Chapter 11

Forestry

SP ENERGY NETWORKS

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11.1 Introduction

1. This Chapter presents the findings of the assessment of the likely significant environmental effects of the proposed development described in **Chapter 4: Development Description** on the existing forest resource. An assessment of the likely significant effects of felling on the landscape resource and visual amenity is covered separately in **Chapter 6: Landscape and Visual**. Hydrological effects are covered in **Chapter 7: Geology, Hydrogeology, and Hydrology**, and effects on biodiversity are considered in **Chapter 8: Ecology and Biodiversity**.

11.2 Policy Context

2. The Scottish Planning Policy (2014) states that any development requiring the felling of forestry should be in accordance with the Control of Woodland Removal (CWR) Policy. This position is reiterated in the Draft National Planning Framework 4 (NPF4). The consideration of NP4 is discussed in further detail in **Chapter 5: Planning Policy.**

3. Forestry Commission Scotland (now Scottish Forestry (SF)) issued a document entitled 'The Scottish Government's Policy on Control of Woodland Removal' (2009) and accompanying Implementation Guidance (2019) (Appendix A), which provides guidance the Control of Woodland Removal (CWR) and process for managing the implementation of the CWR Policy in respect of forestry removal on development sites. The principle aims of the CWR Policy are to provide a strategic framework for appropriate woodland removal and to support climate change mitigation and adaptation. The CWR Policy is built on the following principles:

- A strong presumption in favour of protecting Scotland's woodland resource;
- Woodland removal should be allowed only where significant and clearly defined additional public benefit can be demonstrated. A proposal for compensatory planting (CP) may add additional public benefit;
- Approval for woodland removal should be conditional on the undertaking of actions to ensure full delivery of the defined additional public benefits;
- Planning conditions and agreements are used to mitigate the environmental impacts arising from development and SF would also encourage their application to development related woodland removal; and
- Where felling is permitted but woodland removal is not supported, conditions conducive to woodland regeneration should be maintained through adherence to good forestry practices as defined in the UK Forestry Standard (revised 2017) (UKFS).

4. The SF guidance to staff on implementing the CWR states that:

> *"Options to avoid or reduce the need for Compensation Planting should always be fully considered as part of the decision making process. Compensation Planting should be seen as the final option once all other solutions have been exhausted".*

5. A fundamental policy that has been followed throughout in relation to the location of the proposed development has been to minimise the amount of permanent felling. This would ensure compliance with the CWR.

6. However, the proposed development still involves the permanent removal of woodland for the purposes of conversion to another type of land use. Woodland removal with CP, 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.

7. The proposed development would meet the acceptability criteria for woodland removal as the change of land use with CP would contribute significantly to *"helping Scotland to adapt to climate change"* by providing facilities appropriate for the development of renewable energy projects and significantly reduce net greenhouse gas emissions.

8. The Scottish Government's policy on control of woodland removal (CWR): implementation guidance states the following in relation to overhead powerlines:

> *"Mitigation measures must be fully assessed in the EIA Report and both on-site and off-site compensatory planting (CP) must form part of the assessment. All areas of woodland that need to be removed to directly accommodate the overhead line and associated structures (pylons, access tracks, roads, and ancillary structures) will always be counted toward the net area of CP required".*

11.3 Influence on Design

9. An initial desk study was carried out to gather all available information within the routeing study area (i.e. the area within the red line boundary as shown in Figure 1.1 of the Scoping Report). The study included capturing any relevant information on SF approved forestry management plans including any planting and felling plans and a search to see whether any of the woodlands were plantations on ancient woodland sites (PAWS) or Ancient Semi-Natural Woodlands (ASNW). The main sources of information were:

- The Scottish Forestry Map Viewer;
- Forestry Commission National Forest Inventory Woodlands;
- NatureScot Ancient Woodland Inventory;
- Aerial photographs; and
- Ordnance Survey maps.

10. The original study area included very large areas of commercial plantations, plantations on ancient woodland sites and two small ASNW, one of which was a Sites of Special Scientific Interest (SSSI).

11. The proposed route avoids all the ancient woodlands and does not go directly through any of the major woodland blocks. It does however run close to the edge of a commercial woodland, and some felling would be necessary to provide the clear swathe needed for the OHL. It would also cross some small areas of scrub and in the most northerly section there are areas of young broadleaved planting that would need to be felled.

12. As detailed in **Chapter 4: Development Description**, during the pre-construction design process, there is the potential to reduce or avoid effects on forestry through the refinement of the locations of poles and related infrastructure utilising the 50 m Infrastructure Location Allowance (ILA) (or micrositing allowance). The implementation of the ILA would be controlled through the proposed detailed Construction Environmental Management Plan (CEMP) and in consultation with the forest manager/landowner.

11.4 Embedded Mitigation

13. The following mitigation measures would be implemented as a matter of course:

- Timber extraction would be carried out making optimum use of existing tracks wherever possible; and
- Site refuelling and maintenance areas would be sited outside the watercourse buffer areas and best practice measures would be taken to mitigate risks of spillages.

11.5 Scope of the Assessment

11.5.1 Consultation

14. In undertaking this assessment, we have fully considered the formal scoping consultation responses we have received.

15. There have only been responses in relation to forestry from SF and the Scottish Environmental Protection Agency (SEPA).

Consultee and method of consultation	Comments	Response
Scottish Forestry Meetings (18 June 2019 and 15 January 2020)	Scottish Forestry has very much welcomed the ongoing discussions with SPEN and RSK on the Kennoxhead to Coalburn routing study and potential route options, since June 2019. We were pleased to note that the final route proposed is the same as that discussed at our most recent meeting and avoids as much woodland loss as possible. With this in mind Scottish Forestry have no further comments to add at this time	Noted.
Scottish Forestry Scoping Response (20 August 2020)	Having reviewed the proposed route and the scoping report, Scottish Forestry are pleased to note that the route remains as previously discussed in June 2019. However we also note that the route has not been finalised and could still be subject to change. It is also noted within paragraph 9.4.1 Compensatory Planting, that the compensatory planting requirements of the proposed route is currently 3.45 ha and if subject to change due to routing alongside Carmacoup Forest, that this figure might reduce to 6 ha. Whilst we appreciate that this figure has been calculated, Scottish Forestry would wish to see a firm commitment within the EIA to provide a Compensatory Planting Plan, subject to approval by SF, that details the location, final area, ground preparation, species choice, protection measures and long term management of the planting, should planning approval be granted and before any development work begins	Following subsequent design iteration the felling requirement has changed. The felling requirement based upon the proposed development would be 3.5 ha. SPEN anticipates that compensatory planting would be secured through a condition attached to any section 37 consent granted and SPEN would consult Scottish Forestry regarding the compensatory planting.
SEPA	The submission must include: 1. A map demarcating the areas to be subject to different felling techniques. 2. Photography of general timber condition in each of these areas. 3. A table of approximate volumes of timber which will be removed from site and volumes, sizes of chips or brash and depths that will be re-used onsite. 4. A plan showing how and where any timber residues will be re-used for ecological benefit within that area, supported by a Habitat Management Plan.	1. The areas of woodland to be felled are shown on **Figure 11.1**. The trees would be clear felled with chainsaws and extracted with a forwarder and this would be the only felling technique employed. 2. Photos of the conifer plantation to be felled is included below. All the timber within the plantations would be comprised of small softwood sawlogs and poles, which would be sold and removed from site 3. The volumes of timber to be removed from the two forestry plantations are summarised in **Table 11.5.** 4. It is not planned to chip any of the softwood lop and top, which will be left on the forest floor as normal with most forestry felling operations However, the disposal of all branchwood from the broadleaved trees will be discussed with the relevant landowners and if they have a requirement for woodchips e.g., as a mulch of for path surfaces, then the branchwood will be chipped. The size of the woodchips will depend on the use to which it is put. There is no specific requirement throughout the development site to use timber residues for ecological purposes. Discussions will however be held with the relevant landowners to see whether they would be willing to use some of the residues from the broadleaved trees to create log piles for deadwood. This would benefit many invertebrate species including flies and moths, bees and wasps, centipedes, woodlice, springtails, mites and other micro-organisms involved in the final decay of wood.

Table 11.1: Pre-application consultation

11.5.2 Effects Scoped In

16. On the basis of the desk based and field survey work undertaken, in combination with the professional judgement of the EIA team, experience from other relevant projects and policy guidance or standards, and feedback received from consultees, the potential effect of the long term loss of forestry resource as a result of the felling of the required ‘wayleave corridor’ has been assessed.

11.5.3 Effects Scoped Out

17. On the basis of the desk based and field survey work undertaken, in combination with the professional judgement of the EIA team, experience from other relevant projects and policy guidance or standards, and feedback received from consultees, a number of potential effects have been ‘scoped out’ of the detailed assessment:

- Effects on shelter. This relates largely to agricultural and horticultural areas, where shelterbelts are used to protect agricultural and horticultural crops. There are no such crops within the vicinity of the proposed OHL and there are no shelterbelts that will be affected;
- Effects relating to forest clearance required for temporary construction works. These impacts would be temporary and affect a relatively small area of forestry/woodland so are considered to be negligible;
- Effects relating to the proposed southern section of underground cable. The proposed southern section of the underground cable to Coalburn Substation has been designed to avoid impacts on forestry by running along existing areas of open ground within the Kennoxhead Wind Farm Extension) site boundary. It is also acknowledged that woodland adjacent to this area has either been removed or is proposed to be removed as part of the wind farm development or the approved forest felling plan. Further details are provided in the Kennoxhead Wind Farm Extension application which was consented by Scottish Ministers in March 2021 and is currently under construction (Nov 2022, Ref: ECU00002038). Therefore, the proposed southern section of underground cable (connection he OHL to Kennoxhead Windfarm substation will not have an impact on forestry; and
- Effects relating to subsequent windthrow to the newly created forest edges. The risk of windthrow resulting from felling for the wayleave has been assessed and it was judged that there would be no additional felling requirement.

11.6 Assessment Methodology

11.6.1 Study Area

18. The Study Area for the proposed route covers all woodlands affected by the proposed route. This covers a swathe width of 30 m either side of the proposed OHL for the wayleave corridor (i.e. a total swathe width of 60 m) and a swathe width of 10 m either side of the northern section of the proposed underground cable for the wayleave corridor (i.e. a total swathe width of 20 m).

11.6.2 Guidance

19. As there are no published criteria, guidance or methodologies in relation to the assessment of effects on forestry. The assessment is therefore based on professional judgement informed by available forestry plans (and supporting information), field work, local management experience and consultation.

20. The assessment has however taken account of statute, guidance and advice where applicable including:

- FC (FLS) Technical paper 16 Designing Forest Edges to improve wind stability (1996);
- FC Forest Yield: A handbook for forest growth and yield tables for British forestry (2016);
- Forestry and Woodland Strategy (FWS) for Glasgow City Region 2020;
- Forest Research, Forest Gales 2.5 model for predicting risk of windthrow;
- Scotland's Forestry Strategy 2019-2029;
- UK Forestry Standard 2017; and
- UK Woodland Assurance Standard.

11.6.3 Assessing Significance

21. The significance of the effects has been approached as follows;

- Identifying the existing conditions;
- Assessing the likely effects on the woodlands;
- Confirming whether the effects are positive or negative;
- Assessing the significance of the effects;
- Where there is likely to be a negative effect, decide how best to reduce or mitigate the effect; and
- Consider the long term effect following the application of any mitigation.

11.6.4 Sensitivity

22. There are no known published guidance on methodologies for assessing the sensitivity of woodland. So the sensitivities have been drawn up based on the views of a highly experienced Chartered Forester. The categories shown in **Table 11.2**Error! Reference source not found. have been used to assess the sensitivity of the effects on the forestry plantations and other woodlands.

Sensitivity	Criteria
High	• Ecologically sensitive e.g. ASNWs • Woodlands subject to other designations e.g. NWSS • Rare or distinctive woodlands • High value from a public recreation point of view • Vulnerable to small changes
Moderate	• Locally important woodlands • Some public recreation • Susceptible to moderate changes
Low	• No local or national importance • Woodlands not used for public recreation • Woodlands where some change is part of normal forestry management
No obvious sensitivity	• Woodlands where major changes (e.g. large scale felling) are part of normal management • Woodlands with little landscape value • No public recreation • No special ecological value

Table 11.2: Woodland sensitivity criteria

23. The sensitivity of forestry management to the effects of the wayleave felling for construction has been determined taking additional account of:

- The productivity of the plantations, based on their yield class;
- Accessibility of the plantations for felling and timber extraction; and
- Size of the woodlands and whether they are managed commercially or not.

24. It should be noted that not all aspects considered within the example conditions are required concurrently to define the sensitivity level, which is assigned based on professional judgement.

11.6.5 Magnitude

25. The following criteria, shown in **Table 11.3** have been used to assess the magnitude of changes from the wayleave clearance.

Magnitude	Criteria
Major	A significant change to the woodland taking into account the size of the woodland and the scale of the clearance
Moderate	A small change to the woodlands taking into account the size of the woodland and the scale of the clearance
Minor	A very little change to the woodland taking into account the scale of the size of the woodland and the scale of the clearance
None	No change

Table 11.3: Magnitude of impact criteria

11.6.6 Significance

26. Professional judgement has been used to identify the significance of the effect based on **Table 11.4** below.

Magnitude	Sensitivity			
	High	Moderate	Low	No Obvious Sensitivity
Major	**Major**	**Major**	Minor	None
Moderate	**Major**	Moderate	Minor	None
Minor	Moderate	Minor	None	None
None	Minor	None	None	None

Table 11.4: Significance matrix

27. Where an effect is classified as Major, this is considered to represent a 'significant effect' in terms of the EIA Regulations. Where an effect is classified as Moderate, this may be considered to represent a 'significant effect' but should always be subject to professional judgement and interpretation, particularly where the sensitivity or impact magnitude levels are not clear or are borderline between categories or the impact is intermittent. It should be noted that significant effects need not be unacceptable or irreversible.

11.7 Existing Conditions

28. A field survey was carried out in June 2019 and an initial report produced which fed into the Scoping Report. The field work included assessments and mensuration on each of the plantations that might be affected and this included obtaining information on species, estimated age of plantations and top height measurements so that an assessment could be made of the yield classes and volume of timber to be felled.

29. The proposed development would impact on the following areas of forestry:

- Broadleaved woodland near Carmacoup Farm between poles 30 and 33;
- Scrub near derelict building at pole 125, conifer plantation to the west of Coalburn comprising Japanese larch with a few Sitka spruce, planted in 1999 (see **Photo 1** below), of variable quality owing to old opencast workings;
- Young amenity planting adjacent to the west of Coalburn Road between poles 149 and 150;
- Naturally regenerated scrub on the old mine working site between poles 151 and 154; and
- Young broadleaved plantation leading to Coalburn Substation between poles 160 and 163.

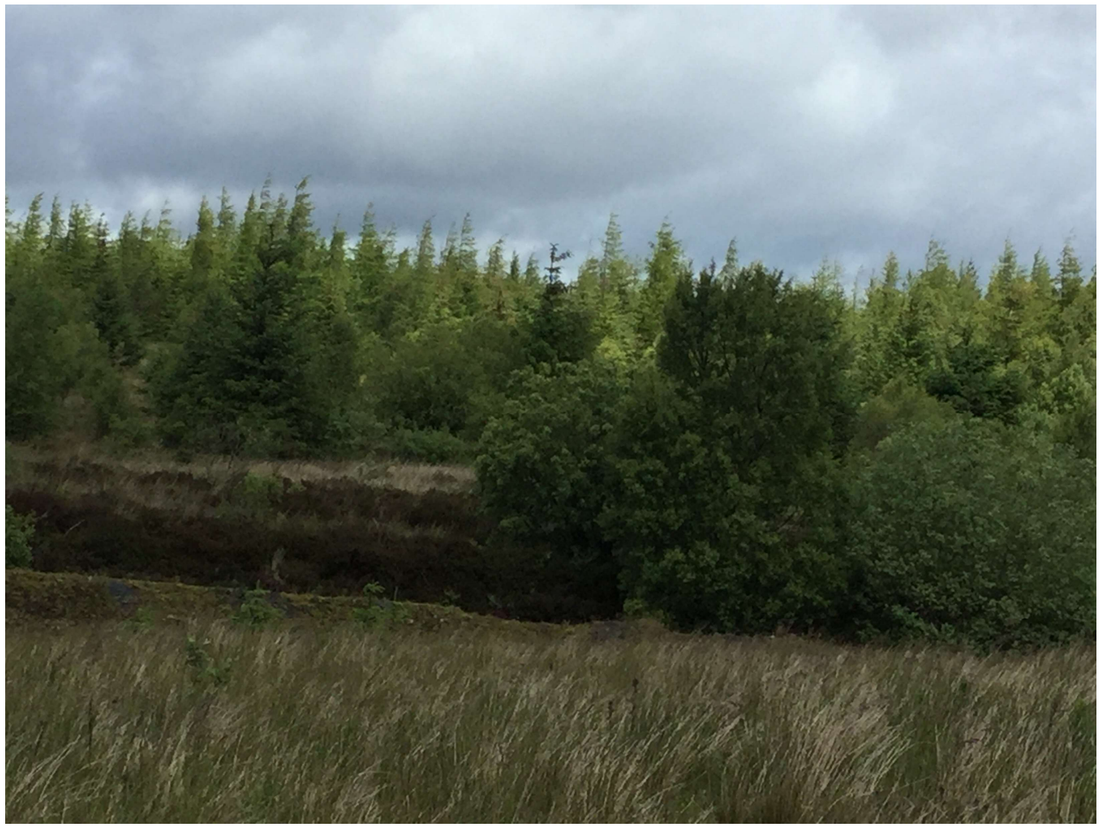

Photo 1: Young conifer plantation to the west of Coalburn, looking west towards pole 128 Potential Impacts. The proposed development would pass between the conifer plantation and the small area of scrub in the foreground.

30. It should be noted that the amenity planting adjacent to the south and west of Coalburn Substation at pole 169 and along the proposed underground cable, which provides screening of the substation, has already been felled by a separate development[1]. Therefore this planting will not be removed by the proposed development and does not form part of the baseline (existing conditions) of this assessment.

11.8 Potential Impacts

11.8.1 Felling Requirement and Timber Production

31. **Table 11.5** shows the permanent felling requirements to maintain the wayleave corridor during construction and operation. These are also shown on **Figure 11.1**.

[1] Further information available at: https://www.spenergynetworks.co.uk/pages/coalburn_substation_extension_project.aspx

Felling Area	Woodland type	Area (ha)
1	Young Sitka spruce	0.168
2	Scrub (Mixed Broadleaves)	0.045
3	Scrub (Mixed Broadleaves)	0.416
4	Scrub	0.327
5	Sitka Spruce and Larch	0.068
6	Sitka Spruce and Larch	0.036
7	Sitka Spruce and Larch	0.090
8	Sitka Spruce and Larch	0.004
9	Sitka Spruce and Larch	0.128
10	Sitka Spruce and Larch	0.081
11	Sitka Spruce and Larch	0.008
12	Sitka Spruce and Larch	0.011
13	Sitka Spruce and Larch	0.033
14	Young Broadleaves	0.131
15	Young Broadleaves	0.160
16	Young Broadleaves	0.120
17	Scrub	0.136
18	Young Broadleaves	0.214
19	Young Broadleaves	0.033
20	Young Broadleaves	0.037
21	Young Broadleaves	0.042
	Total area (hectares)	**3.514**

Table 11.5: Felling areas required for construction and operation of the proposed development

32. The preference for timber harvesting would be whole tree harvesting. However, where ground conditions do not allow for this then the method employed is likely to be based on the use of harvesters which will process every tree to very small top diameters leaving only small volumes of timber on soft areas and brash to support the harvesting equipment. All works will only be undertaken after assessment of the site's capacity to sustain such a process and with due consideration to operator safety.

33. The only significant amount of timber that would be felled is the softwood timber from the plantation to the West of Coalburn. None of the trees in the young Sitka spruce broadleaved plantation areas are large enough to produce any timber. There might be a small amount of hardwood timber from the scrub areas and a few individual broadleaved trees in the northern section. However, most of the hardwood timber would be small and of poor quality.

34. **Table 11.6** shows the timber volume calculation for the plantation to the west of Coalburn.

Location	Species	Age	Yield Class	Ha	M^3/ha	M^3 total
Plantation to the West of Coalburn	Japanese larch/Sitka spruce	23 years	14	0.4588	180	82.58

Table 11.6: Timber volume assessment for plantation to the west of Coalburn

11.8.1.1 Waste Materials

35. Given the negligible quantities of forestry waste likely to be produced from the proposed felling, these impacts have not been considered. However, all waste materials will be managed in accordance with SEPA's guidance notes – Land Use Planning System, SEPA Guidance Note LUPS-GU27 – Use of Trees Cleared to Facilitate Development on Afforested Land and the SEPA (2017) Guidance WST-G-027 version 3 Management of Forestry Waste

11.9 Assessment of Effects

36. This section assesses the effect of the long term loss of forestry resource as a result of the felling of the required 'wayleave corridor'.

37. The total area of felling within the wayleave corridor is 3.5 ha. There would also be approximately 82.56 m^3 of timber prematurely cleared from the commercial plantation to the west of Coalburn which will result in a loss of Net Present Value (NPV) for the landowner in perpetuity. The likely magnitude of impact is **Minor** given the relatively small area of permanent woodland loss taking in to account the scale of the size of the woodland resource.

38. The forestry that would be lost comprises woodland where change is a normal part of forestry management, low quality scrub that does not provide public recreation and is not of local or national importance, and amenity planting and that is locally important and susceptible to moderate change. The sensitivity of the forestry resources is **Moderate**.

39. The likely significance of the effect on the local forestry resource is considered to be **Minor**, which is **not significant** in EIA terms.

11.10 Mitigation

40. As the proposed development involves the permanent removal of woodland for the purposes of conversion to another type of land use, compensatory planting would be required in line with CWR.

41. The maximum area of land that would need to be planted (the SF default position) is an area equivalent to the area being felled and left unplanted, which in this case is estimated to be 3.514 ha. Therefore there will be no net loss of forestry resource.

11.11 Residual Effects

42. With compensatory planting there would be no net loss of forestry resource. This would ensure that there would be no overall loss of woodland related public benefit. Therefore, the magnitude of impact would be reduced to **None** and as such the overall significance of effect reduced to **None** (**not significant**).

11.12 Summary of Significant Effects

43. **Table 11.6** summarises the predicted forestry effects of the proposed development.

Predicted effect	Significance	Mitigation	Significance of residual effect
Long-term loss of local forest resource	Minor (not significant)	Compensatory Planting equivalent to the area being felled and left unplanted	None (not significant)

Table 11.6: Summary of assessment of effects

11.13 References

Forestry and Land Management (Scotland) Act (2018)

Forest Yield: A handbook on forest growth and yield tables for British forestry: T.A.R. Jenkins, E.D. Mackie and E.C. Dick: 2016

Forestry and Woodland Strategy (FWS) for Glasgow City Region 2020: Clydeplan: 2020.

Fourth National Planning Framework: position statement: Scottish Government: 2020

Land Use Planning System SEPA Guidance Note LUPS-GU27 – Use of trees Cleared to Facilitate Development on Afforested Land: Scottish Environment Protection Agency: 2014

National Planning Framework 3: Scottish Government: 2014

Scottish Forestry Strategy 2019-2029: Scottish Government: 2019

Scottish Government's policy on control of woodland removal: implementation guidance: Forestry Commission Scotland: 2019

Scottish Planning Policy (SPP): Scottish Government: 2014

Technical Paper 16: Designing Forest Edges to Improve Wind Stability: B. Gardiner and G. Stacey: Forestry Commission: 1996

The Land Use Strategy for Scotland 2016-2021: Scottish Government: 2016

The Scottish Government's Policy on Control of Woodland Removal: Forestry Commission Scotland: 2009

The UK Forestry Standard (Fourth edition): Forestry Commission: 2017

UKWAS (Fourth Edition): UKWAS: 2018