

Chapter 12

Forestry

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12.1 INTRODUCTION

12.1.1 This Chapter of the Environmental Impact Assessment (EIA) Report has been prepared by DGA Forestry LLP. It evaluates the potential effects of the Proposed Development on the woodland resource. There is no forestry where the proposed wind turbines are. Only the private access which requires upgrading and developing, affects forestry.

12.1.2 Commercial forests are dynamic and their structure continually undergoes change due to normal felling and restocking by the landowner; natural events, such as windblow, pests or diseases; and external factors, such as a wind farm development.

12.1.3 This Chapter therefore describes the plans as a result of the Proposed Development for felling, restocking and forest management practices; the process by which these were derived; and the changes to the physical structure of the forest. It further discusses the issue of forestry waste arising from the Proposed Development. The forestry proposals are interrelated with environmental effects, which are assessed separately. This Chapter should be read in conjunction with the following EIA Report chapters as they are interrelated to the changes in the forest structure:

- Chapter 2: Site Selection and Design Evolution;
- Chapter 3: Project Description;
- Chapter 5: Landscape & Visual Impact Assessment;
- Chapter 6: Ecology;
- Chapter 7: Ornithology; and
- Chapter 8: Hydrology, Geology & Hydrogeology.

12.1.4 This Chapter identifies areas of forest to be removed for the construction and operation of the Proposed Development and outlines the proposed management practices, while identifying the likely restocking proposals and future land management of the remaining forest. The responsibility for the management of the remainder of the forest outwith the Proposed Development Area lies with the landowner and therefore the wider felling operations, restocking, and aftercare operations do not form part of the Proposed Development for which consent is sought.

12.1.5 The Proposed Development's private access route from the public road (as shown in EIA Report Figure 1.1: Site Layout) lies within existing commercial forestry plantations. The forestry is split between areas owned by the Scottish Ministers and managed by Forestry and Land Scotland and privately owned and managed woodlands (See paragraph 2.1). 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 may or may not be replanted as part of the Proposed Development; and
- propose management practices for the forestry works.

12.1.6 In general, throughout this Chapter data labelled "baseline" refers to the current crop composition and any existing plans without any modification as a result of the Proposed Development. Data labelled "development" refers to the forestry plans incorporating the Proposed Development.

12.1.7 This Chapter is structured as follows:

- Legislation, Policy and Guidance;
- Forestry Study Area;
- Forest Plans;
- Creation of the Development Forestry Plan;
- Baseline Conditions;
- Development Forestry Plan;

- Requirement for Compensatory Planting;
- Forestry Waste;
- Forestry Management Practices; and
- Summary.

12.2 LEGISLATION, POLICY AND GUIDANCE

12.2.1 Relevant overarching planning policies for the Proposed Development are detailed within EIAR Chapter 4 and also in the Planning, Design & Access Statement that accompanies the application. A desktop study was undertaken drawing upon published National, Regional and local level publications, assessments and guidance to establish the broad planning and forestry context within which the Proposed Development is located.

12.2.2 Forestry related law, policies and documents listed below have been considered within the forestry assessment. The following section provides an outline of the law and planning policies which are relevant to the Proposed Development with regards to forestry.

Forestry and Land Management (Scotland) Act 2018

12.2.3 Until 01 April 2019, the Scottish Ministers owned the National Forest Estate (NFE), provided funding and had responsibility for forestry strategy and policy, but the management of the NFE and delivery of forestry functions had been the responsibility of the Forestry Commissioners.

12.2.4 The Forestry Commission was a cross-border public authority and a UK non-ministerial department with a statutory Board of Commissioners. The Commission was made up of a number of parts, including in Scotland:

- Forest Enterprise Scotland (FES), which carried out forestry operations and managed the NFE on Scottish Ministers' behalf; and
- Forestry Commission Scotland (FCS), which was responsible for the other forestry functions in Scotland.

12.2.5 When full devolution of forestry to the Scottish Government was completed on 01 April 2019, FCS and FES became two new agencies of the Scottish Government:

- Scottish Forestry (SF), responsible for regulatory, policy and support functions; and
- Forestry and Land Scotland (FLS), responsible for the management of the NFE and any other land managed for the purposes of the Forestry and Land Management (Scotland) Act 2018.

12.2.6 With the introduction of the Forestry and Land Management (Scotland) Act 2018¹ and its associated Regulations the old regulatory regime of felling control under the Forestry Act 1967² was repealed in Scotland. From 01 April 2019, anyone wishing to fell trees in Scotland requires a Felling Permission issued by SF, unless an exemption applies or another form of felling approval such as a felling licence (including a forest plan) has previously been issued.

12.2.7 Under the new Regulations felling which is authorised by planning permission consent continues to be exempt from the Regulations and does not require a Felling Permission issued by SF.

¹ The Scottish Government (2018). *The Forestry and Land Management (Scotland) Act 2018*, Edinburgh. Available at <http://www.legislation.gov.uk/asp/2018/8/contents/enacted> [accessed on 15.04.19].

² UK Government (1967). *Forestry Act 1967 (as amended)*. HMSO, London. Available at <https://www.legislation.gov.uk/ukpga/1967/10/contents> [accessed on 15.04.19].

Scotland's Forestry Strategy 2019 - 2029

- 12.2.8 Scotland's Forestry Strategy 2019 – 2029 (SFS)³, was published in 2019 after a consultation period. The strategy provides an overview of contemporary Scottish forestry; presents the Scottish Government's 50-year vision for Scotland's forests and woodlands; and sets out a 10-year framework for action.
- 12.2.9 The vision is that "...in 2070, Scotland will have more forests and woodlands, sustainably managed and better integrated with other land uses. These will provide a more resilient, adaptable resource, with greater natural capital value, that supports a strong economy, a thriving environment, and healthy and flourishing communities."
- 12.2.10 It lists a number of objectives summarised below:
- increase the contribution of forests and woodlands to Scotland's sustainable and inclusive economic growth;
 - improve the resilience of Scotland's forests and woodlands and increase their contribution to a healthy and high quality environment; and
 - increase the use of Scotland's forest and woodland resources to enable more people to improve their health, well-being and life chances.
- 12.2.11 It further describes the priorities as:
- ensuring forests and woodlands are sustainably managed;
 - expanding the area of forests and woodlands, recognising wider land-use objectives;
 - improving efficiency and productivity, and developing markets;
 - increasing the adaptability and resilience of forests and woodlands;
 - enhancing the environmental benefits provided by forests and woodlands; and
 - engaging more people, communities and businesses in the creation, management and use of forests and woodlands.
- 12.2.12 There are ambitious targets included within the strategy for new woodland creation:
- 10,000 ha per year in 2018;
 - 12,000 ha per year from 2020/21;
 - 14,000 ha per year from 2022/23; and
 - 15,000 ha per year from 2024/25.
- 12.2.13 The stated objective is to increase Scotland's woodland cover from the current 18.5% to 21% by 2032.

The Land Use Strategy for Scotland 2016 - 2021

- 12.2.14 The Land Use Strategy for Scotland 2016 - 2021 ⁴ sets out a strategic framework for getting the best out of Scotland's land resources. It looks at the potential of the land and the ways in which it is used, both now and in the future. Principles of sustainable land use are central to its vision for the future. With specific reference to forestry, the strategy acknowledges forestry's role as a key multipurpose land use and the role it has to play in terms of delivering the Vision, Objectives and Principles of the Land Use Strategy in rural and urban Scotland. It comments that the sustainable management of Scotland's woodlands and forests makes an important contribution to Scotland's economy; it delivers health and wellbeing benefits for people and a range of other critical ecosystem services including climate change mitigation and adaptation.
- 12.2.15 To increase its role in addressing the challenge Scotland faces from climate change, a target of 100,000 ha of new woodland creation between 2012-2022 has been established. Within the UK, Scotland is leading the way in

³ The Scottish Government (2019). *Scotland's Forestry Strategy 2019 -2029*, Edinburgh.

⁴ The Scottish Government (2016). *A Land Use Strategy for Scotland*, Edinburgh.

terms of areas of new woodland creation, however it is recognised that more needs to be done to achieve the planting target. To support this, Scotland's Forestry Strategy 2019 – 2029 emphasises the continued protection of Scotland's forest resource.

Third National Planning Framework

- 12.2.16 Scotland's Third National Planning Framework (NPF3)⁵ recognises that woodlands and forestry are an economic resource, as well as an environmental asset (NPF3 Paragraph 4.2). It further supports the continued expansion of Scotland's woodland and forestry resource (NPF3 Paragraph 4.23). A key action of NPF3 (NPF3 Paragraph 6.10) is a commitment to create on average 10,000 ha per annum of new woodland from 2015 onwards, a target which has been superseded by the Scottish Forestry Strategy. The position statement on NPF 4 published in Nov 2020 advises that NPF 4 strengthen "policy on woodland protection and creation in association with development, aligned with new provisions on forestry and woodland strategies."

Scottish Planning Policy

- 12.2.17 The Scottish Planning Policy (SPP)⁶ includes a section on woodlands (SPP Paragraphs 216 - 218). This refers to the Scottish Government's Control of Woodland Removal Policy (Forestry Commission Scotland, 2009)⁷ which is discussed in more detail below. The SPP states that woodland removal should only be permitted where it would achieve significant and clearly defined additional public benefits. It further states that where woodland is removed in association with development proposals, developers will generally be expected to provide compensatory planting and that the acceptability of woodland removal, in the context of the Control of Woodland Removal Policy, should be taken into account in determining applications.

Control of Woodland Removal Policy

- 12.2.18 In parallel with the SFS and other national policies on woodland expansion, there is a strong presumption against permanent deforestation unless it addresses other environmental concerns. In Scotland, such deforestation is dealt with under the Scottish Government's 'Control of Woodland Removal Policy'. The guidance relating to the implementation of the policy was revised and updated in 2019.
- 12.2.19 The purpose of the policy is to provide direction for decisions on woodland removal in Scotland. The policy document lays out the background to the policy, places it into the current policy and regulatory context, and discusses the principles, criteria and process for managing the policy implementation. The following paragraphs summarise the policy relevant to the Proposed Development.
- 12.2.20 The principal aims of the policy include:
- to provide a strategic framework for appropriate woodland removal; and
 - to support climate change mitigation and adaptation in Scotland.
- 12.2.21 The guiding principles behind the policy include:
- there is a strong presumption in favour of protecting Scotland's woodland resources; and
 - woodland removal should be allowed only where it would achieve significant and clearly defined additional public benefits. In appropriate cases a proposal for compensatory planting may form part of this balance.
- 12.2.22 Woodland removal, without a requirement for compensatory planting, is most likely to be appropriate where it would contribute significantly to:

⁵ The Scottish Government (2014). *Scotland's Third National Planning Framework (NPF3)*. Edinburgh.

⁶ The Scottish Government (2014). *Scottish Planning Policy*. Edinburgh.

⁷ Forestry Commission Scotland (2009). *The Scottish Government's Policy on Control of Woodland Removal*. Edinburgh.

⁸ Forestry Commission Scotland (2019): *Scottish Government's policy on control of woodland removal: implementation guidance*. Available at <https://forestry.gov.scot/publications/349-scottish-government-s-policy-on-control-of-woodland-removal-implementation-guidance>

- enhancing priority habitats and their connectivity;
 - enhancing populations of priority species;
 - enhancing nationally important landscapes, designated historic environments and geological Sites of Special Scientific Interest (SSSI);
 - improving conservation of water or soil resources; or
 - public safety.
- 12.2.23 Woodland removal, with compensatory planting, is most likely to be appropriate where it would contribute significantly to:
- helping Scotland mitigate and adapt to climate change;
 - enhancing sustainable economic growth or rural/community development;
 - supporting Scotland as a tourist destination;
 - encouraging recreational activities and public enjoyment of the outdoor environment;
 - reducing natural threats to forests or other land; or
 - increasing the social, economic or environmental quality of Scotland's woodland cover.
- 12.2.24 The consequences of the policy are stated as:
- minimising the inappropriate loss of woodland cover in Scotland;
 - enabling appropriate woodland removal to proceed with no net loss of woodland -related public benefits other than in those circumstances detailed in the policy; and
 - facilitating achievement of the Scottish Government's woodland expansion ambition in a way that integrates with other policy drivers (such as increasing sustainable economic growth, tackling climate change, rural/community development, renewable energy and biodiversity objectives).
- 12.2.25 Addressing the policy requirements can be met through changes to forest design, increasing designed open space, changing the woodland type, changing the management intensity, or completing off site compensation planting.

The Dumfries and Galloway Forestry and Woodland Strategy

- 12.2.26 The Dumfries and Galloway Forestry and Woodland Strategy (DGFWS)⁹ supports national policies whilst integrating with other Dumfries and Galloway Council (DGC) strategies and plans. It provides a framework for guiding forestry and woodland practice within Dumfries and Galloway. It is intended to guide both woodland creation and the restructuring and management of existing forests and woodlands, to maximise the benefits for the local economy, communities and environment. The strategy supports Scottish Ministers' desire to see an expansion in woodland cover, delivering multiple benefits across the country.
- 12.2.27 The DGFWS forms Supplementary Guidance to the Local Development Plan. It supersedes the Dumfries and Galloway Indicative Forestry Strategy Technical Paper No. 4; the Forestry Strategy Diagram, which forms part of the Dumfries and Galloway Structure Plan (approved 1999); and the Galloway and Langholm/Lockerbie Local Forestry Framework (2000). It does not supersede the 'Landscape Design Guidance for Forests and Woodlands in D&G' (SNH/DGC 1998).
- 12.2.28 In DGFWS Paragraph 4.32, the DGFWS recognises that the region has attracted a lot of interest from wind energy developers and that many afforested areas are also potentially suitable locations for wind farms. It states that integrating wind energy developments into wooded areas can have advantages in that the visual impacts of infrastructure may be screened or softened by planting whilst contributing to overall forest design objectives.

⁹ Dumfries and Galloway Council (2014): *The Dumfries and Galloway Forestry and Woodland Strategy*. Dumfries.

- 12.2.29 This has resulted in a policy within the DGFWS (page 23): LAN 9 "Work with emerging guidance on integrating wind energy developments within forest landscapes."
- 12.2.30 Under the of Theme of 'Woodlands, Forestry and Climate Change' one of the key policy objectives, of the DGFWS, is to encourage effective development of renewable energy from forests in the form of biomass wood fuel and the integration of appropriate renewable energy schemes within forests and woodlands.
- 12.2.31 Paragraph 6.13 of the DGFWS states that there may be potential within some of the existing forested areas for the siting of wind farms; however, this needs to be balanced against the loss of trees and carbon emissions from their construction. Both the Local Development Plan and the Wind Energy Supplementary Guidance emphasise the need for replacement planting of woodland lost as a result of development.
- 12.2.32 Paragraph 6.14 of the DGFWS identifies that the access and transportation needs of both the timber industry and wind farm construction should be planned for in a comprehensive and inclusive manner.
- 12.2.33 This has resulted in a policy within the DGFWS: DRE 2 (page 39): "Develop effective local guidance and practice to minimise woodland loss from renewable energy developments." The DGFWS goes on to state in Paragraph 8.5 that locating wind farms or turbines within woodland or productive forests can lead to a loss of woodland cover and refers specifically to the Scottish Government's policy on 'The Control of Woodland Removal'.

12.3 FORESTRY STUDY AREA

- 12.3.1 The Forestry Study Area (FSA), as shown on Figure 12.1 extends to approximately 5,800 ha and is part of an extensive area of state-owned and private forestry containing 3 separate forest plans. The state-owned forest plans consist of the Beattock and Ae plans, totalling approximately 4,400 hectares. The private forestry block is covered by the Raehills Annandale plan which covers an area of approximately 1,400 hectares. The forests contain a range of woodland types and age classes due to original planting programme together with areas of unplanted land and open ground. The crops are comprised largely of commercial conifers with areas of mixed broadleaves and open ground. The woodlands are in the production phase with rotational felling and restocking underway.

12.4 FOREST PLANS

- 12.4.1 One of the original key objectives of the Forestry Commission was forest expansion, in both state and private forests, to produce a strategic reserve of timber, and consequently, a limited range of species was planted. More recently, greater emphasis has been placed on developing multi-purpose forests, which require a restructuring of age and species in existing woodlands. Restructuring is achieved through the forest planning process.
- 12.4.2 A Forest Plan, termed either a Land Management Plan (LMP) or Forest Design Plan (FDP) in the State sector, relates to individual forests or groups of woodlands. The term Forest Plan will be used throughout this Chapter. It describes the woodlands, places them in context with the surrounding area, and identifies issues that are relevant to the woodland or forest. Forest Plans describe how the long-term strategy would meet the management objectives of the owner, the criteria of the UK Forestry Standard (UKFS)¹⁰ and the UK Woodland Assurance Standard 4th Edition (UKWAS)¹¹, under which the woodlands would be managed if certificated.
- 12.4.3 The Forest Plan involves a scoping exercise whereby the views of Statutory Consultees, neighbours and stakeholders are sought, resulting in an agreed Scoping Report. The results of the scoping exercise are incorporated into the Forest Plan. The Forest Plan covers all aspects, such as conservation, archaeology, landscape and the local community in addition to forestry and silvicultural considerations.

¹⁰ Forestry Commission (2017). *The UK Forestry Standard: The Government's Approach to Sustainable Forestry*, Forestry Commission, Edinburgh.

¹¹ UKWAS (2018). *The UK Woodland Assurance Standard Fourth Edition*, UKWAS, Edinburgh.

- 12.4.4 Restructuring of age class and species are important factors in this process to ensure proposals meet the current standards. A Development Forest Plan is prepared along the same principles with the relevant information being provided by other members of the project team. A Forest Plan will typically contain felling and restocking proposals covering a 10 year period in detail, with outline proposals for the remainder of the forest. As mentioned above there are 3 separate approved forest plans within the Proposed Development Area.
- 12.4.5 Restructuring presents forest managers with many challenges and opportunities, particularly in relation to the management of potential catastrophic windblow. The forest planning process allows forest managers to review and revise proposals in a structured way to take account of such external factors. The inclusion of a wind farm within the forest is an example of one such external factor.
- 12.4.6 The current guidelines require diversification of species and woodland types as part of the forest planning process, specifically an increase in the proportion of broadleaf woodland, other conifers, and open ground. The incorporation of the Proposed Development into the forest would result in further restructuring of the crops.

12.5 CREATION OF A DEVELOPMENT FORESTRY PLAN

Introduction

- 12.5.1 Existing crop information is collated from the landowners and crop surveys as necessary including species, planting year, felling and restocking plans.
- 12.5.2 It is proposed to utilise existing wind farm and forestry access tracks to deliver turbine components for the construction of the Proposed Development. Details of works required to upgrade the existing forestry access tracks would be provided by other disciplines within the project team. This data would then be amalgamated with the forestry data to construct the Proposed Development forestry proposals.
- 12.5.3 The Proposed Development felling programme would largely be driven by technical constraints. Within forests and woodlands, areas of crop may require to be felled to accommodate access for the construction of the Proposed Development. In this case taking into account technical and environmental constraints a swept path analysis of the proposed access route was undertaken, see Chapter 11: Traffic & Transport. Areas of track alteration, overrun and oversail were identified and a 10 m buffer applied to allow for construction and access. This would be reviewed at the detailed design stage post consent and prior to construction. Please refer to Chapter 3: Project Description which contains information on all the infrastructure elements.

Development Forestry Plan

- 12.5.4 Felling required for a development can be divided into two categories. Firstly, that required during the construction phase of the Proposed Development, which for the purposes of this assessment, has been anticipated as commencing in 2025; secondly, felling required during the operational period of the Proposed Development. In this case there is no felling required outwith that required for the construction phase.
- 12.5.5 The crops were assessed to identify those areas which would require to be felled for a number of reasons as described above. Due to the discrete nature of the intervention required in the woodlands, it is envisaged that the felling required to facilitate access for the Proposed Development will be keyholed into the existing crop.
- 12.5.6 The resultant development felling plan shows which woodlands within the FSA would be felled as a result of the Proposed Development and when this felling would take place, within the context of the wider Land Management Plan.
- 12.5.7 None of the areas felled along the access track would be restocked.
- 12.5.8 The forestry proposals have been assessed by each of the separate environmental disciplines / consultants as part of the EIA process and the effects are reported in individual chapters of this EIA Report and their supporting appendices.

12.6 BASELINE CONDITIONS

- 12.6.1 Many woodlands established in the mid to late 1900's, were planted in large contiguous blocks, often over a limited number of years and with a limited range of species. Such woodlands develop poor structural diversity, especially on upland sites. Restructuring the age class and species of such forests is desirable and would yield both forest management and environmental benefits. Due to the ongoing restructuring programme the woodlands within the FSA contain an increasing diverse age class structure.
- 12.6.2 The main species are commercial conifers, principally Sitka spruce in pure or mixed stands. Other conifer woodland and broadleaves form very small components of the woodlands. Open ground accounts for the second largest component.
- 12.6.3 The species composition reflects the practice and guidance which prevailed at the time the woodlands were established, though restructuring is introducing an increasing proportion of broadleaves and other conifers into the woodland composition.
- 12.6.4 The baseline felling plan forms part of the current Forest Plans prepared by the forest managers. It considers the requirement to restructure the age class of even aged forests as described above.
- 12.6.5 The baseline felling programme is designed to provide the required separation between felling coupes, where possible. This may take more than one rotation to achieve, especially in the uplands where windfirm boundaries between felling coupes are limited.
- 12.6.6 The baseline restocking proposals illustrate how the forest would be structured at the end of the Forest Plan period if the entire plan was implemented.
- 12.6.7 The majority of the changes to the composition of the woodlands reflect the ongoing proposed restructuring of the first rotation crops to meet current guidelines resulting in a decrease in the primary conifer species, Sitka spruce, in favour of broadleaves and other conifer species.

12.7 DEVELOPMENT FORESTRY PLAN

Introduction

- 12.7.1 An area of 7.19 ha has been identified within the FLS Land Management Plans as requiring felling for the works to the access track. A further 0.9 ha of felling has been identified in the private forestry block to the south.
- 12.7.2 The total felling identified for the Proposed Development is therefore 8.09 ha. This equates to 0.13% of the FSA.
- 12.7.3 As the area required for the works are so small in the context of the FSA, this Chapter will only concentrate on the immediate areas affected by the works. It is not deemed necessary to analyse the impact of the works on the baseline felling or restocking plans as there will be no material impact to either.

Felling Plan

- 12.7.4 Of the 7.19 ha within the FLS LMP's, 2.34 ha is due to be felled prior to construction as part of the felling plans approved under the Ae and Beattock Land Management Plans. As a result, there would be advanced felling totalling 5.75 ha resulting from the construction of the Proposed Development. There were some minor amendments to other areas out with the construction corridor for forest management and design purposes.
- 12.7.5 The Proposed Development advanced felling data is shown in Figure 12.2 and summarised in Table 12.1 below.

Table 12.1: Development Advanced Felling Data

Species	Age Class Area (ha)				Area Totals (ha)
	0 – 10 yrs	11 - 20 yrs	30 - 40 yrs	40+ yrs	
Mixed woodland	0.03	0.00	0.00	0.00	0.03
Sitka spruce	1.11	2.07	0.90	0.59	4.67

Species	Age Class Area (ha)			Area Totals (ha)	
Sitka spruce/Other conifer	0.00	0.00	0.00	0.02	0.02
Other conifer	0.13	0.00	0.00	0.00	0.13
Sitka spruce (private forestry)			0.90		0.90
Totals	1.27	2.07	1.80	0.61	5.75

12.7.6 Felling is required for delivery of components for construction of the Proposed Development. It is envisaged that this will be "keyholed" into the crops, where only the crops required for the delivery and associated buffer zones will be cleared as detailed earlier.

12.7.7 None of the areas felled to facilitate access will be restocked, however a small portion of those areas were designated as being left as open ground in the forest plans for both Beattock and Ae LMP's. These areas of open ground will be excluded from the compensatory planting requirement. These areas are detailed below in table 12.2

Table 12.2: Restocking Prescription

Restock Species	Development Restock Species	Area (ha)
Mixed broadleaves	Development open ground	0.35
Other conifer	Development open ground	0.46
Open ground	Open ground	2.96
Sitka spruce	Development open ground	3.42
Sitka spruce (private forestry)	Development open ground	0.90
Totals		8.09

12.7.8 An area of 4.23 ha of woodland would be cleared and not restocked in the area covered by the Beattock and Ae LMP's. A further 0.9 ha will be lost in the area of private forestry covered by the Raehills and Annandale forest plan.

12.7.9 The woodland loss associated with the Proposed Development therefore equals 5.13 ha.

12.8 REQUIREMENT FOR COMPENSATORY PLANTING

12.8.1 As a result of the construction of the Proposed Development, there would be a net loss of woodland area. The area of stocked woodland in the study area would decrease by 5.13 ha.

12.8.2 In order to comply with the criteria of the Scottish Government's Control of Woodland Removal Policy, off-site compensation planting would be required. The Applicant is committed to providing appropriate compensatory planting. The extent, location and composition of such planting to be agreed with SF, taking into account any revision to the felling and restocking plans prior to the commencement of operation of the Proposed Development.

12.9 FORESTRY WASTE

12.9.1 The Scottish Environment Protection Agency (SEPA) guidance document WST-G-027, 'Management of Forestry Waste' (SEPA, 2013)¹² highlights that all waste producers have a statutory duty to adopt the waste hierarchy as per the Waste (Scotland) Regulations 2012 (the Scottish Government, 2012)¹³, which amended Section 34 of

the Environmental Protection Act (EPA) 1990 (duty of care) (UK Government, 1990)¹⁴. This places a specific duty on any person who produces, keeps or manages (controlled) waste to take all such measures available to them to apply the waste hierarchy in Article 4 (1) of the revised Waste Framework Directive¹⁵ (rWFD), which is:

- prevention;
- preparing for re-use;
- recycling;
- other recovery, including energy recovery; and
- disposal, in a way which delivers the best overall environmental outcome.

12.9.2 Further guidance is contained in the document LUPS-GU27, 'Use of Trees Clear Felled to Facilitate Proposed Development on Afforested Land'" (SEPA, 2014)¹⁶.

12.9.3 A hierarchy of uses for forestry materials is proposed, derived from the waste hierarchy contained within the Regulations, summarised as follows:

- prevention via the production of timber products and associated materials for use in timber and other markets;
- the re-use of materials on site for a valid purpose, where such a use exists e.g. road construction including floating roads;
- there is no valid re-cycling use for forestry residues;
- other recovery via collection and use as biomass for energy recovery or other markets, where not included above; and
- where no valid on or off-site use can be found for the material, disposal would be in a way that is considered to deliver the best overall environmental outcome.

12.9.4 Where no valid on or off-site use or other disposal method can be found for the material, it should be regarded as waste and handled accordingly. Disposal of timber residues as waste in or on land requires a landfill permit or a waste exemption licence and should be considered the option of last resort.

12.9.5 As the crops are not being replanted, brash would be removed and treated in line with the proposed hierarchy described above.

12.9.6 Stumps would be left in situ as per good practice guidance, except where excavated as part of the construction activities. Excavated stumps would be treated in line with the proposed hierarchy described above.

12.9.7 In areas of lower yielding crops into which the Proposed Development infrastructure would be keyholed. the objective would be to recover as much merchantable timber as possible and failing that to treat them in line with the hierarchy outlined above. Where suitable, whole trees would be extracted and used in the biomass market. As a result, it is anticipated the forestry waste arising from the works will be minimal.

12.9.8 It is proposed that full consideration and further clarification on this issue would be included in a Forestry Waste Management Plan to form part of the Construction Environmental Management Plan (CEMP) during the detailed planning phase following receipt of planning consent and prior to commencement of construction.

¹⁴ UK Environmental Protection Act 1990 1990 c. 43 Part II Duty of care etc. as respects waste Section 34 available at <http://www.legislation.gov.uk/ukpga/1990/43/section/34> [accessed 20/01/2019]

¹⁵ EU Waste Legislation Waste Framework Directive <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098> [accessed 20/01/2019]

¹⁶ SEPA (2014): LUPS-GU27 "Use of Trees Cleared to Facilitate Development of Afforested Land. 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 SEPA (2013): SEPA Guidance Notes WST-G-027 "Management of Forestry Waste". https://www.sepa.org.uk/media/28957/forestry_waste_guidance_note.pdf [accessed 20/01/2019]

¹³ The Scottish Government (2012): The Waste (Scotland) Regulations 2012 No. 148 available at <https://www.legislation.gov.uk/sdsi/2012/9780111016657> [accessed 20/01/2019]

12.10 FORESTRY MANAGEMENT PRACTICES

Crop Clearance

- 12.10.1 Areas of crops of sufficient tree size and standing volume would be harvested conventionally. Timber operations would be undertaken with conventional harvesting and forwarding equipment utilising flotation tracks as required. Flotation devices are fitted to each machine wheel which gives the machines very low ground pressure and minimises the ground disturbance during the forestry operations.
- 12.10.2 Stemwood down to 7 centimetres (cm) or below would be removed from the Proposed Development Area and sold into the timber markets. The harvester would maximise timber recovery wherever possible, this would result in the maximum timber volume being recovered to ensure the volume used in the brash mats is kept to a minimum. On wetter ground the harvester would build stronger brash mats to ensure there would be minimal damage to the peat and soil structure by the forwarder during extraction. On soft ground, the bottom layers of brash mats become embedded into the soil and removal could result in more environmental damage than leaving the material to naturally degrade.
- 12.10.3 In areas of young or lower yield class crops, where little or no merchantable timber would be recovered, a number of options could be utilised depending on the factors prevailing at the time of clearance. The methodology used would depend on tree size; site conditions; the availability of suitable equipment; and the markets prevailing at the time of the works being carried out. Where there was suitable access and ground conditions the trees could be whole tree harvested and extracted to roadside for chipping as biomass.
- 12.10.4 Where trees are very small due to age or poor growth it may be more viable to fell the crop manually using scrub cutters or chainsaws. The end use of the material would depend on the factors mentioned above, but in some cases there would be no recoverable material. Where material was recoverable it could potentially be used on site in the base of floating roads; extracted and processed for biomass; or used for ecological enhancement if applicable.
- 12.10.5 Stumps would be left in situ as per the guidance contained in the Forestry Commission Research Note "Environmental effects of stump and root harvesting" (Forestry Commission, 2011)¹⁷ except where they would be removed for borrow pits, excavated roads, turbine bases and other infrastructure requiring excavation. Such material would be treated as described above.

Standards and Guidelines

- 12.10.6 All forestry operations would be carried out in strict accordance with current good practice and guidelines. This would include, but not be limited to:
- UK Forestry Standard (Forestry Commission 2017);
 - Forest Industry Safety Accord Guides¹⁸ (or equivalent) (FISA, 2014); and
 - current relevant legislation including, but not limited to, Health and Safety at Work Act 1974 (UK Government, 2014)¹⁹.

12.11 SUMMARY

- 12.11.1 The total study area extends to approximately 5,800 ha and is comprised of State owned and managed woodlands.

12.11.2 Felling would be advanced on 5.13 ha for construction of the Proposed Development. This accounts for 0.089% of the total study area.

12.11.3 The area of unplanted ground would increase and as a result, there would be a net loss of woodland area of 5.13 ha to accommodate the Proposed Development.

12.11.4 In order to comply with the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required to mitigate for the loss of woodland area (**5.13 ha**). The Applicant is committed to providing appropriate compensatory planting. 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 operation. Whilst noting in 12.1.12 that forestry is not in itself regarded as an EIA receptor it has nevertheless been concluded for the purpose of the EIAR and compliance with relevant Local Development Plan and other policies that neither the extent of felling nor the potential environmental impact of this felling will be significant.

¹⁷ Forestry Commission Research Note "Environmental effects of stump and root harvesting" (Forestry Commission, 2011). [https://www.forestry.gov.uk/pdf/FCRN009.pdf/\\$FILE/FCRN009.pdf](https://www.forestry.gov.uk/pdf/FCRN009.pdf/$FILE/FCRN009.pdf) [accessed 20/01/2019]

¹⁸ Forest Industry Safety Accord (2014). FISA Safety Guides (various). Edinburgh.

¹⁹ UK Government (1974): Health and Safety at Work etc. Act 1974 available at <http://www.legislation.gov.uk/ukpga/1974/37/contents> [access 20/01/2019]

