

CHAPTER 14 - FORESTRY

14.1	Executive Summary	2
14.2	Introduction	3
14.3	Scope of Assessment and Methodology	3
14.4	Baseline Conditions	12
14.5	Embedded Mitigation Measures	13
14.6	Potential Effects	14
14.7	Mitigation	21
14.8	Residual Effects	22
14.9	Summary and Conclusions	25

Figures (Volume 2 of this EIA Report)

Figure 14.1a: Forestry

Figure 14.1b: Forestry - Ancient Woodland Inventory

Technical Appendices (Volume 4 of this EIA Report)

Technical Appendix 14.1: Woodland Reports

14.1 Executive Summary

- 14.1.1 This Chapter considers the likely significant effects from the construction and operation of the Proposed Development on forest and woodland areas. The assessment has been undertaken by Bidwells Forestry in line with the UK Forestry Standard (UKFS) guidance.
- 14.1.2 The Applicant has produced a series of Woodland Reports (included as a series of Annexes to **Technical Appendix 14.1: Woodland Reports**) to indicate the areas of forestry or woodland that would be intersected by the Proposed Development. The Woodland Reports set out details of the current baseline in terms of describing the woodland type (species, condition, current management), with reference to incorporation of the Proposed Development within ongoing forest management activities.
- 14.1.3 The Proposed Development is predicted to result in the direct loss of 58.18 ha of commercial woodland, of which 17.28 ha of Upland Planted Ancient Woodland (PAWS) and 1.75ha are classed as 2a within the Ancient Woodland Inventory (AWI). A further 7.64 ha of ancient and semi-natural woodland would also be lost, of which 3.23 ha are classed as 2a within the AWI, 0.86ha as PAWS and 3.55 ha of semi-natural woodland due to the requirement to create an Operational Corridor (OC) for the construction and safe operation of the proposed overhead line (OHL), including the creation of access.
- 14.1.4 The assessment concluded that the removal of 3.23 ha of ancient woodland and 3.55 ha of semi-natural woodland, would result in a **significant** adverse effect on both woodland types, despite potential opportunities to reduce the amount of felling, subject to further detailed design. No significant effects were predicted for the removal of commercial or PAWS woodland.
- 14.1.5 Given that the Proposed Development would result in the permanent loss of woodland, the Applicant is committed to making arrangements to plant off-site the equivalent area of woodland as Compensatory Planting, meeting the Scottish Government's CoWRP¹ objective of no net loss of woodland.
- 14.1.6 Furthermore, 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 (windthrow). The Woodland Reports identify further areas of felling to leave a windfirm edge (categorised as an indirect secondary impact). 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 UKFS for the implementation of the works required.
- 14.1.7 The assessment identified the potential for significant effects (pre-mitigation) on forest management, due to the requirement for forest managers to amend current objectives, plans and techniques for their forest, in particular, to incorporate the felling requirements for the OC into their long-term felling and landscape design plans. With the commitment to develop the 'Woodland Reports' for each of the forests and woodlands affected by the Proposed Development, this is deemed sufficient to reduce the residual effect on forest management to not significant.
- 14.1.8 No significant effects on forest operations access were identified.

¹ The Scottish Government's Policy on Control of Woodland Removal, Forestry Commission (2009)

14.2 Introduction

- 14.2.1 This Chapter assesses the significance of predicted residual effects of the construction and operation of the Proposed Development (and Ancillary Works) on forest and woodland areas. As described in **Chapter 3: Project Description** it is anticipated that the effects associated with the construction phase could be considered to be representative of worst-case decommissioning effects on forestry and woodlands. As such, a separate assessment of potential decommissioning effects is not included in this Chapter. The assessment is supported by **Technical Appendix 14.1: Woodland Reports** (in Volume 4 of this EIA Report). The Technical Appendix contains a series of location specific Woodland Reports in relation to forestry and woodland that would be intersected by the Proposed Development. These Woodland Reports that are individual Annexes to **Technical Appendix 14.1: Woodland Reports**, detail the current baseline in terms of describing the woodland type (including species, condition, current management), and future management under reference to the Land Management Plans (LMPs) where available. The Woodland Reports contain the detailed assessment of impacts likely to result from the construction and operation of the Proposed Development. Future management proposals have been designed in conjunction with relevant landowners / forest managers to create a resilient and sustainable long-term forest management system.
- 14.2.2 The assessment has been prepared by Bidwells Forestry in line with the UK Forestry Standard (UKFS) guidance². All staff contributing to this Chapter have professional experience in forestry survey and environmental impact assessment (EIA). A table presenting the relevant qualifications and experience of key staff involved in the preparation of this Chapter is included in **Technical Appendix 4.1: EIA Team**, contained within Volume 4 of this EIA Report.
- 14.2.3 Throughout this assessment, areas of ancient or semi-natural woodland are referred to as woodland and areas of predominately commercial species are classed as forests.

14.3 Scope of Assessment and Methodology

Scope of Assessment

- 14.3.1 This Chapter considers the significance of likely predicted effects of the Proposed Development on forestry, including cumulative effects with other developments where relevant. This includes an assessment of the sensitivity of the forestry and woodland areas located along the route of the Proposed Development and an assessment of the likely impacts that would arise from the Proposed Development, with particular emphasis on forest and woodland structure and management.
- 14.3.2 The assessment is based on the description of the Proposed Development that is provided in **Chapter 3: Project Description**.
- 14.3.3 The assessment is based on the requirement to form, and maintain, an Operational Corridor (OC) along the route for the Proposed Development, while recognising the potential impacts over broader forest management areas as a result of the Proposed Development. This Chapter reports on the assessment of the effects associated with the creation of the OC only and does not address the overall Long Term Forest Plans (LTFPs). Any felling undertaken out with the OC would be solely under the control of the relevant landowner and not the Applicant, and consequently, the assessment is limited to consideration of the effects of the Proposed Development on the present forest composition and yield, at the time of writing. The relevant landowners and forest managers have been consulted on the felling requirements within the OC and how these may impact the overall LTFPs. Proposals to develop the additional works required to maintain a sustainable long-term resilient holding following the clearance of the OC have been developed alongside the landowners and forest managers to minimise the long-term impact.

² United Kingdom Forestry Standard (UKFS), Forestry Commission (2017)

14.3.4 As provided in terms of the Electricity Safety, Quality and Continuity Regulations (ESQCR) 2002³ and Schedule 4 to the Electricity Act 1989⁴, the Applicant has the necessary statutory powers to remove woodland for the purposes of construction and on-going maintenance of new OHLs, and/or protection of electrical plant.

Extent of the Study Area and Operational Corridor

14.3.5 The study area for this assessment initially focussed on an area 100 metres (m) either side of the centre line of the OHL alignment and ancillary infrastructure, where relevant, prior to the identification of an OC. The OC is defined 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 final 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.

14.3.6 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 of the OHL). Where the OC passes through areas of native 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 proposed OC for the Proposed Development through areas of native woodlands of high sensitivity (i.e. Ancient Woodland Inventory (AWI)) has been reduced to 50 m (i.e. 25 m either side of the centre line of the OHL). This has been based on the likely height of the woodland at maturity.

14.3.7 By definition, the OC is deemed to include any tree with the potential to become a “Red Zone” tree as defined within the Forest Industry Safety Accord (FISA), Guidance note 804⁵. This refers to any tree with the potential to fall into the vicinity zone of the OHL conductors or directly onto the conductors causing damage or failure.

14.3.8 The assessment has been limited to the forestry and woodland removal required to create the proposed OC for the 400 kV OHL (including the 132 kV OHL diversions and required access tracks), as set out in **Chapter 3: Project Description**. It is acknowledged that the creation of the OC would result in wider potential indirect effects on the surrounding forestry and woodland areas. These areas would be subject to potential increased risk of damage (windthrow). As a result, the assessment work includes a series of Woodland Reports (see the Annexes to **Technical Appendix 14.1: Woodland Reports**), in respect of the forests and woodlands affected by the Proposed Development. The Woodland Reports demonstrate how the Proposed Development would be incorporated within ongoing forest management activities. They also identify further areas of felling to establish and leave a windfirm edge for the remaining forestry or woodland; (categorised as an indirect effect). Any felling undertaken out with the OC would be solely under the control of the relevant landowner (and not the Applicant) (see paragraph 14.3.3).

14.3.9 It should be noted that of the six woodlands affected by the Proposed Development, two of these are private woodlands and four are within the ownership of the Scottish Ministers and are managed by Forestry and Land Scotland (FLS).

Consultation and Scoping

14.3.10 To inform the scope of the assessment for the Proposed Development, consultation was undertaken with statutory and non-statutory bodies. Table 14.1 summarises the scoping and consultation responses relevant to the forestry and woodland assessment and provides information on where and/or how points raised have been addressed in this assessment.

14.3.11 Full details on the consultation responses and scoping opinion can be reviewed in **Chapter 5: Scoping and Consultation**, and associated appendices.

³ <https://www.legislation.gov.uk/uksi/2002/2665/contents/made> - accessed 15/07/2022

⁴ <https://www.legislation.gov.uk/ukpga/1989/29/contents> - accessed 15/07/2022

⁵ Safety Guide 804 Electricity at work: Forestry, Forest Industry Safety Accord (FISA)

14.3.12 Consultation responses, relevant to forestry, are provided in **Table 14.1** below.

Table 14.1: Consultation Responses

Consultee and Date	Consultation Type	Response	Action
Scottish Forestry (SF) 22 nd February 2023	Scoping Response	<p>The first consideration for all woodland removal decisions should be whether the underlying purpose of the proposals can reasonably be met without resorting to woodland removal.</p>	<p>The reasoning behind the selection of the proposed alignment of the 400 kV OHL is described in Chapter 2: Routeing Process and Alternatives.</p>
		<p>In line with Scottish Government's wider objective to protect and expand Scotland's woodland cover, applicants are expected to develop their proposal with minimal woodland removal. Woodland removal should be allowed only where it would achieve significant and clearly defined additional public benefits.</p> <p>The following criteria for determining the acceptability of woodland removal should be considered relevant to this application:</p> <ul style="list-style-type: none"> • Woodlands with a strong presumption against removal • Woodland removal with a need for compensatory planting. 	<p>An assessment has been carried out to identify potential effects on forestry and native woodland (including AWI) throughout the route. The supporting Technical Appendix and Annexes to this Chapter also confirm compensatory measures where woodland loss is anticipated.</p> <p>Baseline surveys have been carried out to identify high sensitivity areas. Mitigation measures have been applied to minimise the short and long-term impacts.</p>
		<p>Adopted and published by Scottish Ministers on Monday 13th February 2023, National Planning Framework 4 (NPF4) - Policy 6 Forestry, Woodlands and trees identifies several themes that should be considered relevant to this application.</p>	<p>The NPF4 will be adhered to throughout the assessment.</p>
		<p>SF strongly advises the developers to ensure that any proposed changes to woodland address the requirements of the Control of Woodland Removal Policy and other relevant guidance.</p>	<p>Compensatory planting requirements and potential windthrow effects form part of the forestry assessment and associated Technical Appendix and Annexes.</p>
		<p>SF acknowledges the developer's commitment to include detailed</p>	<p>Any additional felling undertaken out with the OC</p>

Consultee and Date	Consultation Type	Response	Action
		<p>information on the types and areas of forestry to be felled and restocked as a result of the proposed development. Detailed information on any compensatory planting proposals should also be provided. All felling, restocking and compensatory planting proposals must be compliant with the UK Forestry Standard.</p>	<p>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 good practice in terms of redesign of their current LTFPs which in-turn would aim to follow UKFS for the implementation of the works required.</p>
		<p>The applicant should note that any compensatory planting required as a result of the proposed development, may also need to be considered under The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 and should follow the process for preparing a woodland creation proposal, as set out in FS's guidance booklet: Woodland Creation Application Guidance.</p>	<p>A separate application will be submitted to SF for a formal opinion on whether consent is required to undertake Compensatory Planting.</p>
<p>Scottish Environment Protection Agency (SEPA) 24th March 2023</p>	<p>Scoping Response</p>	<p>Proposals for felled forest material must be shown to comply with our Use of Trees Cleared to Facilitate Development on Afforested Land – Joint Guidance from SEPA, SNH and FCS.</p>	<p>Any commercially viable timber will be removed from site.</p> <p>In areas of poor access and uneconomic felling, trees will be mulched. All excess waste created during felling works will be managed under UKFS guidance.</p>
<p>Forestry and Land Scotland (FLS) North District 15th August 2022</p>	<p>Route and Alignment Stage Consultation Response</p>	<p>FLS North have agreed that SSEN Transmission have designed the Proposed Development to minimise the impact on the local community and landscape.</p> <p>Further investigations are required into the Torr Dhuin archaeological site and the volume of timber traffic within the Fort Augustus community.</p> <p>An agreement to manage the PAWS restoration works will be required to mitigate any loss of habitat.</p>	<p>Information relating to removal of woodland is included within this Chapter and associated Technical Appendix and Annexes.</p> <p>An assessment of the potential setting impacts on the Torr Dhuin Scheduled Monument is included in Chapter 11: Cultural Heritage.</p> <p>An assessment of Traffic and Transport effects of the Proposed Development, including Timber removal is</p>

Consultee and Date	Consultation Type	Response	Action
			included in Chapter 12: Traffic and Transport.
Forestry and Land Scotland (FLS) West District 20 th June 2022	Route and Alignment Stage Consultation Response.	<p>It is the impact on the Caledonian pinewood that is of most concern to FLS due to the irreplaceable nature and fragility of this habitat. Concerns were raised over the initial reports during the route and alignment process, stating the woodland was almost entirely routed through an area of commercial forestry. This is incorrect – the Glen Garry section is through Caledonian pinewood restored native woodland, PAWS due to be restored and temperate rainforest.</p> <p>FLS would expect to see greater effort being made to avoid the Caledonian pinewood area through alternative locations and routes as well as more innovative approaches to construction and design.</p>	<p>An assessment has been carried out to identify potential effects on forestry and native woodland (including AWI) throughout the route. The supporting Technical Appendix and Annexes to this Chapter also confirm compensatory measures where woodland loss is anticipated.</p> <p>Baseline surveys have been carried out to identify high sensitivity areas. Mitigation measures have been applied to minimise the short and long-term impacts.</p> <p>Additional management felling areas have been identified throughout the woodlands to minimise the impact of wind blow.</p> <p>An online workshop was held on the 14th June 2022 to discuss the issues raised during consultation and a subsequent on-site meeting was held to further investigate the mitigation measures that could be implemented.</p>
		<p>Further investigations are required to measure the peat depths, wind blow and landscape impacts.</p>	<p>Additional management felling areas have been identified throughout the woodlands to minimise the impact of wind blow.</p> <p>Potential impacts on the landscape are assessed in Chapter 7: Landscape and Visual Assessment.</p> <p>Potential impacts on peat are assessed on Chapter 10: Geology, Soils and Water.</p>

Consultee and Date	Consultation Type	Response	Action
		<p>Any woodland removal for development purposes will be subject to Scottish Governments' Policy on Control of Woodland Removal (CoWRP). The CoWRP states, "<i>there is a strong presumption against removing the following types of woodland: ancient semi-natural woodland: areas supporting priority habitats and species listed in the UK Biodiversity Action Plan (UKBAP)</i>".</p> <p>The Caledonian Pinewoods are included within the UKBAP as UK BAP priority habitat (coniferous woodland): Native Pine Woodlands. The first consideration should be whether the underlying purpose of the proposal can be reasonably met without resorting to woodland removal.</p>	<p>An assessment has been carried out to identify potential effects on forestry and native woodland (including AWI) throughout the route of the Proposed Development. The supporting Technical Appendix and Annexes to this Chapter also confirm compensatory measures where woodland loss is anticipated.</p> <p>Compensatory planting requirements and potential windthrow effects form part of the forestry assessment and associated Technical Appendix and Annexes.</p> <p>The Caledonian Pinewoods are assessed as a UKBAP habitat in Chapter 8: Terrestrial Ecology.</p> <p>Chapter 2: Route Selection and Alternatives describes why the proposed OHL alignment, which is routed through the Glengarry Forest Caledonian Pinewoods, was selected.</p>
<p>Scottish Forestry (SF) 14th June 2022</p>	<p>Route and Alignment Stage Consultation Response.</p>	<p>An EIA Report must be submitted which should include a stand-alone chapter on 'Woodland management and tree felling', which should be prepared by a suitably qualified professional. Site surveys will need to be carried out and information of the woodland presented, including maps. This chapter should include a description of the current woodland type and an assessment of the impacts and mitigation of felling and woodland removal particularly on woodland types with a strong presumption against removal.</p>	<p>This Chapter is included as a standalone chapter on potential impacts on the Proposed Development on forestry and woodland, including woodland management and felling. This Chapter (and the associated Technical Appendix and Annexes) includes a description of the current woodland type and an assessment of the impacts and mitigation of felling and woodland removal.</p>

Consultee and Date	Consultation Type	Response	Action
		Any proposed compensatory planting areas will be the subject of the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017, and therefore a separate application will be required to be submitted to SF for a formal opinion on whether consent is required.	Compensatory planting requirements form part of the forestry assessment and associated Technical Appendix and Annexes to this Chapter. A separate application will be submitted to SF for a formal opinion on whether consent is required to undertake Compensatory Planting.
		Any additional felling which is not part of the planning application will require permission from SF under the Forestry and Land Management (Scotland) Act 2018 (the Act). For areas covered by an approved Long Term Forest Plan (LTFP), the request for additional felling (and subsequent restocking) areas needs to be presented in the form of a LTFP amendment.	Any additional 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 good practice in terms of redesign of their current LTFPs which in-turn would aim to follow UKFS for the implementation of the works required.
Woodland Trust (WT) 17 th June 2022	Route and Alignment Stage Consultation Response.	WT advised that the proposed removal of woodland identified on the Ancient Woodland and Caledonian Pinewood inventories would be significant and noted that they would take a position of opposition to the proposals.	Information relating to removal of woodland is included within this Chapter and associated Technical Appendix and Annexes.

Methodology for the Assessment of Effects

14.3.13 There are currently no published criteria, guidance or methodologies for the assessment of effects on forestry. The assessment reported in this Chapter is based upon the methodology set out in **Chapter 4 – EIA Process and Methodology** and has therefore been based upon the requirements of the 2017 EIA Regulations.

14.3.14 The assessment is made based on professional judgement, with reference to:

- the sensitivity of the different types of woodland present in the study area taking account of the degree and rate of change in the woodland, both in the recent past and that anticipated in the near future, and therefore the susceptibility/vulnerability of the woodland to change; the quality of the woodland and the extent to which it is rare or distinctive, and the value attributed to the woodland through designations;
- magnitude of change and extent of woodland removal;
- duration and reversibility - timescale of effect (days/weeks/months/years) until recovery. Permanent effects are described as such, and likelihood of recovery is detailed where appropriate; and

- adverse/beneficial - if the effect will be beneficial or detrimental to the feature.

14.3.15 The effect on woodland is normally considered to be of an adverse nature (i.e. tree felling); however indirect beneficial effects in some areas may arise where the introduction of the Proposed Development allows for the removal of ecologically habitat-poor conifer plantation. This may be followed by natural regeneration or planting of more diverse woodland tree mix or introduction of native woodland species, and the development of more open ground than that which existed originally. While there may be an ecological benefit from the removal of conifer plantation forest, there is a presumption against all forest removal which is supported by the Scottish Government's policy on Control of Woodland Removal⁶. As such for the purposes of this assessment tree removal is to be considered as having an adverse effect. Further arboricultural works (i.e. crown reduction or limb removal) to achieve the necessary safety clearance, removes the necessity for tree removal, thereby reducing the adverse effect on the woodland habitat.

Criteria for Assessing Sensitivity / Importance of Receptors

14.3.16 Four categories of sensitivity / importance of a forest or woodland are defined in **Table 14.2**.

Table 14.2: Sensitivity Criteria

Category	Description
High	<ul style="list-style-type: none"> • Highly valued, subject of national designation e.g. Ancient Woodland Category 1a&2a; • Particularly rare or distinctive in a national context; or • Considered susceptible to small changes.
Medium	<ul style="list-style-type: none"> • Valued more locally; • Rare or distinctive in a regional context; and/or • Are tolerant of moderate levels of change.
Low	<ul style="list-style-type: none"> • Generally, more commonplace, not designated; • Considered potentially tolerant of noticeable change; or • Undergoing substantial development such that their character is one of change.
Negligible	<ul style="list-style-type: none"> • Already fundamentally changed (e.g. second rotation commercial conifer plantation); • considered tolerant of noticeable change; or • having undergone substantial development such that their character is one of change.

14.3.17 Given the dynamic nature of productive forests, which are subject to restructuring, the environmental sensitivity of the forest as a commercial asset and land use is low. There are areas of Ancient Woodland present within the vicinity of the Proposed Development, and these are considered in this assessment to be of medium sensitivity. The assessment of effects on ancient and semi-natural woodland in ecological terms are addressed in **Chapter 8: Terrestrial Ecology** of this EIA Report.

Criteria for Assessing Magnitude of Change

14.3.18 Criteria for assessing the magnitude of change to a forest or woodland is defined in **Table 14.3**.

⁶ Scottish Government's Policy on Control of Woodland Removal: implementation guidance. (2019)

Table 14.3: Magnitude of Change Criteria

Category	Description
High	a noticeable change to the forest or woodland over a wide area or an intensive change over a limited area.
Medium	small changes to the forest and woodland over a wide area or noticeable change over a limited area.
Low	very small changes to the forest or woodland over a wide area or small changes over a limited area.
Negligible / None	no discernible change to the forest or woodland.

Significance Criteria

14.3.19 The sensitivity of the woodland (**Table 14.2**) and magnitude of change criteria (**Table 14.3**) are then used to inform a professional judgement on the likely significance of the effect. **Table 14.4** provides a framework for reaching a judgement as to the significance of predicted effects.

Table 14.4: Matrix for Determining the Significance of Effects

		Sensitivity of Receptor/Receiving Environment to Change/Effect			
		High	Medium	Low	Negligible
Magnitude of Change/Effect	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

14.3.20 Major and moderate effects are considered to be significant within the context of the 2017 EIA Regulations.

Desk Study

14.3.21 Searches of the Land Register of Scotland of the Proposed Development provided the property boundary information of each landholding. A desk-based appraisal of Ordnance Survey (OS) mapping, aerial photography and review of web-based data provided by Scottish Forestry⁷ identified the existing forest and woodland cover within a study area defined as 100 m either side of the proposed OHL alignment and ancillary infrastructure. This was supplemented by consultation with landowners and/or forest managers and review of existing forest data (provided by the landowners) on woodland type (species / age / class) and the existing woodland management regime, including woodland restructuring and LMP/LTFP information.

Field Survey

14.3.22 Forest walkover and mapping surveys were undertaken during February 2023, to confirm the extent of the woodland areas affected by the Proposed Development and further assess the current woodland characteristics. Photographic records were taken to provide visual samples of the woodland types and are

⁷ open-data-scottishforestry.hub.arcgis.com

included in **Annex 1 of Technical Appendix 14.1**. Woodland volume assessments of the commercial conifer woodlands were undertaken during the site walkovers, with the application of tree measurement techniques in-line with industry standard forest mensuration protocol.⁸

14.3.23 The forest walkovers included the visual assessment of tree health, vigour, ground conditions and existing woodland stability. Observations were also made of potential woodland windfirm boundaries. The forest walkover surveys included consideration of ancillary infrastructure and the Limits of Deviation (LOD) as set out in **Chapter 3: Project Description**.

Limitations and Assumptions

14.3.24 Forest information has been provided by the landowners and forest / land managers of each landholding and cross checking has only been carried out where observations suggested that the immediate conditions varied from the estate forestry records.

14.4 Baseline Conditions

14.4.1 The study area comprises large areas of commercial forest plantations, as well as areas of native woodland, a number of which are recorded as Ancient Woodland (see Figure 14.1a). In relation to the Highland region, The Highland Council (THC) records the woodland cover across the region as 310,000 hectares (ha), with 232,500 ha comprising commercial woodland and 130,000 ha comprising native woodland, of which approximately 40,100 ha are classed as Ancient Woodland. The baseline characterisation work carried out identified three landowners with forest or woodland potentially affected by the Proposed Development. A Woodland Report has been prepared for each of the affected forest or woodland properties (six reports in total), which are included in **Technical Appendix 14.1: Annex 1 - Woodland Reports**. Each of these sites were visited and existing data, sourced from the forest owners and their agents, were reviewed and confirmed against the woodland site surveys.

14.4.2 The total areas of woodland habitats recorded within the OC during the site surveys include:

- Commercial Woodland (58.18 ha); and
- Native Broadleaved Woodland (ancient woodland and semi natural woodland) (7.64 ha).

14.4.3 Of the woodland areas identified, 4.98ha of these areas are recorded as 2a and 18.14 ha as PAWS (as defined in 14.4.4 below) on the Scottish Government's Ancient Woodland Inventory⁹ (AWI), and 3.55 ha of semi-natural woodland as shown within **Technical Appendix 14.1: Woodland Reports** and **Figure 14.1b**.

14.4.4 NatureScot's Ancient Woodland Inventory (AWI)¹⁰ sets out three main categories of ancient woodland, all of which are of value for their biodiversity and cultural value by virtue of their antiquity:

- Ancient Woodland (1a or 2a) - Interpreted as semi-natural woodland from maps of 1750 (1a) or 1860 (2a) and continuously wooded to the present day. If planted with non-native species during the 20th century they are referred to as Plantations on Ancient Woodland Sites (PAWS);
- Long Established of Plantation Origin (LEPO) (1b or 2b) - Interpreted as plantation from maps of 1750 (1b) or 1860 (2b) and continuously wooded since. Many of these sites have developed semi-natural characteristics, especially the oldest ones, which may be as rich as Ancient Woodland; and
- Other woodlands on 'Roy' woodland sites (3) - Shown as unwooded on the 1st edition maps but as woodland on the Roy maps. Such sites have, at most, had only a short break in continuity of woodland cover and may still retain features of Ancient Woodland.

⁸ Forest Mensuration: a handbook for practitioners. Forestry Commission (2006)

⁹ Available via - <https://www.data.gov.uk/dataset/c2f57ed9-5601-4864-af5f-a6e73e977f54/ancient-woodland-inventory-scotland> - accessed 15/07/2022

¹⁰ A guide to understanding the Scottish Ancient Woodland Inventory (AWI) | NatureScot

Future Baseline

14.4.5 Under the future “do nothing scenario” it has been assumed that coniferous plantation areas will continue to be managed principally in-line with commercial objectives and woodland restructuring, including their felling and replanting with similar species. It is assumed that the Ancient and semi-natural woodland areas would be managed as long-term retention areas. It is not considered likely that there will be a net reduction in the area of forest as a result of this scenario overall, although there will clearly be local changes. On this basis, the current baseline has been used for the purposes of this assessment and no further consideration will be given to future baseline scenarios.

14.5 Embedded Mitigation Measures

14.5.1 The embedded mitigation is a combination of decisions taken during the design process to avoid or minimise the potential for likely significant effects through routeing and alignment of the OHL, and the implementation of standard practice mitigation measures that are well-established and effective. These are discussed below.

Iterative Design Process

14.5.2 The routeing and alignment selection process for the Proposed Development has taken into consideration the potential for significant effects on forestry and woodland, and for such effects to be avoided or minimised where possible. This has continued through the EIA process, with survey data informing the siting of infrastructure and access routes to minimise further potential effects on forestry and woodland, where practicable. This process is detailed in **Chapter 2: The Routeing Process and Alternatives**.

Good Practice

14.5.3 There would be a contractual management requirement for the successful Principal Contractor to fully implement a comprehensive and site-specific Construction Environmental Management Plan (CEMP). This document would detail how the successful Principal Contractor would manage all works in accordance with all commitments and mitigation detailed in the EIA Report, the Applicant’s GEMPs and SPPs (see **Technical Appendix 3.2, General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs)**), statutory consents and authorisations, and industry good practice and guidance, including pollution prevention guidance. An outline CEMP is provided in **Technical Appendix 3.6**.

14.5.4 Good practice measures with respect to felling requirements would be incorporated into environmental management controls, including:

- adherence to Forestry Commission (Scottish Forestry) Guidelines¹¹ e.g. to ensure protection and enhancement of the water environment;
- management of forestry waste (SEPA)¹² to ensure all excess waste resulting from forestry operations is correctly disposed of; and
- implementation of tree harvesting and extraction methods to ensure minimisation of soil disturbance and compaction.

14.5.5 All woodland and forestry removal operations contracted by the Applicant would adhere to the UKFS¹³.

¹¹ The UK Forestry Standard. Forestry Commission (2017)

¹² SEPA Guidance WST –g-027, version 3 (2017)

¹³ The UK Forestry Standard. Forestry Commission (2017)

14.6 Potential Effects

14.6.1 The assessment of likely significant effects associated with the construction and operational phases of the Proposed Development is based on the typical activities and characteristics described in **Chapter 3: Project Description** and related Appendices.

14.6.2 The introduction of OHLs into forestry and woodland can give rise to a combination of short-term and long-term effects during both construction and operation. The following interrelated effects can arise from the introduction of OHLs within forest and woodland areas associated principally with the requirement for tree felling and vegetation management.

- Direct construction and operational effects: loss of areas of forest through woodland removal to create the 132 kV OHL diversions, 400 kV OHL OC and access tracks, in the context of the regional forest resource for both commercial woodland, ancient woodland and semi natural woodlands;
- Indirect construction effects: increased windthrow and secondary felling agreed with landowners;
- Indirect operational effects: effects on forest management systems;
- Indirect operational effects: restrictions on forest access; and
- Cumulative effects: combined loss of woodland from direct and indirect (secondary) felling.

14.6.3 The assessment is structured around the consideration of these effects.

14.6.4 In total, approximately 7.3 km of the Proposed Development was assessed as being within forest or woodland and associated open ground, where tree clearance would be required to form an OC.

14.6.5 A summary of the forestry and woodland receptors relevant to the ownership areas and why these have been 'scoped-in' to the assessment are given in **Table 14.5.. Annex 2 of Technical Appendix 14.1** provides details of the named forestry / woodland sites.

Table 14.5: Summary of Woodland Receptors

Woodland	Receptor	Justification
FLS Glengarry	Plantation conifer forest	Tolerant to the proposed changes and having no environmental designation. Considered as part of the assessment of effects.
	Ancient woodland and semi natural woodland	Ancient woodland is valued (non- statutory designation). Semi natural woodland is noted to have biodiversity and amenity value. Both are considered locally tolerant to medium levels of change. This assessment is based on the regional sensitivity. It is recognised there may be some localised areas considered to have increased sensitivity. Within this assessment the sensitivity is considered to be medium. Considered as part of the assessment of effects.
FLS Glengarry II	Plantation conifer forest	Tolerant to the proposed changes and having no environmental designation. Considered as part of the assessment of effects.
	Ancient woodland and semi natural woodland	Ancient woodland is valued (non- statutory designation). Semi natural woodland is noted to have biodiversity and amenity value. Both are considered locally tolerant to medium levels of change. This assessment is based on the regional sensitivity.

		It is recognised there may be some localised areas considered to have increased sensitivity. Within this assessment the sensitivity is considered to be medium. Considered as part of the assessment of effects.
Aberchalder Estate	Ancient woodland and semi natural woodland	Ancient woodland is valued (non- statutory designation). Semi natural woodland is noted to have biodiversity and amenity value. Both are considered locally tolerant to medium levels of change. This assessment is based on the regional sensitivity. It is recognised that there may be some localised areas considered to have increased sensitivity. Within this assessment the sensitivity is considered to be medium. Considered as part of the assessment of effects.
Kilfinnan & Munerigie	Plantation conifer forest	Tolerant to the proposed changes and having no environmental designation. Considered as part of the assessment of effects.
	Ancient woodland and semi natural woodland	Ancient woodland is valued (non- statutory designation). Semi natural woodland is noted to have biodiversity and amenity value. Both are considered locally tolerant to medium levels of change. This assessment is based on the regional sensitivity. It is recognised that there may be some localised areas considered to have increased sensitivity. Within this assessment the sensitivity is considered to be medium. Considered as part of the assessment of effects.
FLS Drynachan	Plantation conifer forest	Tolerant to the proposed changes and having no environmental designation. Considered as part of the assessment of effects.
FLS Auchterawe Farm	Plantation conifer forest	Tolerant to the proposed changes and having no environmental designation. Considered as part of the assessment of effects.
	Ancient woodland and semi natural woodland	Ancient woodland is valued (non- statutory designation). Semi natural woodland is noted to have biodiversity and amenity value. Both are considered locally tolerant to medium levels of change. This assessment is based on the regional sensitivity. It is recognised that there may be some localised areas considered to have increased sensitivity. Within this assessment the sensitivity is considered to be medium. Considered as part of the assessment of effects.

Direct Construction Effects – Woodland Removal

14.6.6 The direct and gross loss of woodland from construction of the Proposed Development (plus Ancillary Works) is set out for each Section in **Table 14.6**. The named woodland that would be affected in each of the Sections is identified in **Annex 2 of Technical Appendix 14.1** and the areas affected in each of the woodlands is quantified in each of the relevant Woodland Reports in **Annex 1 of Technical Appendix 14.1: Woodland Reports**

Table 14.6: Construction Phase Woodland Removal

Section	Woodland	Woodland Type	Woodland Classification	Area (ha)	Felling requirement
1	FLS Glengarry	Commercial	Mixed Conifer	0.75	400 kV OC
		Commercial	Ancient Woodland PAWS	5.67	400 kV OC
		Commercial	Ancient Woodland 2a	0.48	New Track
		Native	Semi-natural broadleaved	1.75	400 kV OC
		Native	Ancient Woodland PAWS	0.22	400 kV OC
		Native	Ancient woodland 2a	2.09	400 kV OC
2	FLS Glengarry II	Commercial	Ancient Woodland 2a	0.28	400 kV OC
		Commercial	Ancient Woodland PAWS	1.36	400 kV OC
		Commercial	Ancient Woodland 2a	0.23	New Track
3	Aberchalder	Native	Ancient woodland 2a	1.02	400 kV OC
		Native	Semi-natural broadleaved	0.16	400 kV OC
		Native	Semi-natural broadleaved	0.39	132 kV Fort Augustus to Fort William OHL Diversion OC
		Native	Ancient Woodland 2a	0.255	OC Crown Reduction (not included within woodland removal area)
4	Kilfinnan&Munerigie	Commercial	Mixed Conifer	5.42	400 kV OC
		Commercial	Ancient Woodland 2a	0.34	400 kV OC
		Native	Ancient Woodland 2a	0.12	400 kV OC
5	FLS Drynachan	Commercial	Mixed conifer	10	400kV OC
		Commercial	Mixed conifer	2.17	132 kV Fort Augustus to Fort William OHL Diversion OC

Section	Woodland	Woodland Type	Woodland Classification	Area (ha)	Felling requirement
		Commercial	Mixed conifer	2.42	132 Invergarry Tee OHL Diversion OC
		Commercial	Mixed conifer	2.02	New track
6	FLS Auchterawe Farm	Commercial	Mixed conifer	14.81	400 kV OC
		Commercial	Ancient woodland 2a	0.7	400 kV OC
		Commercial	Ancient woodland PAWS	9.46	400 kV OC
		Commercial	Mixed conifer	1.28	New track
		Commercial	Ancient woodland PAWS	0.79	New track
		Native	Semi-natural broadleaved	1.25	400 kV OC
		Native	Ancient woodland PAWS	0.64	400 kV OC
TOTAL				66.075	
TOTAL (Minus Crown red.)				65.82	

14.6.7 The total direct and gross loss of forestry and woodland for construction of the Proposed Development (plus Ancillary Works) equates to 65.82 ha; this includes 58.18 ha of commercial woodland removal (including 17.28 ha of PAWS and 1.75 ha of 2a AWI) and 7.64 ha of ancient and semi natural native woodland removal (excluding OC Crown Reduction). The detailed breakdown is provided in **Annex 2, Technical Appendix 14.1: Woodland Reports**.

Commercial Woodland

14.6.8 As shown in **Table 14.6**, the direct loss of commercial woodland as a result of the Proposed Development is primarily as a result of the requirement to form an OC (for both the 400 kV OHL and the 132 kV OHL diversions), with some felling required to form access tracks. Commercial woodland loss is spread across all six Sections included within the assessment.

14.6.9 The sensitivity of commercial woodland within the study area is low. The combined and direct loss of 58.18 ha of commercial woodland across all six Sections is assessed as a low magnitude of change, in the context of a noticeable change over a limited area, equating to a 0.02% impact of woodland removal within the regional resource forest area of 232,500 ha. This effect is assessed as **Minor Adverse** and **Not Significant**.

Semi-natural Native Woodland

14.6.10 As shown in **Table 14.6**, the direct loss of semi-natural native woodland is predicted in Sections 1 and 6. Across the two Sections, this is primarily as a result of the requirement to form an OC for the 400 kV OHL. No loss of semi-natural native woodland is predicted in Sections 2-5 for the Proposed Development (or Ancillary Works).

14.6.11 The combined and direct loss of semi-natural woodland (mixed native broad-leaved woodland), including recently planted woodland, due to construction of the Proposed Development across all six Sections (included within the assessment) would be 3.55 ha. A breakdown of the ancient and semi natural woodland habitat types impacted by construction and operation of the Proposed Development are shown in **Table 14.7**.

Table 14.7: Ancient Woodland Inventory Habitat Classification

Ancient and Semi-natural Woodland (ha) to be removed.			
Semi-natural woodland Classification	Area (ha)		
	Commercial	Native	TOTAL
Ancient Woodland (2a)	1.75	3.23	4.98
Ancient Woodland PAWS	17.28	0.86	18.14
Semi-natural Woodland		3.55	3.55
TOTAL	19.03	7.64	26.67

14.6.12 The sensitivity of semi-natural native woodland is considered within this assessment as medium. The magnitude of change is considered medium and as such the effect is assessed as **Moderate Adverse** and **Significant**.

Ancient Woodland

14.6.13 As shown in **Table 14.6**, the direct loss of Ancient Woodland is predicted in Sections 1, 2, 3, 4, and 6, with the greatest loss being seen in Section 1, with the majority being classed as PAWS. Across the five Sections, this is primarily as a result of the requirement to form an OC for the 400kV OHL, with some additional felling required to form access tracks. No loss of Ancient Native Woodland is predicted in Section 5 for the Proposed Development (and Ancillary Works).

14.6.14 The combined and direct loss of Ancient Native Woodland, due to construction of the Proposed Development across all five Sections (included within the assessment) would be 4.98 ha of 2a AWI and 18.14 ha of PAWS. A breakdown of the ancient and semi natural woodland habitat types impacted by construction and operation of the Proposed Development are shown in **Table 14.7**.

14.6.15 The sensitivity of Ancient Woodland is considered within this assessment as medium. The magnitude of change is considered medium and as such the effect is assessed as **Moderate Adverse** and **Significant**.

14.6.16 The local authority (THC) recorded area of ancient and semi natural woodland is 130,000 ha, therefore the impact area (4.98 ha) would represent a maximum of 0.004% of the regional resource.

14.6.17 The assessment of the impact of the clearance of ancient semi natural woodland in biodiversity terms is addressed within **Chapter 8: Terrestrial Ecology**.

Indirect Construction Effects – Windthrow

14.6.18 The tree felling required through areas of mature commercial woodland to create the OC would result in an indirect effect of increasing potentially unstable forest edges where retained trees stand immediately adjacent to

the OC. These areas, known within the forest industry as 'brown edges', have relatively unstable trees within them which previously depended upon the now felled neighbouring trees for support. The risk of windthrow is that these brown edge trees would be damaged and blown over due to the lack of shelter.

14.6.19 This assessment identifies an additional area of 80.22 ha of commercial forestry which would be at increased risk of windthrow. The sensitivity of commercial woodland within the study area is low. The magnitude of impact would be low, and therefore this additional area is assessed as **Minor Adverse** and **Not Significant**.

14.6.20 Notwithstanding this assessment, the Applicant has produced Woodland Reports included in **Technical Appendix 14.1: Woodland Reports** which recommend proposals to landowners to remove this risk by identifying additional areas of felling out to the nearest 'windfirm' edge (known as a 'green edge'), where the trees have developed next to open ground. The extent of additional (secondary) 'management felling' required to achieve this reduction in windthrow risk would be 80.22 ha. The sensitivity of the forest for removal of trees out with the OC is considered low in that the forest is deemed tolerant to this level of change and that such change could be expected to occur during normal forest management practices. The additional felling requirement introduced by the Proposed Development would only be to potentially bring felling activity forward and as such can be considered to be a temporary (albeit long-term) effect, with replanting likely to be required as a condition of any statutory felling license granted. The approach to mitigation in relation to this additional felling to protect against future windthrow is discussed in greater detail in Section 14.7 of this Chapter below.

Direct Operational Effects – Woodland Removal

14.6.21 The direct operational effects on forests and woodland associated with the Proposed Development (and Ancillary Works) would be limited to periodic vegetation management to maintain the OC. Within the OC, following the construction of the Proposed Development (and Ancillary Works), there would be an ongoing need to manage the growth of vegetation to facilitate access for maintenance of the OHL and to maintain the required tree clearance zones for the safe and resilient operation of the OHL. The OC, after woodland removal, is deemed to be of negligible sensitivity and the impact of vegetation management is considered to represent a low magnitude of change. Overall, the adverse effect during operation is assessed as **Negligible** and **Not Significant**.

14.6.22 In addition, there is the potential for a medium to long-term beneficial effect through the opportunity to manage lower growing vegetation to provide biodiversity enhancement in the OC. The development of a species diverse area of lower growing shrub species would provide valuable habitat for local fauna and flora.

Indirect Operational Effects - Effects on Forest Management Systems

14.6.23 The introduction of a new OHL through areas of managed forest would require a review by each landowner of the existing management system. Most larger commercial forest areas have a long-term forest plan (LTFP) which identifies the operations intended for the ongoing management of the forest over a 20 year period. This LTFP also provides the forest owner with consents from Scottish Forestry, as the forest authority, to undertake felling and replanting of the forest over a 10-year period. The impact of the Proposed Development is therefore only in terms of individual LTFP's having to be revised to address the construction of the OHL and ancillary works, and the associated tree clearance works on the future management of the site. In the absence of mitigation, the requirement for forest owners to revisit their LTFP to incorporate the existence of the Proposed Development could be considered to be onerous. The sensitivity of the management system to revision is considered to be low; however, the magnitude of change required in terms of restructuring the LTFP to incorporate felling for the OC and potentially additional felling to avoid wind throw could be, locally or for the individual landowner, of high magnitude and thus the effect is **Moderate Adverse** and **Significant**.

Indirect Operational Effects - Restrictions on Forest Access

14.6.24 At the time of tree harvesting the forest industry has a range of operations, some of which can be restricted by the presence of an OHL. Live electrical OHLs provide a number of risks in terms of tree felling and extraction of the timber to the roadside near the OHL. Loading and haulage of the timber off-site can also be restricted within proximity of the OHL.

14.6.25 The sensitivity of the forestry and woodlands to this impact is considered to be low and the magnitude of change is defined as none due to the working area being removed by approximately 45 m from the Proposed OHL (in commercial forestry due to the presence of the OC. Assuming that all proposed felling works would incorporate standard health and safety management measures (e.g. the forest industry safety accord) as set out in Section 14.5 of this Chapter, the effect is assessed as **Negligible** and **not significant**.

Cumulative Effects – Woodland Removal

14.6.26 The cumulative effect of direct commercial forestry removal associated with creating an OC and access tracks (predicted to be 58.18 ha), combined with the potential indirect (secondary) effect of woodland removal outside of the OC (predicted to be 80.22ha) (under separate felling licences obtained by landowners and not under the control of the Applicant), would potentially comprise up to 138.40 ha of commercial woodland. This is assessed as a medium magnitude of change. Given the low sensitivity of commercial forestry within the study area, this cumulative effect is assessed as **Minor Adverse** and **Not Significant**. There are no additional indirect cumulative effects associated with native woodland.

14.6.27 Other developments within the vicinity of the Proposed Development that have been considered within the cumulative assessment include:

- Wider Coire Glas Grid Connection Project, including the new Coire Glas Switching Station and the new Loch Lundie Substation (Associated Works, pre-application);
- Coire Glas Pumped Storage Scheme (Consented)
- Skye Reinforcement OHL (In Planning - Ref: ECU000043395);
- Proposed Bhlairaidh Extension Wind Farm Grid Connection (In Planning - Ref: ECU00004639).

14.6.28 The proposed Loch Lundie Substation development is a requirement for the construction of a new 400 kV substation to facilitate a wider rationalisation exercise to reduce the overall amount of electrical grid infrastructure in the surrounding area. The substation would provide a facility to rationalise the existing 132 kV Fort Augustus to Fort William and Invergarry Tee OHLs, as these circuits would be diverted into the 132 kV side of the substation, where they would be connected to the new 400 kV OHL. This would allow the Fort Augustus to Fort William OHL to be dismantled between the proposed Loch Lundie Substation and the Fort Augustus Substation. The substation will also be designed with space provision for future renewable generation in the area to connect into. Early proposals indicate that approximately 9.4 ha of permanent and temporary land-take may be required for the Loch Lundie Substation (comprising a control building, two transformers and outdoor Air Insulated Switching (AIS) equipment). The land-take area for the proposed Loch Lundie Substation is sited wholly within an area of commercial conifer plantation.

14.6.29 The proposed Coire Glas Switching Station platform housing both the Applicant's and Coire Glas Hydro Pumped Storage Ltd's (CGHPSL) switchgear will be split into two separate fenced compound areas. The Applicant's compound would house a 400 kV Air Insulated Switchgear (AIS) switching station, containing switchgear and two control buildings. CGHPSL's compound is still at design stage. Approximately 5 ha of semi-natural woodland would be removed to facilitate the construction of the switching station.

14.6.30 The Coire Glas Pumped Storage Scheme (located southwest of Laggan Locks) sits within Clunes Forest (which would include construction of the lower reservoir works and associated access tracks), would result in the felling

of some 48.69 ha of coniferous forest plantation. Construction of the Proposed Development within Glengarry Forest (which would include widening and realignment of forestry tracks from White Bridge), would result in the felling of a total area of approximately 13.63 ha of coniferous plantation.

14.6.31 In commercial woodland situated to the west of the Proposed Development (at Kilfinnan & Munerigie), the Skye Reinforcement Project, if consented, would result in the loss of 8.6 ha of commercial woodland and 1.09 ha of ancient and semi-natural woodland, due to the requirement to create an OC for the construction and safe operation of the proposed 132 kV OHL, including the creation of access tracks.

14.6.32 The proposed Bhlaraidh Extension Wind Farm Grid Connection Development would, if consented, lie within the forested and wooded area to the north east of the Fort Augustus Substation, of which a significant part is under the woodland designations AWI and NWSS. A total of 37.17 ha of these designated woodlands (of which 17.49 ha is PAWS) would require removal. Additionally, an area 0.75 ha of recently planted native woodlands which form part of the Bhlaraidh Extension Wind Farm Habitat Management Plan would require removal. The remaining 18.06 ha of the total 55.98 ha for removal consists of commercial conifer woodland, mixed broadleaves and unplanted woodland.

14.6.33 Given the Scottish Government's policy on Woodland Removal¹⁴, it can be assumed that there would be no residual loss of woodland associated with these projects as the developers will require to undertake compensatory planting for any areas of felling. As such, the cumulative effect is assessed as **Negligible and Not Significant**.

Cumulative Effects - Windthrow

14.6.34 Predicted indirect effects on commercial woodland out with the OC are based on the risk of windthrow following construction phase felling. On this basis, it is assessed that there is no potential for additional or in combination cumulative windthrow effects from the Proposed Development. As such, the cumulative effect of windthrow is assessed as **Negligible and Not Significant**.

Cumulative Effects – Forest Management

14.6.35 There is no direct overlap of woodland removal for the Proposed Development in combination with other proposed programmes of woodland removal for cumulative developments during either the construction or the operational phase of the Proposed Development. On this basis, the cumulative effect is assessed as **Negligible and Not Significant**.

14.7 Mitigation

Mitigation During Construction

14.7.1 The Applicant proposes to implement a suite of standard good practice working methods to ensure that all construction activity (including woodland removal) avoids significant effects on ecological and hydrological receptors, as detailed under Section 14.5.

14.7.2 The areas of ancient and semi natural woodland impacted by the Proposed Development (7.64 ha) could potentially be further reduced through micro-siting within the LOD where a combination of factors (e.g. topography, tower height, tree species and height) may reduce the area of ancient semi-natural woodland defined as being within the OC. For example, the extent of tree clearance may be reduced where it can be demonstrated through further detailed survey that the trees can be safely overflown by the OHL conductors or that the trees can be accommodated within closer proximity to the Proposed Development with either no work being required, or a degree of crown reduction only. There may also be opportunities to further retain

¹⁴ The Scottish Government's Policy on Control of Woodland Removal (2009).

scrub/understorey layers in areas where existing tree cover does not breach safety clearances and allows for safe construction activity.

14.7.3 In order to address the likely significant effect predicted for forest land-use management in the absence of mitigation (as discussed in paragraph 14.6.23 above), the Applicant has committed to the development of Woodland Reports for each of the forestry and woodland interests (6 in total identified). The Woodland Reports, included within **Technical Appendix 14.1: Woodland Reports**, identify all areas of felling required to form the OC and ancillary works. In addition, the Woodland Reports has sought to reduce the risk of future wind throw by identifying felling to stable forest edges (outside of the OC).

14.7.4 The delivery of the felling identified in the Woodland Reports has been developed in conjunction with the landowners / forest managers to deliver felling and restocking out with the OC. The Applicant has agreed the use of the 'Woodland Report' to confirm the extent of woodland removal required. This proposed felling will be further reviewed with the landowners to link this with their existing LTFP/LMP, which will, once amended, be required to adhere to the UKFS as part of the approval process with Scottish Forestry. This approval is required prior to any felling being undertaken out with the Proposed Development OC or proposed ancillary works. This method of addressing felling has been successfully used on a number of recent large OHL projects and has delivered forest design to the satisfaction of Scottish Forestry as the statutory authority.

Mitigation During Operation

14.7.5 To mitigate the predicted likely significant effect on forest management systems for individual landowners, the Applicant has developed the Woodland Reports in conjunction with the relevant landowners and forest managers.

Compensatory Planting

14.7.6 Given that the Proposed Development would result in the permanent loss of woodland, the Applicant is committed to making arrangements to plant off-site the equivalent area of woodland as Compensatory Planting, meeting the Scottish Government's CoWRP¹⁵ objective of no net loss of woodland.

14.7.7 Following the removal of the existing 132 kV Fort Augustus and Fort William OHL between the proposed Loch Lundie Substation and the existing Fort Augustus Substation, there is potential for woodland expansion within the historical OC within FLS Auchterawe Farm woodland. This presents an opportunity to replant part of the compensatory planting requirement within close vicinity to the Proposed Development, although this requires to be discussed and agreed with the respective landowners.

14.8 Residual Effects

14.8.1 A summary of how the implementation of the mitigation measures outlined above influence the assessment of the significance of predicted residual effects likely to result from the Proposed Development on forestry and woodland are described below.

Construction Effects

14.8.2 Whilst opportunities to reduce the predicted removal of 26.67 ha of ancient and semi-natural woodland have been identified, comprising 4.98 ha of 2a ancient woodland, 18.14 ha PAWS and 3.55 ha of semi-natural woodland (Table 14.7), these remain uncertain until further micro-siting and review of wiring operations by a Principal Contractor in combination with an arboriculturist has been undertaken. The residual effect on woodland removal for semi natural woodland remains **Moderate Adverse** and **Significant**. Similarly, the residual effect on woodland removal for ancient woodland remains **Moderate Adverse** and **Significant**.

¹⁵ The Scottish Government's Policy on Control of Woodland Removal, Forestry Commission (2009)

14.8.3 The Applicant is committed to making arrangements to plant off-site the equivalent area of woodland as Compensatory Planting, meeting the Scottish Government's CoWRP¹⁶ objective of no net loss of woodland.

14.8.4 The potential to further reduce construction effects through good practice measures have been identified in the Woodland Reports (in relation to windthrow); however, at this stage the Applicant is limited to committing to working with landowners to seek to agree felling through the Woodland Reports, which would in-turn lead to changes to the LTFP on land outside of the Applicant's control at this stage.

Operational Effects

14.8.5 Current and future forest land-use management is likely to be affected by the introduction of the OHL and associated felling requirements. This is likely to require forest managers to amend current objectives, plans and techniques for the relevant forest, in particular, the incorporation of felling requirements into their long-term felling and landscape design plans. Taking account of the proposed mitigation in the Woodland Reports, the residual effect on forest management is assessed as **Minor Adverse** and **Not Significant**.

14.8.6 There would be no significant operational effects pre-mitigation on woodland removal or forestry operations access and consequently, no significant residual operational effects are predicted to occur.

Cumulative Effects

14.8.7 In reviewing the potential for effect interactions, additional and in combination cumulative effects, no significant residual cumulative effects have been identified either during the construction or the operational phase of the Proposed Development.

Summary of Residual Effects

14.8.8 **Table 14.8** provides a summary of the residual effects.

Table 14.8: Summary of Residual Effects

Summary of Residual Effects Forest Receptor	Effect (Pre-Mitigation)	Mitigation Proposed	Residual Effect
Woodland removal (commercial conifer forest) during construction	Direct effect on commercial conifer forest. Minor Adverse and not significant based on the area of woodland removal.	The Applicant would implement a suite of standard good practice working methods to ensure that all construction activity (including woodland removal) avoids significant effects on ecological and hydrological receptors. Equivalent area of woodland removed to be planted off site as per Scottish Government's CoWRP	Minor Adverse and not significant .

¹⁶ The Scottish Government's Policy on Control of Woodland Removal, Forestry Commission (2009)

<p>Woodland removal (Ancient Woodland Woodland) during construction</p>	<p>Direct effect on Ancient Woodland. Moderate Adverse effect (significant).</p>	<p>The Applicant would reduce the OC felling where possible and seek to retain scrub/understorey layers in areas where existing tree cover does not breach safety clearances and construction activities. Equivalent area of woodland removed to be planted off site as per Scottish Government's CoWRP</p>	<p>Moderate Adverse and significant.</p>
<p>Woodland removal (Semi-natural Woodland) during construction</p>	<p>Direct effect on Semi-natural Woodland. Moderate Adverse effect (significant).</p>	<p>The Applicant would reduce the OC felling where possible and seek to retain scrub/understorey layers in areas where existing tree cover does not breach safety clearances and construction activities. Equivalent area of woodland removed to be planted off site as per Scottish Government's CoWRP.</p>	<p>Moderate Adverse and significant.</p>
<p>Predicted loss of forest due to windthrow during construction</p>	<p>Predicted indirect effect on commercial conifer forest based on risk of windthrow following construction phase felling. Minor Adverse and not significant based on the area of woodland removal.</p>	<p>No mitigation possible within the scope of the Proposed Development. However, mitigation is possible with the co-operation of the landowners. The Applicant has produced Woodland Reports for each forest affected, which will recommend actions to reduce the risk of future wind throw by felling to stable forest edges (outside of the OC).</p>	<p>Minor Adverse and therefore not significant.</p>

Woodland removal during operation	Limited to periodic vegetation management to maintain the OC Negligible and not significant	No mitigation is required.	Negligible and therefore, not significant .
Forest management during operation	Indirect effect on woodland management through requirement to incorporate the proposed OHL into LTFP. Moderate Adverse and significant.	The Applicant has produced Woodland Reports for each forest ownership to inform proposed revisals to the relevant LTFP and facilitate agreement with the landowners.	Minor Adverse and therefore not significant .
Forest Access during operation	Direct effect on access for felling during the operational phase. Negligible and not significant based on the set back and use of standard safety measures.	No mitigation is required.	Negligible and therefore, not significant .
Cumulative Effects	No significant cumulative effects predicted during the construction or the operational phase of the Proposed Development (not significant).	No mitigation is required.	Negligible and therefore, not significant .

14.9 Summary and Conclusions

14.9.1 This Chapter reports upon the significance of the predicted residual effects from the construction and operation of the Proposed Development on forest and woodland areas. The assessment is supported by **Technical Appendix 14.1: Woodland Reports** (in Volume 4 of this EIA Report). The Technical Appendix contains a series of location specific Woodland Reports in relation to forestry and woodland that would be intersected by the Proposed Development. These Woodland Reports that are individual Annexes to **Technical Appendix 14.1: Woodland Reports**, details the current baseline in terms of describing the woodland type including (species, condition, current management), and future management under reference to the LMPs where available. The Woodland Reports contain the detailed assessment of impacts likely to result from the construction and operation of the Proposed Development.

14.9.2 The Proposed Development is predicted to result in the direct loss of 58.18 ha of commercial forestry 4.98 ha of 2a ancient woodland, 18.14 ha PAWS and 3.55 ha of semi-natural woodland, due to the requirement to create an OC for the construction and safe operation of the 400 kV OHL (including the 132 kV OHL diversions and the creation of access tracks).

The assessment concluded that the removal of 4.98 ha of 2a ancient woodland, 18.14 ha PAWS and 3.55 ha of semi-natural woodland, would result in a **significant** adverse effect, despite potential opportunities to reduce the amount of felling, subject to further detailed design. No significant effects were predicted for the removal of commercial forestry. Further consultation will be undertaken with relevant landowners to identify any potential PAWS restoration sites.

14.9.3 The Applicant is committed to making arrangements to plant off-site and on-site where appropriate the equivalent area of woodland lost as Compensatory Planting, meeting the Scottish Government's CoWRP¹⁷ objective of no net loss of woodland.

14.9.4 Furthermore, 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 (windthrow). As a result, the Applicant has produced a series of Woodland Reports (see **Technical Appendix 14.1: Woodland Reports**) to incorporate the Proposed Development within ongoing forest management activities. The Woodland Reports identify further areas of felling to leave a windfirm edge (categorised as an indirect secondary impact). Any felling undertaken out with the OC would be solely under the control of the relevant landowner (and not the Applicant).

14.9.5 The assessment identified the potential for significant effects (pre-mitigation) on forest management, due to the requirement for forest managers to amend current objectives, plans and techniques for their forest, in particular, to incorporate the felling requirements for the OC into their long-term felling and landscape design plans. The Applicant has proposed mitigation in the form of a commitment to develop 'Woodland Reports' for each of the forests and woodlands affected by the Proposed Development (six in total). This mitigation is deemed sufficient to reduce the residual effect on forest management to not significant.

14.9.6 No significant effects on forest operations access were identified.

14.9.7 Additional good practice measures are identified for implementation on land out with the OC, for example additional felling to deliver a more natural landscaped and wind firm edge. These measures can only be undertaken with the agreement of the affected landowner. It is the intention of the Applicant to encourage the landowners to follow this good practice in terms of redesign of their current LTFPs, which in-turn would aim to follow UKFS for the implementation of the works required.

¹⁷ The Scottish Government's Policy on Control of Woodland Removal, Forestry Commission (2009)