VOLUME 1: CHAPTER 5: EIA PROCESS AND METHODOLOGY

Figures (Volume 2 of this EIA Report)

There are no figures associated with this Chapter

Appendices (Volume 4 of this EIA Report)

Appendix 5.1: EIA Team Details

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 the consequences of such changes. It therefore informs both the project design and the decision-making processes related to the granting 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. This Chapter also outlines the structure of the EIA Report.

5.2 EIA Regulations

5.2.1 As discussed in **Chapter 1 - Introduction and Background**, 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 1/2017[2].

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 (Chapters 6 to 13) of this EIA Report have been the subject of consultation with statutory and non-statutory consultees through the publication of, and consultation on, the "Strathy Wood Wind Farm Grid Connection: Scoping Report" [3] published in January 2024 (see **Appendix 4.2: Scoping Report – January 2024**).

5.2.4 The scope of the EIA Report has been informed by, and is based on, the EIA Scoping Opinion issued by the Scottish Ministers in August 2024, as discussed further within **Chapter 4 - Scope and Consultation** of this EIA Report and associated appendices (see **Appendix 4.3: Scoping Opinion – August 2024**).

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.
[3] Strathy Wood Wind Farm Grid Connection: Scoping Report (January 2024), produced by SSEN Transmission.

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 Section 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 of this EIA Report.

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. Receptors 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) and 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. The

scale generally uses high, medium, low, and negligible criteria, as outlined in **Table 5.1** below and defined within each of the technical chapters of this EIA Report.

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 uses high, medium, low, and negligible criteria, as outlined in **Table 5.1** below and defined within each of the technical chapters of this EIA Report.

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 5.1** and defined within each of the technical chapters of this EIA Report to determine an overall significance of effect.

Table 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 generally considered to be significant in the context of the EIA Regulations. Minor and negligible effects are not considered significant. Where different terms or levels of effect to the above are used, they are defined within the methodology section within each of the technical chapters of this EIA Report.

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 of this EIA Report.

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

- Inter project 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 combination 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 5.2** lists the developments that have broadly been considered with respect to cumulative effects within this EIA Report (see also **Figure 6.4: 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 (typically three months prior to submission of this EIA Report), that the developer will proceed with an application for consent.

Table 5.2: Cumulative Developments

Development Name and Type	Application Status	Description
Strathy Wood Wind Farm (and on-site substation)	Consented[4]	Wind Farm development of 11 turbines with a generating capacity of up to 62.4 MW. Located on the eastern edge of Strathy Forest.
Strathy South Wind Farm (and on-site substation)	Consented[5]	Wind Farm development with 39 turbines and a generating capacity of 208 MW. Located to the south of Strathy Forest.
Melvich Wind Energy Hub (and on-site substation)	Proposed	Wind Farm and BESS development comprising 12 turbines with a generating capacity of 57.6 MW plus 42 MW of battery storage.
Kirkton Energy Park (and on-site substation)	Proposed	Wind Farm and BESS development comprising 11 turbines with a generating capacity of 52.8 MW plus 20 MW of battery storage.
Strathy South Wind Farm 'Southern Section' Grid Connection	Anticipated to be Permitted Development	5 km of 132 kV underground cable (from Strathy South Wind Farm on-site substation to a cable sealing end compound near Strathy Wood Wind Farm on-site substation)
Strathy South Wind Farm 'Northern Section' Grid Connection (Proposed and Alternative Alignments)	Scoping	Proposed Alignment - 10.5 km of 132 kV double circuit steel lattice overhead line (OHL) (from Strathy North 'T' (near Dallangwell) to Connagill 275/132 kV substation). Alternative Alignment - 12.5 km of 132 kV double circuit steel lattice OHL (considered to avoid passing through the footprint of the proposed Melvich Wind Energy Hub).
Melvich Wind Energy Hub Grid Connection	Anticipated to be Permitted Development	132 kV underground cable (from Melvich Wind Farm on-site substation to the existing Strathy North 132 kV trident H-wood pole OHL (section to be retained)).
Kirkton Energy Park Grid Connection	Pre-Scoping	A short span (<1 km) of single circuit 132 kV trident wood pole OHL (between Kirkton Wind Farm on-site substation and a 'T' on the existing Strathy North 132 kV trident H-wood pole OHL (section to be retained)).
Strathy Switching Station	Pre-Scoping	Switching station.

[4] Received consent from the Scottish Government in December 2021.

[5] Received consent from the Scottish Government in November 2021.

5.5.4 The individual topic based technical chapters of this EIA Report 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 **Chapter 14 - Schedule of Mitigation**.

5.6.2 Any remaining predicted effects after taking into account available mitigation measures are known as 'residual effects'. The 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 to co-ordinate the EIA Report for the Proposed Development, SSEN Transmission has ensured that the EIA 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).

5.7.2 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 5.1** for further EIA Team details):

- EIA Co-ordination – ASH design and assessment Ltd.;
- Landscape and Visual – horner + maclellan;
- Ecology – RPS Consulting Services Ltd.;
- Ornithology – RPS Consulting Services Ltd.;
- Soils, Geology and Water – SLR Consulting Ltd.;
- Cultural Heritage - Catherine Dagg;
- Traffic and Transport – Pell Frischmann Consultants Ltd.;
- Forestry – Neil McKay Forestry;
- Socio-Economic, Tourism and Recreation – MKA Economics Ltd; and
- Planning – David Bell Planning.

5.8 Structure of the EIA Report

5.8.1 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: Figures;
- Volume 3a: Visualisations to NatureScot guidelines[6];
- Volume 3b: Visualisations to The Highland Council guidelines[7];
- Volume 4: Appendices to support each of the Chapters in the EIA Report where required; and
- Non-Technical Summary.

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

- 1: Introduction and Background;
- 2: The Routeing Process and Alternatives;
- 3: The Proposed Development;
- 4: Scope and Consultation;
- 5: EIA Process and Methodology;
- 6: Landscape and Visual;
- 7: Ecology;
- 8: Ornithology;
- 9: Soils, Geology and Water;
- 10: Cultural Heritage;
- 11: Traffic and Transport;
- 12: Forestry;
- 13: Socio-economic, Tourism and Recreation; and
- 14: Schedule of Mitigation.

5.8.3 Chapters 6 to 13 comprise technical topic based reports that each include an assessment of the likely significant effects of the Proposed Development on the particular receptors of relevance to the topic, a description of the proposed mitigation measures relevant, and, confirmation of the predicted residual effects. The consideration of cumulative effects is also discussed where relevant in each specialist topic.

5.8.4 **Volume 2** contains supporting figures referred to in **Volume 1** of the EIA Report.

5.8.5 **Volume 3** (**a** and **b**) comprises photomontage visualisations of the Proposed Development from a viewpoint location, prepared in accordance with the relevant guidance from both NatureScot (**Volume 3a**) and The Highland Council (**Volume 3b**).

5.8.6 **Volume 4** comprises supporting appendices for **Volume 1** of the EIA Report. Appendices include further detailed reporting or information to support the EIA Report and technical assessments. Notable appendices include:

- Shadow Habitats Regulation Assessments (HRAs) where the Proposed Development passes through sites of European nature conservation importance (**Appendix 7.6** and **Appendix 8.4**);

[6] NatureScot (Formerly Scottish Natural Heritage (SNH)), (2017), Visual Representation of Wind Farms (Version 2.2).
[7] The Highland Council (THC), (2016), Visualisation Standards for Wind Energy Developments.

- Flow Country World Heritage Site (WHS) Assessment (**Appendix 7.7**);
- Connagill Cluster Outline Habitat Management Plan (HMP) (**Appendix 7.8**);
- a Peat Landslide Hazard and Risk Assessment (PLHRA), to consider the potential risk of peat landslides occurring within the vicinity of the Proposed Development so that suitable controls and appropriate methodologies can be employed during the construction and operation of the Proposed Development to mitigate against these risks (**Appendix 9.1**); and
- an Outline Peat Management Plan (PMP), to demonstrate that there has been a systematic assessment to the management and treatment of peat that would be excavated during the construction of the Proposed Development (**Appendix 9.2**).

5.8.7 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 included with the application as supporting information. The Planning Statement considers the compatibility of the Proposed Development in the context of the existing development plan and national energy and planning policies.