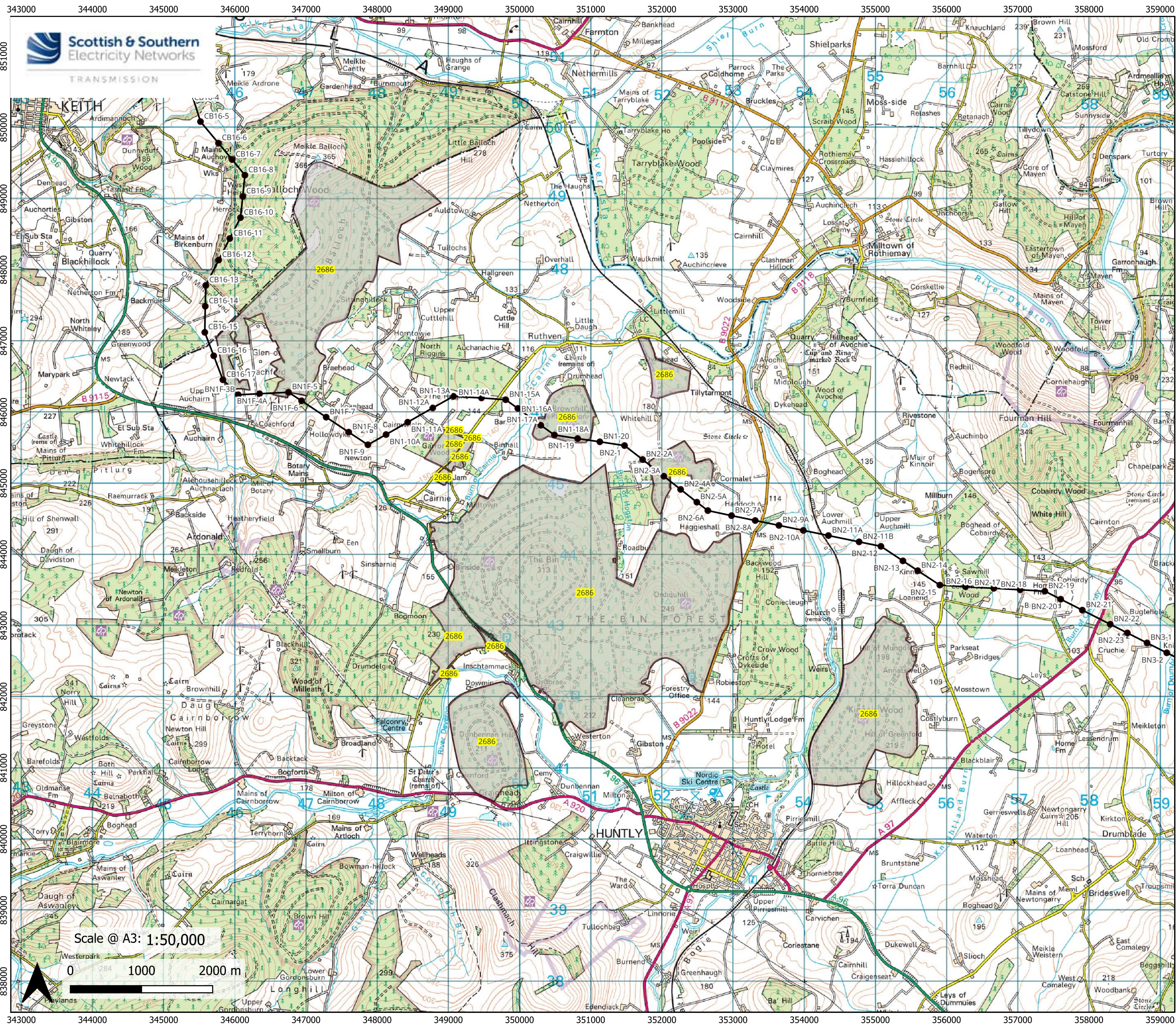
Table 8.4: Woodland removal for Management Felling, outwith OC

Item	Woodland Type	Area (ha)
Management Felling	Mature Conifer Plantation	10.30
Replanting / Restocking Opportunities	Conifer Plantation	10.30
Total 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)¹¹. 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.
- 9.1.3 The total amount of net felling requiring compensation under the CoWRP is 13.55 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 offsite compensatory planting within the same local authority area. It is proposed that full details of the areas subject to this offsite compensatory planting is notified to Scottish Forestry prior to energising the OHL.

¹¹ 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>



Legend

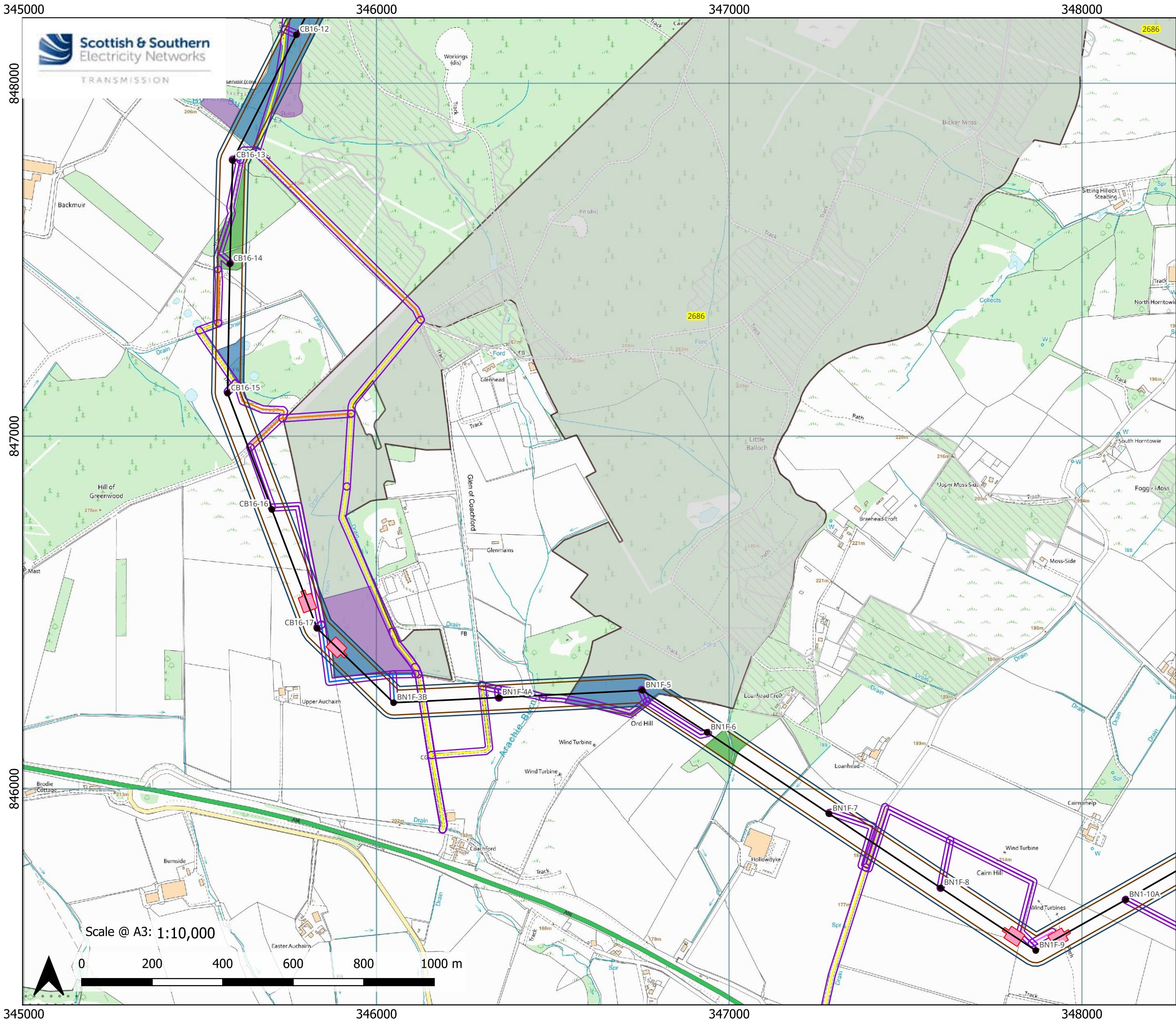
- Proposed Tower - 400 kV
- Proposed OHL Alignment - 400 kV
- ▭ Landownership Boundary/Parcel

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

Title:
Figure 12.1.93a Parcel 2686 Location Map

Drawn by: LA



Legend

- Proposed Tower - 400 kV
- Proposed OHL Alignment - 400 kV
- Proposed Conductor Pulling Area (EPZ)
- 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 – Poor Condition
- Proposed Access – ATV or Temporary Trackway
- Proposed Access – Permanent
- Proposed Access – Temporary

Proposed Felling Requirements

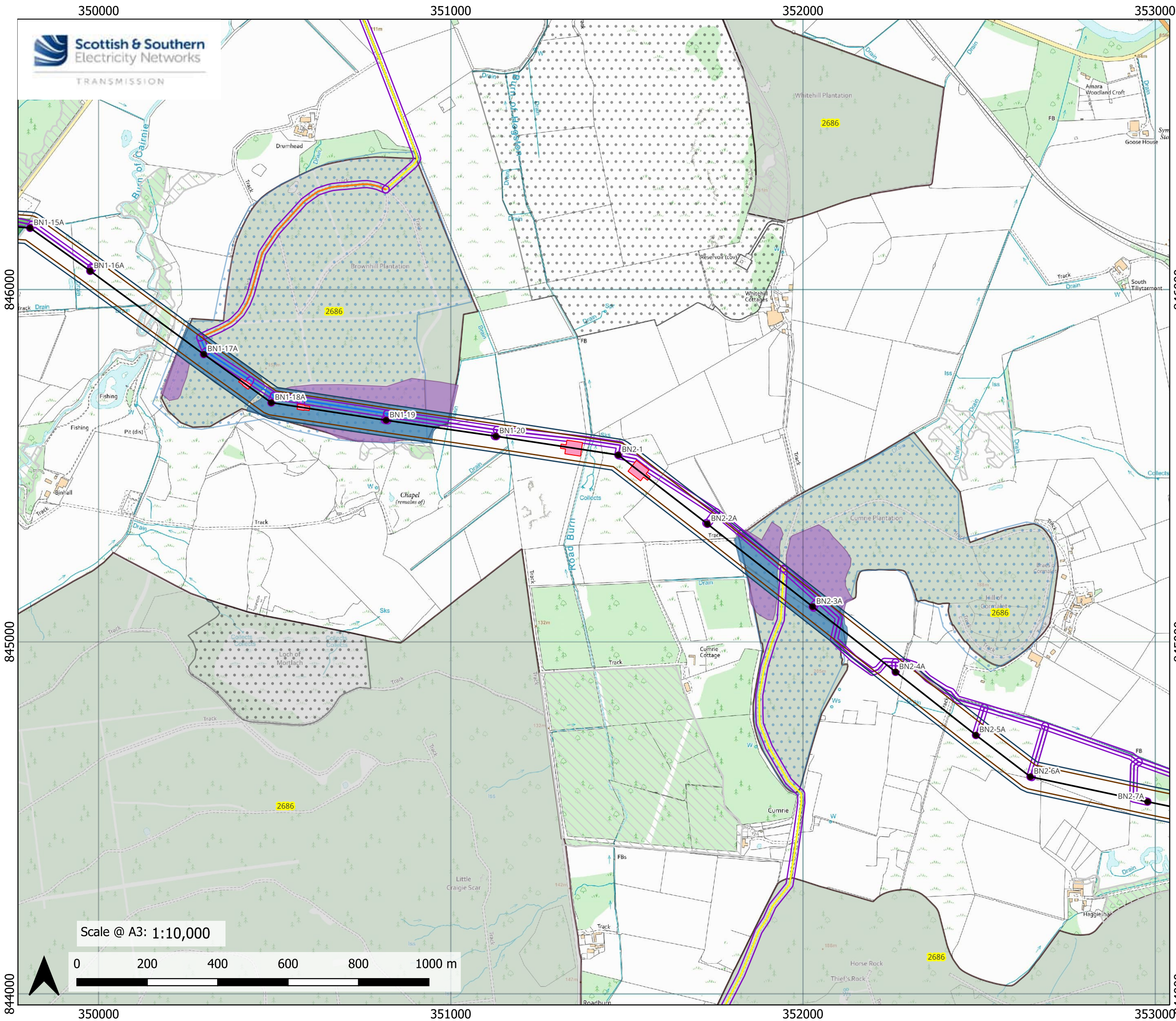
- Native Woodland Operational Corridor Felling
- Mixed Conifer Operational Corridor Felling
- Mixed Conifer Management Felling
- Site of Special Scientific Interest (SSSI)
- Native Woodland Survey Scotland (NWSS)
- Landownership Boundary/Parcel
(Landownership boundary extends beyond map extent – relevant area shown)

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

Title: **Figure 12.1.93b** 1 of 2 Parcel 2686
Proposed Felling Requirements

Drawn by: LA



Legend

- Proposed Tower - 400 kV
- Proposed OHL Alignment - 400 kV
- Proposed Conductor Pulling Area (EPZ)
- 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 – Poor Condition
- Proposed Access – ATV or Temporary Trackway
- Proposed Access – Permanent
- Proposed Access – Temporary

Proposed Felling Requirements

- Native Woodland Operational Corridor Felling
- Mixed Conifer Operational Corridor Felling
- Mixed Conifer Management Felling
- Site of Special Scientific Interest (SSSI)
- 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 12.1.93b** 2 of 2 Parcel 2686
Proposed Felling Requirements

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