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CRUACH CLENAMACRIE WIND FARM

CHAPTER 13:
FORESTRY

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RESPONSIBILITIES

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ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AWI	Ancient Woodland Inventory
CEMP	Construction Environmental Management Plan
cm	centimetre
EIA	Environmental Impact Assessment
EPA	Environmental Protection Act 1990
FCS	Forestry Commission Scotland
FES	Forest Enterprise Scotland
FLS	Forestry Land Scotland
ha	Hectares
FSA	Forestry Study Area
LMP	Land Management Plan
m	Metres
NFE	National Forestry Estate
NWSS	Native Woodland Survey Scotland
NPF4	National Planning Policy Framework 4
PAWS	Plantations on Ancient Woodland Sites
rWFD	revised Waste Framework Directive
SEPA	Scottish Environment Protection Agency
SF	Scottish Forestry
SFS	Scotland's Forestry Strategy
SSSI	Sites of Special Scientific Interest
UKFS	UK Forestry Standard
UKWAS	UK Woodland Alliance Standard

13 FORESTRY

13.1 Introduction

This Chapter considers the potential effects of the Proposed Development on the woodland resource within the Site and its long-term management. This Chapter was prepared by DGA Forestry LLP.

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

- Normal felling and restocking by the landowner;
- Natural events, such as storm damage, pests or diseases; and
- External factors, such as wind farms or other development.

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 forestry within the Application Boundary.

This Chapter also considers 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 **Environmental Impact Assessment (EIA) Report** technical chapters.:

- **Chapter 9: Geology, Hydrogeology, Hydrology and Soils;**
- **Chapter 10: Ecology;**
- **Chapter 11: Ornithology; and**
- **Chapter 17: Carbon Balance and Climate Change.**

Management of the remainder of the forest, outwith the Site, lies with the landowners. 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.

The majority of the proposed infrastructure is located outside of existing woodlands, however, access for the Proposed Development is taken via 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 may or may not be replanted as part of the Proposed Development; and
- Propose management practices for the forestry works.

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.

This Chapter is structured as follows:

- Planning, Policy and Guidance;
- Forestry Study Area;
- Development of the Proposed Development Plans;
- Proposed Development Plans;
- Forestry Management Practices; and

- Conclusion.

13.2 Consultation

The following consultation responses were received as part of the Scoping Exercise carried out in 2023.

TABLE 13.1: SCOPING RESPONSE AND ACTION

CONSULTEE	RESPONSE	ACTION
Scottish Forestry - received July 2023	Woodland Management and tree felling Where woodland removal is proposed for development, the relevant Environmental Impact Assessment (EIA) regulations will apply and the EIA Report should justify and provide evidence for the need for woodland removal and the associated mitigation measures. The EIA Report should include a stand-alone chapter on 'Woodland management and tree felling' (a forest plan) prepared by a suitably qualified professional and supported by existing records, site surveys and aerial photographs. Details of the proposed mitigation measures must be included in the EIA Report, not left to post -consent habitat management plans (or others) to decide and implement. A long term forest plan should be provided as part of the EIA Report (as a technical appendix for context) to give a strategic vision to deliver environmental and social benefits through sustainable forest management and describes the major forest operations over a 20 years period.	This dedicated forestry chapter has been prepared and submitted as part of the EIA process. Scottish Forestry's comments are noted and, have been addressed in this chapter. The forestry plan, including mitigation, can be found in **Section 13.6** and on **Figure 13.3.**

13.3 Legislation, Policy and Guidance

Relevant overarching planning policies for the Proposed Development are detailed in **EIA Report Chapter 2: Planning and Renewable Energy Policy**. 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.

Forestry-related policies and documents listed below have been considered within this forestry Chapter. The following section provides an outline of those planning policies which are relevant to the Proposed Development and to forestry in particular.

13.3.1 Forestry and Land Management (Scotland) Act 2018

Until 1st April 2019, the Scottish Ministers owned the National Forest Estate (NFE), provided funding and had responsibility for forestry strategy and policy. The management of the NFE and delivery of forestry functions was the responsibility of the Forestry Commissioners.

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.

When full devolution of forestry to the Scottish Government was completed on 1 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.

With the introduction of the Forestry and Land Management (Scotland) Act 2018[1] and its associated Regulations on April 1 2019, the old regulatory regime of felling control under the Forestry Act 1967[2] was repealed in Scotland. From the 1st of April 2019, anyone wishing to fell trees in Scotland requires a Felling Permission issued by SF, unless an exemption applied or another form of felling approval such as a felling licence (including a forest plan) had previously been issued.

Under the new Regulations (The Foresty (Exemptions) (Scotland) Regulations 2019)[3] felling which is authorised by planning permission granted or deemed to be granted under the Town and Country Planning (Scotland) Act 1997 continues to be exempt from the Regulations and does not require a Felling Permission issued by SF.

13.3.2 Scotland's Forestry Strategy 2019 – 2029

Scotland's Forestry Strategy 2019 – 2029 (SFS)[4] , 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.

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."*

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.

It further describes the priorities as:

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[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 05/11/2024).

[2] UK Government (1967). Forestry Act 1967 (as amended). HMSO, London. Available at https://www.legislation.gov.uk/ukpga/1967/10/contents (Accessed on 05/11/2024)

[3] The Forestry (Exemptions) (Scotland) Regulations 2019, Edinburgh. Available at https://www.legislation.gov.uk/sdsi/2019/9780111040966/contents (Accessed 11/11/2024)

[4] The Scottish Government (2019). Scotland's Forestry Strategy 2019 -2029, Edinburgh.

- 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.

There are ambitious targets included within the strategy for new woodland creation, including:

- 10,000ha per year in 2018;
- 12,000ha per year from 2020/21;
- 14,000ha per year from 2022/23; and
- 15,000ha per year from 2024/25.

The stated objective is to increase Scotland's woodland cover from the current 18.5% to 21% by 2032.

13.3.3 Scotland's Third Land Use Strategy 2012 – 2026

Scotland's Third Land Use Strategy 2021 – 2026[5] stresses the importance of forestry in balancing the demands on land use in Scotland and its transition to a net zero economy. It states: "…*there will need to be a significant land use change from current uses to forestry and peatland restoration.*" This will involve rapidly increasing the pace of woodland and forest creation. To support this, Scotland's Forestry Strategy 2019 – 2029 emphasises the continued protection of Scotland's forest resource.

13.3.4 National Planning Framework 4

National Planning Framework 4 (NPF4)[6] was adopted by the Scottish Ministers on 13 February 2023.

NPF4 (Forestry, Woodland and Trees) states that development proposals that enhance, expand and improve woodland and tree cover will be supported.

It further states that development proposals will not be supported where they will result in:

- Any loss of ancient woodlands, ancient and veteran trees, or adverse impact on their ecological condition;
- Adverse impacts on native woodlands, hedgerows and individual trees of high biodiversity value, or identified for protection in the Forestry and Woodland Strategy; and
- Fragmenting or severing woodland habitats, unless appropriate mitigation measures are identified and implemented in line with the mitigation hierarchy.

Furthermore, NPF4 states that development proposals involving woodland removal will only be supported where they will achieve significant and clearly defined additional public benefits in accordance with relevant Scottish Government policy on woodland removal and, where woodland is removed, compensatory planting will most likely be expected to be delivered.

13.3.5 Right Tree in the Right Place

[5] Scottish Government (2021): Scotland's Third Land Use Strategy 2021-2026 https://www.gov.scot/publications/scotlands-third-land-use-strategy-2021-2026-getting-best-land/ (Accessed 05/11/2024)
[6] The Scottish Government (2023): National Planning Framework 4, Edinburgh

Right Tree in the Right Place - Planning for Forestry & Woodlands[7] sets out detailed guidance to planning authorities when considering development proposals involving forestry and woodland. It advises that planning authorities should:

- Assess the current and likely future public benefits (social, economic and environmental) deriving from the existing woodland;
- Determine whether the Development should be modified or the woodland redesigned to avoid or reduce woodland loss (e.g. by accommodating new development within 'open space' within woodlands);
- Where woodland loss cannot be avoided, assess the public benefit of the Proposed Development to see if it would justify the loss of the woodland;
- Consider whether any loss of woodland should be mitigated by compensatory planting; and
- Consider whether any felling consent needs to specify the timing of forestry operations to avoid disturbance to wildlife present on the Site.

If an authority decides that a development proposal involving woodland loss should receive planning permission, it should specify the precise area of felling permitted and ensure that planning conditions and/or agreements would ensure the provision of any compensatory planting which is required.

13.3.6 Control of Woodland Removal Policy

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'[8]. The guidance relating to the implementation of the policy was revised and updated in 2019[9].

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.

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.

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.

Woodland removal, without a requirement for compensatory planting, is most likely to be appropriate where it would contribute significantly to:

- Enhancing priority habitats and their connectivity;
- Enhancing populations of priority species;

[7] Forestry Commission Scotland (2010): Right Tree in the Right Place - Planning for Forestry & Woodlands. Forestry Commission, Edinburgh.
[8] Forestry Commission Scotland (2009). The Scottish Government's Policy on Control of Woodland Removal. Edinburgh.
[9] 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 (Accessed 05/11/2024)

- 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.

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.

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).

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.

13.3.7 The Argyll and Bute Forestry and Woodland Strategy

The Argyll and Bute Woodland and Forestry Strategy was published in 2011[10]. The vision for the strategy was defined as:

"The woodlands of Argyll and Bute will make a significant contribution to climate change mitigation and adaptation, have significant levels of economic value retained locally, enhance biodiversity and environmental quality and support the further development of recreation opportunities, for the benefit and well-being of local people and visitors alike. Sustainable and responsible stewardship of the resource will enable communities to play an active role in the ownership and management of woodlands in their area, developing business opportunities and helping to maintain the viability of rural living ."

The Strategy was developed as statutory supplementary planning guidance which will be adopted as part of the Argyll and Bute Local Development Plan. The Strategy integrates with other local strategies and action plans, including the Council's Core Path Plan, Economic Development Action Plan and the Argyll and Bute Renewable Energy Action Plan Strategy. It will primarily be used to guide woodland expansion within the region.

The Strategy is based on the following seven themes:

- Climate change;
- Timber;
- Business development;

[10] Argyll and Bute Council and Forestry Commission Scotland (2011) The Argyll and Bute Council Woodland and Forestry Strategy [Online] Available at: https://www.argyll-bute.gov.uk/planning-and-building/planning-policy/argyll-and-bute-woodland-and-forestry-strategy (Accessed 05/11/2024).

- Community development;
- Access and health;
- Environmental quality; and
- Biodiversity.

Strategic priorities have been defined for each of the above themes which are translated into detailed priority actions.

Section 3.6 of the Strategy states that the net area of forest cover within the region is forecast to decrease due to forest restructuring as part of existing approved Forest Plans. The loss of woodland area is estimated at 7 - 8 %, equivalent to the removal of 15,000ha of woodland. In Section 3.7, the Strategy refers to further woodland loss having arisen in recent years as a result of wind farm development in afforested areas and refers to the Scottish Government's Control of Woodland Removal Policy.

It noted that further wind energy development within the National Forest Estate may result in further woodland removal. Given the importance of maintaining and expanding total woodland cover, and in light of the Control of Woodland Removal Policy, the Strategy states that any loss of woodland will require compensatory planting.

Where new wind farm development is proposed (particularly if woodland removal is required), the Strategy proposes that native woodland creation and habitat enhancement programmes could be delivered, at least in part, through developer contributions. Similarly, where important sites for timber production are likely to be lost or reduced in size in this way, appropriate provisions for replanting should be secured to safeguard future timber resources.

Under the theme of Climate Change a key Strategic Priority is stated as:

- *"CC1: Encourage the net expansion of woodland cover in Argyll and Bute in order to further contribute to national targets for carbon sequestration."*

Priority Actions to support this include:

- *"CC1.1: Ensure that forest restructuring results in no net loss of woodland"*; and
- *"CC1.2: Ensure that woodland removal associated with developments such as windfarms is compensated for at a ratio of at least 1:1 in terms of area and quality of woodland."*

The Strategy therefore supports and reinforces the aims of the Scottish Government's Control of Woodland Removal Policy.

13.4 Forestry Study Area

The Forestry Study Area (FSA) is situated within Fearnoch Forest. It is owned by the Scottish ministers and managed on their behalf by Forest and Land Scotland (FLS), the forest forms part of the Taynuilt Land Management Plan (LMP)[11]. The Management Plan states:

"The Taynuilt Land Management Plan area covers 2041 Ha, and comprises 3 discrete blocks: Fearnoch (1289 Ha), Glen Nant (332 Ha) & Inverawe (420 Ha).

Fearnoch is a well roaded, mixed aged, mixed species forest containing a wide range of soil types. Restructuring has taken place across the full extent of the forest. The terrain is gently rolling which benefits harvesting operations and reduces landscape impacts. The forest is a very popular recreational area. Clais Dhearg SSSI lies to the West of the forest & Airds Park & Coille Nathais SSSI lies to the East. Both SSSI's

[11] Taynuilt Land Management Plan, Forest and Land Scotland, Edinburgh, 2020 [Online] Available at: https://forestryandland.gov.scot/what-we-do/planning/active/taynuilt (Accessed 01/10/2024)

also fall within the wider Loch Etive Woods SAC. There are extensive PAWS areas in Fearnoch which often occupy highly productive sites."

The LMP further states that the aim within Fearnoch forest is that of a Plantation on Ancient Woodland Site (PAWS) restoration and enhancing adjacent designated sites.

The Forestry Study Area has been targeted only on those areas directly affected by the works on the access track. This area has been identified as 18.1ha (excluding mapped open ground), as shown in **Figure 13.1 - Forestry Study Area.**

As the Proposed Development access is to be taken along existing forestry tracks with minimal coupe felling, it has been determined that a full analysis of the Baseline Forest Plans and the impact on these is not warranted in this instance. This Chapter will instead focus on the felling and restocking along the access route and subsequent loss of woodland area as a result.

Approximately 350m of track runs through Dailnamac, private land to the north of the FLS woodlands before entering Fearnoch forest. 0.2 ha of broadleaf woodlands have been identified in this area and has been included in the tables.

13.5 Preparation of the Proposed Development Plans

13.5.1 Introduction

This Section describes the process by which a typical Forest Plan, including development infrastructure, is prepared. Existing crop information is collated from the landowner including current forestry information on species, planting year and felling and restocking plans where available. This is followed by field surveys and further desk-based assessment as necessary.

Details of infrastructure locations, new tracks, construction compounds, borrow pits, substation compound and other infrastructure are provided by the project team. This data will then be amalgamated with the forestry data to construct the forestry proposals for the Proposed Development.

The location of infrastructure is influenced by environmental constraints and technical considerations, e.g. sensitive habitats, wind capture, ground conditions, etc. The final location of infrastructure considers the various Site constraints. Land management requirements associated with the construction and operation of the Proposed Development are also taken into account in the forestry proposals, where appropriate.

Within forests and woodlands, areas of crop required to be felled to accommodate the construction and operation of the Proposed Development have been identified. The felling programme for the Proposed Development will largely be driven by technical constraints relating to both forestry management and the Proposed Development.

A 10m buffer was applied around each item of infrastructure and an indicative 30m corridor was applied to all access tracks to be used for component delivery and construction purposes. This will be reviewed at the detailed design stage post consent and prior to construction. Please refer to **EIA Report Chapter 5: Project Description** which contains information on all the infrastructure elements.

13.5.2 Development Felling Plan

The crops were assessed to identify those areas that will require to be felled for the construction and operation of the Proposed Development. Due to the current baseline composition of the woodlands and current crop ages and heights, it has been assessed that where the infrastructure deviates from the existing track and moves within woodland areas, a combination of keyholing into younger crops, and in the mature crops clear felling of entire coupes back to either a wind firm edge or management boundaries will be

required. Where entire coupes are to be felled, the infrastructure will be incorporated into the Proposed Development Restocking Plan as described below.

Additional minor felling will be required for forest management purposes, for example, to reduce the risk of subsequent windblow; to reduce coupe fragmentation, and to ensure access for future forest operations.

The resultant Proposed Development Felling Plan shows which woodlands within the FSA will be felled as a result of the Proposed Development and when this felling will take place.

13.5.3 Development Restocking Species Plan

The Proposed Development Restocking Species Plan shows which woodlands will be restocked and with which species. The majority of the areas to be felled for the Proposed Development will be restocked, with exception of:

- Land required for the Proposed Development's permanent infrastructure subject to the buffer zones described above; and
- Land to be left unplanted for forest management; or forest design purposes.

In preparing the Proposed Development Restocking Species Plan a number of points will be considered as detailed below:

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

Species composition of the restocking was considered taking into account the Proposed Development operational requirements such as separation distances between wind turbines and forest edges, landowner objectives and forestry policies.

The Proposed Development forestry felling and restocking proposals have been assessed by each of the separate environmental disciplines/consultants as part of the EIA process where required, and the effects are reported in the other technical chapters of this EIA Report and their supporting appendices as appropriate.

13.6 Proposed Development Plan

13.6.1 Introduction

Details of infrastructure locations, new tracks, construction compounds, borrow pits, substation compound and other infrastructure were provided by the project team. This data was amalgamated with the forestry data to construct the forestry proposals for the Proposed Development.

The location of infrastructure is influenced by environmental constraints and technical considerations, e.g. sensitive habitats, wind capture, ground conditions, etc. The final location of infrastructure considers the various Site constraints. Land management requirements associated with the construction and operation of the Proposed Development are also taken into account in the forestry proposals, where appropriate.

13.6.2 Designated Areas

Large portions of Fearnoch Forest are identified on the Ancient Woodland Inventory (AWI) and/or the Native Woodland Survey Scotland (NWSS). These areas have been identified on **Figure 13.1 - Forestry Study Area.** The works on the access track are limited to areas already degraded though existing commercial

forestry operations. There is a commitment in the Taynauilt LMP to restore the areas of PAWS within Fearnoch Forest; in order to contribute to this goal, all commercial conifer cleared for the access track works will be replaced with native broadleaves.

13.6.3 Access Route Felling/Restocking Requirements

Access requirements for the Proposed Development totals an area of 18ha (excluding open ground), of which the majority is commercial conifer. Felling and restocking will be required for the construction of the access tracks and associated infrastructure.

As the works within commercial forestry are for access only, and predominately follow existing forestry tracks, the felling and restocking requirements are minimal compared to the overall Forestry Study Area.

A 10m buffer was applied around each item of infrastructure and an indicative 30m corridor was applied to all access tracks proposed to be used for component delivery and construction purposes. This will be reviewed at the detailed design stage, post consent and prior to construction. Please refer to **EIA Report Chapter 5: Project Description** which contains information on all the infrastructure elements.

Construction has been provisionally programmed for 2030.

An access track footprint has been identified in which clearance of trees totalling 18.1ha will be required for infrastructure and advanced felling. The current species composition of this area is shown in **Figure 13.2 - Baseline Species Composition**. Areas identified for advanced felling will be restocked in line with the FLS Land Management Plan. The extent and location of this felling, plus the effect to the species composition of the forest are detailed in **Figure 13.3 - Development Feling Access Route** summarised in **Table 13.2.**

Table 13.2 reports the areas of felling, subsequent restocking, and woodland loss as a result of the Proposed Development by current species.

TABLE 13.2: SUMMARY OF ACCESS ROUTE FELLING AND RESTOCKING

FELLING FOR ACCESS	DEVELOPMENT RESTOCK SPECIES (HA)		AREA (HA)
Baseline species	**Mixed broadleaves**	**Wind farm open ground**	
Felled awaiting restock	0.3	0.7	1.1
Mixed Broadleaves	0.1	2.6	2.7
Other Conifer	0.0	0.5	0.5
Other conifer/Mixed broadleaves	0.0	0.2	0.2
Sitka Spruce	6.3	5	11.4
Sitka Spruce/ Other Conifer	0.1	1.8	1.9
Sitka spruce/Mixed broadleaves	0.0	0.3	0.3
Totals	**6.8ha**	**11.3ha**	**18.1ha**

It may be necessary to clear self-seeded trees from the roadside along the entirety of the access track. It is envisaged that any planning permission granted for the Proposed Development will include permission to clear such roadside regeneration where required.

Areas of advanced felling to wind firm edges will be restocked to match the pre-existing crop.

Of the 18.1ha of felling along the access route, 6.8ha will be restocked as shown in **Table 13.2: Summary of Access Route Felling and Restocking.** Therefore, the total area of woodland lost to the access track works will be 11.3ha.

10.8ha of this woodland is on FLS land, 0.2ha is situated on the private land to the north at Dailnamac.

13.7 Requirement for Compensatory Planting

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 FSA would decrease by 11.3ha.

In order to comply with the criteria of the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required. The Applicant is committed to providing appropriate compensatory planting. The extent, location, and composition of such planting is to 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.

13.8 Forestry Waste

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 Directive[15] (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.

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

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

[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 05/11/2024)
[13] The Scottish Government (2012): The Waste (Scotland) Regulations 2012 No. 148 available at https://www.legislation.gov.uk/sdsi/2012/9780111016657 (Accessed 05/11/2024)
[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 05/11/2024)
[15] EU Waste Legislation Waste Framework Directive https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0098 (Accessed 05/11/2024)
[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 05/11/2024)

- 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.

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.

As discussed in this Chapter, the crops will be replanted except where required for infrastructure associated with the Proposed Development. Brash would be left in situ to provide nutrients for the next rotation where the crops are being replanted as per standard forestry practice. Where crops are not being replanted brash would be removed and treated in line with the proposed hierarchy described above.

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.

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.

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). This will be completed during the detailed planning phase, following receipt of planning consent and prior to commencement of construction.

13.9 Forestry Management Practices

13.9.1 Crop Clearance

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. The 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.

Stemwood down to 7 centimetres (cm) or below would be removed from the Site 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.

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 is suitable access and ground conditions, the trees could be whole tree harvested and extracted to the roadside for chipping as biomass.

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 aforementioned factors, 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.

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.

13.9.2 Restocking/Planting Methodology

Restocking would be carried out according to current standard practice, the forest manager's internal guidance and practices and in accordance with the guidelines contained in the UK Forestry Standard (UKFS) and UK Woodland Alliance Standard (UKWAS) as a minimum, where applicable. Methodology would vary depending on the type of restocking being carried out. The following information is provided for guidance as to the restocking methodology which may be adopted.

On commercial conifer areas the methodology would normally include:

- Site preparation by machine cultivation and drainage;
- Manual planting;
- Subsequent follow-up establishment operations such as the replacement of failures, weeding and protection measures until the crops are satisfactorily established; and
- Replanting would be carried out with the conifer species identified in the restocking plan at the minimum density of 2,500 trees per ha.

Restocking within the broadleaf woodland areas would be carried out to the same specification with the following changes:

- A lower planting density of 1,600 trees per ha; and
- The principal species would be mixed native broadleaves including, for example, downy and silver birch with small components of other species as appropriate to site such as oak, rowan, hazel, gean, grey willow, goat willow, alder and woody shrubs.

13.9.3 Aftercare Works

Aftercare establishment works would normally include, but are not limited to, the following:

- The woodlands would be beaten up (replacement of failures) to ensure satisfactory stocking levels by year 5, broadleaf woodlands by year 10;
- The woodlands would be weeded as necessary to ensure satisfactory establishment by year 5 / year 10 for broadleaf woodlands;
- The woodlands would be protected against pine weevils by management inspections and remedial treatment as necessary;
- The woodlands would be protected against browsing damage from wild and domestic animals;
- The woodlands would be protected against fire;
- Fertiliser would be applied as necessary to ensure satisfactory establishment and growth; and
- Other works as reasonably required ensuring satisfactory establishment of the woodlands.

13.9.4 Standards and Guidelines

All forestry operations would be carried out in strict accordance with current good practice and guidelines. This would include, but not be limited to:

[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 (Accessed 05/11/2024)

- UK Forestry Standard (Forestry Commission 2023)[18];
- Forest Industry Safety Accord Guides[19] (or equivalent); and
- Current relevant legislation including, but not limited to, Health and Safety at Work Act 1974 (UK Government, 2014)[20].

13.10 Conclusion

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

- Normal felling and restocking by the landowner;
- Natural events, such as storm damage, pests or diseases; and
- External factors, such as wind farms or other developments.

The Forestry Study Area (FSA) extends to 18.1ha, excluding existing open ground. Felling would be advanced on 18.1ha for construction of the Proposed Development and 6.8ha of woodland would be restocked in line with the aims of the Taynauilt LMP. There would be a loss of woodland totalling 11.3ha due to the access track.

In order to comply with the Scottish Government's Control of Woodland Removal Policy, compensation planting would be required to mitigate the loss of woodland area. The Applicant is committed to providing appropriate compensatory planting. The extent, location and composition of such planting is to be agreed with SF, taking into account any revision to the felling and restocking plans prior to the commencement of construction.

[18] Forest Research (2023): The UK Forestry Standard, Forest Research, Farnham.
[19] Forest Industry Safety Accord (2014). FISA Safety Guides (various). Edinburgh.
[20] UK Government (1974): Health and Safety at Work etc. Act 1974 available at http://www.legislation.gov.uk/ukpga/1974/37/contents (Accessed 05/11/2024)