11. FORESTRY

11.1 Executive Summary

11.1.1 This chapter has considered the potential for significant effects on the forest resource, forest management and access during construction and operation

11.1.2 The effects of woodland removal, in forestry terms, were assessed as not significant, on the basis of the relatively low magnitude of change in the context of the regional resource, and the low to medium sensitivity of the types of woodland present in the Study Area. The effect on the ancient semi-natural woodland of mixed native broadleaves classification were assessed as significant based on the impact of a noticeable change over a limited area. No mitigation is deemed to be required to address the direct woodland loss in forestry terms; however, the applicant is committed to seeking to reduce the ecological (biodiversity) effects, that would arise through the loss of ancient semi-natural woodland through the sensitive management of the operational corridor.

11.1.3 The assessment identifies 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 operational corridor into their long-term felling and landscape design plans. The applicant has proposed mitigation in the form of a commitment to develop 'OHL Woodland Reports' for each land ownership. This mitigation is deemed sufficient to reduce **the residual effect to not significant.**

11.1.4 Additional good practice measures are identified for implementation on land outwith the operational corridor, 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 Long-Term Forest Plans which in-turn would aim to follow UK Forestry Standard for the implementation of the works required.

11.1.5 The development of compensatory planting scheme agreements will be progressed with landowners within the regional land boundary of the Local Authority, of where the Proposed Development is geographically located. This is to mitigate the woodland removal of the Proposed Development in meeting the Scottish Government's CoWRP objective of no net loss of woodland. On this basis the Applicant will replant the area quantity (hectares) of woodland removed for the Proposed Development.

11.2 Introduction

11.2.1 This Chapter assesses the potential effects of the Proposed Development on forest areas.

11.2.2 The assessment has been prepared by the Scottish and Southern Electricity Networks (SSEN) Forestry Project Manager, BSc qualified in Forestry and Conservation, with a professional development of over 22 years. Baseline surveys and the forestry landscape assessment were completed by Scottish Woodlands Ltd. The assessment has been carried out in line with the UK Forestry Standard (UKFS)[1] guidance.

11.3 Methodology

Scope of the Assessment

11.3.1 The assessment considers the likely impacts of the Proposed Development on forestry. This includes an assessment of the sensitivity of the forest areas and a determination of the likely level of impact upon them that would arise from the Proposed Development, with particular emphasis on forest structure and management.

11.3.2 The assessment is based on the requirement to form an Operational Corridor (OC) while recognising the potential impact over broader forest management from the Proposed Development. This Chapter assesses the OC only and does not address the overall Long Term Forest Plans (LTFPs). Any felling undertaken outwith the OC would be solely under the control of the landowner, and the Applicant would not have any control over such. Consequently, the assessment is limited to consideration of the effects of the Proposed Development on the present forest composition and yield.

Extent of the Study Area

11.3.3 The Study Area for this assessment is based around the OC. The Applicant[2] defines the area in which it has rights to remove woodland for the purposes of creation of new overhead lines (OHLs), resilience and maintenance of OHLs, or protection of electrical plant as required by the Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) and The Electricity Act 1989. The typical OC required within areas of commercial conifer forestry for a 275 kV OHL is 85 m. The OC is defined with reference to the distance at which a tree could fall and cause damage to the overhead line, resulting in a supply outage[3]. As a result, the final corridor 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. Where the OC passes through areas of native woodland, it is noted that the width of woodland removal is likely to be reduced due to the lower height of the tree species present. The proposed OC illustrated in **Figure 11.4 (EIAR Volume 3a)** has been based on the likely height of the woodland at maturity and therefore, varies in width according to the woodland type present.

11.3.4 For the purposes of this report the OC may lie anywhere within the 100 m Limit of Deviation (LOD), which forms the extent of the Study Area, as indicated on **Figure 2.1a-2.1j: Overhead Line Route and Access Tracks (EIAR Volume 3a)**.

[1] The UK Forestry Standard 4th Edition (2017); The Governments' approach to sustainable forestry.

[2] Scottish and Southern Electricity Networks (SSEN) Transmission, operating under licence as Scottish Hydro Electric Transmission plc, who own, operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands (hereafter referred to as the 'Applicant').

[3] As specified by the 'Red Zone' set out in paragraph 41 of the Forest Industry Safety Accord. (2020) Safety Guide 804 Electricity at Work: Forestry. [pdf] Available at: FISA 804 (ukfisa.com)

11.3.5 The forestry assessment does take note that the scope of woodland removal included as part of the Proposed Development (for consenting purposes) has been limited to the woodland removal required to create the proposed operational corridor, required access tracks, and temporary diversion, as set out in **Chapter 2: Description of the Proposed Development (EIAR Volume 2).** It is acknowledged that the creation of the operational corridor 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 OHL Woodland Reports **Technical Appendix (TA) 11.1 (EIAR Volume 4)** to incorporate the Proposed Development within ongoing forest management activities. The OHL Woodland Reports identify further areas of felling to leave a windfirm edge (categorised as a secondary impact associated with associated works). Indicative areas of felling to address windthrow risk are illustrated on **TA Figures 11.13 to Figure 11.31 (EIAR Volume 4).** Further detail is provided under the mitigation section of this chapter.

11.3.6 The woodlands affected by the Proposed Development lie within a series of separate landholdings **Figure 11.1 (EIAR Volume 3a),** south of the village of Dalmally, which are predominantly within private ownership other than one forest property of the National Forest Estate managed by the Scottish Government's agency Forestry and Land Scotland (FLS) within the FLS West Region.

Consultation Undertaken

11.3.7 Scottish Forestry (SF)[4] is the Scottish Government agency responsible for forestry policy, support and regulations. SF works as part of Scottish Government to protect and expand Scotland's forests and woodlands and so has an interest in major developments that have the potential to impact on local forests and woodlands and / or the forestry sector.

11.3.8 **Table 11.1** details the key issues raised by SF, as part of the consultation process of relevance to forestry, as described in **Chapter 4** of this **EIAR** (see also the Scoping Opinion, **TA 4.2, EIAR Volume 4)**, and the comments in response or actions taken.

Table 11.1: Forestry Issues Raised During Consultation

Consultee	Summary Response	Comment / Action Taken
Scottish Forestry (SF) – Scoping Response	The Scottish Government's Control of Woodland Removal Policy (CoWRP) includes a strong presumption in favour of protecting Scotland's woodland resources.	The Proposed Development addresses this through minimising the woodland removal both through careful route selection and by defining the OC appropriately for different woodland types. Compensatory planting to achieve no net loss of woodland for the Proposed Development, in-line with CoWRP objective is discussed within this chapter.
	Further assessment should consider the issue of woodland fragmentation, specifically if commercial woodland and should be left in a commercially workable condition, consideration to be given to access and ground conditions. Where it is possible to route along the edge of woodland in the design, this would be preferable to avoid felling and be mindful of edge design.	The Proposed Development addresses this through careful route selection and by avoiding main woodland boundary edges where possible.
	Woodland planning conditions would be similar to other consented projects including the requirement for OHL Woodland Reports,	The Proposed Development addresses this through the forestry assessment of the

[4] Scottish Forestry an agency of the Scottish Government (April 2019) previously known as Forestry Commission Scotland.

Table 11.1: Forestry Issues Raised During Consultation		
Consultee	**Summary Response**	**Comment / Action Taken**
	Native Woodland Management Plan and Compensatory Planting Management Strategy.	operational corridor and provision of the required management reports and plans.
	SF notes the Applicant is aware that any additional felling, outwith the Proposed Development's OC will fall under Forestry and Land Management (Scotland) Act 2018, and therefore will need to be covered by a forest plan or a felling permission, and will be conditioned on a suitable restock plan.	Any permanent woodland removal outwith the OC is identified within this Chapter.

Method of Baseline Data Collation

11.3.9 The completion of the land referencing of the Proposed Development provided the property boundary information of each landholding. The Study Area of 100 m either side of the proposed OHL alignment was analysed for existing woodland cover through desk based survey using maps, aerial photography and the review of web based data provided by Scottish Forestry[5]. The desk based survey was supplemented by consultation with landowners 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 LTFP information.

Forest Walkover

11.3.10 Forest walkover and mapping surveys were undertaken during the period March to October 2021, 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 included in **TA 11.1**(**EIAR Volume 4**) Woodland volume assessments of the commercial conifer woodlands were undertaken on site, with the application of tree measurement techniques in-line with industry standard forest mensuration protocols[6]. Changes in land-use of the individual landholdings was also noted.

11.3.11 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 the 100 m LOD Study Area.

11.3.12 The site visits confirmed that woodland restructuring management is active within the commercial conifer woodland properties.

Determining Magnitude of Change and Sensitivity of Receptors

11.3.13 There are no published criteria, guidance or methodologies for the assessment of effects on forestry. As a result, 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;

[5] Scottish Forestry Land Information Search https://map.environment.gov.scot/LIS_Agri/Agri.html
Scottish Forestry Map Viewer https://scottishforestry.maps.arcgis.com/apps/webappviewer/index.html?id=0d6125cfe892439ab0e5d0b74d9acc18
[6] Forestry Commission (Scottish Forestry) Forest Mensuration; A handbook for practitioners (2006)

- duration and reversibility - timescale of effect (days/weeks/months/years) until recovery. Permanent effectsare 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.

11.3.14 The effect on woodland is normally considered to be of an adverse nature (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 Removal. As such for the purposes of this assessment tree removal is to be considered as having an adverse effect.

Criteria for Assessing Sensitivity of Receptors

11.3.15 Four categories of sensitivity are defined in **Table 11.2:**

Table 11.2: Sensitivity Criteria

Category	Description
High	• Highly valued, subject of national designation e.g. Ancient Woodland Category 1a; • Particularly rare or distinctive in a national context; or • Considered susceptible to small changes.
Medium	• Valued more locally, subject to local designation; • Rare or distinctive in a regional context; and/or • Are tolerant of moderate levels of change.
Low	• Generally, more commonplace, not designated; • Considered potentially tolerant of noticeable change; or • Undergoing substantial development such that their character is one of change.
Negligible	• Already fundamentally changed (e.g. second rotation commercial conifer); • considered tolerant of noticeable change; or • having undergone substantial development such that their character is one of change.

Criteria for Assessing Magnitude of Change

11.3.16 The magnitude of change has been assessed with reference to the four categories defined in **Table 11.3**:

Table 11.3: Magnitude of Change Criteria

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

Significance Criteria

11.3.17 The sensitivity of the woodland (**Table 11.2**) and magnitude of change criteria (**Table 11.3**) are then used to inform a professional judgement on the likely significance of the effect. **Table 11.4** provides a framework for assigning significance of effects.

Table 11.4: Significance of Effects

Magnitude ofChange ↓ / Sensitivity of Woodland →	High	Medium	Low	Negligible
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	None
Low	Moderate	Minor	None	None
Imperceptible	Minor	None	None	None

11.3.18 Major and moderate effects have been assessed as being significant in the terms of the EIA regulations.

Limitations and Assumptions

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

11.4 Sensitive Receptors

11.4.1 A summary of the woodland receptors identified as being sensitive to the Proposed Development and which have been 'scoped-in' to the assessment are given in **Table 11.5**, together with the justification for inclusion:

Table 11.5: Summary of Receptor Sensitivity

Receptor	Sensitivity	Justification
Plantation conifer forest	Low	Tolerant to the proposed changes andhaving no environmental designation.
Ancient woodland and seminatural woodland	Medium	Ancient woodland is a valued (non- statutory designation). Semi natural woodland is noted to have biodiversity and amenity value. Both are consideredlocally tolerant to moderate 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 medium[7].

11.4.2 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 small and localised areas of Ancient Woodland present and these are of medium sensitivity. The assessment of effects on ancient and semi-natural woodland are addressed in Chapter 6 biodiversity(EIAR Volume 2).

[7] It is noted that the assessment of the sensitivity of this resource in ecological terms is high; however, this chapter is looking solely at the forestry and woodland resource impacts, and indirect effects on biodiversity are addressed within **Chapter 6: Biodiversity.**

11.5 Baseline Conditions

11.5.1 In total, approximately 7.92 km of the 13.3 km Proposed Development OHL was assessed as being within woodland and associated open ground, where tree clearance would be required to form an operational corridor, **Figure 11.4 (EIAR Volume 3a)**.

11.5.2 The baseline characterisation work carried out identified 11 landowners **Figure 11.1 (EIAR Volume 3a)** with forest or woodland potentially affected by the Proposed Development. Following consultation with Scottish Forestry (SF), the Applicant has produced an OHL Woodland Report for the affected forest properties, being nine reports in total **TA 11.1 (EIAR Volume 4)**. Each of these sites were visited and existing data sourced from the forest owners and their agents was reviewed and confirmed against the woodland site surveys.

Current Baseline

11.5.3 The woodland habitats recorded are summarised in **Table 11.6**

Table 11.6: Woodland Habitat Types

Habitat Type	Area (ha)
Broadleaved semi-natural woodland	12.62
Broadleaved plantation woodland	0.36
Coniferous plantation woodland	51.19
Total	64.17 ha

11.5.4 The native broadleaved woodland areas are identified on Scottish Government's Ancient Woodland Inventory, as shown on **Figure 6.1: Biodiversity Constraints (EIAR Volume 3a).** The SF website provides the Native Woodland Survey of Scotland (NWSS) as spatial data showing the type and extent of these woods. The NWSS woodland type classifications are:

- Native woodland;
- Nearly-native woodland;
- Non-native plantations on ancient woodland sites (PAWS); and
- Open land habitat.

Future Baseline

11.5.5 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 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. The native broadleaved woodland would be anticipated to remain in a similar condition in the absence of the Proposed Development. 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.

11.6 Issues Scoped Out

11.6.1 On the basis that felling proposals to create the operational corridor will be supported by a commitment to comply with CoWRP through compensatory planting, there would be no likely significant effects on the productive conifer plantation resource.

- It is noted that the UKFS identifies seven elements of sustainable forest management, as follows:
- Forests and Biodiversity;
- Forests and Climate Change;

- Forests and Historic Environment;
- Forests and Landscape;
- Forests and People;
- Forests and Soil; and
- Forests and Water.

11.6.2 The potential environmental impacts and likely significant effects associated with the seven elements of sustainable forest management will be considered within the individual topic chapters proposed for inclusion in the EIA Report, rather than in a Forestry chapter.

11.7 Assessment of Likely Effects

11.7.1 The assessment of likely effects associated with the construction and operational phases of the Proposed Development is based on the typical activities and characteristics described in **Chapter 2: Description of the Proposed Development**. The assessment is structured around the consideration of the following:

- Direct construction effects: loss of areas of forest through woodland removal to create the operational corridor and access, in the context of the regional forest resource for both commercial conifer forest and 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.

11.7.2 The introduction of OHLs into woodland would 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 woodland areas associated principally with the requirement for tree felling and vegetation management.

Construction Effects

Woodland Removal

11.7.3 The direct and gross[8] loss of woodland has been calculated using the project Geographic Information System (GIS) and equates to 64.17 ha.

11.7.4 Based on the forestry mapping (**Figure 11.4, EIAR Volume 3a)** for the Proposed Development the total area of woodland removal is 64.17 ha of this, 51.19 ha is conifer plantation woodland, 12.62 ha is categorised as broadleaved semi-natural woodland, with 0.36 ha categorised as broadleaved plantation woodland. In the absence of mitigation, the loss of 51.19 ha of commercial forest is assessed as a medium magnitude of change in the context of a noticeable change over a limited area equating to a 0.03% impact of woodland removal within the regional resource forest area of 200,000 ha. This effect is assessed as minor adverse, long term effect and not significant.

11.7.5 In terms of ancient semi-natural woodland (mixed native broad-leaved woodland) there is an estimated maximum area impacted of 12.62 ha (as illustrated in **Figure 11.4**[9]). The local authority (Argyll and Bute Council) recorded area of ancient woodland is 34,716 ha, therefore the impact area would represent a maximum of 0.04% of the regional resource. The ancient semi-natural woodland impacted areas have been categorised as shown in **Table 11.7:**

[8] Gross' loss is taken to mean the total woodland removal for the Proposed Development.

[9] Also, Figures 11.7 to 11.30 can be referenced.

Table 11.7: Ancient Woodland Inventory Habitat Classification	
Habitat Type	**Area (ha)**
Broadleaved semi-natural woodland	12.62
Broadleaved Plantation Woodland	0.36
Total	12.98

11.7.6 The direct impact on ancient semi-natural woodland removal (mixed native broad-leaved woodland) including recently planted woodland is 12.98 ha. The impact area could potentially be further avoided or reduced through detailed design 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 operational corridor. 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 Proposed Development 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. In terms of the forestry assessment of this, the sensitivity is medium[10], the magnitude of the change is medium and as such the effect is assessed as moderate adverse, long term and significant. The assessment of the impact of the clearance of ancient semi natural woodland in biodiversity terms is addressed within **Chapter 6: Biodiversity (EIAR Volume 2).**

Windthrow

11.7.7 The tree felling through areas of mature and semi mature conifers to create the Proposed Development operational corridor would result in an indirect effect of increasing potentially unstable forest edges where retained trees stand immediately adjacent to the operational corridor. 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 will be damaged and blown over due to the lack of shelter. This assessment identifies an additional area of 111.49 ha which would be at increased risk of windthrow. This additional area of forestry would represent a 0.06% of the regional resource and as such the effect is assessed as minor adverse, long term and not significant.

11.7.8 Notwithstanding this assessment, the Applicant has produced OHL Woodland Reports **TA 11.1 (EIAR Volume 4)**, 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 111.49 ha[11]. The sensitivity of the forest for removal of trees outwith the Proposed Development operational corridor 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 nature of native broadleaved woodland (including ancient woodland) is such that it is not deemed to be susceptible to windthrow and has been assessed as low risk to windthrow adjacent to the operational corridor.

[10] It is noted that some areas of woodland would have locally higher sensitivity; however overall in forestry terms, the sensitivity is considered to be medium.

[11] This felling is not included within the scope of the Proposed Development (for the purpose of the application for consent under S37 of the Electricity Act 1989). This additional 'management felling' would be subject to a requirement for separate felling licence approval from Scottish Forestry.

Operational Effects

Woodland Removal

11.7.9 The direct operational effects on forests and woodland associated with the Proposed Development would be limited to periodic vegetation management to maintain the operational corridor. Within the operational corridor following the construction of the Proposed Development there would be an ongoing need to manage the growth of vegetation within the operational corridor to facilitate access for maintenance of the overhead line and to maintain the required tree clearance zones for the safe and resilient operation of the line. The operational corridor, 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 none and not significant.

11.7.10 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 operational corridor. This development of a species diverse area of lower growing shrub species would provide valuable habitat for local fauna and flora. The assessment of this effect is provided in **Chapter 6:Biodiversity (EIAR Volume 2)**.

Effects on Forest Management Systems

11.7.11 The introduction of a new overhead line through areas of managed forest would require a review by each landowner of the existing management system. Most large 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 overhead line 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 operational corridor 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.

Restrictions on Forest Access.

11.7.12 At time of tree harvesting the forest industry has a range of operations, some of which can be restricted by the presence of an overhead line. Live electrical lines provide a number of risks in terms of tree felling and extraction of the timber to roadside near the line. Loading and haulage of the timber off site can also be restricted within proximity of the overhead line. The sensitivity of the woodlands to this impact is considered to be low and the magnitude is also defined as none, due to the working area being removed by approximately 42.5 m from the proposed OHL due to the proposed presence of the operational corridor. This assessment assumes that planning work for proposed felling would incorporate standard health and safety management measures e.g. the forest industry safety accord[12]. As such, the effect is assessed as none and not significant.

[12] Forest Industry Safety Accord (FISA) Electricity at work: Forestry, FISA Safety Guide 804 (2020): URL:FISA 804 (ukfisa.com)

Cumulative Effects

Woodland Removal

11.7.13 The cumulative effect of direct woodland removal associated with creating an operational corridor and access, combined with the potential indirect (secondary) effect of woodland removal outside of the operational corridor (under separate felling licence) would potentially comprise 170.50 ha. The loss of 160.14 ha of commercial forest and 12.62 ha of native broadleaved woodland is assessed as a medium magnitude of change in the context of the regional resource of 200,000 ha and with the predominant woodland removal comprising of low sensitivity woodland, this effect is assessed as minor adverse, long term effect and not significant.

Windthrow

11.7.14 Due to the scale of woodland removal and/or restructuring required to accommodate windfarm development, there has been a general commitment by windfarm developers to fell to windfirm boundaries thereby removing, or at least minimising, the risk of further windthrow. This is in contrast to the narrower and more linear nature of the operational corridor felling required for the Proposed Development. On this basis, it is assessed that there is no potential for additional or in combination cumulative windthrow effects from the Proposed Development.

Forest Management

11.7.15 No direct overlap of woodland removal for the Proposed Development, with other proposed programmes of woodland removal for cumulative developments has been identified. On this basis, no potential for significant cumulative effects on forest management have been identified.

11.8 Mitigation

Mitigation During Construction

11.8.1 No significant effects are predicted based on the area of woodland removal proposed in conifer plantation or considering the potential for increased windthrow. On this basis no mitigation is proposed; however, 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.

11.8.2 The permanent loss of ancient semi-natural woodland areas as part of the Proposed Development is considered to be significant in ecological terms and would be mitigated by a reduction in the operational corridor width and seeking to further retain scrub/understorey layers in areas where existing tree cover does not breach safety clearances and allows for safe construction activity.

11.8.3 In order to address the potential significant effect on forest land-use management, the applicant has committed to the development of OHL Woodland Reports for each forest ownership **TA 11.1 (EIAR Volume 4)**. The OHL Woodland Reports identify all areas of felling required to form the operational corridor, temporary diversion and access corridors. In addition, the OHL Woodland Reports will aim to reduce the risk of future wind throw by identifying felling to stable forest edges (outside of the operational corridor). The OHL Woodland Reports would also include, but are not limited to seeking to agree a forest landscape design following good practice as defined by Forestry Commission (Scottish Forestry) Guidance (2014)[13]. The delivery of the felling identified in the OHL Woodland Reports will require working jointly with the forest owner to deliver felling and restocking outwith the operational corridor. As explained in **Table 11.1**, the Applicant has agreed the use of the 'OHL 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 long-term forest plan, 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 outwith the Proposed Development operational corridor or proposed access tracks. This method of addressing felling has been successfully used on a number of recent large overhead line projects and has delivered forest design to the satisfaction of Scottish Forestry as the statutory authority.

Mitigation During Operation

11.8.4 No significant effects are predicted based on the area of woodland removal proposed during operations or from restrictions on forest access. The potential for significant effect on forest management systems for individual landowners has been identified as a result of the need to accommodate the felling required to create the operational corridor, temporary diversion and access tracks. In order to address this effect, the applicant is committed to working with landowners in-line with the OHL Woodland Report for the woodland property.

Additional Good Practice

11.8.5 Good practice measures have been incorporated into the environmental management controls set out in **Chapter 2: Description of the Proposed Development**, including:

- adherence to Forestry Commission (Scottish Forestry) Guidelines e.g. to ensure protection and enhancement of the water environment; and
- implementation of tree harvesting and extraction methods to ensure minimisation of soil disturbance and compaction.

11.8.6 All woodland removal operations contracted by the applicant would adhere to the UKFS.

11.9 Residual Effects

Construction Effects

11.9.1 There would be **no significant** construction effects pre-mitigation and, consequently, no significant residual construction effects would occur. The potential to further reduce the construction effects in the OHL Woodland Reports (in relation to windthrow) has been identified as a good practice measure; however, at this stage the Applicant is limited to committing to working with landowners to seek to agree felling through the OHL Woodland Reports, which would in-turn lead to changes to the LTFP on land outside of the Applicant's control at this stage.

[13] Forestry Commission Practice Guide, 'Design Techniques for Forest Management Planning' (2014);.URL: Design_techniques_for_forest_management_planning.pdf (publishing.service.gov.uk).

Operational Effects

11.9.2 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 OHL Woodland Reports, the residual effect on forest management is assessed as **minor** and **not significant**

11.9.3 There would be no significant operational effects pre-mitigation on woodland removal or forest access and consequently, **no significant residual** operational effects would occur.

Cumulative Effects

11.9.4 In reviewing the potential for effect interactions, additional and in combination cumulative effects, **no significant residual cumulative** effects have been identified.

11.9.5 **Table 11.8** provides a summary of the residual effects.

Table 11.8: Summary of Residual Effects

Forest Receptor	Effect (Pre-Mitigation)	Mitigation Proposed	Residual Effect
Woodland removal (conifer forest) during construction	Direct effect on commercial coniferforest. Not significant based on the area of woodland removal.	No mitigation is required; however, the Applicant would implement a suite of standard good practice working methodsto ensure that all construction activity (including woodland removal) avoids significant effects on ecological and hydrological receptors. Furtherdetail is set in Technical **TA 10.6:Forestry/Hydrology Assessment (EIAR Volume 4)**.	Minor and thereforenot significant.
Woodland removal (Ancient Semi-natural Woodland) during construction	Direct effect on Ancient Semi-natural Woodland. Significant based on the noticeable change over a limited area by the woodland removal for the operational corridor.	The application would reduce the operational corridor felling where possible and seek to retain scrub/understory layers in areas where existing tree cover does not breach safety clearances and construction activities.	Moderate and therefore significant.
Predicted loss offorest due to windthrow	Predicted indirect effecton commercial conifer forest based on risk of windthrow following construction phase felling. Not significant based onthe area of woodland removal.	No mitigation possible within the scope of the Proposed Development. The applicant has produced OHL Woodland Reports for each forest ownership, which will recommend actions to reduce the risk of future wind throw by felling to stable forest edges (outside of the operational corridor).	Minor and thereforenot significant.
Forest management	Indirect (significant) effecton woodland management through requirement to incorporate OHL into LTFP.	The applicant has produced OHL Woodland Reports for each forest ownership.	Minor, therefore, notsignificant.

Table 11.8: Summary of Residual Effects

Forest Receptor	Effect (Pre-Mitigation)	Mitigation Proposed	Residual Effect
Access	Direct effect on accessfor felling during operational phase. Not significant based onthe set back and use of standard safety measures.	No mitigation is required.	Minor, therefore, notsignificant.

11.10 Compensatory Planting

11.10.1 The Applicant is committed to meeting the Scottish Government's CoWRP objective of no net loss of woodland for the Proposed Development. On this basis the Applicant will replant the area quantity (hectares) of woodland removed for the Proposed Development. This will be achieved in the form of Compensatory Planting Scheme agreements with landowners within the regional land boundary of the Local Authority, of where the Proposed Development is geographically located. **Technical Appendix 11.3 (EIAR Volume 4) Compensatory Planting Management Strategy** provides further details on this mitigation method.

11.11 Summary

11.11.1 The routeing process (described in **Chapter 3: Consideration of Alternatives, EIAR Volume 2**) sought to avoid woodland where possible, while taking account of other environmental, technical and cost constraints. The Proposed Development would pass through 7.92 km of woodland, and potentially impact on up to 64.17 ha of woodland.

11.11.2 The loss of predominately low sensitivity coniferous woodland (51.19 ha) equates to approximately 0.03% of the regional resource (Argyll & Bute Council area). The Proposed Development would result in an impact on up to 12.98 ha of more sensitive ancient semi-natural woodland and broadleaved plantation woodland, of which 12.62 ha is categorised as semi-natural woodland. In the context of the regional resource, 12.62 ha would equate 0.04% loss.

11.11.3 This chapter has considered the potential for significant effects on the forest resource, forest management and access during construction and operation

11.11.4 The effects of woodland removal, in forestry terms, were assessed as not significant, on the basis of the relatively low magnitude of change in the context of the regional resource, and the low to medium sensitivity of the types of woodland present in the Study Area. The effect on the ancient semi-natural woodland of mixed native broadleaves classification were assessed as significant based on the impact of a noticeable change over a limited area. No mitigation is deemed to be required to address the direct woodland loss in forestry terms; however, the applicant is committed to seeking to reduce the ecological (biodiversity) effects, that would arise through the loss of ancient semi-natural woodland through the sensitive management of the operational corridor. Further detail is provided in **Chapter 6:Biodiversity (EIAR Volume 2).**

11.11.5 The assessment identifies 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 operational corridor into their long-term felling and landscape design plans. The applicant has proposed mitigation in the form of a commitment to develop 'OHL Woodland Reports' for each land ownership. This mitigation is deemed sufficient to reduce the residual effect to not significant.

11.11.6 No significant effects on forest access were identified.

11.11.7 Additional good practice measures are identified for implementation on land outwith the operational corridor, 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 Long-Term Forest Plans which in-turn would aim to follow UK Forestry Standard for the implementation of the works required.

11.11.8 The development of compensatory planting scheme agreements will be progressed with landowners within the regional land boundary of the Local Authority, of where the Proposed Development is geographically located. This is to mitigate the woodland removal of the Proposed Development in meeting the Scottish Government's CoWRP objective of no net loss of woodland. On this basis the Applicant will replant the area quantity (hectares) of woodland removed for the Proposed Development.