VOLUME 2: CHAPTER 9 – FORESTRY

Figures and Visualisations (Volume 3a and 3b of this EIA Report)

Appendices (Volume 4 of this EIA Report)

There are no appendices associated with this chapter.

9. FORESTRY

9.1 Introduction

This Chapter assesses the potential effects of the Proposed Development on forest areas during construction and operational phases. The assessment considers the overall effect on the forest area.

The specific objectives of this chapter are to:

- Describe the forestry baseline;
- Describe the potential effects, including direct, indirect and cumulative effects, on forestry features;
- Describe the mitigation measures proposed to address likely significant effects; and,
- Assess the significance of any residual effects remaining following the implementation of mitigation.

9.2 Assessment Methodology and Significance Criteria

9.2.1 Scope of the Assessment

This 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.

This assessment is based on the requirement to construct and operate the proposed infrastructure while recognising the potential impact over broader forest management within the East Sutherland Land Management Plan (LMP), managed by Forest and Land Scotland (FLS) from the Proposed Development. This Chapter assesses the area of the Site and does not address the overall LMP. Any further felling undertaken within the Site would be solely under the control of the landowner, and the Applicant would not have any influence or control over such and therefore cannot be reliably assessed for the purposes of the EIAR. Consequently, the assessment is limited to consideration of the effects of the Proposed Development on the present forest composition.

9.2.2 Extent of the Study Area

The woodlands considered in this Chapter fall under the management of Forestry and Land Scotland on behalf of the Scottish Government and are within the East Sutherland Land Management Plan (LMP) area. The specific area of forest is referred to as Achormlarie within the LMP.

The Proposed Development is contained within the area at the north west of Achormlarie to the south of the existing substation which itself is to the south of Loch Buidhe.

9.2.3 Consultation Undertaken to Date

A request for a Scoping Opinion was made in February 2024. A Scoping Report was submitted to support the request, which sought input from statutory and non-statutory consultees regarding the information to be provided within this EIA Report. **Table 9.1** sets out the comments received from consultees in relation to forestry and the actions taken to address them within this assessment.

Table 9.1 Scoping Consultee responses

Consultee	Summary Response	Comment / Action Taken
The Highland Council **9 May 2024**	The Scoping Report notes that tree removal would be required. The EIAR should indicate all the areas of woodland / trees that would be felled to accommodate the development, including any off-site works / mitigation. Compensatory woodland is a clear expectation of any proposals for felling, and thereby such mitigation needs to be considered within any assessment. If so minded, permission is only likely to be granted on the basis that compensatory planting proposals are identified in advance. Compensatory planting should be within the Highland area and not form part of an already approved forestry plan / proposal that has gained Forestry Commission (FC) funding. 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 Scottish Forestry (SF) for a formal opinion on whether consent is required. Areas of retained forestry or tree groups should be clearly indicated and methods for their protection during construction and beyond clearly described. If timber is to be disposed of, further details of the methodology for this should be submitted.	This Chapter addresses the areas of woodland that would be felled for the Proposed Development. The Applicant recognises the requirement for compensatory planting and has made arrangements to fulfil this obligation. The requirements of the Forestry Environmental Impact Assessment (Scotland) Regulations 2017 are understood by the Applicant. Tree felling for management purposes extend beyond the Site infrastructure and felling boundaries shall be clearly marked prior to felling. The tree size to be felled for the Proposed Development is of sufficient size and maturity to meet the specifications of the current timber processors and will be harvested and marketed without recourse to forestry waste planning.

9.3 Method of Baseline Data Collation

Desk-based study included the review of the Open Data forest information[1]. These include the latest sub compartment schedules and the current East Sutherland LMP through Forestry and Land Scotland website[2]. The entire LMP area covers c. 3075 hectares (ha). Skelbo and Balvraid woodlands were, in 1955, leased from Cambusmore Estate for 200 years. The lease area is 134 ha, the remaining area is owned by the Scottish Government as part of the National Forest Estate.

The LMP runs from 2015 to 2025 with an expected revision at the end of this period for a further ten years. The Achormlarie section of the LMP covers an area of some 1992 ha.

Further open data for the Ancient Woodland Inventory (Scotland) (AWI)[3] and the Native Woodland Survey of Scotland (NWSS)[4] have also been considered.

[1] Forest Research Open Data Available at https://www.forestresearch.gov.uk/tools-and-resources/fthr/open-data/ [Accessed on 05/07/2024]
[2] Forestry and Land Scotland, East Sutherland land management plan. Available at https://forestryandland.gov.scot/what-we-do/planning/active/east-sutherland-lmp [Accessed on 05/07/2024]
[3] Ancient Woodland Inventory https://www.data.gov.uk/dataset/c2f57ed9-5601-4864-af5f-a6e73e977f54/ancient-woodland-inventory-scotland [Accessed on 05/07/2024]
[4] Native Woodland Inventory of Scotland https://www.data.gov.uk/dataset/da3f8548-a130-4a0d-8ddd-45019adcf1f3/native-woodland-survey-of-scotland-nwss [Accessed on 05/07/2024]

A forest walkover was undertaken in May 2024 to confirm the mapping provided and note any changes. It is noted that timber harvesting operations were in place within Achormlarie during the visit. Tree size and yield class were estimated during the walkover.

9.3.1 Determining Magnitude of Change and Sensitivity of Receptors

The Criteria for the assessment of effects on forestry are based against the standards set in UK Forestry Standards (UKFS)[5] and the Scottish Government's Control of Woodland Removal Policy (CoWRP)[6] and the implementation guidance.

UKFS is the reference standard for sustainable forest management in the UK. The standards for the planning, design and sustainable management of forests and woodlands in the UK use an approach based on internationally recognised science and best practice.

The seven elements of sustainable forest management within UKFS are

- Forests and Biodiversity;
- Forests and Climate Change;
- Forests and Historic Environment;
- Forests and Landscape;
- Forests and People;
- Forests and Soil; and
- Forests and Water.

The UKFS includes guideline points associated with each of these seven elements, which in turn enable an assessment to be made as to whether the relevant requirements of the UKFS have been achieved.

Productive conifer plantations are dynamic over time through planned and unplanned interventions, however, within any woodland there may be designated conservation areas and areas which are planned for enhancing biodiversity.

The criteria for assessing sensitivity is as follows:

High: Ancient Woodland Inventory (AWI) / Native Woodland Survey of Scotland (NWSS);

Medium: Plantation on ancient woodland sites (PAWS), Long Term Retention (LTR) and Natural Reserve (NR);

Low: Productive conifer plantation; and

Negligible: Unplanted areas.

9.3.2 Criteria for Assessing the Magnitude of Change

The criteria for assessing the magnitude of change for the forestry activities associated with the Proposed Development is the measurement or scale of felling required, both temporary which will be replanted and that which will be permanent woodland loss to these forests. Permanent woodland loss will be compensated for elsewhere following the CoWRP and should also be considered temporary woodland removal in a Scottish forestry context.

Table 9.2 illustrates how residual effects are determined by comparison of the sensitivity of receptors with the magnitude of predicted change. For the purposes of this assessment, taking account of the forest environment criteria, would be moderate and major effects would be considered significant.

[5] UK Forestry Standards, 5th Edition, 2023 https://www.forestry.gov.scot/publications/sustainable-forestry/uk-forestry-standard-ukfs [Accessed on 05/06/2024)

[6] Forestry Commission Scotland. (2009) The Scottish Government's Policy on Control of Woodland Removal. Edinburgh

Table 9.2: Residual 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

In addition, the Scottish Government's CoWRP provides the key terms of reference for this assessment. In this regard, any loss of forest resource as a result of the Proposed Development would be considered significant. Where forest resource would be maintained in the long term through provision of compensatory planting and compliance with the UKFS (in so far as is possible within the Site), effects of felling to accommodate the Proposed Development would be considered not significant.

9.3.3 Limitations and Assumptions

The digital data used in this assessment is publicly available open data and assumed to be correct subject to confirmation during the forest walkover.

Forest management planning changes in response to wind damage, pests and diseases and other natural events. Timber harvesting was on going within the forest at the time of the forest walkover.

9.4 Sensitive Receptors

General forest management is not being regarded as a receptor for this EIA as these forestry management considerations are developed within Forest Plans and in UKFS compliance. This EIA Report chapter therefore concentrates on the Proposed Development plans for felling, restocking and any permanent woodland loss.

No felling is proposed of any NWSS. No AWI is listed within the Site.

9.5 Baseline Conditions

The Proposed Development contains both woodland felled by FLS lying fallow prior to replanting as part of the LMP operations, and standing conifer crops.

There are areas of NWSS native pinewood within the Site, but to the south of the proposed development area.

The species within the Site is mainly sitka spruce (*Picea sitchensis*), with lodgepole pine (*Pinus contorta*) and a small amount of hybrid larch (*Larix x marschlinsii*) (**Volume 3a Figure 9.1** Forestry Baseline Species). The principal planting year was 1984 with a small area planted in 1986.

The site also contains open ground and felled areas awaiting replanting. The area felled is at variance from the slightly out of date (2019) Open Data.

The species, planting years and area of Achormlarie are shown in **Table 9.3**.

Table 9.3 Achormlarie species and planting year by are (ha)

Species	Planting year											
	1950	1984	1985	1986	1987	1988	1989	1990	1991	2013	2015	Total (ha)
Birch (*Betula Sp.*)	0.3											0.3
Hybrid larch (*Larix Sp.*)		1.2	6.8	7.8	2.3	11.8		1.6				31.5
Japanese larch (*Larix kaempferi*)				11.3			2.2					13.4
Lodgepole pine (*Pinus contorta*)		14.8	105.3	13.9	25.4	101.3	3.4	0.4				264.5
Mixed broadleaf	0.3			1.2		0.3	1.2	1.6			4.7	9.3
Other broadleaf						0.6						0.6
Scots pine (*Pinus sylvestris*)			15.9	62.4	1.9	18.3	12.1	17.1	6.6			134.3
Sitka spruce (*Picea sitchensis*)		61.9	74.2	99.8	241.9	247.2	75.4	109.2		6.2		916.0
Unplanted												622.9
Grand Total	0.7	78.0	202.1	196.4	271.6	379.5	94.3	129.9	6.6	6.2	4.7	1992.8

9.6 Future Baseline

Should the Proposed Development not proceed, the forest would continue to be managed under the current LMP or subsequent revisions for Achormlarie. The present felled areas would be replanted according to the LMP Future Habitats which includes productive conifers, native woodlands with Scots pine and riparian woodlands.

Felling would continue as the LMP management coupes shown for Achormlarie. The next felling phase for the Site is planned for 2036 - 2040.

9.7 Assessment of Effects, Mitigation and Residual Effects

9.7.1 Mitigation by Design

The Proposed Development has been designed to be in near proximity to the forest edge and the existing Loch Buidhe Substation, thereby reducing the impact on the overall future management of the wider forest unit.

The felling design avoids the potential impact of windblow from felling (**Volume 3a Figure 9.2** Forestry Felling Plan) for the Proposed Development and includes proposals to replant in situ (**Volume 3a Figure 9.3** Forestry Replanting Plan) and includes planting through a proposed Landscape and Ecological Mitigation Plan (**Volume 3a Figure 5.4**).

9.7.2 Construction Phase

The site infrastructure includes permanent substation platform, permanent access tracks, permanent drainage channels and SuDS ponds and all associated earthworks. There is also an area for the temporary construction compound.

Felling for the site infrastructure extends beyond the proposed substation footprint. Felling of 69.54 ha of standing coniferous timber planted in 1984 and 1986 will be undertaken for this infrastructure. Timber harvested will supply some 23,000 tonnes of marketable timber to the respective wood processing businesses.

The site infrastructure also includes 18.34 ha of ground previously harvested through the Forestry Land Scotland (FLS) LMP planned Management Coupes. This ground is presently lying fallow awaiting restocking.

Additionally, the proposed peat restoration area within the Proposal of Application Notice (PAN) Boundary is currently woodland both felled and not yet replanted and areas of standing timber. The area of fallow ground is 151.72 ha while the standing timber occupies 39.62 ha and will release approximately 16,626 tonnes of timber to the wood processing industry. As environmental improvement through the peatland restoration these areas are not required to provide compensatory planting (**Volume 2 Chapter 16** F1).

9.7.3 Mitigation During Construction

Felling has been designed to follow the most suitable wind firm boundaries reducing the potential for windblow occurring beyond the proposed felling coupe. If felling should be undertaken without considering wind firm boundaries consequential windblow is predicted resulting in windblow clearance operations rather than felling standing timber and resulting in some economic loss.

All timber harvesting and timber haulage during construction will follow best practice and guidance within the UKFS guidelines.

The residual effect of felling for construction is an area cleared for the Site infrastructure and a broader area which can be replanted in situ. This includes the area felled for the temporary construction compound. The areas of woodland lost to the permanent infrastructure are shown in **Table 9.4**.

Table 9.4 Felling and Replanting for the Proposed Development

Construction activity	Area (ha)
Fell standing timber crop	69.54
Fallow area	18.34
Replanting in situ	51.20
Permanent woodland loss at Achormlarie	23.52

9.7.4 Operational Phase

During the operational phase replanting of the felled areas shall take place. The replanting design will follow the proposed Landscape and Ecological Mitigation Plan (**Volume 3a Figure 5.4**) around the Proposed Development (**Volume 2 Chapter 16** F2). Areas felled for the Proposed Development out with the Landscape and Ecological Mitigation Plan will follow the Future Habitats Plan within the East Sutherland LMP for this part of Achormlarie.

However, permanent woodland removal of some 23.52 ha would be required for the Proposed Development. 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 (**Volume 2 Chapter 16** F3). Compensatory planting arrangements are being sought with the prospect, subject to the required Scottish Forestry authorisations.

Compensatory planting will be subject to a planting plan to the UKFS approval by Scottish Forestry. As the area required for compensatory planting exceeds the 20 ha afforestation threshold, assuming no part of the land is in a sensitive area, it will be subject to an EIA determination through Scottish Forestry.

9.7.5 Cumulative Effects

Given the constantly changing woodland structure and the commitment to replant in situ and off site there is considered to be no cumulative effect.

9.8 Summary

The Proposed Development will occupy 23.52 ha of forest area, 18.34 ha has been previously felled in accordance with the East Sutherland Land Management Plan. This ground has not yet been replanted. To take the coupes to wind firm boundaries 69.54 ha of standing conifer crop will be felled. This represents less than 5% of the planted area of Achoromlarie and the changes are not significant.

Replanting on site includes the planting proposed within the Landscape and Ecological Mitigation Plan (**Volume 3a Figure 5.4**) and where the area felled for the Proposed Development is out with the area covered by this plan, the replanting species and design will follow the current East Sutherland LMP Future Habitats Plan.

The permanent woodland loss resulting from the Proposed Development amounts to 23.52 ha. The Applicant is committed to at least matching this area with compensatory planting, the details and locations to be confirmed.