

VOLUME 1: CHAPTER 5 – EIA PROCESS AND METHODOLOGY

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5. EIA PROCESS AND METHODOLOGY

5.1 Introduction

- 5.1.1 Environmental Impact Assessment (EIA) is a process that considers how a proposed development is predicted to change existing environmental conditions and what the consequences of such changes will be. It therefore informs both the project design and the decision-making processes related to the grant of development consents.
- 5.1.2 This Chapter sets out the regulatory context for undertaking an EIA and the assessment methodology applied in the evaluation of effects, approach to mitigation and assessment of the significance of likely environmental effects. The Chapter also outlines the structure of the EIA Report.

5.2 EIA Regulations

- 5.2.1 As discussed in Chapter 1 of this Volume, the EIA Report has been prepared in accordance with the EIA Regulations.
- 5.2.2 This EIA Report contains the information specified in Regulation 5 of, and Schedule 4 to, the EIA Regulations. The approach to the assessment has been informed by current best practice guidance, including the following:
- Scottish Government Planning Advice Note (PAN) 1/2013 (revision 1.0)¹; and
 - Planning Circular 1/2017².
- 5.2.3 An overview of the guidance and methodology adopted for each technical study is provided within the respective technical chapters of this EIA Report. The proposed methodologies for the assessment of likely significant effects for each topic area covered in the technical chapters within **Volume 2** of this EIA Report, and **Volume 6** for the Alternative Alignment, have been the subject of consultation with statutory and non-statutory consultees through the publication of, and consultation on, the “Skye Reinforcement Project Environmental Impact Assessment: Scoping Report”, published in December 2021 (see **Appendix V1-6.2: Scoping Report**).
- 5.2.4 The scope of the EIA Report has been informed by the Scoping Opinion, discussed further **within Volume 1: Chapter 6 – Scope and Consultation** of this EIA Report and associated appendices.

5.3 Baseline

- 5.3.1 To identify the scale of likely significant effects as a result of the Proposed Development, it is necessary to establish the existing baseline environmental conditions.
- 5.3.2 The baseline scenario was established through the following methods, where relevant:
- site visits and surveys;
 - desk-based studies;
 - review of existing information;
 - modelling;
 - review of relevant national and local planning policies;
 - consultation with the relevant statutory consultees and where appropriate, non-statutory consultees; and,
 - identification of sensitive receptors.

¹ Scottish Government (2013, revised 2017) Planning Advice Note 1/2013 (revision 1.0): Environmental Impact Assessment.

² Scottish Government (2017) Planning Circular 1/2017: Environmental Impact Assessment Regulations 2017.

5.4 Assessment of Likely Significant Environmental Effects

5.4.1 For the purposes of this EIA Report the terms used in the assessment of effects are generally defined as follows:

- Temporary – where the effect occurs for a limited period of time and the change for a defined receptor can be reversed;
- Permanent – where the effect represents a long-lasting change for a defined receptor;
- Direct – where the effect is a direct result (or primary effect) of the Proposed Development;
- Indirect – a knock-on effect which occurs within or between environmental components, may include effects on the environment which are not a direct result of the Proposed Development, often occurring away from the proposals or as a result of a complex biological or chemical pathway;
- Secondary – an induced effect arising from the actions or presence of a project, such as changes to the pattern of future land use or improvements to local road networks;
- Cumulative – these effects may arise when more than one development of a similar scale and nature combine to create a potentially greater impact than would result from the Proposed Development alone (see also Part 5.5 of this Chapter);
- Beneficial – an effect beneficial to one or more environmental receptors; and
- Adverse – a detrimental, or adverse, effect on one or more environmental receptors.

5.4.2 Where a more appropriate definition of the above terms is applicable to a technical discipline this is clearly outlined within the technical chapters in **Volume 2** of this EIA Report, and **Volume 6** for the Alternative Alignment.

5.4.3 The result of the assessment is the determination of whether the likely effect of the Proposed Development on the receptors in the study area would be significant or not significant, and, adverse or beneficial. Receptor should be defined as meaning the factors of the natural and built environment, including people and communities, that may be significantly affected by the Proposed Development. Examples include cultural heritage, landscapes, populations, animal and plant species, and the water environment.

5.4.4 Where no published standards exist, the assessments presented in the technical chapters describe the professional judgements (assumptions and value systems) that underpin the attribution of significance. For certain technical topics, such as ecology, widely recognised published significance criteria and associated terminology have been applied and these are presented in the technical chapters and associated appendices where relevant.

5.4.5 The assessment of significance has considered the magnitude of change (from the baseline conditions), the sensitivity of the affected environmental factors / receptors and (in terms of determining residual effects) the extent to which mitigation and enhancement can reduce or reverse adverse effects. In addition, further considerations such as those listed below have been factored into the assessment using professional judgement:

- likelihood of occurrence;
- geographical extent;
- the value of the affected resource;
- the compatibility of the Proposed Development with the provisions of legislation and planning policy; and
- reversibility and duration of the likely effect.

5.4.6 The magnitude (scale) of change for each effect has been identified and predicted as a deviation from the established baseline conditions, for the construction and operational phases of the Proposed Development, and

the dismantling of the existing OHL. The scale generally used high, medium, low, and negligible criteria, as outlined in **Table V1-5.1** below and defined within each of the technical chapters in **Volume 2** of this EIA Report and **Volume 6** for the Alternative Alignment.

- 5.4.7 The sensitivity of the receptor / receiving environment to change has been determined using professional judgement, consideration of existing designations (such as Sites of Special Scientific Interest (SSSIs)) and quantifiable data, where possible. The scale generally used high, medium, low, and negligible criteria, as outlined in **Table V1-5.1** below and defined within each of the technical chapters in **Volume 2** of this EIA Report and **Volume 6** for the Alternative Alignment.
- 5.4.8 Each effect has been assessed taking account of the predicted magnitude of change and the sensitivity of the receptor / receiving environment as shown in **Table V1-5.1** and defined within each of the technical chapters of this EIA Report to determine an overall significance of effect.

Table V1-5.1: Matrix for Determining the Significance of Effects

		Sensitivity of Receptor/Receiving Environment to Change/Effect			
		High	Medium	Low	Negligible
Magnitude of Change/Effect	High	Major	Major	Moderate	Negligible
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

- 5.4.9 Major and moderate effects are considered to be significant in the context of the EIA Regulations. Minor and negligible effects are not considered significant.
- 5.4.10 The characteristics of an effect will vary depending on the duration of the activity causing the effect, the sensitivity of the receptor and the resultant change. It is therefore necessary to assess whether the effect is temporary or permanent; beneficial or adverse; and indirect or direct. Effects that are temporary are usually reversible and generally confined to the construction period.

5.5 Cumulative Effects

5.5.1 In accordance with the EIA Regulations, the assessment has considered 'cumulative effects'. The assessment of cumulative effects is a key part of the EIA process and is concerned with identifying circumstances in which a number of potential and/or predicted effects from separate existing or future development projects could combine to cause a significant effect on a particular receptor. Cumulative effects have been assessed within each technical chapter in **Volume 2** of this EIA Report, and **Volume 6** for the Alternative Alignment.

5.5.2 There are two aspects to cumulative effects, defined as follows:

- in-combination effects: the combined effect of the Proposed Development together with other reasonably foreseeable future developments (taking into consideration effects at the site preparation and earthworks, construction and operational phases); and
- effects interactions: the combined or synergistic effects caused by the combination of a number of effects on a particular receptor (taking into consideration effects at the site preparation and earthworks, construction and operational phases), which may collectively cause a more significant effect than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.

5.5.3 **Table V1-5.2** lists the developments that have broadly been considered with respect to cumulative effects within this EIA Report (see also **Figure V1-5.1: Cumulative Developments**). Such developments include those for which consent has been granted, or future development for which it is reasonable to assume, at the

date that the list of cumulative developments is frozen, that the developer will proceed with an application for consent. The final list of development to be considered in the cumulative effects assessment has been frozen three months prior to publication of the EIA Report to allow sufficient time to compile the EIA Report.

Table V1-5.2: Cumulative Developments

Development Name and Type	Application Status	Sections of Relevance
Edinbane Substation Extension	PAN Submitted ³ . Planning application expected late Autumn 2022.	0, 1
Glen Ullinish Wind Farm	Planning consent granted ⁴ , subject to expansion and re-design ⁵ .	0, 1
Broadford Substation Extension	PAN Submitted ⁶ . Planning application expected late Autumn 2022.	2, 3
Quoich Tee Switching Station Upgrade	Planning application expected early 2023.	5
Coire Glas Pumped Storage Grid Connection	Application expected early 2023.	5
Loch Lundie Substation	Application expected early 2023.	5

5.5.4 The individual topic based technical chapters within **Volume 2** of this EIA Report, and **Volume 6** for the Alternative Alignment, consider the cumulative effects of the Proposed Development with other existing or future committed development that have the potential to result in significant cumulative effects in combination with those resulting from the Proposed Development.

5.6 Approach to Mitigation

5.6.1 Mitigation measures are identified to prevent, reduce or remedy any potentially significant adverse environmental effects identified, beyond that already taken into account as normal good practice (i.e. embedded mitigation for example, the Construction Environment Management Plan (CEMP)). Such measures would 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 identified likely significant effects, and a summary of the recommended mitigation measures is provided in **Appendix V1-3.6: Schedule of Mitigation Measures**.

5.6.2 Any remaining predicted effects after taking into account available mitigation measures are known as 'residual effects'. This assessment takes into account the mitigation as specified in the EIA Report to identify the residual effects, based on the assumption that the identified mitigation is implemented. The residual predicted effects are discussed for each potential effect that has not been scoped out of the assessment and a significance level identified.

5.7 EIA Quality

5.7.1 In accordance with Regulation 5(5) of the EIA Regulations, by appointing ASH design+assessment Ltd. (ASH) to coordinate the EIA Report for the Proposed Development, SSEN Transmission has ensured that the EIA

³ THC Application Reference:22/03176/PAN

⁴ THC Application Reference: 20/01129/S42

⁵ ECU Scoping Reference: 22/01468/SCOP

⁶ THC Application Reference: 22/03292/PAN

Report has been prepared by competent experts. The EIA Report has been compiled and approved by professional EIA practitioners at ASH, holding relevant undergraduate and post-graduate degrees, and membership of the Institute of Environmental Management and Assessment (IEMA). The EIA Report meets the requirements of the IEMA EIA Quality Mark scheme. This is a voluntary scheme operated by IEMA that allows organisations to make a commitment to excellence in EIA and to have this commitment independently reviewed on an annual basis. In addition, SSEN Transmission and ASH can confirm that each of the topic based impact assessment chapters has been prepared by competent experts, with the details being provided in the chapters of the relevant qualifications, any professional memberships of the authors and any applicable code of practice followed in their assessment work. The following summary is provided of the specialist consultants appointed by SSEN Transmission for this EIA Report (see also **Appendix V1-5.1** for further EIA Team details):

- EIA Co-ordination – ASH design and assessment Ltd.;
- Landscape and Visual – ASH design and assessment Ltd.;
- Ecology – MacArthur Green;
- Ornithology – Natural Research Projects Limited;
- Hydrology and Hydrogeology – SLR Consulting Ltd.;
- Geology and Soils – SLR Consulting Ltd.;
- Cultural Heritage – CFA Archaeology;
- Traffic and Transport – Pell Frischmann;
- Socio-Economics and Tourism – MKA Economics;
- Forestry – CKD Galbraiths;
- Noise (Operational) – Wood Group plc; and
- Planning – David Bell Planning Associates.

5.8 Structure of the EIA Report

5.8.1 As previously stated in paragraph 1.6.1 of **Volume 1, Chapter 1: Introduction and Background**, given the length of the route for the Proposed Development, for the purposes of this EIA Report the route for the new 132 kV transmission connection has been split into seven geographically defined 'Sections' to describe more easily the Proposed Development and the baseline environmental factors. These 'Sections' are broadly defined as follows:

- Section 0 – Ardmore to Edinbane;
- Section 1 – Edinbane to North of Sligachan;
- Section 2 – North of Sligachan to Broadford;
- Section 3 – Broadford to Kyle Rhea;
- Section 4 – Kyle Rhea to Loch Cuaich;
- Section 5 – Loch Cuaich to Invergarry; and
- Section 6 – Invergarry to Fort Augustus.

5.8.2 An overview of the Proposed Development including the sections referred to above is shown on **Figures V1-1.1a to 1.1.c: Overview of the Proposed Development**. This figure also presents an Alternative Alignment within Section 3 of the project, which is assessed within **Volume 6** of this EIA Report (see paragraph 5.8.10).

5.8.3 This EIA Report contains the environmental information required by the EIA Regulations and comprises a number of volumes as detailed below:

- Volume 1: Main Report;
- Volume 2: Technical topic based reports as outlined in paragraph 5.8.6 below;
- Volume 3: Figures;

- Volume 4a: Visualisations to NatureScot guidelines⁷;
- Volume 4b: Visualisations to The Highland Council guidelines⁸;
- Volume 5: Appendices to support each of the Chapters in the EIA Report where required;
- Volume 6: EIA of Alternative Alignment; and
- Non-Technical Summary.

5.8.4 Volume 1 of the EIA Report (this document) contains the following chapters:

- 1: Introduction and Background;
- 2: Project Need and Strategy;
- 3: Project Description;
- 4: The Routeing Process and Alternatives;
- 5: EIA Process and Methodology;
- 6: Scope and Consultation;
- 7: Planning and Energy Policy; and
- 8: Summary of Effects.

5.8.5 **Volume 2** comprises a series of technical topic based reports that each include an assessment of the likely significant effects of the Proposed Development (comprising the Proposed Alignment) on the particular receptors of relevance to each of the topic based assessments, a description of the proposed mitigation measures relevant to those assessments, and, confirmation of the predicted residual effects. The consideration of cumulative effects, and those effects that may cross 'Section' boundaries' is also discussed where relevant in each specialist topic within **Volume 2**. **Volume 2: Chapter 2 – Section by Section Overview** provides an overview of each Section, together with a description of the elements of the Proposed Development, ancillary development and associated development located within each of the geographical Sections.

5.8.6 Volume 2 of the EIA Report contains the following chapters:

- 1: Introduction
- 2: Section by Section Overview
- 3: Landscape and Visual
- 4: Ecology
- 5: Ornithology
- 6: Water Environment
- 7: Geology and Soils Environment
- 8: Cultural Heritage
- 9: Forestry
- 10: Transport
- 11: Socio-Economic, Recreation and Tourism

5.8.7 **Volume 3** contains supporting figures referred to in **Volumes 1, 2 and 6** of the EIA Report. Figures associated with **Volume 1** include the prefix '**V1**' whereas figures associated with **Volume 2** include the prefix '**V2**' and figures associated with **Volume 6** include the prefix '**V6**'.

5.8.8 **Volume 4 (a and b)** comprises photomontage visualisations of the Proposed Development from a series of viewpoints throughout the route that have been agreed with The Highland Council and NatureScot in

⁷ Scottish Natural Heritage (SNH), (2017), Visual Representation of Wind Farms (Version 2.2) (SNH, 2017)

⁸ The Highland Council (THC), (2016), Visualisation Standards for Wind Energy Developments (THC, 2016)

accordance with the requirements of the Scoping Opinion, prepared in accordance with the relevant guidance from both NatureScot (**Volume 4a**) and The Highland Council (**Volume 4b**). Visualisations are included for both the Proposed Alignment and the Alternative Alignment within Section 3.

5.8.9 **Volume 5** comprises supporting appendices for both **Volumes 1, 2 and 6** of the EIA Report. Appendices include a schedule of mitigation and further detailed reporting or information to support the EIA Report and technical assessments contained therein. Other notable appendices include shadow HRAs where the Proposed Development crosses through, or within the vicinity of, sites of European nature conservation importance. Appendices associated with **Volume 1** include the prefix '**V1**', whereas appendices associated with **Volume 2** include the prefix '**V2**' and appendices associated with **Volume 6** include the prefix '**V6**'.

5.8.10 **Volume 6** contains a description of the Alternative Alignment within Section 3 of the project, and the results of an EIA undertaken on the Alternative Alignment.

5.8.11 A standalone Non-Technical Summary is also provided which describes the project and the likely significant effects predicted in a concise, non-technical manner.

5.9 Supporting Documents

5.9.1 A Planning Statement is also included with the application as supporting information and in accordance with the request of The Highland Council in its scoping response. The Planning Statement considers the compatibility of the Proposed Development in the context of existing and emerging development plan and national energy and planning policies.