VOLUME 2: CHAPTER 5 – EIA PROCESS AND METHODOLOGY

Appendices (Volume 4 of this EIA Report)

Figures (Volume 3 of this EIA Report)

5. EIA PROCESS AND METHODOLOGY

5.1 Introduction

5.1.1 Environmental impact assessment (EIA) is a process consisting of the preparation of an Environmental Impact Assessment Report (EIAR) that identifies, describes and assesses the likely significant effects of the Proposed Development on the environment. When determining an application, the relevant planning authority must examine the environmental information and reach a reasoned conclusion on whether planning permission or a development consent is to be granted and consider whether it is appropriate to impose monitoring measures.

5.1.2 This Chapter sets out the assessment methodology applied in the evaluation of likely significant 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 Methodology

5.2.1 This EIA Report has been prepared in accordance with the EIA Regulations and has been informed by current best practice guidance, including the following:

- Scottish Government Planning Advice Note (PAN) 1/2013 (revision 1.0)[1];
- Planning Circular 1/2017[2];
- Institute of Environmental Management and Assessment (IEMA) Impact Assessment Guidelines 8/2024[3];
- Planning Inspectorate. Nationally Significant Infrastructure Projects (NISP): Advice on Cumulative Effects Assessment 9/2024[4][5];
- National Planning Framework 4[6]; and
- Angus Council Local Development Plan[7].

5.2.2 Scottish Planning Policy (SPP) is the statement of Scottish Government policy on nationally important land use planning matters. Planning advice notes (PANs), provide advice and guidance on these matters in Scotland, and are update periodically to reflect current best practices. SPP forms part of a National Policy Framework (NPF4) that informs the strategy for Scotland's long-term development. SPP is implemented on a local level through a Local Council Authority (LCA), in this case Angus Council, through its Local Development Plan (LDP). From time to time, the Scottish Government issues circulars which also provide statements on government policy and contain guidance on policy implementation through legislation and procedural change.

5.2.3 Environmental Impact Assessment (EIA) is an integral part of land use planning. As such, this EIA Report has been produced according to the latest advice and guidance on EIA as provided by the UK, Scottish, and local government. The Proposed Development is a national development according to NPF4 and Angus Council is the local authority that determines planning approval/consent for development projects in its council area.

5.2.4 An EIA overview of the methodology and guidance adopted for each technical study is provided within the respective technical chapters of this EIA Report. These chapters draw on discipline-specific advice and guidance as provided in Scottish Government PANs and circulars and follow the overarching EIA guidance on both cumulative impacts and a mitigation hierarchy broadly aligned with IEMA guidance. They also follow specific policy, best practices, and technical guidance from the respective institutions and professional organizations for their discipline, as well as from relevant statutory and non-statutory consultees

[1] Scottish Government (2013, revised 2017). Planning Advice Note 1/2013 (revision 1.0) Environmental Impact Assessment. Available [online]: https://www.gov.scot/publications/planning-advice-note-1-2013-environmental-impact-assessment/pages/1/

[2] Scottish Government (2017). Planning Circular 1/2017; Environmental Impact Assessment Regulations. Available [online]: https://www.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/

[3] IEMA (August 2024). Impact Assessment Guidelines: Implementing the Mitigation Hierarchy from Concept to Construction. Available [online]: https://www.iema.net/media/oone2qce/iema-mitigation-in-eia-guidance-final.pdf

[4] Planning Inspectorate (September 2024). Nationally Significant Infrastructure Projects (NSIP): Advice on Cumulative Effects Assessment. Available [online]: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

[5] In the absence of specific guidance, the approach to assessing cumulative impacts has been informed by PI's NISP guidance; however, NISP does not have direct relevance or application in Scotland.

[6] Scottish Government (February 2023). National Planning Framework 4. Available [online]: https://www.gov.scot/publications/national-planning-framework-4/

[7] Angus Council (September 2016) Local Development Plan. Available [online]: https://www.angus.gov.uk/planning_and_building/environment_and_development_planning/angus_plan

(NatureScot, Historic Environment Scotland (HES), Scottish Environment Protection Agency (SEPA)), and SSEN Transmission's General Management Plans and Species Protection Plans. By environmental assessment discipline, institutions and professional organizations include:

- Landscape and Visual Impact – Landscape Institute (LI)
- Cultural Heritage – Chartered Institute for Archaeologists (CIfA)
- Ecology – Chartered Institute of Ecology and Environmental Management (CIEEM)
- Ornithology – Chartered Institute of Ecology and Environmental Management (CIEEM), Landscape Institute (LI)
- Hydrology and Hydrogeology – Chartered Institution of Water and Environmental Management (CIWEM)
- Traffic and Transport – Chartered Institution of Highways and Transportation (CIHT), Chartered Institute of Logistics and Transport (CILT)
- Noise & Vibration – Institute of Acoustics (IOA)

5.2.5 The in-house and consultant technical teams are fully accredited members of their respective above-listed institutions and professional organizations. They have used their professional judgement to interpret and apply the guidance in developing the proposed methodologies for the assessment of likely significant effects for each topic area and cumulative effects covered in the technical chapters. The determination of significance of effect has drawn on the environmental data collection and analysis undertaken as part of the assessments underpinning the EIAR and the professional judgment and experience of the assessors. Some assessments may reference specific thresholds to assign sensitivity, magnitude and/or significance. Where appropriate, these will be stated in the relevant chapter. Development of the assessments has been the subject of consultation with statutory and non-statutory consultees through the publication of, and consultation on, the "Environmental Impact Assessment (EIA) Scoping Report: Emmock 400 kV Substation", published in July 2024[8].

5.3 Scope

5.3.1 The scope of the EIA and resulting Report has been informed by the Scoping Opinion issued by Angus Council on 11 September 2024, discussed further within **Chapter 6: Scope and Consultation**, as clarified through correspondence between the Applicant and Angus Council.

5.4 Baseline

5.4.1 Environmental baseline surveys determine the character of an area prior to the implementation of a project. The area considered varies by technical discipline and is specified in the technical chapters. This EIA Report was developed using up to date technical information representing discipline-based best practice, as well as information provided by consultees as part of the scoping and consultation process, for desk studies; and empirical survey and fieldwork using professional and approved data collection and assessment methods. Where possible, and as applicable, survey and data collection methods were agreed beforehand with relevant consultees.

5.4.2 Once the initial environmental baseline character is determined and key receptors identified and categorised, the potential for the impacts on this baseline, arising from completion of the Proposed Development, are assessed using an appropriate methodology for each technical discipline.

5.4.3 A broad assessment approach for this is set out in **Section 5.4: Assessment of Likely Significant Effects**. For some disciplines consideration of a future baseline condition is required to fully understand the potential for significant effects of reasonably foreseeable changes at the time of preparation of the EIA Report. Such changes in baseline conditions may arise due to, for example, climate change, habitat succession or land use changes. This EIA Report sets out the rationale for considering a future baseline and the assumptions made in defining it. Consideration is also given to the potential for cumulative effects where the assessment would describe effects associated with the Proposed Development in combination. The in-combination effects are described in each technical chapter respectively as well as in **Chapter 16: Cumulative Effects**.

5.5 Mitigation

[8] SSEN Transmission (July 2024). Environmental Impact Assessment (EIA) Scoping Report: Emmock 400 kV Substation. Available [online]: https://planning.angus.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=SG5OONCF07200

5.5.1 In this report, mitigation has been developed and organized in a three-tier mitigation hierarchy that is broadly in line with latest guidance from IEMA (See 5.2.4). The three tiers are as follows:

1) **Embedded Mitigation**: design stage mitigation
2) **Applied Mitigation**: standard/best practice environmental discipline/construction industry mitigation
3) **Additional Mitigation**: Site-specific bespoke mitigation

5.5.2 **Tier 1, Embedded Mitigation**, is a process of mitigating impacts in the design stage of project development. The purpose of embedding mitigation through project design is to reduce or eliminate foreseeable potentially significant environmental effects. Avoiding or reducing environmental impacts through the design process is a key objective of EIA.

5.5.3 The design of the Proposed Development has been progressed through an iterative process integrating electrical and civil engineering and environmental considerations. The design process has sought to reduce or eliminate potentially significant environmental effects at the outset taking account of site topography, slope, drainage, existing land uses and vegetation. (See also section 3.4 and 4.7 which describe how the design process has addressed potential environmental effects). A landscape design has been developed to define the location and position of landscaping structures which provide visual screening of the Proposed Development, and other design features and planting which mitigate landscape and visual impacts, and which provide opportunities to enhance biodiversity within the Site.

5.5.4 **Tier 2**, **Applied Mitigation**, comprises the adoption of good practice measures and procedures relating to assessment discipline-specific, industry standard construction environmental management which are well understood and with a high degree of confidence they would be effective, and the Applicant's own proprietary environmental management plans, which are based on the industry standard.

5.5.5 In relation to Applied Mitigation, for its new infrastructure projects in recent years, the Applicant has developed and effectively implemented a suite of General Environmental Management Plans (GEMPs) and Species Protection Plans (SPPs) which prescribe good environmental management practices. In addition, the Applicant has developed a Consents and Environment Specification which prescribes environmental management principles which Contractors are required to meet under the terms of the Principal Contract. The Specification includes management plans that the Contractor is required to prepare and implement, including a Construction Environmental Management Plan (CEMP), and subsidiary plans on aspects such as ecological and ornithological management, construction noise management, construction transport management. In preparing these Plans, the Contractor will be required to incorporate any additional management measures identified through the EIA as necessary to avoid or reduce significant residual effects (i.e., "additional mitigation").

5.5.6 **Tier 3**, **Additional Mitigation**, comprises Site-specific mitigation considered necessary to reduce the magnitude and/or significance of residual impacts which remain after the application of embedded and applied mitigation. Given the scope and substance of embedded and applied mitigation, the requirement for additional mitigation is limited to a small number of individual situations, such as installation of silt fences/settlement ponds around water crossings and access tracks during construction (Hydrology).

5.5.7 Embedded Mitigation is secured through the design process, while both Applied Mitigation and Additional Mitigation would be secured through the terms of the Principal Contract. In addition, it is expected that Angus Council, as planning authority, would seek the implementation of similar environmental management principles, and of specific Management Plans, through Conditions attached to the planning permission. The expectation would be that the Plans and measures developed by the Contractor in accordance with the approach described above, would be reviewed and approved by Angus Council as part of condition discharge.

5.6 Assessment of Likely Residual Significant Environmental Effects

5.6.1 The EIA process has sought to identify potential effects arising from the Proposed Development, to develop and apply mitigation, in the manner described above, and to predict and scale and assess the significance of residual environmental effects through the application of predictive tools and techniques, assessment criteria, and guidance and professional judgement by qualified and experienced assessors.

5.6.2 Predicted impacts have been assessed by taking into account the following:

- the geographic extent or magnitude of change (from the baseline conditions);
- the sensitivity or value of the affected environmental factors / receptors;
- the availability and likely effectiveness of measures to mitigate impacts;
- the likelihood of occurrence.
- reversibility and duration of the likely effect; and
- the compatibility of the Proposed Development with the provisions of legislation and planning policy.

5.6.3 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. Magnitude of impact is typically characterised in terms of the extent of change, or the geographical extent over which an impact may be experienced, and is represented using a scale of high, medium, low, or negligible magnitude.

5.6.4 The sensitivity of the receptor / has been determined based on its legal or policy protection or designation at an international, national or local level and is represented using a scale of high, medium, low, or negligible sensitivity.

5.6.5 The interaction of receptor sensitivity and predicted magnitude of impact is used to determine the likely significance of effect as set out in **Table 5.1: Matrix for Determining the Significance of Effects** and is addressed within each of the technical chapters in Volume 2 of this EIA Report..

Table 5.1: Matrix for Determining the Significance of Effects

Magnitude of Change / Impact	Sensitivity of Receptor / Receiving Environment			
	High	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Negligible
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

5.6.6 Major and moderate effects are considered to be significant in the context of the EIA Regulations. Minor and negligible are not considered to be significant.

5.6.7 The characteristics of an effect will vary depending on the duration of the activity causing the effects, 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.

5.6.8 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;
- 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.

5.7 Cumulative Effects

5.7.1 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 associated with the Proposed Development, in combination with itself or other existing or planned development projects, could combine to cause a significant effect on a particular receptor.

5.7.2 In this EIA Report, the following cumulative effects have been considered:

- In-combination effects - impacts from the Proposed Development with other reasonably foreseeable future developments.
- Interactive effects - combined or synergistic effects from different impact types of the Proposed Development on key receptors which may collectively cause a more significant effect than individually.

5.7.3 "In combination effects" have been considered with reference to three groups of reasonably foreseeable future developments (**See Figure 5.1**); (a) those projects which are defined in Chapter 1 as Associated SSEN Transmission projects and (b) other projects which fall into one or more of the following categories: other SSEN Transmission projects, projects of National importance within 3 km, local developments within 2km where an EIA is required, developments where undetermined planning/consent applications or scoping requests have been submitted, or developments where consents have been granted but construction has not yet commenced at the time of preparation of this EIAR. A schedule of other projects identified for this purpose is provided in **Table 14.1: Summary of Likely Significant In Combination Cumulative Effects** and **Table 14.2: Summary of Predicted Significant Effects** in **Chapter 14: Cumulative Effects Assessment**.

5.7.4 In-combination cumulative effects arising from the Associated SSEN Transmission projects and from third party projects are presented in separate tables in each technical chapter and summarised in **Chapter 14: Cumulative Effects Assessment**.