Scottish & Southern Electricity Networks

Fanellan Hub 400 kV Substation and Converter Station

Environmental Impact Assessment Report

Volume 2 | EIA Report

Chapter 18 – Summary of Effects

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Scottish & Southern Electricity Networks
TRANSMISSION

CONTENTS

18. SUMMARY OF EFFECTS

18.1 Introduction

18.1.1 The findings of the environmental impact assessment (EIA) for the Proposed Development are presented within the technical assessments contained within 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[206] ('the EIA Regulations').

18.1.2 Mitigation measures have been identified to prevent, reduce or remedy any potentially significant adverse environmental effects identified where practicable, beyond that already taken into account as normal good practice (i.e. embedded mitigation) (e.g. 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 recommended to mitigate any identified significant effect, and a summary of the recommended mitigation measures is provided in **Volume 2, Chapter 19 Schedule of Environmental Mitigation**. Any remaining effects following implementation of available mitigation measures are known as 'residual effects'.

18.1.3 The purpose of this chapter is to provide a summary of the predicted likely significant environmental effects identified within **Volume 2**.

18.2 Summary of Likely Significant Effects

18.2.1 **Table 16-1** summarises the predicted likely significant effects as a result of the Proposed Development. Note, the table only includes receptors where likely **significant** effects are predicted pre-additional mitigation, for example, the assessment identified that there would be no likely significant effects to traffic and transport receptors, ornithology, water resources, socio-economics or cultural heritage assets during construction or operation of the Proposed Development, so therefore these technical topics have not been included in the table.

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

Table 18-1 Likely Significant Effects

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
Landscape and Visual Impacts			
Construction – Landscape Character			
LCT 227: Farmed Strath – Inverness	A landscape of high sensitivity giving rise to a temporary localised **Moderate Adverse landscape** effect (significant).	No additional mitigation to that embedded in design is proposed.	A landscape of high sensitivity giving rise to a temporary localised **Moderate Adverse landscape** effect (significant).
LCT 229: Enclosed Farmland	A landscape of high sensitivity giving rise to a temporary localised **Major Adverse landscape** effect (significant).	No additional mitigation to that embedded in design is proposed.	A landscape of high sensitivity giving rise to a temporary localised **Major Adverse landscape** effect (significant).
Construction – Visual Receptors			
Residential receptors	Fanellan Cottages and Fanellan Croft – **Major Adverse (significant)** temporary effect. Butlers Cottage, Broomhill & Hill View - **Major Adverse (significant)** temporary effect. Bredaig, Sunnybrae, Fanellan & Hughton - **Major Adverse (significant)** temporary effect Culburnie - **Major Adverse (significant)** temporary effect Kilmorack - **Moderate Adverse (significant)** temporary effect	No additional mitigation to that embedded in design is proposed.	**Moderate to Major Adverse (significant)** temporary effect

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
	Crerag (Creraig) - **Major Adverse (significant)** temporary effect Residents of Kiltarlity and Tomnacross - **Moderate Adverse (significant)** temporary effect		
Recreational and visitor receptors	Core paths IN20.06; IN20.08; IN20.10; IN20.07; and IN20.09 - **Moderate Adverse (significant)** temporary effect		Core paths IN20.06; IN20.08; IN20.10; IN20.07; and IN20.09 - **Moderate Adverse (significant)** temporary effect
Minor road users	C1106 (Fanellan Road) to the A831 via Black Bridge - **Moderate to Major Adverse (significant)** temporary effect		**Moderate to Major Adverse (significant)** temporary effect
Operation – Landscape Character			
LCT 229: Enclosed Farmland	Year 0 – a medium degree of change is anticipated in a localised area of LCT 229. With a sensitivity of high and a medium magnitude of change there would be a permanent **Moderate Adverse (significant)** effect. Year 15 – a medium degree of change is anticipated in a localised area of LCT 229. With a low to medium magnitude of change there would be a permanent **Minor to Moderate adverse (significant)** effect.	No additional mitigation to that embedded in design is proposed.	Year 0 – **Moderate adverse (significant)** to a localised area of the LCT. Year 15 – **Minor to moderate adverse** (significant) to a localised area of the LCT.
Operation – Visual Receptors			
Residential receptors	Fanellan Cottages and Fanellan Croft: Year 0 – **Major Adverse (significant)**, Year 15 – **Major Adverse (significant)**	No additional mitigation to that embedded in design is proposed..	Fanellan Cottages and Fanellan Croft: Year 0 – **Major Adverse (significant)**, Year 15 – **Major Adverse (significant)**

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
	Butlers Cottage, Broomhill & Hill View: Year 0 – **Moderate Adverse (significant)** Year 15 - **Moderate Adverse (significant)** Bredaig, Sunnybrae, Fanellan & Hughton: Year 0 – **Moderate Adverse (significant)** Culburnie: Year 0 – **Moderate Adverse (significant)** Year 15 – **(not significant)** Residents of Crerag (Creraig) Year 0 – **Moderate Adverse (significant)** Year 15 – **(not significant)**		Butlers Cottage, Broomhill & Hill View: Year 0 – **Moderate Adverse (significant)** Year 15 - **Moderate Adverse (significant)** Bredaig, Sunnybrae, Fanellan & Hughton: Year 0 – **Moderate Adverse (significant)** Culburnie: Year 0 – **Moderate Adverse (significant)** Residents of Crerag Year 0 – **Moderate Adverse (significant)**
Minor road users	C1106 (Fanellan Road) to the A831 via Black Bridge Year 0 – **Moderate Adverse to Major Adverse (significant)** Year 15 – **(not significant) to Moderate Adverse**		C1106 (Fanellan Road) to the A831 via Black Bridge Year 0 – **Moderate Adverse to Major Adverse (significant)** Year 15 – **(not significant) to Moderate Adverse**
Cumulative – Landscape Character			
The Spittal-Beauly 400kV OHL adjacent to the Proposed Development	Construction: increase in magnitude and a temporary localised **Major Adverse (significant)** cumulative effect on LCT 227 and **Moderate Adverse (significant)** effect on LCT 229. Operational: Locally the cumulative effect would remain **Major Adverse**	No additional mitigation is proposed.	Construction: Landscape Character: **Major Adverse** (significant) effect on LCT 227; **Moderate Adverse** (significant) effect on 229. Operational: Landscape Character: **Major Adverse** (significant) effects

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
	(significant), due to the anticipated permanent vegetation loss within an artificially straight corridor through Ruttle Wood.		
The Beauly-Peterhead 400kV OHL adjacent to the Proposed Development	Operational: locally the effect would be more intense. Locally the cumulative effect would be **Moderate Adverse** (significant).	No additional mitigation is proposed.	Operational: Locally the cumulative effect would be **Moderate Adverse** (significant).
The Western Isles Link HVDC underground cable (tying into the Proposed Development)	Construction: temporary local **Moderate adverse (significant**) cumulative landscape effect on LCT 229.9.	No additional mitigation is proposed.	Construction: Temporary **Moderate Adverse** (significant) on LCT 229.
Kilmorack Power Station – replacement of existing Kilmorack Substation	Construction: construction works (access roads and construction of the power station) are anticipated to have a temporary adverse effect locally on LCT 229 in and around Black Bridge. This would intensify construction activities within a localised area of the LCT extending the influence of construction activity on the landscape, giving rise to a temporary local **Moderate Adverse** (**significant)** cumulative landscape effect on LCT 229.	No additional mitigation is proposed.	Construction: Locally **Moderate Adverse (significant)** on LCT 229.
Cumulative – Visual Amenity			
Kilmorack Power Station – replacement of existing Kilmorack Substation	Construction: a temporary **Moderate adverse cumulative effect**	No additional mitigation is proposed.	Construction: Temporary **Moderate Adverse** (significant)

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
The Proposed Spittal-Beauly 400kV OHL adjacent to the Proposed Development	Construction: a temporary **Moderate to Major Adverse** (**significant**) cumulative visual effect. Operational: **Moderate to Major Adverse (significant)** visual effects.	No additional mitigation is proposed.	Construction: **Moderate** to **Major Adverse** (significant) effects. Operational: **Moderate** to **Major Adverse** (significant) effects.
The Beauly-Peterhead 400kV OHL adjacent to the Proposed Development	Construction: temporary **Moderate Adverse (significant)** cumulative visual effect. Operational: **Moderate to Major Adverse** (**significant**) visual effects.	No additional mitigation is proposed.	Construction: **Moderate Adverse** (significant) effects. Operational: **Moderate to Major Adverse** (significant).
The Western Isles Link HVDC underground cable (tying into the Proposed Development)	Construction: a temporary **Moderate to Major adverse (significant)** cumulative effect.	No additional mitigation is proposed.	Construction: Temporary **Moderate to Major Adverse** (significant) effects
Black Bridge	Construction: temporary **Moderate adverse (significant)** cumulative effect, whilst those further from one or the other development would experience lesser effects	No additional mitigation is proposed.	Construction: Temporary **Moderate Adverse** (significant) effects.
Ecology and Nature Conservation			
Construction			
Bats	Works affecting roosts/ roosting bats within the Site – **Major Adverse (significant)**. Overall, the combined effects on bats using the Site and surrounding area would be **significant** at a Local scale.	See **Volume 2, Chapter 9, paragraph 9.5.23 – 9.5.27** for full details on additional mitigation measure. These include: • Licensed bat surveyor to oversee all building demolition and tree felling;	CMitigation measures have been identified to reduce the residual effects to **Not Significant** on the bat populations at a Local scale.

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
		• monitoring surveys of compensatory roost features; • sensitive timings of works; • sensitive lighting; and • pre- and during works surveys.	
Noise and Vibration			
Construction Noise			
Construction – Static and Quasi-Static Noise	The construction programme requires working from 0700 – 1900 every day, and therefore construction activities have assessed to BS 5228 using the 55 dB limit due to working hours falling outwith Monday to Friday: 08:00 to 19:00 and Saturday: 08:00 to 13:00., Noise levels are predicted to be above the 55 dB criteria at 42 NSRs. Noise at 14 NSRs is predicted to be above 60 dB, indicating **High** impacts. Therefore, prior to the mitigation measures outlined**,** effects are assessed as **Major Adverse (Significant)** When assessed to the daytime 65 dB noise limit, only one (1) NSR exceeds the limit.	See **Volume 2, Chapter 14Sections 14.17, 14.21 and 14.30** for full details on additional mitigation measures but these include implementation of a Construction Noise Management Plan (CNMP) in accordance with BS 5228-1 and attenuation of construction noise at source and transmission path. The principal contractor is required to develop a CNMP when the full construction schedule is known, the primary method of mitigation will be to conduct particularly noisy work during defined daytime hours.	Not significant. The implementation of a robust CNMP, prioritising particularly noisy work (such as crushing in earthworks) during daytime defined hours with a higher 65 dB limit, and careful consideration of the location of crushing activities will help construction noise of the Proposed Development to achieve a **Minor (Not Significant)** impact on nearby NSRs.
Construction - Traffic Noise	Worst-case construction traffic noise is assessed as High impacts at Links 5 for	See **Volume 2, Chapter 14, section 14.17** for full details on additional mitigation measures but these include	As above.

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
	Phase 1, and Links 2 and 5 during Phase 2 which is **Significant**. This will remain significant if the traffic noise continues for: 10 or more days or nights in any 15 consecutive days or nights; and/or a total number of days exceeding 40 in any 6 consecutive months.	implementation of a Construction Noise Management Plan in accordance with BS 5228-1 and attenuation of construction noise at source by: • avoidance of vehicles waiting or queuing, particularly on public highways or in residential areas with their engines running; • scheduling of deliveries to arrive during set hours only (likely to be in line with Monday to Friday 08:00 – 19:00 and Saturday 08:00 – 13:00). Care should be taken to minimise noise while unloading delivery vehicles. Delivery vehicles should follow routes that minimise use of residential roads;	
Operational **Cumulative – Construction Noise**			
Beauly Denny OHL Diversion	Construction noise at 36 NSRs is above the 55 dB Evening and Weekends criteria. The foundations phase is expected to cause a maximum of 71 dB at Fanellan Crofthouse. Therefore, prior to the mitigation measures outlined, effects are assessed as **Major Adverse (Significant)**	See **Volume 2, Chapter 14, Section 14.17** for full details on additional mitigation measures but these include implementation of a Construction Noise Management Plan (CNMP) in accordance with BS 5228-1 and attenuation of construction noise at source and transmission path. The principal contractor is required to develop a CNMP when the full construction schedule is known, the primary method of mitigation will be to	Not significant. The implementation of a robust CNMP, prioritising particularly noisy movements during daytime defined hours, construction traffic noise of the Proposed Development to achieve a **Minor (Not Significant)** impact on nearby NSRs.

Topic / Receptors	Effect Significance (Pre- Additional Mitigation)	Additional Mitigation	Residual Effects and Significance (Post Mitigation)
		conduct particularly noisy work during defined daytime hours.	
Black Bridge Replacement Works	Construction noise at 36 NSRs is above the 55 dB Evening and Weekends criteria. The site establishment phase is expected to cause a maximum of 63 dB at Millcroft. Therefore, prior to the mitigation measures outlined, effects are assessed as **Major Adverse (significant),** and therefore **Significant** due to being at least 5 dB over the 55 dB limit.	As above.	As above.
Arboriculture			
Arboriculture assessment area A	Given the anticipated intensive change within half of the Study Area, a Medium magnitude of impact equating to a **Moderate Adverse (Significant)** effect is anticipated.	See **Volume 2, Chapter 15, paragraph 15.9.1 – 15.9.3** for full details on additional mitigation measures. These include an Arboricultural Method Statement and compensatory planting.	Despite the proposed mitigation, tree loss cannot be avoided from arboriculture risk assessment area A, individual trees and small groups within agricultural land and risk assessment area B, deciduous or mixed woodlands within agricultural land. As such, the residual effects are unchanged and remain as **Moderate significant** effect for arboriculture risk assessment A and **Major significant** effect for arboriculture risk assessment area B.
Arboriculture assessment area B	Given the anticipated noticeable change over a wider area, a Medium magnitude of impact equating to a **Major Adverse (Significant)** effect is anticipated.		