VOLUME 2 – CHAPTER 7: FORESTRY

Figures (Volume 3 of this EIA Report)

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7. FORESTRY

7.1 Introduction

7.1.1 This chapter considers the potential effects of the Proposed Development on Forestry. It details the implications of the Proposed Development on the woodland resource within the Site and its long-term management.

7.1.2 Forestry is not usually regarded as a receptor for EIA purposes. Commercial forests are a dynamic environment, and their structure continually undergoes change due to:

- normal felling and restocking by the landowner;
- natural events, such as storm damage, pests or diseases; and
- external factors, such as a wind farms or other development.

7.1.3 The specific objectives of the study within this chapter are as follows:

- Identify the baseline environment with regard to forestry within the Site and;
- Describe how consultation has informed the scope of the assessment;
- Identify the mitigation measures proposed to address impacts upon forestry, namely restocking and forest management practices and the process by which these were derived; and
- Present the residual effects remaining i.e. the changes to the physical structure of the forestry within the Site.

7.1.4 The forestry proposals are interrelated with environmental effects, which are assessed separately in the EIA Report. This chapter should therefore be read in conjunction with the following chapters of the **EIA Report Volume 2**, notably: **Chapter 3: Description of the Proposed Development**; **Chapter 9: Cultural Heritage**; **Chapter 10: Ecology**; **Chapter 11: Ornithology**; and **Chapter 12: Hydrology and Hydrogeology** as they are interrelated to the proposed changes in the forest structure.

7.1.5 The responsibility for the management of the remainder of the forest outwith the Site lies with the landowners and therefore the wider felling operations, restocking, and aftercare operations within these areas do not form part of the Proposed Development for which consent is sought.

7.1.6 The Proposed Development is located within existing commercial forestry plantations. The forestry proposals have been developed to:

- identify areas of forest to be removed for the construction and operation of the Proposed Development;
- identify those areas which are proposed to be replanted as part of the Proposed Development; and
- propose management practices for the forestry works.

7.1.7 In general, throughout this chapter data labelled 'baseline' refer to the current crop composition and any existing plans without any modification as a result of the Proposed Development. Data labelled 'Proposed Development' refer to the forestry plans incorporating the Proposed Development.

7.1.8 The Forestry assessment was prepared and overseen by DGA Forestry LLP, experienced forestry consultants with appropriate memberships to the Institute of Chartered Foresters (ICF), and experience of forestry assessment in the context of wind farm, grid and mixed-use developments.

7.1.9 The following terminology will be referred to throughout this chapter:

- Site: all land within the planning application (red line) boundary (**Figure 1.1: Site Location**);
- Proposed Development: The infrastructure including the platform, bays, control buildings, access tracks, drainage and landscape features and temporary construction compounds (see **Chapter 3: Description of the Proposed Development**);
- Windblow: trees that have fallen down / snapped due to wind disturbance; usually on edges where they have recently been exposed. Windblown trees should be considered as a potential risk to public health and safety;

- Windfirm: trees that are considered less likely to fall down due to wind disturbance due to prolonged exposure to the prevailing wind;
- Windfirm edge: trees along an edge that are considered less likely to fall down due to wind disturbance due to prolonged exposure to the prevailing wind i.e. along a forest road or ride;
- Construction felling: felling required to allow for the construction of the Proposed Development (see **Chapter 3: Description of the Proposed Development)**; and
- Management felling: felling that has been advanced from within its current agreed phase to allow wind firm edges to be created following the removal of trees due to construction felling.

7.2 Scope of the Assessment

Effects Assessed in Full

7.2.1 On the basis of the EIA Scoping process, desk-based, and field survey work undertaken, in combination with the professional judgement of the EIA team, experience from other relevant projects and policy guidance or standards, and feedback received from consultees, the following direct, indirect and cumulative effects have been identified for detailed assessment:

- direct long-term loss of forest resource as a result of felling trees for the construction of the Proposed Development;
- loss of broadleaf woodland and native woodland as a result of felling of trees for the Proposed Development;
- effects on forest management during construction and operation; and
- cumulative effects during both the construction and operational of the Proposed Development.

7.2.2 The EIA Scoping process, baseline conditions and professional judgement has identified the following effects for detailed assessment:

- direct effects during construction on net woodland area;
- indirect effects during construction on woodland fragmentation and isolation e.g. increased risk of windblow; and
- cumulative effects during construction on the loss of woodland from construction felling and management felling.

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

Effects Scoped Out

7.2.4 On the basis of the desk-based assessment, professional judgement of the assessment team, experience from other relevant projects, policy guidance or standards, and feedback received from consultees, the following effects have been 'scoped out' of detailed assessment, as proposed in the EIA Scoping Report (**Appendix 6.1: Scoping Report**).

- Forestry management issues during the operational phase are scoped out. It is considered that implications for future forest management outside of the Site in terms of felling phases, risk of windblow, replanting on site and wayleave maintenance can be adequately addressed through wayleave agreements with the relevant landowners.
- Indirect impacts from the felling or woodland management undertaken outwith the Site which would be under the control of the landowner over which the Applicant would have no influence or control.

Study Area

7.2.5 In this chapter the term "woodland" is used generically to describe the "'receptor'" whether that is a woodland of any description, a forestry plantation, a group of trees, or an individual tree within the Forestry Study Area (FSA), as shown in **Figure 7.1: Forestry Study Area**. The FSA extends to 496.4 ha.

7.2.6 The Proposed Development and the FSA is located within an extensive area of commercial forestry, known as the Mearns Forest. The land is part of Scotland's National Forest Estate, owned by Scottish Ministers on behalf of the nation, and managed by Forestry and Land Scotland (FLS).

7.2.7 Please note that the FSA and the Proposed Development Red Line Boundary are two separate areas. The FSA takes into account the wider forest area and is shown to include whole forestry management coupes and windfirm edges,

rather than partial coupes. The forestry assessment is based on the FSA, as shown in **Figure 7.1: Forestry Study Area.**

7.3 Assessment Methodology

Legislation, Policy and Guidance

Legislation

7.3.1 This assessment has been carried out in accordance with the principles contained within the following legislation:

- Forestry and Land Management (Scotland) Act[1] 2018;
- Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations[2] 2017;

Policy

7.3.2 The following policies of relevance to the assessment have been considered:

- National Planning Framework 4[3] (NPF4) (Scottish Government) 2023;
- Scotland's Forestry Strategy[4] 2019-2029 (Scottish Government);
- Scotland's Third Land Use Strategy[5] 2012-2026 (Scottish Government);
- Control of Woodland Removal Policy[6] 2019 (Forestry Commission Scotland);
- Aberdeenshire Local Development Plan[7] 2023, Policy E3; and
- Aberdeenshire Forestry and Woodland Strategy[8] 2023.

Guidance

7.3.3 The assessment has been carried out in accordance with the principles contained within the following documents:

- Right Tree in the Right Place[9] 2010 (Forestry Commission Scotland);
- Management of Forestry Waste[10] 2017 (SEPA);
- "Use of Trees Clear Felled to Facilitate Proposed Development on Afforested Land" 2014[11] (SEPA);
- UK Forestry Standard 2023[12] (Forest Research); and

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[1] The Scottish Government (2018) The Forestry and Land Management (Scotland) Act 2018, Edinburgh. Available [online]: http://www.legislation.gov.uk/asp/2018/8/contents/enacted [accessed on 15.04.19]
[2] The Scottish Government (2017) The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, Edinburgh. Available [online]: https://www.legislation.gov.uk/ssi/2017/102/contents?view=plain [accessed 07.11.2024]
[3] The Scottish Government (2022) National Planning Framework 4 Revised Draft. Available [online]: https://www.gov.scot/publications/national-planning-framework-4-revised-draft/ [accessed 17/02/2023]
[4] The Scottish Government (2019) Scotland's Forestry Strategy 2019-2029, Edinburgh.
[5] Scottish Government (2021) Scotland's Third Land Use Strategy 2021-2026. Available [online]: https://www.gov.scot/publications/scotlands-third-land-use-strategy-2021-2026-getting-best-land/ [accessed 10/03/2022]
[6] Forestry Commission Scotland (2019) Scottish Government's policy on control of woodland removal: implementation guidance. Available [online]: https://forestry.gov.scot/publications/349-scottish-government-s-policy-on-control-of-woodland-removal-implementation-guidance
[7] Aberdeenshire Council (2023) Aberdeenshire Local Development Plan 2023, Aberdeen. Available [online]: https://online.aberdeenshire.gov.uk/ldpmedia/LDP2021/AberdeenshireLocalDevelopmentPlan2023IntroductionAndPolicies.pdf [accessed 07.11.2024]
[8] Aberdeenshire Council (2023) Aberdeenshire Forestry and Woodland Strategy, Aberdeen. Available [online]: https://aberdeenshirestorage.blob.core.windows.net/acblobstorage/530cfa0d-77f2-4752-a2b3-f1a689f5abc7/pa2023-01---planning-advice---aberdeenshire-forest-and-woodland-strategy-2021.pdf [accessed 07.11.2024]
[9] Forestry Commission Scotland (2010) Right Tree in the Right Place - Planning for Forestry & Woodlands. Forestry Commission, Edinburgh.
[10] SEPA (2017) SEPA Guidance Notes WST-G-027 "Management of Forestry Waste". Available [online]: https://www.sepa.org.uk/media/28957/forestry_waste_guidance_note.pdf [accessed 04/03/2022]
[11] SEPA (2014) LUPS-GU27 "Use of Trees Cleared to Facilitate Development of Afforested Land". Available [online]: https://www.sepa.org.uk/media/143799/use_of_trees_cleared_to_facilitate_development_on_afforested_land_sepa_snh_fcs_guidance-_april_2014.pdf [accessed 20/01/2019]
[12] Forest Research (2023) The UK Forestry Standard. Forest Research, Farnham.

- UK Woodland Assurance Standard[13].

Consultation

7.3.4 In undertaking the assessment, consideration has been given to the consultation responses which are summarised in **Table 7.1.**

Table 7.1: Summary of Consultation

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
Scottish Forestry (SF) May 2024	Formal pre-application consultation	The Applicant should read and implement the Scottish Government's Control of Woodland Removal Policy. The following points should be noted: • SF will no longer permit wholescale removal of woodlands to enable developments; • Only construction felling will be approved as part of the application; • All other felling should be approved as part of the Forest Plan or Felling Permissions; and • Where woodlands and forest are removed for developments and subject to compensatory planting, there must be no loss of productivity.	A forestry chapter will be prepared as part of the EIA Report detailing felling and restocking proposals. It will identify the proposed method of crop clearance, subsequent replanting and aftercare works. It will also identify changes to the pattern of timber harvesting and the effects on timber production. The Proposed Development will take into account the Scottish Government's Control of Woodland Removal Policy, the associated implementation guidance; the UK Forestry Standard and other legislation, policy and guidance as relevant. The proposals will identify the extent of any net loss of woodland and requirement for compensatory planting (See Appendix 7.1). SF comments are noted and have been taken into account in the assessment.
Aberdeenshire Council May 2024	Formal pre-application consultation	Impact on trees and compliance with relevant legislation.	A forestry chapter has been prepared as part of the EIA Report. The Proposed Development will take into account the Scottish Government's Control of Woodland Removal Policy, the associated implementation guidance; the UK Forestry Standard and other legislation, policy and guidance as relevant.
NatureScot May 2024	Formal pre-application consultation	Impact on habitats and protected species.	There will be consultation within the wider EIA team including Ornithology, Ecology and Forestry specialists to ensure plans align.
SEPA May 2024	Formal pre-application consultation	Minimise felling. Forest removal and forest waste.	Where relevant the comments regarding forest waste and forest removal have been addressed and felling has been reduced to the extent feasible to do so.
Stonehaven and District Community Council	Formal scoping consultation	Preservation of woodland, in particular ancient woodland. Impact of tree removal on recreation and tourism.	Ancient woodland has been avoided. Consideration of the impact of the Proposed Development on wildlife is provided in Chapter 10: Ecology and Chapter 11: Ornithology.

[13] UKWAS (2017) UK Woodland Assurance Standard, Edinburgh. Available [online]: https://ukwas.org.uk/standard/background-and-purpose/ [accessed 07.11.2024]

Consultee and Date	Scoping/Other Consultation	Issue Raised	Response/Action Taken
		Impact on the environment and wildlife.	
Aberdeenshire Council September 2024	Formal scoping opinion	In agreement with the scope proposed although it was made clear that compensatory planting for woodland removal must be addressed within the assessment.	This is included in this assessment and also presented on Figure 3.3: Landscape Design. Remaining planting requirements will be provided off site. A compensatory planting strategy is provided in Appendix 7.1.

Desk Based Research and Data Sources

7.3.5 A desk-based assessment was undertaken to determine existing crop information, this was collated using data from the landowner and any other data sources, as necessary. The existing crop information includes current forestry information on species, planting year and felling and restocking plans where available.

7.3.6 Publicly available data was used for this assessment in conjunction with data provided by the landowner, although the data was slightly older and potentially out of date for some areas, it provided an entire overview of the FSA. It was believed that this data would improve the report and make a more robust assessment, since the data provided by the landowner contained gaps, which could be detrimental to the overall assessment.

7.3.7 Within the Site, areas of crop will require to be felled to accommodate the construction and operation of the Proposed Development. The felling programme for the Proposed Development will largely be driven by technical constraints relating to both forestry and development.

7.3.8 In this case, taking into account the ecological constraints as mentioned in **Chapter 10: Ecology**, a 5 m buffer has been applied around each item of temporary and permanent infrastructure. An indicative 50 m corridor has been applied to all new access tracks and upgraded existing tracks to be used for construction purposes.

7.3.9 The following data sources have informed the assessment:

- National Estate sub-compartment database: information on baseline species, age class, baseline fell phases and restocking species;
- the Native Woodland Survey of Scotland: information on distribution and status of native woodland within Scotland;
- the National Forest Inventory: information on baseline species, age class, baseline fell phases and restocking species;
- aerial photography: information on current status of the forest; and
- Scottish Forestry publicly available databases: information on the current status of the forest.

Field Survey

7.3.10 A field survey was undertaken after the collation of crop data and the inclusion of the Proposed Development infrastructure. The field survey included a site walkover to verify and update the baseline data as necessary; and assess the woodlands with respect to integration of the Proposed Development.

7.3.11 The following field surveys were carried out to inform the assessment:

A field survey was carried out within the Fetteresso forest block on 18th September 2024, this included visual observations on species composition and age class. A small number of top height measurements were taken to help determine yield class.

Assessing Significance

7.3.12 There are currently no published criteria, guidance or methodologies for the assessment of effects on forestry. The predicted significance of the effect has been determined through a standard method of assessment outlined in **Chapter 5: EIA Process and Methodology** and based on professional judgement.

7.3.13 Greater sensitivity has been given in the assessment to woodlands determined to be of high conservation value e.g. Ancient & Semi-Natural Woodlands, lower weighting to woodlands determined to be of lower conservation value e.g. commercial forestry plantations. However, this does not imply that commercial woodland will automatically be assessed as of low sensitivity as the specific characteristics of the woodlands will be taken into account.

7.3.14 In addition, there may be other features, especially veteran trees, within the Site which may have biodiversity value and make a contribution to landscape character and quality.

Criteria for Assigning Sensitivity to Forestry

7.3.15 Sensitivity has been determined on the basis of the following:

- the sensitivity of the different types of woodland present in the FSA 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.

7.3.16 Five categories of sensitivity/importance of a forest or woodland are defined in **Table 7.2: Sensitivity Criteria** below.

Table 7.2: Sensitivity Criteria

Category	Description
Negligible	• 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.
Low	• generally, more commonplace, not designated; • considered tolerant of moderate levels of change; or • undergoing substantial development such that their character is one of change.
Medium	• generally, more commonplace, but may have low level local value; • are tolerant of moderate levels of change; and • potential to undergo smaller developments.
High	• valued more locally; • rare or distinctive in a regional context; and/or • are considered potentially tolerant of small levels of change.
Very 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.

Table 7.3: Sensitivity Rankings

Ranking	Score
Negligible	4
Low	5-8
Medium	9-12
High	13-16
Very High	17-20

7.3.17 Sensitivity rankings (**Table 7.3**) are determined by which category within the sensitivity criteria fits the Site best. There are a range of scores for each ranking, this allows for a judgement to be made about where within a category the ranking of a Site lies. Forests are dynamic and can be in a permanent state of change; a range of scores allows for this to be assessed on an individual basis. These scores are then used to inform the likely significance of the effect of the Proposed Development.

7.3.18 The magnitude of effect has been assessed based on professional judgement and as identified in **Table 7.4: Magnitude of Effect**, with reference to:

- 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.

Table 7.4: Magnitude of Effect

Criterion	Magnitude Score				
	1	2	3	4	5
Type of Effect	Nil	Limbing/ Pruning	Crown Reduction	Partial Felling	Complete Felling
Percentage of Woodland Affected	<10%	10-30%	31-50%	51-90%	>90%
Timescale of Effect	Short Term	-	Medium	-	Long
Risk of Consequential Damage/Windblow	Low	-	Medium	-	High
Fragmentation of Woodland	Low	-	Medium	-	High

Table 7.5: Magnitude Rankings

Ranking	Score
Negligible	5
Slight	6-12
Moderate	13-19
Severe	20-25

7.3.19 Magnitude rankings (**Table 7.5**) are determined by adding the scores for each individual criterion based on the circumstances on Site. This combined score then provides a ranking, which is used to inform the significance of the effect of the Proposed Development. The following definitions are used to determine the magnitude rankings:

- short term timescales could be considered to be less than a singular phase within a forest plan, whereas long term would be the timescale for the entirety of the plan;
- a forest with a low risk to windblow would have rides, windfirm boundaries and suitable wind breaks, a forest with a higher risk of windblow could have had windfirm edges felled, be a continuous block of even aged plantation; and
- low fragmentation of woodland would mean that the forest is continual with easy access between coupes, high fragmentation would be a forest where the blocks are spread out with no easy access route between them.

Significance of Effect

7.3.20 The sensitivity of a woodland (**Table 7.3)** and the magnitude rankings (**Table 7.5)** have been used to inform an assessment on the likely significance of the effect. **Table 7.6: Matrix for Determination of Significance of Effects** provides the criteria for reaching a judgement as to the significance of predicted effects.

7.3.21 Major and Moderate effects are considered to be 'significant' in the context of the EIA Regulations; Minor and Negligible effects are considered to be 'not significant'.

Table 7.6: Matrix for Determination of Significance of Effects

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

Magnitude of Change	Sensitivity of Receptor / Receiving Environment to change				
	Very High	High	Medium	Low	Negligible
Slight	Moderate	Minor	Minor	Negligible	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

Assessment Assumptions and Limitations

Assessment Assumptions

7.3.22 The following assumptions have been made when undertaking the assessment of effects:

- areas felled as part of the management felling programme will be restocked by the landowner under the MDP; and
- data taken from publicly available datasets is up to date and correct.

Assessment Limitations

7.3.23 Current landowner data has not been provided. All baseline data is taken from the most recent National Forest Estate (NFE) records. The Mearns FDP has been approved by Scottish Forestry since the NFE records were last updated. There may be some discrepancies due to the lack of up-to-date datasets for the FSA.

7.3.24 Due to restricted access minimal field visits were undertaken on Site to verify and update the baseline data; cross checking the data has been limited, and the woodland characteristics and a detailed volume assessment could not be further assessed. Observations of potential woodland windfirm boundaries could not be confirmed with a site visit.

7.3.25 Whilst some information gaps have been identified, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on Forestry.

7.4 Baseline Conditions

Summary of Baseline

7.4.1 The woodlands surrounding the Site are managed under the Mearns Land Management Plan (LMP) 2015 – 2024. The Mearns LMP area is made up of three forest blocks; Fetteresso, Glenfarquhar; and North Drumtochty and South Drumtochty. The Mearns Forest is predominately an upland environment with poorer soils which have been planted with commercial conifers. The purpose of the FDP is to set out management objectives and prescriptions for the Mearns Forest for the ten-year period in detail, and in broader terms into the future. The main objectives of the FDP are to produce good quality timbers whilst dealing with plant health issues.

7.4.2 The three forest blocks are composed primarily of commercial conifers, principally Sitka spruce (*Picea sitchensis*), with areas of diverse conifers and small areas of mixed broadleaf woodland (See **Appendix 7.2: Woodland Report**). The FDP confirms it is planned to retain the woodlands as commercial forest in the future. The woodlands within the Site have a diverse age class due to the ongoing felling and replanting programmes over many years.

7.4.3 None of the woodlands within the Site are recorded in the Ancient Woodland Inventory (AWI) Scotland. Small areas are recorded as native woodland in the Native Woodland Survey of Scotland. However, comparison with the Mearns FDP and the National Forest Estate sub-compartments identifies that the areas classed as native woodland are in fact comprised of commercial conifers or open ground.

7.4.4 The forests contain a limited range of woodland types due to the original planting programme together with areas of unplantable land and open ground. The crops are comprised largely of commercial conifers with small areas of both mixed conifers and mixed broadleaves and open ground. The woodlands are currently within the felling and restocking phase. Further information on the composition of the woodlands in the FSA is provided in the baseline description below in Section 7.4.

Species Composition

7.4.5 The current baseline species composition of the woodlands within the FSA is shown in **Figure 7.2: Baseline Species Composition** and illustrated in **Table 7.7: Baseline Species Composition**.

Table 7.7: Baseline Species Composition

Species	Area (ha)	Area (%)*
Sitka spruce	215.1	43.3
Sitka spruce/Other conifer	60.5	12.2
Other conifer	136.1	27.4
Mixed broadleaves	16.6	3.3
Open ground	68.1	13.7
Total	496.4	100.0

* - Rounding errors can occur

7.4.6 The main species are commercial conifers, principally Sitka spruce, which in pure or mixed stands, accounts for 55.7% of the total FSA. Other conifers account for 27.4% of the FSA and broadleaf woodland 3.3%. Open ground accounts for 13.7%.

7.4.7 The species composition reflects the practice and guidance which prevailed at the time the woodlands were established. Restructuring as part of a long-term forest plan would aim to introduce an increased proportion of broadleaves and other conifers into the woodland composition, as per current UKFS guidelines.

Future Baseline in the Absence of the Proposed Development

7.4.8 If the Proposed Development were not to proceed 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 under this scenario, although it is likely that there will be local changes.

Implications of Climate Change for Baseline Conditions

7.4.9 A summary of the relevant climate change projections using the UK Climate Change Projections 2018 (UKCP18) are:

- temperatures are projected to increase, particularly in summer;
- winter rainfall is projected to increase and summer rainfall is most likely to decrease;
- heavy rain days (rainfall greater than 25mm) are projected to increase, particularly in winter;
- near surface wind speeds are expected to increase in the second half of the 21st century with winter months experiencing more significant effects of winds; however, the increase in wind speeds is projected to be modest; and
- an increase in frequency of winter storms over the UK.

7.4.10 The projected climate change scenario outlined above, is expected to have the following effects on baseline conditions:

- increased growth rates due to warmer and wetter seasonal changes;
- increased chance of windblow due to weather conditions; and
- potential for greater stress conditions for the trees, which could lead to greater opportunities for pest and disease incursion.

7.5 Mitigation and Monitoring

Embedded Mitigation

7.5.1 Topic specific embedded mitigation (mitigation achieved through design) is outlined below.

- F1 – Measures put in place to mitigate for the permanent loss of woodland by the Proposed Development through planting (refer to **Figure 3.3: Landscape Design**) to satisfy the requirements of the Control of Woodland Removal Policy within the Site including restocking with evergreen conifers.

Applied Mitigation

7.5.2 The Applicant is committed to the implementation of Applied Mitigation summarised in **Table 7.8: Applied Mitigation**.

Table 7.8: Applied Mitigation

Mitigation Measure	Project Stage/Timing	Responsibility
F2: Adherence to all relevant policy documents including: • Right Tree in the Right Place; Control of Woodland Removal Policy; • UK Forestry Standard; and • UK Woodland Assurance Standard.	Planning stage; during construction of the Proposed Development; and during the implementation of any additional mitigation measures	Principal Contractor
F3: The Applicant will implement on-site and off-site BNG measures, as defined in the BNG Report (refer to **Appendix 10.4**). BNG measures will deliver no less than a 10% net gain in biodiversity units and will be underpinned by sound ecological principles to deliver broad benefits for a range of ecological features.	Pre-energisation	Applicant
F4: Restocking of management felling areas (29 ha); and off-site restocking planting for permanent infrastructure areas (87.4 ha).	After construction of the Proposed Development.	Applicant

Further Survey Requirements and Monitoring

7.5.3 During this assessment it has been determined that no further surveys or monitoring will be required for Forestry purposes.

Compensation/Enhancement

7.5.4 In order to comply with the criteria of the Scottish Government's Control of Woodland Removal Policy, compensation planting would be procured. The extent, location and composition of such planting will be agreed with SF, taking into account any revision to the felling and restocking plans prior to the commencement of construction of the Proposed Development.

7.5.5 This compensation planting will be distinct to that which is presented within the BNG Report (**Appendix 10.4: BNG Report**). These documents detail the ecological value of the baseline, and the measures that will be implemented within the Site through the landscape design to “conserve, restore and enhance biodiversity” in accordance with NPF4 policy 3(b). The outline BEP has been designed using sound ecological principles and with reference to existing and emerging BNG best practice.

7.6 Assessment of Likely Significant Effects – Construction

7.6.1 The assessment of effects identified above is based on the project description as outlined in **Chapter 3: Description of the Proposed Development**. Unless otherwise stated, potential effects identified are considered to be adverse.

Predicted Construction Effects

Proposed Development Felling Plan

7.6.2 A felling plan for the Proposed Development is shown in **Figure 7.3: Proposed Development Felling Plan,** which identifies felling required for construction of the Proposed Development within the Site, as well as the management felling required to achieve the windfirm edge. These data are summarised in **Table 7.9: Felling Areas Required for Construction**.

Table 7.9: Felling Areas Required for Construction

Felling Type	Area (ha)	Area (%)
No felling – open ground	68.1	13.7
Infrastructure felling	87.4	17.6
Advanced felling	29.7	6.0
No felling – woodland	311.2	62.7
Total	496.4	100.0

7.6.3 The total felling required for the construction of the Proposed Development, both the infrastructure and management felling, totals 117.1 ha from a total area of woodland (including open ground) within the FSA of 496.4 ha.

7.6.4 The assessment on net woodland loss, woodland fragmentation and windblow risk were undertaken using the matrix of determination of significance of effects. The sensitivity and magnitude of the Site were determined using the data produced through the forestry assessment, sensitivity was determined to be medium and magnitude moderate. Therefore, the Proposed Development has a minor significance.

7.6.5 The management felling of 29.7 ha helps mitigate against woodland fragmentation, windblow and isolation while maintaining a windfirm edge of trees that are considered less likely to fall down due to wind disturbance as a result of prolonged exposure to the prevailing wind, thereby protecting internal forest from fragmentation. By completing this felling as part of the Proposed Development, the potential for significant effects from the Proposed Development is reduced as shown in the sensitivity and magnitude of effects rankings.

Additional Mitigation

Proposed Development Restocking Plan

7.6.6 The Baseline Restocking Plan has been updated to integrate the Proposed Development infrastructure requirements into the forest design and to take account of the site conditions. Restocking on and off site is discussed further in **Appendix 10:4 BNG Repor**t and the approach to compensatory planting described in **Appendix 7.1**. Permanent open ground refers to the permanent loss of crop to permanent infrastructure only of the Proposed Development.

7.6.7 When preparing the Proposed Development Restocking Plan, a number of points were considered as detailed below:

- fragmentation of coupes to be minimised as much as possible;
- coupe shapes would be modified to ensure that access for future forestry operations, principally harvesting, are maintained; and
- coupe shapes and edges would be modified to follow good practice.

7.6.8 The change in area of stocked woodland in the forests due to the Proposed Development is shown in **Table 7.10: Stocked Woodland Area Comparison**.

Table 7.10: Stocked Woodland Area Comparison

Woodland Type	Baseline Species Area (ha)	Proposed Development Area (ha)	Difference Area (ha)	Difference Area (%)
Stocked woodland	428.3	340.9	-87.4	-17.6
Unstocked woodland	68.1	155.5	87.4	17.6
Total	496.4	496.4	0.0	0.0

7.6.9 The changes in the structure of the woodlands due to the Proposed Development can be summarised as follows:

- there would be a net reduction in the total area of woodland of 87.4 ha;
- permanent open ground would total 87.4 ha; and
- the net reduction in stocked woodland area within the FSA would be equivalent to 17.6% of the FSA.

7.6.10 The implementation of on-site BNG measures (refer to **Appendix 10.4**) through the planting of the soil storage compound shown in **Figure 3.3: Landscape Design** will reduce the amount of permanent open ground and therefore the amount of unstocked woodland. The changes these on-site measures will have on the woodlands can be summarised as follows:

- there would be an increase in stocked woodland area of 10.76 ha;
- permanent open ground would total 76.64 ha; and
- the net reduction in stocked woodland area within the FSA would be equivalent to 15.4% of the FSA.

Residual Construction Effects

7.6.11 As described in **Table 17.4 Summary of Significant Effects** the significance to the forest prior to any proposed mitigation was minor, with the inclusion of all embedded and applied mitigation this significance reduces to negligible.

7.6.12 Subject to adherence with all embedded and applied mitigation, no significant residual effects (in EIA terms) as a result of the construction of the Proposed Development are anticipated on Forestry.

7.7 Assessment of Likely Significant Effects – Decommissioning

7.7.1 Decommissioning effects are unclear given the Proposed Development's operational life and the manner in which Forestry features at the Site could change over such a long period. However, while decommissioning effects are not assessed further, it is unlikely that the significance of effects experienced at that time will be greater than those assessed for the construction phase.

7.8 Assessment of Likely Cumulative (In-Combination) Effects

Introduction

7.8.1 Predicted adverse effects on Forestry arising from the construction of the Proposed Development has the potential to contribute to cumulative effects. The EIA Regulations require that these 'in-isolation' effects be considered alongside predicted effects from other plans or projects.

7.8.2 **Table 7.11: Cumulative Assessment: Associated SSEN Transmission Development** provides a cumulative assessment of the Proposed Development with the Associated SSEN Transmission Developments defined in **Chapter 1: Introduction** and shown in **Figure 5.1: Cumulative Developments**.

7.8.3 **Table 7.12 and 7.13** provide a cumulative assessment of the Proposed Development with other reasonably foreseeable SSEN Transmission and 3rd party developments as shown in **Figure 5.1: Cumulative Developments**.

Table 7.11: Cumulative Assessment: Associated SSEN Transmission Development

	Construction	
	Net woodland area	Woodland fragmentation and isolation
Proposed Kintore to Tealing 400kV OHL	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place (See section 7.5 for mitigation). Based on the information currently available the additional felling likely to be required for the construction of the Kintore to Tealing 400kV OHL does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the Kintore to Tealing 400kV OHL does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the OHL is not likely to be significant.
Summary	The cumulative effect of the Proposed Development with the Kintore to Tealing 400 kV OHL is not significant.	

Table 7.12: Cumulative Assessment: Other SSEN Transmission Developments

	Construction	
	Net woodland area	Woodland fragmentation and isolation
Fetteresso 132kV substation extension	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place (See section 7.5 for mitigation). Based on the information currently available the additional felling likely to be required for the construction of the Fetteresso 132kV substation extension does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the Fetteresso 132kV substation extension does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the substation extension is not likely to be significant.
Network Rail Drumlithie	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place (See section 7.5 for mitigation). Based on the information currently available the additional felling likely to be required for the construction of the Network Rail Drumlithie does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the Network Rail Drumlithie does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect.

	Construction	
	Net woodland area	Woodland fragmentation and isolation
		As a result, the cumulative effect of the Proposed Development and the Network Rail project is not likely to be significant.
Fiddes 132kV replacement	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place (See section 7.5 for mitigation). Based on the information currently available the additional felling likely to be required for the construction of the Fiddes 132kV replacement does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the Fiddes 132kV replacement does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the OHL is not likely to be significant.
SSEN Transmission offshore grids project	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place (See section 7.5 for mitigation). Based on the information currently available the additional felling likely to be required for the construction of the SSEN Transmission offshore grid project does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the SSEN Transmission offshore grids project does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the offshore grid project is not likely to be significant.
Glendye Wind Farm Grid Connection	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place (See section 7.5 for mitigation). Based on the information currently available the additional felling likely to be required for the construction of the Glendye Wind Farm Grid Connection does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the Glendye Wind Farm Grid Connection does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the grid connection is not likely to be significant.
Fetteresso windfarm	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place (See section 7.5 for mitigation). Based on the information currently available the additional felling likely to be required for the construction of the Fetteresso windfarm does not introduce	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no significant effect on the overall fragmentation/isolation of the forest.

	Construction	
	Net woodland area	Woodland fragmentation and isolation
	any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	Based on the information available the additional felling required for the construction of the Fetteresso windfarm does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the windfarm is not likely to be significant.
Summary	The cumulative effect of the Proposed Development with other SSEN Transmission Developments is not significant.	

Table 7.13: Cumulative Assessment: Other Third Party Developments

	Construction	
	Net woodland area	Woodland fragmentation and isolation
Bowdun Offshore Wind Farm Onshore Cable Connection	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place. Based on the information currently available the additional felling likely to be required for the construction of the listed development does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no predicted significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the listed development does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the other listed development is not likely to be significant.
Craigneil Wind Farm	The Proposed Development is not predicted to have a significant effect upon net woodland area with embedded and applied mitigation measures in place. Based on the information currently available the additional felling likely to be required for the construction of the listed development does not introduce any significant additional loss of woodland area. It is similarly assumed that the Applicant will commit to the principle of offsite compensatory planting for this Associated Development.	The Proposed Development will result in some fragmentation and isolation of small forestry coupes, although with embedded mitigation through management felling and restocking plans, there is no predicted significant effect on the overall fragmentation/isolation of the forest. Based on the information available the additional felling required for the construction of the listed development does not introduce any significant additional fragmentation and isolation of woodland area and therefore there is no predicted significant cumulative effect. As a result, the cumulative effect of the Proposed Development and the other listed development is not likely to be significant.
Summary	Based on the information currently available the individual cumulative effects during construction of the Proposed Development and the listed developments are unlikely to have a significant effect in isolation but cumulatively they may, depending on their size and distribution.	

7.9 Summary of Significant Effects

7.9.1 **Table 7.14** below summarises the predicted residual effects of the Proposed Development on Forestry prior to the application of additional mitigation. There are no significant effects during the operational phase or any significant cumulative effects, based on the information available.

Table 7.14: Summary of Significant Effects

Predicted Effects	Significance Prior to Additional Mitigation	Mitigation	Significance of Residual Effects Following Additional Mitigation
Construction			
Net woodland loss	Minor	Off site compensatory planting	Negligible
Woodland fragmentation	Minor	Management felling to suitable coupe boundaries	Negligible
Windblow risk	Minor	Management felling to wind firm edges	Negligible
Cumulative			
No significant effects	-	None	-