

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

**Appendix 12.1.23: Woodland Report Parcel 104** 





# APPENDIX 12.1.23: Woodland Report Parcel 104

1	Introduction		
2	Woodland Property		
	Development Requirements		
4	<ul><li>3.1 400 kV Overhead Line Infrastructure Requirements</li><li>3.2 Access Track Route Design</li><li>Woodland Characteristics</li></ul>	3	
5	<ul> <li>4.1 Woodland Composition and Site Conditions</li> <li>4.2 Photo Record – Operational Corridor Assessment</li> <li>Windblow Risk</li> </ul>	4	
6	Woodland Management Impact	7	
7	Mitigation Opportunities		
8	<ul> <li>7.1 Woodland Mitigation Measures.</li> <li>7.2 Restructuring</li></ul>	7	
	Compensatory Planting		

## **Appendix Figures**

Figure 12.1.23a: Parcel 104 Location Map

Figure 12.1.23b: Parcel 104 Proposed Felling Requirements

Figure 12.1.23c: Parcel 104 Proposed Planting Areas



### 1 Introduction

- 1.1.1 This Appendix presents information relevant to the Beauly to Blackhillock to New Deer to Peterhead 400 kV Overhead Line Project (OHL) (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 assesses the potential impacts of the Proposed Development on Woodland Parcel 104. 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 12.1.23a: Parcel 104 Location Map. The forest plantation is situated 5.4 km southwest of Inverness between the Bunchrew burn and the Great Glen Way, within the Highland Council region (NH 602191 417500). The forest consists of a mixture of Scots pine and broadleaves.

# 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) 2002<sup>1</sup> and The Electricity Act 1989<sup>2</sup>. 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 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.

<sup>&</sup>lt;sup>1</sup> UK Gov (2002). The Electricity Safety, Quality and Continuity Regulations 2002. Available at: <u>The Electricity Safety, Quality and Continuity Regulations 2002</u>

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



TRANSMISSION

- 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.
- The typical OC required within areas of commercial conifer forestry for a 400 kV OHL is 90 m (i.e. 45 m either 3.1.2 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 within the commercial forest within Woodland Parcel 104 taking into account the requirements of the conductor blowout assessment. The OC is illustrated in Figure 12.1.23b: Parcel 104 Proposed Felling Requirement.

### 3.2 Access Track Route Design

Temporary access tracks will be created within the OC to access towers BC5-13 and BC5-14.

#### 4 **Woodland Characteristics**

### 4.1 4.1 Woodland Composition and Site Conditions

- 4.1.1 The forest plantation mainly consists of middle-aged Scots pine (SP) of varying density along with a variety of mixed broadleaves in more open areas.
- No current forest management plans or felling permissions apply to the area coinciding with the OC. An active felling permission is in place for areas further north of the OC (FPA-10465).
- 4.1.3 No environmental designations apply to this parcel.
- 414 The land on either side is recorded as Long-Established Plantation Origin (LEPO) on the Ancient Woodland Inventory (AWI)<sup>3</sup>
- The area is moderately exposed with a maximum Detailed Aspect Method of Scoring (DAMS) score of 14<sup>4</sup>, <sup>5</sup>. 4.1.5
- The National Soil Map of Scotland<sup>6</sup> indicates the dominant soil types within the site are humus-iron podzol soils. 4.1.6
- 4.1.7 The Ecological Site Classification  $(ESC)^7$  identifies the site as having a cool, moderately exposed and wet climate. The soils have a slightly dry moisture status and very poor nutrient status.
- 4.1.8 The landscape is characterised by the rocky upland plateau of Inverness. Landform consists of undulating hills.
- The Proposed OHL Alignment consists of a section of OC between towers BC5-13 to BC5-14.

<sup>&</sup>lt;sup>3</sup> NatureScot. Available at: <a href="https://www.nature.scot/doc/guide-understanding-scottish-ancient-woodland-inventory-awi">https://www.nature.scot/doc/guide-understanding-scottish-ancient-woodland-inventory-awi</a>

<sup>&</sup>lt;sup>4</sup> Forest Research (2025). Available at: http://www.forestdss.org.uk/geoforestdss/
<sup>5</sup> 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.

<sup>&</sup>lt;sup>6</sup> Scottish Government (2024). Available at: <a href="https://soils.environment.gov.scot/maps/soil-maps/national-soil-map-of-scotland/7">https://soils.environment.gov.scot/maps/soil-maps/national-soil-map-of-scotland/7</a> Ecological Site Classification. Available at: <a href="https://www.forestdss.org.uk/geoforestdss/">https://www.forestdss.org.uk/geoforestdss/</a>

- TRANSMISSION
  - 4.1.10 There is no existing forest road infrastructure into this part of the property. The Great Glen Way could be used for small scale machines, but it is likely more appropriate to take access from the adjacent properties to the east or west. The closest forest road suitable for haulage within the ownership is the unclassified Dunain to Abriachan road that meets the A82 to the south. This is classed as a Consultation Route by the Timber Transport Forum<sup>8</sup>.
  - 4.1.11 Considering the volume, species, quality and location, felling using harvester / forwarder combinations is recommended. Operations within the parcel could be carried out by hand but considering the required felling on adjacent parcels harvester / forwarder is recommended.

### 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.

Photo 1: Mix of semi-mature Scots pine and Willow with the Bunchrew burn along the fence line in the bottom of the picture (NH 601821 417521, looking northeast)



<sup>&</sup>lt;sup>8</sup> The Timber Transport Forum. Introduction to Agreed Routes Map. Available at: <a href="https://timbertransportforum.org.uk/agreed-routes-map/introduction-to-agreed-routes-map/">https://timbertransportforum.org.uk/agreed-routes-map/introduction-to-agreed-routes-map/</a>



TRANSMISSION

Photo 2: Semi-mature open grown Scots pine (NH 602782 417301, looking west)

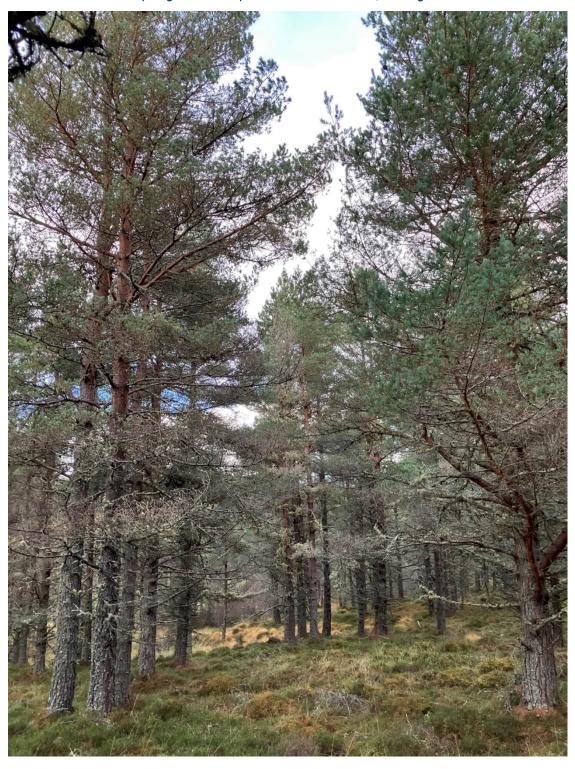




Photo 3: Great Glen Way separating with parcel 1304 on the left (NH 603082 417461, looking northeast)





#### 5 Windblow Risk

- 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). This is covered in more detail in the Chapter 12: Forestry in Section 12.4. 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 the United Kingdom Forestry Standard (UKFS)<sup>9</sup> for the implementation of the works required.
- 5.1.2 Considering the relatively open grown nature of the crop and the shelter given by the landform and surrounding forests the risk of windblow is low.

#### 6 **Woodland Management Impact**

- 6.1.1 Considering the current land use, it is expected the line will have a low impact on forest management. The area does not appear to be used for commercial forestry and is located in a far corner of the property.
- 6.1.2 The infrastructure built for this section of the OHL could provide a minor benefit to the landowner for future forest management as it could provide an access (across neighbouring ground) into part of the property not currently accessible. Alternatively, looking solely at the parcel, the OC will cut off a part of the property south of the OC. As part of construction works, dedicated crossing points and long-term access opportunities should therefore be discussed with the landowner(s).
- 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 Forestry Industry Safety Accord FISA 804 "Electricity at Work: Forestry" 10).
- 6.1.4 The total loss of Native Broadleaved woodland resulting from the Proposed OHL Alignment is 0.0 hectares (ha).

#### 7 **Mitigation Opportunities**

#### 7.1 **Woodland Mitigation Measures**

7.1.1 To mitigate the landscape impact on this section of the Proposed OHL Alignment because of the Great Glen Way, the 'Landscape Replanting Proposals' as set out in the Landscape chapter will be followed. Areas in which this applies are demonstrated in Figure 12.1.23c: Parcel 104 Proposed Planting Areas.

#### 7.2 Restructuring

- 7.2.1 As the felling in this ownership solely consists of the OC felling there will be limited impact on the forest
- 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. The OC does cut off a part of the property to the south of approximately 1ha, this is not a viable management unit and, as such, the green edges as a result of the OC are of limited benefit to landowner.

Scottish Forestry (2024). Available online at: <a href="https://www.forestry.gov.scot/publications/sustainable-forestry/uk-forestry-standard-ukfs">https://www.forestry.gov.scot/publications/sustainable-forestry/uk-forestry-standard-ukfs</a>
 Forest Industry Safety Accord (2020), FISA 804 Electricity at Work: Forestry. Available at: <a href="https://ukfisa.com/Safety/Safety-Guides/fisa-804">https://ukfisa.com/Safety/Safety-Guides/fisa-804</a>



### 7.3 Restocking

7.3.1 As there is no management felling proposed there will be no restock obligation on the landowner. As set out in the Landscape chapter under the 'Landscape Replanting Proposals' restocking can 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 12.1.23c: Parcel 104 Proposed Planting Areas.

## 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 BC5-13 to BC5-14. It details 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)
OC felling	Native Conifer (90 m)	0.63
Total area		0.63

Table 8.2: Compensatory Planting

ltem	Woodland Type	Area (ha)
Compensatory Planting Area	Native Conifer	0.63
Total area		0.63

Table 8.3: Woodland Removal Impact of Infrastructure

Item	Area (ha)
Total Loss of Woodland Area	0.63
Total Compensatory Planting Area	0.63
Total Net Loss of Woodland Area	

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

Item	Woodland Type	Area (ha)
Management Felling		
Replanting / Restocking Opportunities		
Net Loss of Woodland Area		0.0

# 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)<sup>11</sup>. 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 Strategy**.

<sup>&</sup>lt;sup>11</sup> Forestry Commission Scotland (2009). Control of Woodland Removal Policy. Available at: <a href="https://www.forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal/viewdocument/285">https://www.forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal/viewdocument/285</a>



### TRANSMISSION

- 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 0.63 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 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.

