

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

Appendix 12.1.11: Woodland Report Parcel 388, Lovat





APPENDIX 12.1.11: Woodland Report Parcel 388, Lovat

1	Introduction	2
	Woodland property	
	Development Requirements	
5	3.1 400 kV Overhead Line Infrastructure Requirements	
	3.2 Access Track Route Design	
4	Woodland Characteristics	
	4.1 Woodland Composition and Site Conditions	3
	Windblow	
6	Woodland Management Impact	7
	Mitigation Opportunities	
	7.1 Woodland Mitigation Measures	
	Net Effect / Summary	
	Compensatory Planting	

Appendix Figures

Figure 12.1.11a: Parcel 388 Location Map

Figure 12.1.11b: Parcel 388 Proposed Felling Requirements



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 388, Lovat. 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 12.1.11a: Parcel 388 Location Map. The woodland in parcel 388 consists of 3 discrete sections of planted rows of Sessile oak (SOK) at road and field boundaries in the locality of Kirkhill and Reelig in Inverness-shire. They are not currently under any approved Management Plan. They are visible from the A862 road and are located at NH 537631 443591, NH 546611 443801 and NH 550144 443413.

3 Development Requirements

3.1 400 kV Overhead Line Infrastructure Requirements

- 3.1.1 The Study Area for this assessment initially focussed on a 100m 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 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: <u>The Electricity Safety, Quality and Continuity Regulations 2002</u>

 $^{^2\,}$ UK Gov (1989). Electricity Act 1989. Available at: $\underline{\text{Electricity Act 1989}}$



TRANSMISSION

- 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 woodland area within Woodland Parcel 388, based on the type of woodland encountered and the requirements of the conductor blowout assessment. The OC is illustrated in Figure 12.1.11b: Parcel 388 Proposed Felling Requirements.

3.2 Access Track Route Design

3.2.1 A temporary bellmouth and access track within the OC is proposed in section of the Proposed OHL Alignment at tower BC4-4B. Temporary access tracks across open fields to towers BC4-1A, BC4-2B and 4-3B will be created.

4 Woodland Characteristics

4.1 Woodland Composition and Site Conditions

- 4.11 Woodland parcel 388 was surveyed in September 2024. In this parcel the Proposed OHL Alignment crosses over 3 discrete rows of field and roadside boundary trees (NH 537 443, NH546 443, NH550 443), comprising of mature and semi mature Sessile Oak (SOK), being remnants of what appear to formal estate field and road boundary plantings. On historical maps they are shown as broadleaved avenues of trees (OS 6 Inch 1st Edition 1843-1882). Certain specimens appear to be from these original plantings and others are younger replacements from the original planting.
- 4.1.2 Between towers BC3-5B and BC4-1A and between towers BC4-2B and BC4-3B, there are prominent field boundary trees standing perpendicular to the A862 trunk road. These consist of mature and semi mature Sessile oak (SOK) and form part of the network of field boundary trees which contribute to the landscape setting of partially enclosed agricultural fields on the lower ground between the Beauly Firth and The Aird.
- 4.1.3 Between towers BC4-4B and BC4-5A, on the western side of the C1102 Moniak Bridge -Easter Clues-Foxhole Road, the OHL crosses over an avenue of planted roadside trees predominantly comprising mature and semi mature SOK within the OC. These form part of a longer avenue of SOK on this section of the county road.



TRANSMISSION

- 4.1.4 The Ecological Site Classification³ describes the site as having a warm, sheltered, and moist climate. The area is described as coastal (within 3 km of sea). The soils are very moist moisture status and rich nutrient status. The area is sheltered with a maximum Detailed Aspect Method of Scoring (DAMS) score of 9⁴.
- 4.15 The Soil Map of Scotland⁵ identifies the site as being predominantly humus iron podsols with regosols with parent material of undifferentiated beach deposits.
- 4.16 The woodlands do not appear in the Scottish Ancient Woodland Inventory⁶.
- 4.17 The woodlands are not identified in the Native Woodland Survey of Scotland⁷

Photo 1: View at NH 537281 443633 at tower BC3-5B looking northeast. Showing the mature and semi mature Sessile oak trees present within the OC.



³ Forest Research. Ecological Site Classification, <u>Available at: http://www.forestdss.org.uk/geoforestdss/</u>

⁴ 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.

⁵ Scottish Government (2024). National soil map of Scotland. Available at: https://soils.environment.gov.scot/maps/soil-maps/national-soil-map-of-scotland/

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

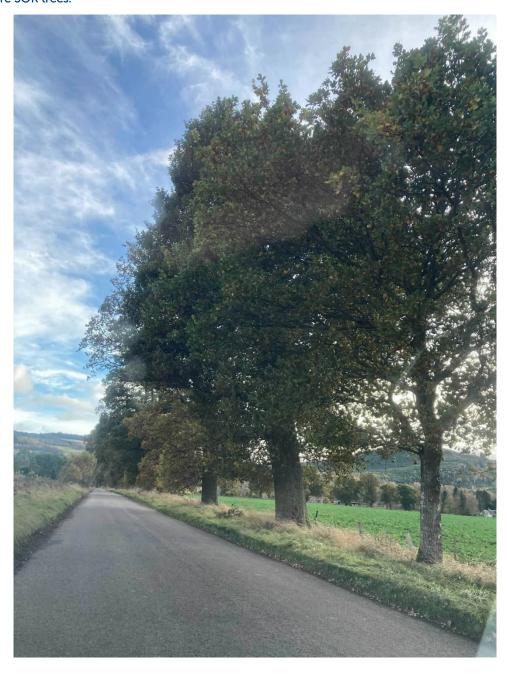


Photo 2: View at NH 548921 445682 at tower BC3-4B looking southwest. Showing mature and semi mature SOK trees along field boundary.





Photo 3: View at NH 550331 4433812 at tower BC4B to BC4-5B looking southwest at mature and semi mature SOK trees.





5 Windblow

- It is acknowledged that the creation of the OC would result in wider potential indirect effects on the surrounding 5.1.1 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 Standards (UKFS)8 for the implementation of the works required.
- There is minimal risk of windblow as a result of the open grown character of adjacent trees at these locations.

6 **Woodland Management Impact**

- While tree felling within the OC will result in a reduction in the total area of woodland, this loss is marginal in the context of forest management and should not significantly affect overall forest management or access at a larger scale.
- 6.1.2 The Proposed OHL Alignment introduces an electrical hazard, but the constraint associated with the electrical hazard will be reduced by regular maintenance of the wayleave which will avoid the incidences of "Red Zone" trees (reference FISA 804 "Electricity at Work: Forestry"9).
- 6.1.3 The total loss of Native Broadleaved woodland resulting from the proposed alignment is 0.25 ha.

7 **Mitigation Opportunities**

7.1 **Woodland Mitigation Measures**

- 7.1.1 Given the loss of field boundary and roadside tress from the wider landscape setting, opportunities to strengthen the wider tree avenue network by planting existing gaps and / or extending the network in the locality should be discussed with the landowner.
- Monitoring and Adaptive Management Regular assessment of tree health of the above network and habitat response to inform future management decisions.

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 BC3-5B to directly east of BC4-5B. They detail the areas designated for clear felling, within the OC and forest design considerations.

Table 8.1: Woodland removal for Infrastructure, within OC.

ltem	Woodland Type	Area (ha)
Operational corridor felling	Native Broadleaved Woodland (70m)	0.25
Total area		0.25

⁸ Scottish Forestry (2024). UK Forestry Standard (UKFS). Available at: https://www.forestry.gov.scot/publications/sustainable-forestry/uk-forestry-standard-ukfs
9 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

ltem	Woodland Type	Area (ha)	
Compensatory Planting Area	Native Broadleaved Woodland	0.25	
Total area			

Table 8.3: Woodland Removal Impact of Infrastructure

ltem	Area (ha)
Total Loss of Woodland Area	0.25
Total Compensatory Planting Area	0.25
Total Net Loss of Woodland Area	

Table 8.4: Woodland removal for Management Felling, outwith OC.

Item	Woodland Type	Area (ha)
Management Felling		0.00
Replanting/Restocking Opportunities		0.00
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)¹⁰. 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 windblow 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 $0.25\ ha$.
- 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 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.

¹⁰ 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

