Chapter 19: Forestry - Contents

List of Figures (Volume 2)

All Figures associated with this Chapter are contained within the Appendices listed below.

List of Appendices (Volume 4)

19. Forestry

19.1 Executive Summary

19.1.1 Crosscut Forestry Ltd was commissioned by Statera Energy (UK) Ltd (the Developer) to undertake an assessment of the woodland in the Whitebridge Plantation on Dell Estate at Whitebridge, to assess the potential effects on trees and woodland in relation to the Proposed Development and to recommend appropriate mitigation where adverse effects are predicted. The scope of the assessment has been informed by consultation and scoping responses from The Highland Council and Scottish Forestry.

19.1.2 The assessment has identified that, prior to the implementation of mitigation measures, a significant adverse effect on woodland is predicted from the permanent felling of 50 ha of commercial woodland within the Whitebridge Plantation and on Torr Cluanie at the northern end of Dam 3 (including areas that have been felled and are awaiting restocking) to accommodate the construction of the Proposed Development. Loss of non-commercial woodland, including woodland within the Ness Woods Special Area of Conservation (SAC), is assessed as part of **Chapter 10: Terrestrial Ecology** but any permanent loss of these woodland areas is included in this assessment for completeness, increasing the total woodland loss to 60.19 ha. The majority of permanent woodland loss would be due to the inundation and raised levels of Loch Kemp. Other woodland loss would be a result of clearance to facilitate access tracks for construction and operation of the Proposed Development, as well as proposals for 5.76 ha of the permanent woodland removal within the Whitebridge Plantation to undergo forest to bog restoration.

19.1.3 Mitigation to offset the permanent loss of woodland is proposed in the form of compensatory planting. Of the 60.19 ha of permanent woodland removal identified, 52.86 ha would require compensatory planting to be carried out under the Scottish Government's Control of Woodland Removal Policy (CoWRP). The compensatory planting plan proposes the creation of 63.11 ha of new native woodland close to the study area resulting in a net increase in woodland cover locally of approximately 14.50 ha, contributing to Scottish Forestry Strategy 2019 – 2029[1] targets to increase Scotland's woodland cover to 21% by 2032. The proposed new woodlands are located within the Highland Native Woodland Target Area and an area identified as suitable for new woodland that delivers biodiversity, landscape and/or amenity objectives in the *Highland Council Forest and Woodland Strategy (2018)*[2].

19.1.4 The implementation of the compensatory planting plan would result in a net increase of the total woodland and associated open ground within the plan area from 237 ha to 257.62 ha. Following the implementation of the mitigation measures set out in this Chapter, no significant adverse residual effects on commercial woodlands are predicted to arise from the construction and operation of the Proposed Development.

[1] Scottish Forestry Strategy 2019 – 2029. Available at Scotland's Forestry Strategy 2019-2029 (www.gov.scot) [Last accessed: 06 November 2023December2022].

[2] Highland Council (2018). *Highland Forestry and Woodland Strategy*. [Online]. Available at: https://www.highland.gov.uk/download/downloads/id/891/highland_forest_and_woodland_strategy.pdf. [Last accessed: 06 November 2023].

19.2 Introduction

19.2.1 This Chapter considers the potential effects, including cumulative effects, of the Proposed Development on woodland during construction and operation and should be read in conjunction with **Chapter 10: Terrestrial Ecology,** where the effects on woodland out with the Whitebridge Plantation have been assessed. As described in **Chapter 3: Description of Development**, with proper maintenance the Proposed Development should remain functional indefinitely. If the Proposed Development were to be decommissioned, it is anticipated that the potential effects on woodland would be lesser than the construction impacts. As such, a separate assessment of potential decommissioning effects on woodland is not included in this Chapter. Where likely significant effects are predicted during construction and operation, appropriate mitigation measures are proposed, and the significance of predicted residual effects are assessed.

19.2.2 This assessment has been carried out by Cameron Ross of Crosscut Forestry Ltd. Established in 2007 as a professional consultancy, the company provides forestry advice and management services to a diverse range of clients throughout the North of Scotland and beyond. Cameron is the founding Director and has 38 years' experience in the forest industry. A table presenting relevant qualifications and experience of key staff involved in the preparation of this Chapter is included in **Appendix 4.1: EIA Team**, contained within **Volume 4** of this EIA Report.

19.3 Scope of Assessment

Study Area

19.3.1 The study area encompasses the area over which all desk-based and field data were gathered to inform the assessment presented in this Chapter. The study area comprises approximately 237 ha of mixed coniferous woodland within the Whitebridge Plantation and close to Dell Farm, near Whitebridge in Inverness-shire.

Consultation Responses

19.3.2 To inform the scope of the assessment for the Proposed Development, consultation was undertaken with statutory and non-statutory bodies. **Table 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041** summarises the scoping and consultation responses relevant to the Forestry Chapter and provides information on where and/or how points raised have been addressed in this assessment.

19.3.3 Full details on the consultation responses and scoping opinion can be reviewed in **Chapter 5: Scoping and Consultation**, and associated appendices.

Table 19.1: Consultation Responses

Consultee	Consultation Type	Date	Issue Raised	Response/Action Taken
Energy Consents Unit	Scoping	21st October 2022	As stated by the planning authority a specific chapter on forestry should be included setting out where the Control of Woodland Removal Policy (CoWRP) applies and how compliance has been demonstrated.	A professional forester has been engaged to prepare this Forestry Chapter (and associated appendices) of the EIA Report, to assess and describe any impacts to commercial forestry. In compliance with the Scottish Government's CoWRP, a Compensatory Planting Plan has been prepared (**Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Section 1.4**).
The Highland Council	Scoping	11th March 2022	It is advised that a specific chapter on forestry is included in the EIA Report where there is likely to be an adverse impact on woodland. The EIA Report should indicate areas of woodland / forestry plantation which may by felled to accommodate new development (including the access), including any off-site works / mitigation. Compensatory woodland is a clear expectation of any proposals for felling, and thereby such mitigation needs to be considered within any assessment. If trees are to be removed, compliance with the Scottish Government's CoWRP must be demonstrated. Areas of retained forestry or tree groups should be clearly indicated and methods for their protection during construction clearly described. Consideration must be given to the full area required for the construction access road through trees/ woodlands and the impacts on these identified. Any areas of woodland listed in the Ancient Woodland Inventory should be safeguarded from adverse impacts. Further as part of habitat management proposals and to offset the carbon of the construction process, it is considered that areas of woodland should be planted.	A professional forester has been engaged to prepare this Forestry Chapter of the EIA Report and associated appendices, to assess and describe any impacts to commercial forestry, including a description of the species mix. This Chapter outlines which areas of forestry are to be felled as part of the Proposed Development and describes the compensatory planting that is proposed. A Forest Plan with Proposed Development (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management,**) has been prepared to allow comparison with proposals in the absence of the Proposed Development. In compliance with the Scottish Government's CoWRP, a Compensatory Planting Plan has been prepared (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Section 1.4**). It is not possible for the Proposed Development to completely avoid woodland removal, including areas listed on the AWI but mitigation, including compensatory planting (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Section 1.4**) The Proposed Development will itself sequester carbon, so there are no

				proposals for further planting beyond the proposed compensatory planting for woodland removal. Non-commercial forestry, including the woodlands within the Ness Woods Special Area of Conservation (SAC), have been addressed as part of **Chapter 10: Terrestrial Ecology**. Baseline Reports on lichens and bryophytes have been included as appendices to this Chapter.
The Highland Council (Tree Officer)	Pre-Application Advice	8th June 2022	The site is within woodland which is listed in the Ancient Woodland Inventory (AWI) as Ancient semi-natural origin woodland (ASNO1750). This is listed as a feature of national importance in policy 57 of the Highland wide Local Development Plan (HwLDP). The site is located partly within woodland which is listed on the AWI as Long established plantation origin woodland (LEPO1860). This is a feature of local/ regional importance in policy 57 of the HwLDP where it is noted that THC will allow developments if it can be satisfactorily demonstrated that they will not have an unacceptable impact on the natural environment, amenity and heritage resource'.	Efforts to minimise the impacts of the Proposed Development on commercial forestry and non-commercial woodlands through design are outlined in **Chapter 2: Design Evolution and Alternatives** of this EIA Report. It is not possible for the Proposed Development to completely avoid woodland removal, including areas listed on the AWI but mitigation, including compensatory planting (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Section 1.4**). Potential impacts on commercial forestry which is listed on the AWI as LEPO 1860 are assessed in **Section 19.8**. Potential impacts on woodland which is listed on the AWI as Ancient semi-natural origin woodland (ASNO1750) is assessed in **Chapter 10: Terrestrial Ecology**
			Where proposals involve woodland loss, the Scottish Government's Control of Woodland Removal (CoWR) policy will apply. The extent of maximum inundation would appear to require the loss of a considerable area of commercial conifer woodland around the south-east side of the existing Loch Kemp. The extent of maximum inundation and formation of dams would also appear to require the loss of several areas of birch woodland listed on the NWSS. There are also Construction and Operation Access Tracks, Operational Access tracks and Temporary. Construction Access tracks in the conifer woodland which would result in further woodland loss.	In compliance with the Scottish Government's CoWRP, a Compensatory Planting Plan has been prepared (**Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Section 1.4**).

			The proposals from the Surge Shaft down to the Powerhouse includes Construction and Operation Access Tracks, Tunnel, Powerhouse, Substation and Site Compound. All of this construction is in or passes through woodland which is listed on the AWI as ASNO1750 and is a serious concern. In the CoWR policy there is a strong presumption against removing ancient semi- natural woodland (ASNO1750) and woodland within Special Areas of Conservation. There are some Areas of New Tree Planting shown but these do not appear to be sufficient in total area to compensate for the loss of conifer woodland that is proposed.	
			The indicative proposals do not accord with policies 51, 52 or 57 of the HwLDP nor do they accord with the Scottish Government's CoWRP. The development would achieve "significant and clearly defined additional public benefits" in the form of renewable energy production and the loss of a specific area of commercial conifer woodland could be compensated for with an equivalent area of new planting. However, the proposed development within woodland listed on the AWI does not accord with local or National policies and should not be supported. It is recommended that the applicant review and amend the design of the layout of the western end of the development to ensure there is no loss of Ancient Woodland.	Efforts to minimise the impacts of the Proposed Development on commercial and non-commercial woodlands through design are outlined in **Chapter 2: Design Evolution and Alternatives** of this EIA Report. It is not possible for the Proposed Development to completely avoid woodland removal, including areas listed on the AWI. Potential impacts on commercial woodland which is listed on the AWI as LEPO 1860 are assessed in **Section 19.8**. Potential impacts on woodland which is listed on the AWI as Ancient semi-natural origin woodland (ASNO1750) is assessed in **Chapter 10: Terrestrial Ecology.** Potential impacts on the woodland habitats within the Ness Woods SAC have been assessed as part of the Shadow HRA which has been submitted as a standalone document to support the EIA Report and are also detailed in **Chapter 10: Terrestrial Ecology**. A Compensatory Measures Package for the loss of qualifying habitat within the Ness Woods SAC has also been developed in consultation with NatureScot and is included in the Derogation Report, which has been developed as a standalone document to support the EIA Report.

			It is recommended that the applicant has a tree survey carried out by a professional arboricultural/ forestry consultant to BS 5837:2012. This is most likely to be in the form of tree groups, but significant individual trees should be recorded. From this a Tree Constraints Plan would be produced which will help to inform the layout of the site in order to minimise the impact on existing trees in and adjacent to the site. The Applicant will need to supply an Arboricultural Impact Assessment which details the extent of impact on trees/ woodland and a Tree Protection Plan to show how all retained trees/ woodland are to be safeguard from construction. An Arboricultural Method Statement may be required if construction works are proposed within or directly adjacent to RPAs of retained trees. The applicant will also need to provide a detailed on-site Tree Planting and Maintenance Plan and, if necessary, off-site Compensatory Planting and Maintenance Plan which shows how trees/ woodlands to be removed are to be replaced and to show how the visual amenity of the local landscape is to be enriched.	This consultation was addressed in a letter (Ref: 120019-L-THC2-1.0.0) sent to THC (via email) on 10th Aug 2022. This letter stated that it is the Applicant's view that the recommendation for a Tree Survey to BS 5837:2012 requested by THC in the pre-application advice is not necessary within the areas of commercial conifer forestry, where rotational felling and thinning operations are on-going and instead a Woodland Management Plan covering the commercial woodlands (to be supplied as an Appendix to the main EIA Report) would identify areas of woodland impacted by the Proposed Development within the context of a 20-year Felling and Replanting Plan. THC confirmed on 11th August 2022 (via email) that they agreed with the set out in letter (see **Chapter 5: Scoping and Consultation for further details)**. The Woodland Management Plan is provided in **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management**.
Scottish Forestry	Scoping	4th March 2022	All proposed compensatory planting, felling and restocking proposals need to be compliant with requirements of UK Forestry Standard (UKFS)	A Professional Forester has been engaged to advise and prepare Forest Plan with Proposed Development to ensure compliance with UKFS. Professional Forester to be retained during all phases of the Proposed Development relating to Forestry.

			As the proposed development area includes woodland, SF recommends that all impacts on woodland are set out in one section of the EIA Report.	Due the loss of non-commercial woodland that forms part of the qualifying features of the Ness Woods SAC associated with the Proposed Development, it has been agreed with the Tree Officer at THC that the EIA will assess impacts on commercial woodland in the 'Forestry' Chapter (this chapter) and non-commercial woodland in the "Terrestrial Ecology" Chapter of the EIA Report (see **Chapter 10: Terrestrial Ecology** and associated appendices). However, these chapters cross reference each other where relevant and all woodland loss (commercial or non-commercial) has been accounted for in the compensatory planting plan **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Section 1.3**
			Any woodland removal for development purposes will be subject to Scottish Governments' CoWRP. This policy seeks to avoid the removal of woodland, but where permanent removal is essential for development purposes the area must be replaced elsewhere by compensatory planting. The EIA Report should set out how this policy has been applied and quantify any permanent woodland removal. Any proposed compensatory planting areas will be the subject of the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017, and therefore a separate application will be required to be submitted to SF for a formal opinion on whether consent is required.	The site has been designed to minimise woodland removal where possible, as detailed in the **Chapter 2: Design Evolution and Alternatives** of this EIA Report. However, it is not possible for the Proposed Development to completely avoid woodland removal. In compliance with the Scottish Government's CoWRP, a Compensatory Planting Plan has been prepared (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Section 1.4**). The Applicant submitted a screening request to Scottish Forestry (via email) to determine whether the felling works required for the Proposed Development would require EIA consent under the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017. Scottish Forestry issued a letter (Ref: 030902580) on the 7th June 2023 confirming that the felling works required for the Proposed Development would not require EIA consent under the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 (See **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management, Annex 3: Scottish Forestry Ref no 030902580 (Afforestation EIA Consent Not Required**).

Scottish Forestry	Site Visit	10th May 2023	A site visit with Scottish Forestry was undertaken on 10th May 2023 with Scottish Forestry to assess compensatory planting proposals for the Proposed Development.	Discussions from the meeting were used to prepare the compensatory planting plan included in **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management**.
Scottish Forestry	Response to Gate Check Report	18th September 2023	Scottish Forestry issued a response to the ECU welcoming the developer's commitment to ensure the requirements of the Control of Woodland Removal Policy and other relevant guidance are addressed. The response stated that where woodland removal is justified, the compensatory planting must exceed the area of woodland removal to compensate for the loss of environmental value and that the EIA Report should include sufficient level of detail to allow Scottish Forestry to reach an informed decision on the potential impact of the proposed development. Scottish Forestry expect all felling, restocking and compensatory planting proposals to be compliant with The UK Forestry Standard and that any additional felling which is not part of the planning application will require permission under the Forestry and Land Management (Scotland) Act 2018. The response noted that any compensatory planting proposals may also need to be considered under The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017. This has been addressed (see above).	Noted
NatureScot	Scoping	4th March 2022	Various	NatureScot consultation in relation to trees and woodlands is related non-commercial woodland and has been addressed in **Chapter 10: Terrestrial Ecology** of this EIA Report.
SEPA	Scoping	1st March 2022	If tree felling is proposed, the submission must include a map with the boundaries of where felling will take place and a description of what is proposed for this timber in accordance with Use of Trees Cleared to	The Forest Plan with Proposed Development **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management** illustrates the felling proposals arising from the Proposed Development and describes the use of felled trees and timber within the context of SEPA

			Facilitate Development on Afforested Land – Joint Guidance from SEPA, SNH and FCS.	Guidance Note LUPS – GU27 Use of Trees Cleared to Facilitate Development on Afforested Land.
The Highland Council	Advanced Compensatory Planting Proposal	23rd August 2022	In August 2022 the Applicant wrote to the THC Planning Officer for the Proposed Development and the THC Tree Officer to enquire whether the planting /natural regeneration proposed around the maximum inundation area (to replace the woodland that would be lost within the inundation area) could be classed as Compensatory Planting (CP) under the CoWRP if undertaken pre-construction. THC responded that whilst technically CP should not occur before consent is granted, that they agreed that there would be a benefit to getting the planting around Loch Kemp done early, as it would then be established when the Proposed Development construction commences. THC also agreed that, as the planting is to take place is specifically associated with a planning application that is yet to be made, they would be inclined to accept it as CP under CoWPR, providing the commitment is made clearly in writing at this stage. THC requested a plan showing the planting location and that a planting mix and maintenance schedule is agreed prior to the planting being undertaken. Further details are provided in **Chapter 5: Scoping and Consultation.**	The information requested was issued to THC (via email) in the 'Loch Kemp Pump Storage Compensatory Planting Plan' on 21st June 2023. See **Chapter 5: Scoping and Consultation** for further details. Following the Applicant attempted to contact the THC on several occasions (via phone and email) between July 2023 and November 2023 to confirm if the additional information supplied was acceptable but did not receive a written response. The Applicant has therefore assumed that the planting proposed around the maximum inundation area can be classed as CP under the CoWRP if undertaken pre-construction as agreed in principal with THC In August 2022 subject to further information (which has been provided). The Applicant considers that it would be beneficial for THC to accept this approach as it would mean that the Applicant would plant / regenerate these new native woodland areas regardless of whether the Proposed Development is ultimately consented and/or constructed.

Issues Scoped Out of Assessment

19.3.4 The increased timber harvesting activity arising from the Proposed Development would result in an increase of the movement of Heavy Goods Vehicles (HGVs) transporting timber and biomass products compared to that arising from the baseline conditions. These additional HGV movements arising from timber harvesting for the Proposed Development have been accounted for in **Chapter 16: Traffic, Access and Transport** and **Volume 4, Appendix 16.1: Transport Assessment** of this EIA Report and therefore are not considered in detail in this Chapter.

19.3.5 No effects on woodland are anticipated as a result of the operational phase of the Proposed Development and therefore consideration of operational impacts on commercial woodland is scoped out of further assessment.

19.4 Legislation, Policy and Guidance

Legislative Context

19.4.1 Forestry in Scotland is regulated by Scottish Forestry (SF) who govern the management of woodlands including planting and removal of trees through legislation, policy, and guidance to ensure the vision and objectives of the *Scottish Forestry Strategy (2019)*[3] are met. The Strategy considers issues including climate change, timber production and biodiversity. Climate change management and mitigation is a key part of Scottish Government Policy and forestry is seen as having an essential role to play in this respect.

19.4.2 The control of timber harvesting is normally administered under the *Forestry and Land Management (Scotland) Act 2018*[4] and is the basis for the regulation of felling through the felling licence system. The proposed felling is part of a development, therefore the consenting process for this is covered by the *Electricity Act 1989*[5].

19.4.3 The following legislation has been considered in the assessment:

- Forestry and Land Management (Scotland) 2018[6];
- Forestry and Land Management (Scotland) Act 2018 – felling[7];

[3] Scottish Forestry (2019). *Scotland's Forestry Strategy: 2019-2029.* Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2019/02/scotlands-forestry-strategy-20192029/documents/scotlands-forestry-strategy-2019-2029/scotlands-forestry-strategy-2019-2029/govscot%3Adocument/scotlands-forestry-strategy-2019-2029.pdf. [Last accessed 06 November 2023].

[4] Forestry and Land Management (Scotland) Act 2018. [Online]. Available at: https://www.legislation.gov.uk/asp/2018/8/contents/enacted. [Last accessed: 06 November 2023]

[5] *Electricity Act 1989*. [Online]. Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents. [Last accessed: 06 November 2023].

[6] Forestry and Land Management (Scotland) Act 2018. [Online]. Available at: https://www.legislation.gov.uk/asp/2018/8/contents/enacted. [Last accessed: 06 November 2023]

[7] Forestry and Land Management (Scotland) Act 2018. (c.3). [Online]. Available at: https://www.legislation.gov.uk/asp/2018/8/part/4/chapter/3/enacted. [Last accessed: 06 November 2023]

- Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017[8] – compensatory planting;
- Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017[9]; and
- The Electricity Act 1989[10].

Policy Context

19.4.4 The following policy has been considered in the assessment:

- National Planning Framework 4 (NPF4) [11]
- The Scottish Governments Policy on Control of Woodland Removal (2009)[12]
- The Scottish Government (2019): Scotland's Forestry Strategy 2019 -2029[13];
- Highland-wide Local Development Plan, Policy 51 Trees and Development and Policy 52 Principle of Development in Woodland. (2012): Supplementary Guidance, Trees, Woodlands and Development[14];
- Forestry Commission Scotland (2009): The Scottish Government's Policy on Control of Woodland Removal[15];
- Highland Forest and Woodland Strategy (November 2019)[16]; and

[8] The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017. [Online]. https://www.legislation.gov.uk/ssi/2017/113/made. [Last accessed: 06 November 2023].

[9]Electricity Works (Environmental Impact Assessment) (Scotland) Regulations (2017). [Online]. Available at: https://www.legislation.gov.uk/ssi/2017/101/contents/made [Last accessed: 06 November 2023].

[10] The Electricity Act (1989). . [Online]. Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents. [Last accessed: 06 November 2023].

[11] National Planning Framework 4 (NPF) Policy 6 available at https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf. [Last accessed 24 August 2023].

[12] Forestry Commission Scotland (2009). *The Scottish Government's Policy on the Control of Woodland Removal.* Available at: https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal. [Last accessed: 06 November 2023]

[13] Scottish Forestry (2019). *Scotland's Forestry Strategy: 2019-2029.* Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2019/02/scotlands-forestry-strategy-20192029/documents/scotlands-forestry-strategy-2019-2029/scotlands-forestry-strategy-2019-2029/govscot%3Adocument/scotlands-forestry-strategy-2019-2029.pdf. [Last accessed 06 November 2023].

[14] Highland Council. (2012). *Highland-Wide Local Development Plan*, pp 102-103. [Online]. Available at: https://www.highland.gov.uk/download/downloads/id/1505/highland-wide_local_development_plan.pdf. [Last accessed: 06 November 2023].

[15] Forestry Commission Scotland (2009). *The Scottish Government's Policy on the Control of Woodland Removal.* Available at: https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal. [Last accessed: 06 November 2023]

[16] Highland Council (2018). *Highland Forestry and Woodland Strategy*. [Online]. Available at: https://www.highland.gov.uk/download/downloads/id/891/highland_forest_and_woodland_strategy.pdf. [Last accessed: 06 November 2023].

- Forestry Commission (2017): The UK Forestry Standard: The Government's Approach to Sustainable Forestry, Forestry Commission[17].

19.4.5 In the UK there is a strong presumption against permanent deforestation unless it addresses environmental concerns. In Scotland deforestation is currently detailed within the *Scottish Government's Policy on Control of Woodland Removal (2009)*[18], published by Forestry Commission Scotland (now Scottish Forestry). There is a strong presumption in favour of protecting Scotland's Woodland resources and this policy aims to provide a strategic framework for appropriate woodland removal and help the Scottish Government meet its targets to maintain and expand the forest cover in Scotland as set out in the Scottish Forestry Strategy (2019).

19.4.6 The NPF4 is a material policy consideration. Policy 6 (Forestry, woodland and trees) of NPF4 is included with the key intention of protecting and expanding forests, woodland and trees.

Technical Guidance

19.4.7 The following technical guidance has been considered in the assessment:

- Forestry Commission Bulletin 112 Creating New Native Woodlands;
- Highland Council Supplementary Guidance, Trees, Woodlands and Development. (2013)[19];
- Forestry Commission (2011); Forests & Water. UK Forestry Standard Guidelines (and other guidelines in the same series);
- Forestry Commission Yield Models for Forest Management;
- Scottish Forestry Guidance Nore – 'Deciding future management options for afforested deep peatland' (2015);
- SEPA Guidance on the management of Forestry Waste (SEPA, 2017)[20]; and
- SEPA Guidance LUPS – GU27 Use of Trees Cleared to Facilitate Development on Afforested Land[21].

[17] Forestry Commission (2017): *The UK Forestry Standard: The Government's Approach to Sustainable Forestry*, Forestry Commission, Edinburgh. [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/687147/The_UK_Forestry_Standard.pdf. [Last accessed: 06 November 2023].

[18] Forestry Commission Scotland (2009). *The Scottish Government's Policy on the Control of Woodland Removal.* Available at: https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal. [Last accessed: 06 November 2023]

[19] Highland Council. (2013). *Trees, Woodlands & Development.* [Online]. Available at: https://www.highland.gov.uk/download/downloads/id/354/trees_woodlands_and_development_supplementary_guidance.pdf. [Last accessed: 06 November 2023].

[20] SEPA. (2017). *Management of Forestry Waste*. [Online]. Available at: https://www.sepa.org.uk/media/28957/forestry_waste_guidance_note.pdf. [Last accessed: 06 November 2023].

[21] SEPA. (2014). *Land Use Planning System SEPA Guidance Note LUPS-GU27: Use of Trees Cleared to Facilitate Development on Afforested Land*. [Online]. Available at: https://www.sepa.org.uk/media/143799/use_of_trees_cleared_to_facilitate_development_on_afforested_land_sepa_snh_fcs_guidance-_april_2014.pdf. [Last accessed: 06 November 2023].

19.5 Methodology

Desk Study

19.5.1 Existing sub compartment database information comprising planting year, species, yield class, felling and restocking proposals were provided by the landowner and are included within the **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation, Woodland Management Plan 2022 – 2041**.

19.5.2 Details of proposed infrastructure including access tracks, site compounds, borrow pits and inundation area within the study area were provided by the Applicant. These were overlayed on the existing Species Map, Felling Proposals Map and Restocking Proposals Map to identify areas that would be affected by the Proposed Development and, where possible, to integrate the needs of the Proposed Development and those of the existing woodland management regime to produce the **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage: Woodland Management Plan.**

19.5.3 The Plan with Proposed Development illustrates and quantifies the felling and restocking plans and associated effects upon the woodland in the event of the Proposed Development going ahead. Comparison with the Plan without Proposed Development identifies potential effects on the woodland and allows calculation of the net woodland removal and the requirement for compensatory planting if the Proposed Development is consented.

19.5.4 The suitability of the proposed forest to bog restoration areas was assessed against relevant legislation and guidance, as detailed in **Volume 4, Appendix 19.3: Loch Kemp Storage: Forest to Bog Restoration Proposals.**

Field Study

19.5.5 Several site visits to the study area were undertaken during spring/summer 2022 to verify the sub compartment data and to assess the areas of woodland that would to be affected by the Proposed Development. These were followed by site specific visits on 28th March 2023 with fencing contractors to consider fencing options for compensatory planting areas CP 2 – 6, a visit on 10th May 2023 with Scottish Forestry to assess compensatory planting proposals and a visit on 16th June 2023 to discuss felling and replanting proposals on Torr Cluanie at the north end of Dam 3.

19.5.6 The proposed forest to bog restoration areas were assessed during a site visit on 2nd October 2023.

19.5.7 Surveys were carried out within the potentially affected areas to confirm species, crop condition and Top Height to ascertain Yield Classes which, in conjunction with the author's experience of similar crops, were then applied to an appropriate Yield Model within Forestry Commissions Yield Models for Forest Management to provide an estimated volume for the additional timber that would be felled because of the Proposed Development.

19.5.8 Compensatory Planting areas were subject to walkover surveys to ascertain their suitability for woodland establishment, with a particular focus on peat depth to ensure no significant areas with a peat depth >50 cm were included[22].

[22] Peat probing was carried out to inform and to ascertain suitability of areas for woodland establishment but not as part of a formal survey. However, this was acceptable to Scottish Forestry.

Assessment Methodology

19.5.9 There are currently no published criteria, guidance or methodologies for the assessment of effects on woodland. The assessment methodology reported in this Chapter is based upon the methodology set out in **Chapter 4: EIA Process and Methodology** and has therefore been based upon the requirements of the 2017 EIA Regulations.

19.5.10 The assessment is made based on professional judgement, with reference to:

- the sensitivity of the different types of woodland present in the study area taking account of the degree and rate of change in the woodland, both in the recent past and that anticipated in the near future, and therefore the susceptibility/vulnerability of the woodland to change; the quality of the woodland and the extent to which it is rare or distinctive, and the value attributed to the woodland through designations;
- magnitude of change and extent of woodland removal;
- 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.

19.5.11 The effect on woodland is normally considered to be of an adverse nature (i.e tree felling); however indirect beneficial effects may arise where the introduction of a proposed development allows for the removal of ecologically habitat poor coniferous plantation followed by reafforestation of a more diverse woodland mix or introduction of native tree species and more designed open ground than was there previously. Although there may be ecological benefits arising from the removal of coniferous woodland, there is a presumption against all woodland removal which is supported by *National Planning Framework 4 (NPF4)* and the *Scottish Government's Policy on the Control of Woodland Removal (CoWRP)*. Therefore, for the purposes of this assessment tree and woodland removal is considered as having an adverse effect.

Criteria for Assessing Sensitivity / Importance of Receptors

19.5.12 Four categories of sensitivity / importance of a forest or woodland are defined in **Table 19.2: Sensitivity Criteria** below.

Table 19.2: Sensitivity Criteria

Category	Description
High	• Highly valued, subject of national designation e.g Ancient Woodland Category 1a & 2a; • Particularly rare or distinctive in a national context; or • Considered susceptible to small changes.
Medium	• Valued more locally; • Rare or distinctive in a regional context; and/or • Are tolerant of moderate levels of change.

Low	• Generally, more commonplace, not designated; • Considered potentially tolerant of noticeable change; or • Undergoing substantial development such that their character is one of change
Negligible	• Already fundamentally changed (e.g second rotation commercial coniferous plantation); • Considered tolerant of noticeable change; or • Having undergone substantial development such that their character is one of change.

19.5.13 Productive commercial woodland such as the Whitebridge Plantation which are undergoing restructuring are dynamic environments with regular periods of change due to on-going rotational felling and replanting programmes and as such, their environmental sensitivity is low.

19.5.14 Some older commercial woodland can appear on the Ancient Woodland Inventory (AWI) as Long-Established Woodlands of Plantation Origin (LEPO) and where they have developed semi-natural characteristics they can be valued locally and have medium sensitivity. Where semi natural characteristics are absent, or rare, such areas have low sensitivity.

19.5.15 Criteria for assessing the magnitude of change to a forest or woodland is defined in **Table 19.3: Magnitude of Change.**

Table 19.3: Magnitude of Change Criteria

Category	Description
High	A noticeable change to the woodland over a wide area or an intensive change over a limited area
Medium	Small changes to the woodland over a wide area or a noticeable change over a limited area
Low	Very small changes to the woodland over a wide area or small changes over a limited area
Negligible/None	No discernible change to the woodland

19.5.16 The sensitivity of the woodland (**Table 19.2: Sensitivity Criteria**) and magnitude of change criteria (**Table 19.3: Magnitude of Change**) are then used to inform a professional judgement on the likely significance of the effect. **Table 19.4: Matrix for Determining Significance of Effects** provides a framework for reaching a judgement as to the significance of predicted effects.

Table 19.4: Matrix for Determining the Significance of Effects

Magnitude of change/effect	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

19.5.17 Major and moderate effects are considered to be significant within the context of the 2017 EIA Regulations

Assumptions and Limitations

19.5.18 The assessment has been carried out on the 237 ha owned by Dell Estate, known locally as the Whitebridge Plantation and compartments 1 & 2, the study area, approximately 500 m north at Dell Farm.

19.5.19 There is an additional and geographically separate area of woodland approximately 2.5 km to the south at Ardochy also owned by Dell Estate. This woodland extends to 300 ha and includes areas of native woodland and productive conifers. It was planted in 2011 and is still mostly in its establishment phase with significant woodland management operations such as felling and replanting at least 30 years away and therefore it was not appropriate to include this in the study area for this assessment.

19.5.20 The assessment assumes that the landowner will implement the woodland management proposals described within the Dell Estate, Whitebridge Plantation, Woodland Management Plan 2022 - 2041 (Plan without the Proposed Development) Technical Appendix 19 - 1, subject to the necessary approvals being in place.

19.5.21 The felling proposals assume a 18 m wide working corridor for the construction and upgrade of access tracks.

19.6 Baseline Conditions

Existing Baseline

19.6.1 The woodlands comprise a wide range of species including Scots Pine (*Pinus sylvestris*), Sitka Spruce *(Picea sitchensis),* Douglas *Fir (Picea menziessi)* and Larch *(Larix)* and include a wide range of age classes. The woodlands are managed with the principal aim of producing a commercial crop of timber with regular thinning and clearfelling of stands prior to them achieving their Terminal Height

and the onset of significant windblow. Felled areas are subsequently restocked in line with the *UK Forestry Standard (UKFS[23]).*

19.6.2 There is no formal Long Term Forest Plan in place for the woodlands with thinning and clearfelling being approved through the Scottish Governments Felling Permissions process within the framework of the **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 - 2041**. This management plan provides the "Plan without Proposed Development" for the purposes of assessing the impacts upon the woodland arising from the Proposed Development and in particular the *Scottish Government's Policy on the Control of Woodland Removal (2009)[24].*

19.6.3 87.83 ha of the Whitebridge Plantation is recorded on the Ancient Woodland Inventory as Long-Established Woodland of Plantation Origin (LEPO).

19.6.4 The native broadleaved woodland within the Ness Woods Special Area of Conservation (SAC) and on the shores around Loch Kemp are not included in the WMP and are not assessed in this chapter. However, the woodland removal arising from the Proposed Development within these areas is summarised in this Chapter with more detailed description of the woodland, the effects and mitigation being described in **Chapter 10: Terrestrial Ecology** of this report.

19.6.5 The baseline species composition set out in the plan includes a sub compartment database recording species, age class and map references for the areas of commercial woodland, as illustrated on the **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041, Figure 19.1.1 Current Species Map** and summarised in **Tables 19.5: Baseline Species Composition 2022** and **Table 19.6: Baseline Age Class Structure.** below**.**

Table 19.5: Baseline Species Composition 2022*

Species	Area (ha)	%
Sitka Spruce	62.69	26
Scots Pine	44.18	18
Mixed Conifer/Native Broadleaves	22.12	9
Felled (awaiting restock)	15.23	7
Scots Pine/Hybrid Larch	11.95	6
Lodgepole Pine	10.59	5

[23] Forestry Commission (2017): *The UK Forestry Standard: The Government's Approach to Sustainable Forestry*, Forestry Commission, Edinburgh. [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/687147/The_UK_Forestry_Standard.pdf. [Last accessed: 06 November 2023].

[24] Forestry Commission Scotland (2009). *The Scottish Government's Policy on the Control of Woodland Removal.* Available at: https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal. [Last accessed: 06 November 2023]

Hybrid larch	10.36	4
Native Broadleaves	10.47	5
Douglas Fir/Hybrid Larch	9.88	3
Sitka Spruce/Douglas Fir	2.76	1
Mixed Conifer	6.37	3
Open Ground/Native Broadleaves	5.44	2
Open Ground	25.02	11
Total	**237.00**	**100**

**Note there are slight differences in species composition between the those provided in Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041 and this Chapter due to minor changes in sub compartment data identified during survey works.*

Table 19.6: Baseline Age Class Structure

Age class (years)	**Current**
	Area (ha)
0-10	33.3
11-20	21.1
21-30	56.2
31-40	0.0
41-50	0.0
51-60	10.2
61-70	86.4
71-80	0.0
81-90	0.0
91-100	0.0
100+	0.0
Total	207.20

Baseline Felling Plan

19.6.6 The plan includes a proposed 20-year felling programme in 5-year phases for the commercial woodland within the site, including areas where Low Impact Silvicultural Systems (LISS) and Long-Term Retentions (LTR) will be applied as illustrated on the plan **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041, Figure 19.1.2: Felling Proposals Map** and summarised in **Table 19.7: Summary of Felling Proposals Forest Plan Without Proposed Development** below.

Table 19.7: Summary of Felling Proposals Forest Plan Without Proposed Development

Baseline Felling Phase	Area (ha)	% of Site
Phase 1	23.2	10
Phase 2	4.47	2
Phase 3	13.5	6
Phase 4	32.3	14
Felling Beyond Period of Plan	73.13	31
Low Impact Silvicultural Systems	20.08	8
Long Term Retention	41.0	17
Other (open Ground etc)	29.3	12
Total Area (ha)	**237.00**	

19.6.5 The felling programme includes approximately 73 ha of clear-felling over the 20-year period with the felling coupes reflecting stands which have reached economic maturity, forest design principles and the desire to fell crops prior to the onset of significant windblow and to ensure windfirm edges are maintained on adjacent stands.

19.6.6 The proposed clear-felling in compartment 11 is a result of significant windblow throughout this compartment.

Baseline Access Tracks

19.6.7 The existing track network within the woodland is illustrated on the plan **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041**, **Figure 19.1.3 Constraints Map**. The map shows the tracks currently suitable for use by heavy goods vehicles (HGVs) for timber haulage and those requiring upgrade to facilitate the proposed harvesting operations. Approximately 1 km of existing track requires upgrading to allow for safe and efficient timber harvesting from compartments 7 and 11.

Baseline Restocking Plan

19.6.8 The plan includes a restocking plan covering the areas to be felled during the proposed 20-year felling programme illustrated on the plan **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041, Figure 19.1.4: Restocking Proposals Year 20 Species Map.**

19.6.9 The focus of the restocking plan is to meet the objectives of the plan to maintain or enhance the productivity of the commercial woodland whilst considering current environmental and landscape considerations.

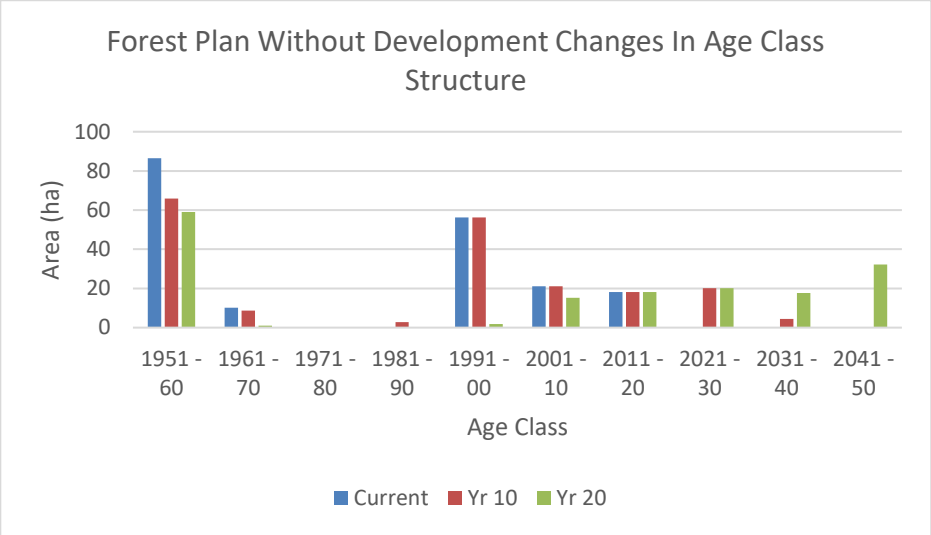
19.6.10 Sitka spruce will be the dominant species used for restocking with elements of Scots Pine and other conifers reflecting site conditions. Native species will be planted on appropriate sites to increase structural diversity and enhance the local biodiversity and the landscape in the medium to longer term.

19.6.11 The changes in species composition over the period of the plan are illustrated in **Charts 19.1: Forest Plan Without Development Changes in Age Class Structure** and **Table 19.8: Baseline Change in Species Composition Over Period of Forest Plan Without Proposed Development** and summarised in **Table 19.9: Summary Felling Phases with and without Proposed Development** below.

Table 19.8: Baseline Change in Species Composition Over Period of Forest Plan Without Proposed Development

Species	Current Percentage	Year 20 Percentage
Sitka Spruce & Sitka Spruce/Scots Pine Mixture	27	32
Other Conifers	46	34
Native Broadleaves	9	17
Open Ground	12	17
Felled Awaiting Restock	6	0

Chart 19.1: Forest Plan Without Development Changes in Age Class Structure



Future Baseline

19.6.12 The future baseline conditions are those arising from the implementation of **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041,** which incorporates the objectives and work proposals of the current woodland management regime with the construction, access, and operational needs of the Proposed Development.

19.6.13 The current woodland structure including species composition and age class is the baseline for both Plans, with and without the Proposed Development and the following sections illustrates the changes arising over a comparative 20-year period resulting from the Plan with Proposed Development.

19.6.14 The felling and restocking proposals arising from the Plan with Proposed Development are illustrated on the **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan, Figure 19.2.2: Proposed Development Felling Proposals Plan** and **Figure 19.2.5**: **Proposed Development Combined Year 20 Species Map**

Table 19.9: Summary Felling Phases with and without Proposed Development

Felling Phase with Proposed Development	Area (ha)	% of Site	Felling Phase without Proposed Development	Area (ha)	% of Site
Phase 1 inc Construction & Access Felling Requirements	60.56	26	Phase 1	23.20	10
Phase 2	4.48	2	Phase 2	4.47	2
Phase 3	9.62	4	Phase 3	13.50	6
Phase 4	20.93	9	Phase 4	32.3	14
Felling Beyond Period of Plan	60.40	25	Phase 5	73.13	31

Low Impact Silvicultural Systems	19.24	8	Low Impact Silvicultural Systems	20.08	8
Long Term Retention	19.00	9	Long Term Retention	41.0	17
Other (open ground etc.)	42.77	17	Other (open ground etc.)	29.3	12
Total	**237.0**			**237.0**	

Table 19.10: Summary of changes in species composition (excluding compensatory planting)

	Baseline Current Species Composition		**Plan with Proposed Development Year 20 Species Composition**		**Plan without Proposed Development Year 20 Species Composition**	
Species	**Area (ha)**	**%**	**Area (ha)**	**%**	**Area (ha)**	**%**
Sitka Spruce & Sitka Spruce/Scots Pine Mixture	61.40	26	67.60	27	76.52	32
Other Conifers	108.04	46	66.84	29	80.86	34
Native Broadleaves	24.26	10	31.48	13	39.63	17
Open Ground	27.79	12	26.84* includes 5.76 ha forest to bog restoration	13	39.45	17
Felled Awaiting Restock	15.51	6	0	0	0	0
Felled No Restock (Normal Forest Practice)	0	0	1.57	<1%	0	0
Felled No Restock (Woodland Removal)	0	0	42.67	18	0	0
Totals	**237.0**	**100**	**237.0**	**100**	**237.0**	**100**

19.7 Mitigations by Design / Embedded Mitigation

19.7.1 The Proposed Development has been subject to several design iterations and evolutions in response to constraints identified as part of the baseline studies, intended to reduce environmental effects including those on trees and woodland (see **Chapter 2: Design Evolution and Alternatives**).

19.7.2 The alignment of access tracks and the location of borrow pits within the woodland have been influenced by a desire to minimise their impacts on trees and woodland with the working corridor being reduced as far as is reasonably practical.

19.7.3 The felling proposals have been developed to retain windfirm edges as far as possible.

19.7.4 The Proposed Development felling proposals represent the worst-case scenario and opportunities will be sought during felling/construction to minimise felling areas, where reasonably practical.

19.7.5 All woodland plans and operations would comply with the *UK Forestry Standard*[25].

19.7.6 All woodland operations would comply with *Best Practice guidance including Forests & Water Guidelines V4 and Forestry & Water – Know the Rules 2nd Edition*[26] to mitigate the risks of diffuse pollution and fuel spillages.

19.7.7 Root Protection Areas as per *British Standard BS:5837 Trees in Relation to Design, Demolition and Construction (2012)*[27] would be established for retained trees around site compounds, borrow pits and other infrastructure to protect the trees during construction.

19.8 Potential Significant Effects

19.8.1 This section considers the potential impacts and associated effect significance of the construction, of the Proposed Development based on the typical activities described in **Chapter 3: Description of Development.**

19.8.2 The only potential significant adverse effect, prior to mitigation, relating to woodland would be from the removal of areas which would not be replanted due to the land it is currently located on being required for permanent access tracks / permanent infrastructure or is within the proposed inundation area. In the absence of mitigation this would result in a permanent loss of woodland, resulting in a **Moderate** and *significant* adverse effect.

Permanent Woodland Removal

19.8.3 Permanent removal of woodland as a result of the Proposed Development is anticipated to include:

- 50.00 ha of woodland (both broadleaved and coniferous) within the Whitebridge Plantation and on Torr Cluanie at the northern end of Dam 3, including areas that have been felled and are awaiting restocking;

[25] Forestry Commission (2017): *The UK Forestry Standard: The Government's Approach to Sustainable Forestry*, Forestry Commission, Edinburgh. [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/687147/The_UK_Forestry_Standard.pdf. [Last accessed: 06 November 2023].

[26] Forestry & Water – Know the Rules 2nd Edition know-the-rules-booklet-2nd-edition-jan-2023.pdf (confor.org.uk) . [Last accessed: 06 November 2023].

[27] British Standard BS:5837 Trees in Relation to Design, Demolition and Construction (2012) BS 5837:2012 Trees in relation to design, demolition and construction - recommendations, British Standards Institution - Publication Index | NBS (thenbs.com) . [Last accessed: 06 November 2023].

- 4.67 ha of Broadleaved Woodland within the inundation area or working corridor of the Proposed Development but out with the plantation and the Ness Woods SAC[28] ;and
- a further 5.52 ha of Broadleaved Woodland within the Ness Woods SAC (see **Table 10.12, Chapter 10: Terrestrial Ecology)[29].**

19.8.4 Crop details for these areas are recorded in the Sub compartment database of the Plan with Proposed Development but are summarised in **Table 19.11: Species Composition Summary of Proposed Woodland Removal** below and illustrated on the **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan, Figure 19.2.4: Proposed Development Restock Species and Woodland Removal Plan.** Loss of non-commercial woodland as a result of the Proposed Development is assessed as part of **Chapter 10: Terrestrial Ecology** but the loss of these areas is included in in **Table 19.11: Species Composition Summary of Proposed Woodland Removal** for completeness.

Table 19.11: Species Composition Summary of Proposed Woodland Removal

Species	Area (ha)
Felled awaiting restock	11.58
Sitka Spruce	9.35
Scots Pine	6.39
Mixed Conifer/Native Broadleaves	3.57
Open Ground	6.59
Mixed Conifer	0.39
Open Ground/Native Broadleaves/NBL	2.44
Scots Pine/Hybrid Larch	0.42
Hybrid Larch	2.83
Lodgepole Pine	4.86
Douglas Fir/Hybrid Larch	0.43

[28] Calculated from **Table 10.12: Summary of Habitat Loss by Phase 1 / NVC Community Type (for Habitats of Local or Greater Value, outwith Ness Woods SAC)** in **Chapter 10: Terrestrial Ecology**, which states that there would 5.48 ha of broadleaved woodland habitat loss outside the Ness Wood SAC due to permanent infrastructure, both commercial and non-commercial. This assessment has estimated that there would be a permanent loss 0.81 ha commercial Native Broadleaves lost due to permanent infrastructure (see Table 19.11), meaning there would be 4.67 ha of broadleaved woodland loss outwith the plantation and the Ness Woods SAC, due largely to native woodland loss within the inundation area, as well as the construction of Dam1, Dam 3 and other permanent infrastructure.

[29] Equivalent to the permanent loss of qualifying woodland habitats (Tilio-Acerion forests of slopes, screes and ravines and Old sessile oak woods with Ilex and Blechnum in the British Isles) that would be permanently lost due to permanent infrastructure within the Ness Woods SAC, as detailed in **Table 10.6: Summary of Habitat Loss within Ness Woods SAC** in **Chapter 10: Terrestrial Ecology**.

Norway Spruce	0.34
Native Broadleaves	0.81
Broadleaved Woodland outwith the plantation and the Ness Woods SAC.	4.67
Broadleaved Woodland within Ness Woods SAC (see **Table 10.6, Chapter 10: Terrestrial Ecology** (Loss of qualifying habitat only)**. Table 10.7** in this Chapter also provides individual tree loss within the Ness Woods SAC)	5.52
Total	**60.19 ha**

Temporary Woodland / Forestry Removal

19.8.5 Other areas of commercial woodland would be felled at proposed borrow pit and site compound locations within the Whitebridge Plantation. However, the effect on these areas would be short-term, resulting in a **Minor** and *not significant* effect, as restocking would be carried out during the first available planting season following the completion of the construction period or, in the case of borrow pits, earlier if they are no longer required and land reinstatement has been completed. Restocking operations are normally carried out within three years following felling.

Timber Harvesting

19.8.6 Felling over the 20-year of the Plan with Proposed Development (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan**) would increase by 24 ha more than that proposed over the same period in the Plan without Proposed Development (see **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation Woodland Management Plan 2022 – 2041**) with a notable increase of 40 ha during the first 5-year period followed by a reduction in the later phases as illustrated in **Table 19.9: Summary Felling Phases with and without Proposed Development** above.

19.8.7 The proposed increased level of timber harvesting during the construction phase would result in an increased volume of timber being removed from site during Phase 1 of the Plan compared to the Plan without Proposed Development and this would result in an increase in the movement of heavy goods vehicles (HGVs).

19.8.8 However, the timing of the baseline felling operations would be subject to the necessary approvals being in place and it is unlikely that landowner felling operations would coincide with the felling operations associated with the Proposed Development.

19.8.9 As a result, most of the tonnage from the landowner operations will be deferred towards the latter period of Phase 1 (or possibly pre-construction) and thereby avoid the main construction period and minimise the increased movement of HGVs to only those associated with the Proposed Development during the main construction period.

19.8.10 The overall increase in felling and resulting additional 10,450 tonnes harvested during the Phase 1 period would be **Minor** and *not significant*, when considered within the context of the 5 year phase of a 20 year plan and the available softwood volume of timber across THC area of 2 million cu3 annually in 2021 rising to 3.2 million cu3 annually by 2037, Highland Council Forest and Woodland Strategy (2018). HGV movements associated with the increased timber harvesting activity arising

from the construction of the Proposed Development (during the enabling works) are included in the Transport Assessment (see **Volume 4, Appendix 16.1: Transport Assessment**), which concludes that with the implementation of appropriate mitigation, no significant residual adverse effects are anticipated in respect of traffic and transport issues as a result of the Proposed Development.

19.8.11 The Woodland Management Plan with Proposed Development (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan**) would result in a reduction of approximately 22 ha (14%) in the area of productive conifers over the period of the plan compared to that of the Woodland Management Plan without Proposed Development (see **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation, Woodland Management Plan 2022 – 2041**), resulting in a potential reduction in the volume of timber available for timber processing in the future. However, the effect of this would be partially mitigated through silvicultural practices, including the use of "improved" Sitka Spruce which can produce increased timber yields of around 25% over the length of a rotation compared to traditional planting stock *Forest Research Practice Note: Choosing Sitka Spruce Planting Stock (December 2012)*[30]*,* resulting in a **Minor** and *not-significant* adverse effect.

Forest to Bog Restoration

19.8.12 5.76 ha of the 50.00 ha of commercial woodland that would be permanently removed (see paragraph 19.8.3) within the Whitebridge Plantation would be restored to bog. This is considered a **Negligible** and *not significant* effect, as the areas proposed for restoration are already proposed to be returned to open ground within **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation, Woodland Management Plan 2022 – 2041.**

Non-Commercial Woodlands

19.8.13 It is a requirement that these areas identified for woodland removal (including the areas of broadleaf woodland assessed in **Chapter: 10 Terrestrial Ecology**) are considered within the context of the Scottish Governments Policy on the Control of Woodland Removal (COWRP)[31]. This is discussed further in **Section 19.10: Mitigation**.

Ancient Woodland

19.8.14 The proposed commercial woodland removal area includes 6.34 ha which is recorded on the Ancient Woodland Inventory (AWI) as Long-Established Woodland of Plantation Origin (LEPO) (2b) see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan, Figure 19.2.4: Proposed Development Restock Species and Woodland Removal Plan**. This comprises 2.56 ha of woodland that would be lost within the inundation area once the Proposed Development is operational and the balance being woodland to be cleared to facilitate access.

19.8.19 *LEPO* can develop semi-natural characteristics and be locally important where they have developed semi-natural characteristics. This is especially true for some of the oldest sites which can be as rich as Ancient Woodland. However, the sub compartments which would be affected by the Proposed Development have been subject to at least two rotations of commercial conifers and now comprise of mostly non-native species with a dense canopy that has supressed most of the ground vegetation

[30] Forest Research Choosing Sitka Spruce Planting Stock December 2012 https://cdn.forestresearch.gov.uk/2012/12/fcpn018.pdf [Last accessed: 06 November 2023]

[31] Forestry Commission Scotland (2009). *The Scottish Government's Policy on the Control of Woodland Removal.* Available at: https://forestry.gov.scot/publications/285-the-scottish-government-s-policy-on-control-of-woodland-removal. [Last accessed: 06 November 2023]

and semi natural characteristics remaining on this site are limited, resulting in a **Minor** and *not significant effect*.

19.8.15 Where the canopy has not fully closed the occasional naturally regenerated birch does occur, but ground vegetation is dominated by dense bracken (*Pteridium aquilinum*) and/or heather (*Calluna vulgaris*) and biodiversity values are low.

19.8.16 Potential impacts on non-commercial woodland which are listed on the AWI have been assessed in **Chapter: 10 Terrestrial Ecology.**

Changes to the woodland structure and composition

19.8.17 Another potential effect on commercial woodland arising from the construction of the Proposed Development would be changes to the woodland structure and composition. This effect is not considered significant, as productive commercial woodlands such as at Whitebridge are, by their nature, subject to ongoing changes in species and age class arising from rotational felling and replanting operations.

19.9 Cumulative Effects

19.9.1 Of relevance in the consideration of cumulative effects to woodland loss would be the grid connection, in the form of an underground cable and 275 kV switching station, referred to as Associated Works to the Proposed Development (see **Section 3.7** in **Chapter 3: Description of Development**). The location of these Associated Works has been chosen to minimise the effect on trees and woodland and therefore any effect would not be significant nor cause any cumulative effect with the Proposed Development.

19.9.2 No other cumulative effects with any other developments in the vicinity of the Proposed Development are anticipated.

19.10 Mitigation

Compensatory Planting

19.10.1 Of the 60.19 ha of permanent woodland removal identified in **Table 19.11**, 52.86 ha would require compensatory planting to be carried out under the Scottish Government's CoWRP[32]. A Compensatory Planting Plan has therefore been prepared to mitigate the woodland removal arising from the Proposed Development, including the loss of non-commercial woodland identified as part of **Chapter 10: Terrestrial Ecology**. The Compensatory Planting proposals are detailed in **Section 1.3** of **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan** and illustrated on **Figure 19.2.6: Compensatory Planting Plan.**

[32] Areas that would not require compensatory planting to be carried out under the Scottish Government's CoWRP include the 5.76ha proposed for forest to bog restoration (see paragraph 19.8.12) and 1.57 ha of woodland adjacent to access tracks, which would be felled irrespective of the Proposed Development to facilitate track construction/improvements as part of the management proposals outlined in Dell Estate, Whitebridge Plantation, Woodland Management Plan 2022 – 2041. See **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan** for further details.

19.10.2 The proposed areas are located close to the study area and are within the Scottish Forestry Highland Native Woodland Target Area and an area categorised within the Highland Forest and Woodland Strategy as "Potential with Sensitivities" for new woodland which predominantly deliver biodiversity, landscape and/or amenity objectives.

19.10.3 The plan proposes the establishment of approximately 63.11 ha of new native woodland plus associated open ground within the ownership boundary of Dell Estate, close to the Study Area which will ultimately result in the beneficial impact of an increase of woodland from 237.00 ha to 257.62 ha including an increased proportion of native woodland and associated open ground habitats including the forest to bog restoration areas identified in **Volume 4, Appendix 19.3: Loch Kemp Storage: Forest to Bog Restoration Proposals.**

19.10.4 The planting plan will be implemented in three phases;

- Phase 1 Advanced Works (Pre Application) CP2 – CP4;
- Phase 2 Post Consent CP1; and
- Phase 3 Post Construction CP – CP6.

19.10.5 The Applicant submitted a screening request to Scottish Forestry to determine whether the felling works required for the Proposed Development would require EIA consent under the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017. Scottish Forestry have confirmed the sites identified are suitable and that EIA consent will not be required (see **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan, Annex 3: Scottish Forestry Ref no 030902580 (Afforestation EIA Consent Not Required)**). EIA consent is valid for five years from June 2023 and if works have not commenced by then, further screening may be required. The work will be enforced through a Planning Condition.

19.10.6 For areas of temporary woodland removal for borrow pits and site compounds, restocking would be carried out during the first planting season following re-instatement subject to a minimum 6-month period between re-instatement and planting works for planning and operational reasons.

19.10.7 Forest to bog restoration works, as detailed in paragraph 19.8.12 and **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation, Woodland Management Plan 2022 – 2041**, would be carried out as outlined in **Volume 4, Appendix 10.7: Outline Habitat Management Plan (non-SAC)**.

19.10.8 During construction, an independent, qualified, and technically competent Forest Manager with the required experience will be retained throughout the construction period to manage the implementation of the Management Plan to ensure all woodland management works are carried out to meet the requirements of the UKFS and other appropriate guidance.

19.10.9 The forestry professional would be retained to monitor the establishment of the Compensatory Planting Plan with review being carried out at regular intervals (year 1, 5 and 10) to ensure that the trees are planted correctly, maintained to the required standard, and ultimately established into woodland.

19.11 Residual Effects

19.11.1 Following the implementation of the proposed mitigation measures set out in **Section 19.10**, no significant adverse residual effects on forestry, trees and woodland within the Whitebridge Plantation are predicted to arise from the construction and operation of the Proposed Development.

19.11.2 An increase in the native broadleaved woodland resource and associated open ground arising from the Compensatory Planting Plan the restocking proposals (as detailed in **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan**), including forest to bog restoration (as detailed in **Volume 4, Appendix 19.3: Loch Kemp Storage: Forest to Bog Restoration Proposals**), would ultimately result in the beneficial effect of a more extensive and diverse woodland environment capable of contributing to a number of objectives in line with the objectives of *Highland Council Forest and Woodland Strategy (2018).*

19.12 Conclusion

19.12.1 An assessment of the potential effects of the Proposed Development on woodland, specifically as part of the Whitebridge Plantation has been undertaken. The findings of this assessment conclude that, prior to mitigation, a *significant* adverse effect is predicted in relation to the removal of 50.0 ha of commercial woodland within the Whitebridge Plantation and on Torr Cluanie at the northern end of Dam 3 during construction, including areas that have been felled and are awaiting restocking. Loss of non-commercial woodland, including woodland within the Ness Woods SAC, is assessed as part of **Chapter 10: Terrestrial Ecology,** but any permanent loss of non-commercial woodland is included in this assessment for completeness, increasing the total loss of woodland to 60.19 ha. The majority of permanent woodland loss would be due to the inundation and raised levels of Loch Kemp. Other woodland loss would be a result of clearance to facilitate access tracks for construction of the Proposed Development, as well as proposals for 5.76 ha of the permanent woodland removal within the Whitebridge Plantation to undergo forest to bog restoration, as detailed in **Volume 4, Appendix 19.1: Dell Estate, Whitebridge Plantation, Woodland Management Plan 2022 – 2041**.

19.12.2 Of the 60.19 ha of permanent woodland removal identified in **Table 19.11**, 52.86 ha would require compensatory planting to be carried out under the Scottish Government's CoWRP. The proposed compensatory planting plan set out in **Volume 4, Appendix 19.2: Loch Kemp Pumped Storage Woodland Management Plan** would offset the permanent loss of woodland and thereby meet the requirements of the Scottish Governments CoWRP, whilst also achieving significant and clearly defined additional public benefits by helping Scotland mitigate and adapt to climate change. Overall, the implementation of this compensatory planting plan would result in a net increase of the total woodland and associated open ground within the plan area from 237 ha to 257.62 ha.

19.12.3 Following the implementation of the mitigation measures set out in **Section 19.10**, no significant adverse residual effects on commercial woodlands are predicted to arise from the construction and operation of the Proposed Development.

19.12.4 No significant adverse cumulative effects on commercial woodlands are predicted to arise from the construction and/or operation of the Proposed Development.