Scottish & Southern Electricity Networks
TRANSMISSION

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15. SUMMARY OF EFFECTS

15.1 Introduction

15.1.1 The findings of the Environmental Impact Assessment (EIA) for the Proposed Development are presented within the technical assessments contained within the topic chapters that make up Volume 2 of this EIA Report. The significance of these effects has been assessed using criteria defined in the topic chapters. Unless stated otherwise in the technical assessments, the significance of effects has been categorised as **Major**, **Moderate**, **Minor** or **Negligible**, with effects assessed as being of **Major** or **Moderate** considered to be significant effects in the context of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017[1], ('the EIA Regulations').

15.1.2 Additional mitigation measures have been identified to prevent, reduce or remedy potentially significant adverse environmental effects identified, beyond those already taken into account as normal good practice (i.e. embedded mitigation such as the Construction Environment Management Plan (CEMP)). Such measures will be implemented during detailed design, construction and/or operation of the Proposed Development. Each technical chapter of this EIA Report details the measures required to mitigate any identified significant effect, and a summary of these mitigation measures is provided in **Volume 2, Chapter 16: Schedule of Environmental Mitigation**. Any remaining effects following implementation of mitigation measures are known as 'residual effects'.

15.1.3 The purpose of this chapter is to provide a summary of the environmental effects identified within **Volume 2**.

15.2 Summary of Likely Significant Effects

15.2.1 **Table 15-1** summarises the likely significant effects as a result of the Proposed Development. Note, the table only includes receptors where likely significant effects are predicted before the implementation of additional mitigation. For example, the assessment identified that there would be no likely significant effects to traffic and transport receptors during construction or operation of the Proposed Development, therefore this technical topic has not been included in the table.

[1] Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. Available at: https://www.legislation.gov.uk/ssi/2017/102/contents/made [Accessed July 2024].

Table 15-1 Likely Significant Effects

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Forestry			
Construction			
Woodland removal (Semi-natural woodland)	**Moderate Adverse (Significant)**	The Applicant would reduce the felling where possible and seek to retain scrub / understorey layers in areas where existing tree cover does not breach safety clearances and construction activities. Equivalent area of woodland removed to be planted on and off site as per Scottish Government's Control of Woodland Removal Policy.	**Minor Adverse (Not Significant)**
Operation			
Forest Management	**Moderate Adverse (Significant)**	The Applicant has produced a Woodland Report to inform proposed revisions to the relevant Long Term Forestry Plan and facilitate agreement with the landowners.	**Minor Adverse (Not Significant)**
Landscape and visual impacts			
Construction			
Landscape Character: Landscape Character Type (LCT) 20 Undulating Agricultural Heartland	**Moderate Adverse (significant)** at local scale	The majority of landscape and visual mitigation has been embedded into the design, as shown on **Volume 3, Figure 8.7 Landscape and Ecological Mitigation Plan** and described in **Volume 2, Chapter 8: Landscape and Visual, Section 8.7**. This includes measures to be included in the CEMP to be produced by the Principal Contractor. The landscape mitigation commitments are set out in **Volume 2, Chapter 8: Landscape and Visual, Table 8-5 Landscape Mitigation Commitments.**	**Moderate Adverse (significant)** at local scale

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Landscape Character: Cumulative effects with Monquhitter BESS on LCT 20	Very locally **Moderate Adverse (Significant)** but **Minor Adverse (Not Significant)** on LCT 20	No additional mitigation proposed.	Very locally **Moderate Adverse (Significant)** but **Minor Adverse (Not Significant)** on LCT 20
Visual Amenity: Residential receptors at Newton	**Major Adverse (Significant)**	The majority of landscape and visual mitigation has been embedded into the design, as shown on **Volume 3, Figure 8.7 Landscape and Ecological Mitigation Plan** and described in **Volume 2, Chapter 8: Landscape and Visual, Section 8.7**. This includes measures to be included in the CEMP to be produced by the Principal Contractor. The landscape mitigation commitments are set out in **Volume 2, Chapter 8: Landscape and Visual, Table 8-5 Landscape Mitigation Commitments.**	**Major Adverse (Significant)**
Visual Amenity: Residential receptors in Borderside	**Major Adverse (Significant)**		**Major Adverse (Significant)**
Visual Amenity: Residential receptors in Greens	**Major Adverse (Significant)**		**Major Adverse (Significant)**
Visual Amenity: Residential receptors in Parkhill	**Moderate to Major Adverse (Significant)**		**Moderate to Major Adverse (Significant)**
Visual Amenity: Residential receptors in Middletack	**Major Adverse (Significant)**		**Major Adverse (Significant)**
Visual Amenity: Transport receptors on the C130S	**Major Adverse (Significant)**		**Major Adverse (Significant)**
Visual Amenity: Transport receptors on the C1S	**Major Adverse (Significant)**		**Major Adverse (Significant)**
Visual Amenity: Transport receptors on the unclassified road linking the	**Moderate Adverse (Significant)**		**Moderate Adverse (Significant)**

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
C121B and the C1S from Muirtack north			
Visual Amenity: Cumulative effects with Caledonia Offshore Wind Farm connection on receptors within 500 m of the cable route	**Major Adverse (Significant)** very locally to **Minor Adverse (Not Significant)**	No additional mitigation proposed.	**Major Adverse (Significant)** very locally to **Minor Adverse (Not Significant)**
Visual Amenity: Cumulative effects with Monquhitter BESS on a small number of residential receptors in the Burn of Greens valley north of the Proposed Development	**Moderate Adverse (Significant)** and **Major Adverse (Significant)**	No additional mitigation proposed.	**Moderate Adverse (Significant)** and **Major Adverse (Significant)**
Visual Amenity: Cumulative effects with BBNP 400 kV OHL and Greens underground cabe connection on a small number of receptors north and south of the Proposed Development	**Moderate Adverse (Significant)**	No additional mitigation proposed.	**Moderate Adverse (Significant)**
Operation			
Landscape Character: Landscape Character Type (LCT) 20 Undulating Agricultural Heartland	Year 1: **Moderate Adverse (significant)** at local scale	The majority of landscape and visual mitigation has been embedded into the design, as shown on **Volume 3, Figure 8.7 Landscape and Ecological Mitigation Plan** and described in **Volume 2, Chapter 8: Landscape and Visual, Section 8.7.**	Year 1: **Moderate Adverse (significant)** at local scale

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
	Year 15: **Minor Adverse (not significant)** at local scale	The landscape mitigation commitments are set out in **Volume 2, Chapter 8: Landscape and Visual, Table 8-5 Landscape Mitigation Commitments.**	Year 15: **Minor Adverse (not significant)** at local scale
Landscape Character: Cumulative effects with Monquhitter BESS on LCT 20	Very locally **Moderate Adverse (Significant)** but **Minor Adverse (Not Significant)** on LCT 20, reducing over time	No additional mitigation proposed.	Very locally **Moderate Adverse (Significant)** but **Minor Adverse (Not Significant)** on LCT 20, reducing over time
Visual Amenity: Residential receptors at Newton	Year 1: **Major Adverse (Significant)** Year 15: **Major Neutral (Significant)**	The majority of landscape and visual mitigation has been embedded into the design, as shown on **Volume 3, Figure 8.7 Landscape and Ecological Mitigation Plan** and described in **Volume 2, Chapter 8: Landscape and Visual, Section 8.7.** The landscape mitigation commitments are set out in **Volume 2, Chapter 8: Landscape and Visual, Table 8-5 Landscape Mitigation Commitments.**	Year 1: **Major Adverse (Significant)** Year 15: **Major Neutral (Significant)**
Visual Amenity: Residential receptors in Borderside	Year 1: **Major Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)** effect		Year 1: **Major Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)** effect
Visual Amenity: Residential receptors in Greens	Year 1: **Major Adverse (Significant)** Year 15: **Major Neutral (Significant)** for houses and **Major Adverse (Significant)** for the farm		Year 1: **Major Adverse (Significant)** Year 15: **Major Neutral (Significant)** for houses and **Major Adverse (Significant)** for the farm
Visual Amenity: Residential receptors in Parkhill	Year 1: **Moderate to Major Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)** to **Moderate Adverse (Significant)**		Year 1: **Moderate to Major Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)** to **Moderate Adverse (Significant)**
Visual Amenity: Residential receptors in Middletack	Year 1: **Major Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)**		Year 1: **Major Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)**
Visual Amenity:	Year 1: **Major Adverse (Significant)**		Year 1: **Major Adverse (Significant)**

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Transport receptors on the C130S	Year 15: **Moderate Adverse (Significant)**		Year 15: **Moderate Adverse (Significant)**
Visual Amenity: Transport receptors on the C1S	Year 1: **Major Adverse (Significant)** Year 15: mainly **Major Neutral (Significant)** but remains in parts **Major Adverse (Significant)**		Year 1: **Major Adverse (Significant)** Year 15: mainly **Major Neutral (Significant)** but remains in parts **Major Adverse (Significant)**
Visual Amenity: Transport receptors on the unclassified road linking the C121B and the C1S from Muirtack north	Year 1: **Moderate Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)**		Year 1: **Moderate Adverse (Significant)** Year 15: **Minor Adverse (Not Significant)**
Visual Amenity: Cumulative effects with Monquhitter BESS on a small number of residential receptors in the Burn of Greens valley north of the Proposed Development	**Moderate Adverse (Significant)** to **Major Adverse (Significant)** potentially falling to **Moderate Adverse (Significant)** to **Minor Adverse (Not Significant)** over time	No additional mitigation proposed.	**Moderate Adverse (Significant)** to **Major Adverse (Significant)** potentially falling to **Moderate Adverse (Significant)** to **Minor Adverse (Not Significant)** over time
Visual Amenity: Cumulative effects with BBNP 400 kV OHL on a small number of receptors north and south of the Proposed Development	**Moderate Adverse (Significant)** to **Major Adverse (Significant)**	No additional mitigation proposed.	**Moderate Adverse (Significant)** to **Major Adverse (Significant)**
Ecology, Nature Conservation and Ornithology			

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Construction			
Barn owl	**Major Adverse (Significant)** at a **Local** scale: • loss of roost sites (**Moderate Adverse, Significant**); and • killing or injury (**Major Adverse, Significant**).	**Mitigation** Barn Owl Protection Plan – to be produced by the Principal Contractor and agreed in advance of construction commencing, with Aberdeenshire Council, in consultation with NatureScot. To include the following: • A pre-demolition survey to be undertaken, comprising an internal inspection of buildings by the ECoW. If buildings cannot be accessed, then Vantage Point surveys overlooking the buildings during the dusk period will be undertaken to record evidence of barn owl leaving / entering the buildings. These surveys should be undertaken the day, or night, immediately prior to the onset of demolition. • Non-breeding barn owl may be disturbed from their roosting place if present, providing they are not harmed. This should be actioned on the day of demolition, so any barn owls exit the building. If unsafe to enter a building, a slow, methodical demolition process, with pauses in work should be undertaken, which is supervised and directed by an ECoW. • ECoW to remain alert throughout construction programme to the possibility of barn owl using partially constructed substation buildings as roost sites. If any temporary roosting did occur the ECoW will monitor and advise on a suitable course of action. **Compensation** Provision of a minimum of two barn owl nest boxes a minimum of 200 m from construction works. Barn owl boxes will be inspected annually during the construction programme.	Following implementation of mitigation: **Moderate Adverse (significant)** Following implementation of compensation: **Not Significant**

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Fish	**Moderate Adverse (Significant)** at a **District** scale: • habitat fragmentation (**Moderate Adverse, Significant**); and • mortality and injury (**Moderate Adverse, Significant**).	See **Volume 2, Chapter 9: Ecology, Nature Conservation and Ornithology, Section 9.6** for full details on additional mitigation measures. These are summarised as follows: • avoidance, where possible, of removal of suitable salmonid habitat, bankside vegetation and trees; • sensitive timings of works; • sensitive lighting/noise; • sediment management; • licensing; • isolation of in-channel works during outfall construction to allow free passage of fish, and fish rescue if required; • construction of any culverts in accordance with the Institute of Fisheries Management's (IFM) Fish Pass Manual[2]; and • monitoring using electrofishing survey.	**Minor Adverse (Not Significant)**
Bats	**Major Adverse (Significant)** at a **District** scale: • loss of roost resources (**Major Adverse, Significant**).	**Mitigation** See **Volume 2, Chapter 9: Ecology, Nature Conservation and Ornithology, Section 9.6** for full details on additional mitigation measures. These are summarised as follows: • avoidance, where possible, of removal of trees, scrub and hedgerows; • sensitive timings of works; • sensitive lighting;	Following implementation of mitigation: **Moderate Adverse (Significant)** Following implementation of compensation: **Not Significant**

[2] Armstrong, G.S., Aprahamian, M.W., Fewings, G.A.,Gough, P.J., Reader, N.A. and Varallo, P.V. (2010). Environment Agency Fish Pass Manual: Guidance Notes On The Legislation, Selection and Approval Of Fish Passes In England And Wales. Environment Agency, Bristol.

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
		• licensing; and • pre- and during works surveys. Compensation • fix artificial bat boxes on trees retained on the periphery of the Site; • install bat rocket boxes within the Site; and • translocate reclaimed PRFs from trees to be felled onto existing trees on the periphery of the Site. A single inspection of each bat box, two to five years after removal of the original roost feature, will be undertaken.	
Operation			
Otter	**Moderate Beneficial**: a beneficial effect would only be ecologically significant if it causes restoration of desired conservation status for the local otter population	None required.	**Moderate Beneficial (potentially significant)**
Water Vole	**Moderate Beneficial**: a beneficial effect would only be ecologically significant if it causes restoration of desired conservation status for the local water vole population	None required.	**Moderate Beneficial (potentially significant)**
Bats	**Moderate Beneficial**: a beneficial effect would only be ecologically significant if it causes restoration of desired conservation status for the local bat population	None required.	**Moderate Beneficial (potentially significant)**
Cultural Heritage			

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Construction			
The non-designated heritage asset Mains of Greens Farmstead (HA5), located within the Site.	**Moderate Adverse (Significant)**	The non-designated heritage asset of Mains of Greens Farmstead (HA5) would be demolished prior to the construction of the Proposed Development. A programme of Historic Building Recording works will be undertaken prior to any construction works in order to record the buildings in their current state. After archaeological evaluation and where heritage assets are anticipated to be completely removed, a programme of archaeological excavation may be required.	**Slight Adverse (Not Significant)**
Hydrology, Hydrogeology, Geology and Soils			
Construction			
Private Water Supply (PWS) Borderside (ID: 1)	**Moderate Adverse (Significant)**	See **Volume 2, Chapter 12: Hydrology, Hydrogeology, Geology and Soils, Section 12.10** for full details on additional mitigation measures. These are summarised as follows: • the implementation of good practice measures provides good quality and quantity monitoring results on the PWS abstraction; or • the implementation of contingency measures in the event of an unforeseen impact on the existing PWS arising from the construction of the Proposed Development; or • the implementation of a suitable alternative supply.	**Negligible**
PWS Mains of Greens Bungalow (ID: 6)	**Moderate Adverse (Significant)**	None required, property will be purchased by SSEN Transmission and demolished so no supply will be required.	**Moderate Adverse (Significant)** on the current supply, however there will no longer be a requirement for this supply
PWS Oldtown (ID: 12) and PWS Newton of Northburn (ID: 13)	**Major Adverse (Significant)**	See **Volume 2, Chapter 12: Hydrology, Hydrogeology, Geology and Soils, Section 12.10** for full details on additional mitigation measures. These are summarised as follows:	**Negligible**

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
		• the implementation of good practice measures provides good quality and quantity monitoring results on the PWS abstraction; or • the implementation of contingency measures in the event of an unforeseen impact on the existing PWS arising from the construction of the Proposed Development; or • the implementation of a suitable alternative supply.	
PWS Mains of Greens (ID: 14)	**Moderate Adverse (Significant)**	None required, property will be purchased by SSEN Transmission and demolished so no supply will be required.	**Moderate Adverse (Significant)** on the current supply, however there will no longer be a requirement for this supply
PWS Unregistered Property (ID:18)	**Major Adverse (Significant)**	None required, property will be purchased by SSEN Transmission and demolished so no supply will be required.	**Major Adverse (Significant)** on the current supply, however there will no longer be a requirement for this supply
Noise and Vibration			
Construction			
Noise Sensitive Receptors (NSR) (impact from construction noise)	**Moderate Adverse (Significant)**	Noise barriers: Portable noise barriers are to be placed strategically to mitigate noise from mobile plant (rock breakers, track excavator and bulldozer). The Principal Contractor will be responsible for planning construction activities and movement of the portable barriers to provide effective noise screening. Construction timings: The Principal Contractor will be responsible for reducing the "on-time" of any mobile plant. They will also be responsible for organising the programme so that the noisiest activities are only carried out close to noise sensitive receptors (NSR) NSR1 and NSR3 during the weekday period and not during the weekends.	**Minor Adverse (Not Significant)**

Topic / Receptors	Effect Significance (Pre-Additional Mitigation)	Summary of Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Operation			
Noise Sensitive Receptors (NSR) (impact from operation noise)	**Major Adverse (Significant)**	A Noise Mitigation Scheme will be based on a robust acoustic design process and will identify the most cost-effective measures including for example localised noise barriers, acoustic enclosures, cladding with enhanced acoustic specification on buildings containing noisy plant, acoustically attenuated louvres, or a combination of these measures, where required. The scheme would be prepared during detailed design in close liaison with the Council's environmental health team, to ensure their requirements are fully considered.	**Minor Adverse (Not Significant)**