Chapter 5: EIA Methodology

Contents

5 EIA Methodology

5.1 Introduction

5.1.1 This Chapter discusses the need for Environmental Impact Assessment (EIA) and sets out the approach to assessment taken in this EIA Report. This EIA Report has been prepared in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) (the EIA Regulations) (Scottish Government, 2017).

5.2 EIA Regulations

5.2.1 Where a development falls within one of the descriptions in Schedule 2 of the EIA Regulations and is considered likely to have significant effects on the environment then an EIA is required to be submitted with the application for consent. The Proposed Development falls within Schedule 2 as "*(1) a generating station",* the construction and operation of which will require a Section 36 consent but which is not a Schedule 1 development (Scottish Government, 2017).

5.2.2 It was acknowledged at an early stage in the preparation of the application that given the nature, location and characteristics of the Proposed Development that an EIA would be required on the assumption that, having regard to the nature of the Proposed Development, significant effects are likely and need to be assessed. It was therefore not considered necessary to seek a screening opinion.

5.2.3 Establishing which aspects of the environment and associated issues are relevant for a particular project is captured in the EIA scoping process. Scoping is the process of identifying those aspects of the environment and associated issues which may be significantly affected by any proposed development and therefore should be subject to detailed assessment and reported in an EIA Report. This recognises that there may be some environmental elements where there would be no likely significant effects resulting from a proposed development, and hence where there is no need for further assessment to be undertaken. An EIA Scoping Report[1] for the Proposed Development setting out the proposed scope of the EIA Report was submitted to the ECU in November 2022 with a request for a formal Scoping Opinion. A Scoping Opinion[2] was subsequently issued by the ECU on 24 April 2023. The Scoping exercise for the Proposed Development is detailed in Chapter 6.

5.2.4 Following the identification of the scope of the EIA, individual environmental matters are subject to survey, investigation and assessment, and individual technical discipline chapters are prepared for presentation in an EIA Report to accompany the application for a Proposed Development. The assessment methodologies are based on recognised good practices and guidelines specific to each discipline area.

5.2.5 The EIA Regulations prohibit the Scottish Ministers from granting consent for EIA development unless they have taken the environmental information provided into account.

5.2.6 This EIA Report is presented to be taken into consideration by the Scottish Ministers in the determination of this application.

5.3 Requirements of the EIA Regulations

5.3.1 The approach to this EIA has followed the requirements of the EIA Regulations 2017. Regulation 4 of the EIA Regulations defines the process of EIA and highlights the factors and their interactions that should be considered. Regulation 5(1) notes that "*an application for an Electricity Act consent for EIA development must be accompanied by an environmental impact assessment report ("EIA Report")*". Regulation 5 then sets out the minimum requirements of an EIA Report as noted in Table 5.1.

Table 5.1 – Regulation 5 EIA Report Requirements and Location within the EIA Report

Regulation 5 Paragraph	Relevant Section of the EIA Report
(2) An EIA Report is a report prepared in accordance with this regulation by the developer which includes (at least) - (a) a description of the development comprising information on the site, design, size and other relevant features of the development;	– A description of the Proposed Development and its characteristics (comprising information on the site, design, size and other relevant features of the development) is presented in Chapters 2 and 3.

[1] ECU ref ECU00004669 https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00004669
[2] The full scoping opinion can be read on the ECU website here: https://www.energyconsents.scot/ApplicationDetails.aspx?cr=ECU00004669

Regulation 5 Paragraph	Relevant Section of the EIA Report
(b) a description of the likely significant effects of the development on the environment;	– The predicted likely environmental effects of the Proposed Development are reported in Chapters 7 to 17. This is expanded upon in Table 5.2.
(c) a description of the features of the development and any measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment;	– The mitigation measures required to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment are reported in Chapters 7 to 18. Chapter 18 provides a full schedule of commitments.
(d) a description of the reasonable alternatives studied by the developer, which are relevant to the development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;	– The alternatives considered are covered under Chapter 2.
(e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and	– A non-technical summary (NTS) is provided in Volume 1 of the EIA Report.
(f) any other information specified in Schedule 4 relevant to the specific characteristics of the development and to the environmental features likely to be affected.	– A Scoping Report was produced to identify the scope of environmental features likely to be affected upon which this EIA Report is based. More information is provided in Chapter 6.
(3) Where a scoping opinion is adopted, the EIA report must be based on that scoping opinion and must include the information that may reasonably be required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment.	– Chapter 6 explains the Scoping and consultation process undertaken for the Proposed Development. Technical Appendix 6.1 provides the response to Scoping consultee comments.
(4) With a view to avoiding duplication of assessments, account is to be taken of the available results of other relevant assessments in preparing the EIA Report.	– Where relevant any existing assessments are referenced in Chapters 7 to 17 as appropriate.
(5) In order to ensure the completeness and quality of the EIA Report - *(a) the developer must ensure that the EIA report is prepared by competent experts; and* *(b) the EIA report must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.*	– Chapter 1 provides a statement of competency with relevant qualifications for each expert.

5.3.2 Regulation 5 is expanded on in Schedule 4 of the EIA Regulations, which sets out the information that must be included in the EIA Report. Schedule 4 requirements and where the corresponding information can be found in this EIA Report are provided in Table 5.2.

Table 5.2 – Schedule 4 EIA Report Requirements and Location within the EIA Report

Schedule 4 Paragraph	Relevant Section of the EIA Report
1. *A description of the development, including in particular:* *(a) a description of the location of the development;* *(b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;* *(c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;* *(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.*	– A description of the location of the Proposed Development is presented in Chapter 2. – A description of the Proposed Development and its characteristics (including physical characteristics, operational requirements and estimated energy production) is presented in Chapter 3. – The predicted individual environmental effects of the Proposed Development are reported in Chapters 7 to 17.
2. A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the developer, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	– The alternatives considered are covered under Chapter 2.
3. A description of the relevant aspects of the current state of the environment (the "baseline scenario") and an outline of the likely evolution thereof without implementation of the	– These are provided in Chapters 7 to 17.

Schedule 4 Paragraph	Relevant Section of the EIA Report
project as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of relevant information and scientific knowledge.	
4. A description of the factors specified in regulation 4(3) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	– Effects on population are discussed in relation to visual/residential amenity impacts, traffic, noise and air quality. – Material assets are addressed through the effects identified for land use, soil geology and waste, hydrological and cultural heritage. – Effects on human health and climate are considered within Chapter 17. – Consideration has been given within Chapters 8 and 10 to the potential impacts that dust generation could have on any identified sensitive ecological or hydrological receptors. – Effects on biodiversity are assessed within Chapters 8 and 9. – Effects on soils and water are assessed within Chapter 10. – Effects on cultural heritage are assessed within Chapter 11. – Effects on the landscape are assessed within Chapter 7.
5. A description of the likely significant effects of the development on the environment resulting from, inter alia: *(a) the construction and existence of the development, including, where relevant, demolition works;* *(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;* *(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;* *(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);* *(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;* *(f) the impact of the development on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;* *(g) the technologies and the substances used.* *The description of the likely significant effects on the factors specified in regulation 4(3) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.*	– The predicted likely significant effects of the Proposed Development are reported as residual effects after relevant mitigation measures in each of the technical chapters of the EIA Report in Chapters 7 to 17. The methods used to predict significant effects are explained in this chapter and each individual chapter is relevant. (a) Effects have been predicted in relation to the Proposed Development's construction and permanent use of the land. The operation and nature of these effects and their duration are reported. (b) The use of natural resources (in particular land, soil, water and biodiversity) is considered in Chapters 8, 9 and 10. (c) The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste are considered in Chapters 10 and 13 and Technical Appendix 3.1. (d) The risks to human health, cultural heritage or the environment (for example due to accidents or disasters) is considered in Chapters 11 and 17 and Technical Appendix 3.1. (e) The cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources is considered throughout the EIA Report in Chapters 7 to 18. (f) The impact of the Proposed Development on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the Proposed Development to climate change are considered in Chapter 17. (g) The technologies and the substances used are considered in Chapters 2, 3 and Technical Appendices 3.1 and 3.2.
6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered in compiling the required information and the main uncertainties involved.	– Methodologies, assumptions and limitations in the EIA process are reported as required in the relevant technical chapters in Chapters 7 to 17. – Assumptions and limitations in the EIA process are reported as required in the relevant technical chapters in Chapters 7 to 17.
7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That	– EIA Report in Chapters 7 to 17. – The overall approach to mitigation is discussed in this chapter. Specific mitigation measures are reported in each

Schedule 4 Paragraph	Relevant Section of the EIA Report
description should explain the extent to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	relevant technical chapter and are summarised in Chapter 18.
8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned.	– Chapter 17 considers the risk of major accidents and/or disasters relevant to the Proposed Development.
9. A non-technical summary of the information provided under paragraphs 1 to 8.	– A Non-Technical Summary (NTS) is presented as Volume 1 of this EIA Report.
10. A reference list detailing the sources used for the descriptions and assessments included in the EIA report.	– Chapters 1 to 17 each have a reference list detailing relevant sources used.

5.4 EIA and the Design Process

5.4.1 The EIA was treated as an iterative process, rather than a one-off, post design environmental appraisal. This has allowed the findings from the EIA to be fed into the design process, to avoid, reduce and where practicable, mitigate environmental effects. Where potentially adverse environmental effects were identified through preliminary investigations as part of feasibility work, or later in the detailed EIA, consideration was given as to how the Proposed Development design could be modified to design out adverse environmental effects, or where this was not practicable, to identify appropriate mitigation.

5.4.2 This iterative design process is explained further in Chapter 2 and the Design and Access Statement. Consultation from consultees and the public also fed into the design process and is outlined in Chapter 6.

5.5 EIA Project Team and Competency

5.5.1 This EIA has been led by SLR with assistance from other specialist technical and environmental consultants. Full details of the project team are set out in Section 1.4 of Chapter 1 of this EIA Report. Table 1.1 in Chapter 1 shows the EIA Team Assessors', qualifications, and years of experience.

5.6 Determining the Scope of the EIA Report

5.6.1 The EIA Report is the independent assessment of the Proposed Development, presenting likely significant environmental effects, and the measures proposed to avoid, reduce and where practicable mitigate adverse effects.

5.6.2 The scope of the EIA Report has been established through a combination of consultation with various stakeholders, and an EIA scoping process.

5.6.3 The scoping consultation undertaken as part of the EIA process is detailed in Chapter 6 and Technical Appendix 6.1. The responses of all consultations collated during the scoping process are addressed in this EIA Report and referred to as appropriate in each technical EIA Report chapter.

5.7 Approach and Methods

General Approach to the EIA

5.7.1 The assessments that have been undertaken as part of the EIA have been based upon the site and study areas. The site is the area contained within the red line boundary shown on Figure 1.2. The study areas vary between assessments and are defined in individual EIA Report chapters.

5.7.2 Assessments have been undertaken using a 'worst-case' approach. A worst-case approach assumes that the Proposed Development would produce the maximum anticipated impact on the surrounding environment from the range of possible effects projected. This ensures that the assessment is suitably precautionary.

5.7.3 The EIA has been undertaken based on a fixed location for turbines and infrastructure (subject to micrositing) as shown on Figure 3.2.

5.7.4 The assessment is based on turbine tip heights no greater than 200 m. Hub heights; blade lengths and all other proposed infrastructure are based on the Rochdale Envelope[3] principle. The Proposed Development has been assessed within the 100 m micrositing boundary put forward.

5.7.5 Each chapter identifies the sensitivity of the baseline receptors and then considers the range and nature of the impacts associated with the Proposed Development. The assessment then determines the level of the effect significance before ("potential") and after ("residual") the implementation of the mitigation. The level of residual effect determines whether or not an effect will be considered to be significant in EIA terms.

5.7.6 The EIA Regulations require a description of the likely significant effects on the environment, with these covering "*the direct effects and any indirect, secondary, cumulative, transboundary, short term, medium- term and long-term, permanent and temporary, positive and negative effects of the development."* (Paragraph 5, Schedule 4, EIA Regulations 2017).

5.7.7 Unless qualified elsewhere, the following interpretation is applied with regard to effects. Table 5.3 summarises the interpretation applied with regard to the duration of effects.

Table 5.3 – Interpretation of Time Periods and Duration of Effects

Time Period of Effects	Detail	Reveresible/Irreversible
Short Term Effect	An effect which extends over a short period of time only and are typically those associated with the construction or decommissioning periods or other limited periods. This is a temporary effect.	Reversible
Medium Term Effect	An effect which extends over a period of time which is longer than that of a short-term effect but which persists for less than the life of the Proposed Development. This is a temporary effect.	Reversible
Long Term Effect	An effect which persists to the full lifetime of the Proposed Development. This is a temporary effect.	Reversible
Permanent Effect	An effect which persists beyond the lifetime of the Proposed Development. This is a permanent effect.	Irreversible

5.7.8 Assessment criteria have been used to evaluate environmental effects. Significance is generally determined through a combination of the sensitivity of a receptor to an effect and the magnitude of the impact. This process is outlined as follows:

- Identification of baseline conditions of the site and its environs, including sensitivity of receptors which may be affected by changes in the baseline conditions.
- Consideration of the magnitude of potential changes to the environmental baseline.
- Assessment of the significance of effect taking into account sensitivity of receptors and magnitude of impact.
- Identification of appropriate mitigation measures.
- Assessment of the significance of residual effects taking account of any mitigation measures.

5.7.9 Where significant environmental effects are predicted in the EIA process, then the EIA Report sets out mitigation measures which would be employed to eliminate or ameliorate the impact to acceptable levels where practicable. Mitigation measures can be in the form of changes to construction, operational or decommissioning practice, or changes/additions/enhancements to the design. Where impacts cannot be mitigated residual effects are discussed.

5.7.10 The above approach does not, however, apply to all disciplines addressed in the EIA Report, and alternative approaches are therefore developed as appropriate. These are described and justified in the relevant EIA Report chapter.

5.8 Baseline Conditions

5.8.1 A fundamental aspect of the EIA is to determine the baseline environmental conditions prevailing at the site. The predicted changes resulting from the Proposed Development are assessed against the baseline to determine the magnitude of any potential impact. The baseline conditions have been

[3] The 'Rochdale Envelope' principle is employed where the nature of the Proposed Development means that some details of the whole project have not been confirmed (for instance the precise dimensions of structures, due to unknown market conditions at time of project conception and application) so that when the application is submitted flexibility is sought to address that future uncertainty, whilst ensuring that the assessment remains suitably precautionary by assessing the effects arising from the worst case project parameters for each impact.

determined by a number of different methods, including desktop studies, site surveys, use of analytical models and the acquisition of data from third parties.

5.8.2 The assessment of each environmental parameter was undertaken in comparison to baseline conditions. The baseline conditions section in each chapter describes the existing environmental conditions at the site (and in the wider area as pertinent to the particular environmental parameter).

5.8.3 Relevant operational and under construction (if likely to be completed by the Proposed Development construction year) wind farms are considered to be part of the baseline environment for the purposes of this EIA Report unless specifically stated otherwise within relevant topic chapters. These include:

Operational

- Glenkerie Wind Farm, near Biggar – approximately 2.4 km to the north, 11 turbines with a maximum height to blade tip between 100 m and 118 m; and
- Clyde Wind Farm and Extensions, near Abington – approximately 2.5 km to the west, a total of 206 turbines with height to blade tip between 125 m and 142 m.

Under Construction

- Whitelaw Brae Wind Farm, near Moffat – approximately 3.1 km to the south, 14 turbines with a height to blade tip of 133.5 m.

5.8.4 The EIA Report considers the present baseline environment but also considers how the baseline environment may change during the operational period of the Proposed Development (for example in relation to climate change or planned felling).

5.9 Consultation

5.9.1 Consultation has formed an integral part of the EIA process and both the EIA team and the Applicant have contacted statutory and non-statutory consultees to determine their views on the Proposed Development, to collect baseline information and refine survey methodologies.

5.9.2 Chapter 6 of this EIA Report provides a summary of the scoping consultation. Technical Appendix 6.1 provides a table of the scoping responses. Each technical discipline chapter of the EIA Report provides a summary of the consultation undertaken, in conjunction with an explanation as to how this has been considered.

5.9.3 In relation to the EIA, engagement with the local community has been undertaken through a number of mechanisms:

- In December 2022, a project website was launched providing an opportunity to comment on proposals: https://projects.statkraft.co.uk/Oliver-Forest/.
- The first round of public information events were held online between 21 February and 16 March 2023 and in-person on 08 and 09 March 2023 in Tweedsmuir and Broughton respectively.
- The second round of public information events were held online between 28 February and 22 March 2024 and in-person on 05 and 06 March 2024 in Tweedsmuir and Broughton respectively.

5.9.4 The responses received through public consultation are detailed in the Pre-Application Consultation (PAC) Report submitted with this application for the Proposed Development.

5.9.5 In addition, correspondence and meetings with the local community took place from December 2022, throughout 2023 and have continued in 2024, to discuss the progress of the Proposed Development. These meetings are further detailed in Chapter 6 of the EIA Report and within the PAC Report.

5.10 Assessment of Effects

5.10.1 The assessment of likely significant effects, using a range of appropriate methodologies, takes into account the construction, operation and decommissioning of the Proposed Development in relation to the site and environs. It should be noted that the potential effects from decommissioning are anticipated to be similar or less than the effects of construction, explained in further detail in Chapter 6. Methodologies for predicting the nature and magnitude of any potential environmental impacts vary according to the technical subject area. Numerical or quantitative methods of assessment are used to predict values which can be compared against published thresholds and indicative criteria contained in relevant guidance and standards.

5.10.2 Not all technical subject areas are capable of being assessed numerically or quantitatively, and thus qualitative assessments are used in certain cases. Such assessments rely on previous experience of similar projects, baseline information interpretation and professional judgement.

Assessment of Cumulative Effects

5.10.3 In accordance with the EIA Regulations, this EIA Report has assessed 'cumulative effects'. By definition, these are effects that result from incremental changes caused by past, present or reasonably foreseeable projects, together with the Proposed Development. Likely cumulative effects have been defined as the likely effects that the Proposed Development may have cumulatively with other wind farm developments in the local area which are consented or at application stage in addition to the operational and under construction developments which form part of the baseline environment (i.e. the incremental effects resulting from the Proposed Development if all other developments are assumed to be constructed/operated). The extent to which the potential cumulative effects through that co-existence of developments is assessed and described as appropriate throughout Chapters 7 to 17 of this EIA Report.

5.10.4 The study area for considering cumulative effects varies per technical discipline and each EIA Report chapter refers to the cumulative sites considered as appropriate. In general, most specialisms have considered cumulative effects to approximately 15 km from the proposed turbines[4] which includes the following schemes:

Consented

- Glenkerie Extension, appeal allowed 29 July 2015, near Biggar – approximately 2.7 km to the north, six turbines with a height to blade tip of 100 m.

Applications

- Priestgill Wind Farm (variation), near Abington – approximately 11 km to the west, seven turbines with a height to blade tip between 180 m and 200 m; and
- Grayside Wind Farm, approximately 7 km to the north-west (the closest proposed turbines of Grayside were previously to be approximately 2 km north-west of the site, although the scheme was revised through Supplementary Environmental Information (SEI) in October 2023 to remove the closest six turbines). It extends to the north and north-east of the Clyde Extension Wind Farm and is now proposed as a 15 turbine development (with a maximum height to blade tip of 200 m) currently being considered by the Scottish Ministers.

5.10.5 The study area for considering cumulative effects on landscape and visual amenities is up to approximately 25 km from the Proposed Development.

5.10.6 Cumulative wind farm sites within the study area are identified on Figure 7.9. This includes all known sites which are operational within 25 km, and also sites that are under construction, consented, at application and at the Scoping stage. The cut-off date for the cumulative assessment was agreed with the Scottish Borders Council as 29 February 2024, after which any new developments entering the public domain have not been considered within the cumulative assessment.

Sensitivity of Receptors

5.10.7 Criteria for the determination of sensitivity (e.g. 'high', 'medium', or 'low') or of importance (e.g. 'international', 'national', 'regional' or 'authority area') of receptors have been established based on prescribed guidance, legislation, statutory designation and/or professional judgement. The criteria for each environmental parameter are provided in the relevant chapter of the EIA Report.

Magnitude of Impact

5.10.8 The magnitude of impact on environmental baseline conditions is identified through detailed consideration of the Proposed Development, taking due regard of any legislative or policy standards or guidance, and/or the following factors:

- the degree to which the environment would be impacted, e.g. whether the quality is enhanced or impaired;
- the scale or degree of impact from the baseline situation;
- whether the impact is temporary or permanent, indirect or direct, short-term, medium-term or long-term;
- the frequency of the impact;
- any in-combination impacts; and
- potential cumulative impacts.

5.10.9 In some cases, the likelihood of impact occurrence may also be relevant and where this is a determining feature of the assessment this will be clearly stated.

[4] Measurements taken from nearest proposed turbines to nearest existing/consented or application turbines.

Mitigation

5.10.10 Mitigation is considered an integral part of the overall design strategy for the Proposed Development, including 'embedded' mitigation (e.g. altering and refining the Proposed Development's design to reduce landscape and visual impact, watercourse crossings or avoid sensitive species and habitats) rather than relying solely on 'add-on' measures to prevent or reduce significant environmental effects. Identifying mitigation measures is also a requirement of the EIA Regulations under which this EIA Report is prepared. The Applicant has adopted an iterative approach, whereby mitigation is assessed and considered throughout the development of the Proposed Development, and the final design of the Proposed Development has evolved being optimised during the EIA process in response to increasing knowledge of the site and potential environmental impacts.

5.10.11 Where significant environmental effects are predicted in the EIA process, the EIA Report provides measures which would be employed to eliminate or ameliorate the effect where practicable. Mitigation measures are envisaged through the consideration of alternatives, changes/additions to the design of the Proposed Development, or management to prevent, reduce or, where possible, offset any adverse significant effects.

5.10.12 Some of the measures described within Chapters 7 to 17 of this EIA Report do not relate only to likely significant adverse effects but have been included as good practice to reduce the level of adverse effects or enhance the level of beneficial effects, of the Proposed Development. Where relevant, these 'good practice measures' are described in the EIA chapters. Chapter 18 provides a summary of the mitigation measures proposed throughout the EIA Report.

5.10.13 In some cases, environmental mitigation through offsetting may be appropriate to provide replacement features or assets (e.g. compensation habitat to replace that which has been disturbed or lost due to the construction of the Proposed Development or compensatory planting due to felling). However, offsetting may take some time to remedy effects, as compensation may take time to mature sufficiently to enable the effect of the disturbance or loss to be offset.

Enhancement

5.10.14 Opportunities for environmental enhancement measures within the site have been given due consideration throughout the design evolution process. Enhancement refers to measures to be implemented which don't form mitigation by avoiding, reducing or offsetting effects; but instead provide an opportunity to improve the characteristics, features, land use or habitats on-site to make them into a better state than are currently present prior to the Proposed Development being constructed. There is, therefore, a net or new benefit to the environment.

Monitoring

5.10.15 The EIA Report sets out details of any post-consent monitoring which is proposed. This includes, where appropriate, proposals to measure the effectiveness of the identified mitigation measures.

Consideration of Transboundary Effects

5.10.16 In accordance with the EIA Regulations, this assessment has considered 'transboundary effects'. Regulation 29 of the EIA Regulations refers to development with significant transboundary effects as being development proposed to be carried out in Scotland that is likely to have significant effects on the environment in another European Economic Area (EEA) State other than the United Kingdom (UK).

5.10.17 The nature of the Proposed Development and the location of the application site are such that significant transboundary effects are not predicted for the Proposed Development and therefore scoped out of the EIA Report.

Statement of Significance

5.10.18 Assessing the significance of effects relies, at least in part, on value judgements including placing weight or value on the environment likely to experience the change.

5.10.19 The significance of an effect is derived from an analysis of:

- the sensitivity of the receiving receptor to change, including its capacity to accommodate the kinds of changes the Proposed Development may bring about;
- the amount and type of impact, often referred to as the impact magnitude which includes the timing, frequency, scale, size and duration of the impact;
- the likelihood of the impact occurring – which may range from certainty to a remote possibility; and
- expressing the significance of the effects of the Proposed Development, usually in relative terms, based on the principle that the more sensitive the receptor, the more likely and the greater the magnitude of the impact (compared with the baseline) and the greater the resulting significance of the effect.

5.10.20 As the significance of effects will differ depending on the context and the 'receptors' affected by the Proposed Development, there is no general definition of what constitutes a significant effect. In EIA, the

term significance reflects both its literal meaning of 'importance' and its statistical meaning where there is an element of quantification. This combination of judgemental/subjective and quantifiable/objective tests has become the standard approach to understanding and applying the test of 'significance'.

5.10.21 Significant effects are defined in each of the topic-specific chapters and refer to both potential effects (prior to any mitigation) and residual effects (after mitigation has been applied). The Statement of Significance in EIA terms relates primarily to the predicted residual effects.

5.10.22 Any effects associated with the Proposed Development are considered to be adverse except where it is stated that they are beneficial. It is worth noting that an effect assessed to be significant does not necessarily mean it is unacceptable. This is supported by Policy 11 of NPF4 where it is noted that it is recognised that significant landscape and visual impacts *"are to be expected for some forms of renewable energy. Where impacts are localised and/ or appropriate design mitigation has been applied, they will generally be considered to be acceptable".*

Assumptions, Limitations and Technical Difficulties

5.10.23 The EIA process is designed to enable good decision-making based on the best possible available information about the environmental implications of a Proposed Development.

5.10.24 It is not considered that any matter has prevented the accurate assessment of likely significant environmental effects or the identification of appropriate mitigation measures. The environmental effects reported in this EIA Report, and the level of mitigation described, effectively set the minimum standard which will be achieved by the construction, operation, and maintenance and decommissioning of the Proposed Development. The Applicant has a commitment to ensuring that, where details of the Proposed Development differ from those assessed in the EIA, the Proposed Development will not have any adverse environmental effects which are significantly worse than those which have been assessed in the EIA and reported in this EIA Report.

5.11 References

European Union (2014). *Directive 2014/52/EU of the European Parliament and of the Council amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.* Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052. Accessed on: 25 March 2024.

Scottish Government (2017). *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017*. Available at: https://www.legislation.gov.uk/ssi/2017/101/contents/made. Accessed on: 25 March 2024.