

# 4 Approach to EIA

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# 4 Approach to EIA

## 4.1 Introduction

4.1.1 This chapter of the EIA Report details the broad approach undertaken to complete the Environmental Impact Assessment (EIA) for the Proposed Development.

4.1.2 The structure of the EIA Report follows the requirements of Schedule 4 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (Scottish Government, 2017) and other relevant good practice guidance. The EIA Report comprises three main components – a Non-Technical Summary (NTS), the main EIA Report text and figures (including a summary table of the predicted Environmental Effects and a Schedule of Mitigation), and the EIA Report Appendices.

4.1.3 This chapter is structured as follows:

- overview of the relevant legislation, policy and guidance;
- an outline of the EIA process that has been followed;
- the scope of the assessment completed;
- details of the assessment of potential effects;
- mitigation measures;
- enhancement; and
- the assumptions made, likely limitations and uncertainty.

4.1.4 This chapter includes the following appendices:

- **Appendix 4.1** EIA Scoping Report (2017);
- **Appendix 4.2** Revised layout for EIA Scoping Report (2018);
- **Appendix 4.3** ECU EIA Scoping Opinion (2018);
- **Appendix 4.4** Gatecheck 1 Report (2018); and
- **Appendix 4.5** Responses to Gatecheck 1 Report (2018).

## 4.2 Legislation and Guidance

4.2.1 A number of legislative and best practice documents have informed the EIA process. The main piece of legislation is the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (Scottish Government, 2017) (hereafter referred to as the ‘EIA Regulations’). The Proposed Development meets the Schedule 2, (1) criteria of the EIA Regulations, by nature of it being classed as a generating station which requires consent under section 36 of the Electricity Act. The criteria for considering whether a Schedule 2 development requires the preparation of an EIA is set out in Schedule 3 of the EIA Regulations, and the Applicant has voluntary accepted that an EIA is required. Schedule 4 of the EIA Regulations provides details of the information to be included within the EIA Report.

4.2.2 In addition to the above the following regulations and best practice guidance have been referred to:

- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017(as amended), Planning Circular 1/2017 (Scottish Government, 2017b);
- Scottish Planning Policy (Scottish Government, 2014);
- Planning Advice Note (PAN) 1/2013 Environmental Impact Assessment (Scottish Government, 2017c);

- Guidelines for Environmental Impact Assessment, Institute of Environmental Management and Assessment (IEMA, 2006);
- A Handbook on Environmental Impact Assessment (V5) (Scottish Natural Heritage, 2018); and
- Assessing the Cumulative Impact of Onshore Wind Energy Developments, (Scottish Natural Heritage, 2012).

4.2.3

**Table 4.1** below sets out how the mandatory information required by Regulation 5 and relevant information prescribed in Schedule 4 ‘Content of an Environmental Statement’ of the EIA Regulations has been provided in this EIA Report.

**Table 4.1 - Information Required in the EIA Report**

Required Information (EIA Regulations)	Relevant Reference within this EIA Report
<p>1. A description of the development, including in particular:</p> <p>(a) a description of the location of the development;</p> <p>(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;</p> <p>(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;</p> <p>(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.</p>	<p>The Proposed Development is described in <b>Chapter 3</b> (Proposed Development) of the EIA Report, including consideration of anticipated construction methods and the operation of the Proposed Development.</p> <p><b>Figures 1.1</b> and <b>1.2a-e</b> show the site location plan and the Proposed Development layout.</p> <p>No demolition works are required.</p> <p>The land use requirements during construction and operational phases are also described in Chapter 3 (Proposed Development).</p> <p>Expected residues and emissions are addressed, where relevant, in the appropriate technical chapters of this EIA Report.</p>
<p>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.</p>	<p>A description of alternatives studied by the Applicant is provided in Chapter 2 (Design Iterations).</p>
<p>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 project as far as natural changes from the baseline scenario can be</p>	<p>A description of the existing environment is provided within each technical chapter.</p>

Required Information (EIA Regulations)	Relevant Reference within this EIA Report
<p>assessed with reasonable effort on the basis of the availability of relevant information and scientific knowledge.</p>	<p>Evolution of the site in the absence of the Proposed Development (the “do-nothing scenario”) is addressed in Chapter 2 (Site Selection and Design Iterations).</p>
<p>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.</p>	<p>The receptors with the potential to be significantly affected by the Proposed Development are detailed within each of the technical chapters.</p> <p>Effects on population and human health have been scoped in and assessed in relation to visual impacts, socio-economic, recreation, tourism, traffic, noise and shadow flicker.</p> <p>Biodiversity is covered in ecology and ornithology chapters.</p> <p>Material assets are addressed through the assessment of cultural heritage effects and other chapters as appropriate.</p> <p>Effects on climate change and greenhouse gas emissions are addressed in Chapter 16 (Carbon Calculator).</p>
<p>5. A description of the likely significant effects of the development on the environment resulting from, inter alia:</p> <ul style="list-style-type: none"> <li>(a) the construction and existence of the development, including, where relevant, demolition works;</li> <li>(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;</li> <li>(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;</li> <li>(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);</li> <li>(e) the cumulation of effects with other existing and/or approved development, taking into account</li> </ul>	<p>The predicted potential significant effects arising from the construction, operation and decommissioning of the Proposed Development (both alone and cumulatively with other existing/approved development) have been reported, the measures required to mitigate these, and the significant residual effects, in each of the technical chapters of the EIA Report.</p> <p>Effects have been predicted in relation to each of the construction, operational and decommissioning phases of the Proposed Development, including the nature of these effects and their duration.</p> <p>The overall approach and methods used in the assessment of environmental impacts are discussed in Section 4.7 of this EIA Report. Prediction methods are</p>

Required Information (EIA Regulations)	Relevant Reference within this EIA Report
<p>any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;</p> <p>(f) the impact of the development on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the development to climate change;</p> <p>(g) the technologies and the substances used.</p> <p>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. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the development including in particular those established under Council Directive 92/43/EEC3 and Directive 2009/147/EC.</p>	discussed in detail within each relevant technical chapter of the EIA Report.
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 compiling the required information and the main uncertainties involved.	An overview of the methodology of the assessment is provided within Chapter 4 (Approach to EIA), while the individual technical chapters provide details of each technical assessment.
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 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	The overall approach to mitigation is discussed in Section 4.8 of this EIA Report. Specific mitigation measures are reported in each relevant technical section of the EIA Report and in the schedule of committed mitigation measures presented in Chapter 17 (Schedule of Environmental Commitments).
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. Relevant information available and obtained through risk	Major accidents and/or disasters have been scoped in or out of the EIA as per <b>Appendix 4.6</b> . Where they have been scoped into the EIA cross-references to the relevant sections of the EIA Report are provided in Appendix 4.6.

Required Information (EIA Regulations)	Relevant Reference within this EIA Report
<p>assessments pursuant to legislation of the European Union such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.</p>	
<p>9. A non-technical summary of the information provided under points 1 to 8.</p>	<p>A Non-Technical Summary (NTS) of this EIA Report is presented as a stand-alone document.</p>
<p>10. A reference list detailing the sources used for the descriptions and assessments included in the EIA report.</p>	<p>References are provided at the end of each chapter of the EIA Report.</p>

## 4.3 Legal Framework for the EIA Report

### ***Screening***

- 4.3.1 Screening is the process by which it is determined whether or not an EIA should be conducted for the Proposed Development.
- 4.3.2 The Proposed Development is a Schedule 2 development. Schedule 3 of the EIA Regulations sets out the criteria that should be considered in determining whether a Schedule 2 development is likely to have significant environmental effects and hence require a formal EIA. The Applicant acknowledges that the Proposed Development is likely to have significant environmental effects and has therefore voluntarily undertaken an EIA. The Applicant has not formally screened the Proposed Development.

### ***Scoping***

- 4.3.3 The EIA scoping process is undertaken to identify the potentially significant environmental impacts that should be considered when assessing the potential effects of the Proposed Development. An EIA Scoping Opinion may be obtained from the planning authority (in the case of the Proposed Development the Scottish Government's Energy and Consents Unit) which would set out the matters that should be considered through the EIA. In reaching its EIA Scoping Opinion, the ECU consults statutory and non-statutory stakeholders for their respective opinions regarding EIA scope.
- 4.3.4 An EIA Scoping Opinion was requested from the ECU in July 2017 through the submission of an EIA Scoping Report (refer to **Appendix 4.1**), as prepared by the EIA Project Team. This EIA Scoping Report contained details of the site baseline and the Section 36 Proposed Development. It also proposed which environmental impacts would be assessed in the EIA, and the assessment methodologies that would be used. The EIA Scoping Report was updated with a revised, reduced layout in February 2018 (refer to **Appendix 4.2**).
- 4.3.5 The ECU consulted with a variety of statutory and non-statutory consultees before providing an EIA Scoping Opinion in April 2018 (refer to **Appendix 4.3**). This information has informed the design of the Proposed Development and the EIA.

### **Gatecheck 1**

- 4.3.6 Although not a legal requirement ECU offers applicants the opportunity to discuss the requirements outlined in the EIA Scoping Opinion through their Gatecheck process. The Applicant submitted a Gatecheck Report (refer to **Appendix 4.4**) in October 2018 which listed the points made by the ECU and the Scoping Opinion consultees and stated how the Applicant proposes to address the points within the design and/or the EIA Report. It also stated any points raised in the EIA Scoping Opinion which the Applicant does not propose to address, namely provision of detailed borrow pit drawings and an air quality assessment (refer to **Appendix 4.4** for further details).
- 4.3.7 This Gatecheck Report was circulated by the ECU to the consultees and the responses received to the Gatecheck Report can be found in **Appendix 4.5**.

## **4.4 The EIA Process**

- 4.4.1 The EIA process is defined under Regulation 4(1) of the EIA Regulations. In summary, it is the systematic process of compiling, assessing and presenting all of the likely significant environmental effects of a proposed development for consultation with stakeholders, and examination by the decision-maker. The assessment is designed to inform the decision-making process by way of setting out the likely environmental profile of a project. Identification of potentially significant adverse environmental effects then leads to the design and incorporation of appropriate mitigation measures into both the design of the scheme and the way in which it is constructed.
- 4.4.2 Throughout the assessment, a distinction has been made between the term 'impact' and 'effect'. The EIA Regulations refer to the requirement to describe the "likely significant effects on the environment". An impact is defined as the likely change to the characteristics/nature of the receiving environment as a result of the Proposed Development (e.g. noise from turbines), whereas the 'effect' relates to the significance of the impact (e.g. a significant residual noise effect on residential properties). These terms have been adopted throughout this EIA to present a consistent approach to the assessment and evaluation of effects and their significance.
- 4.4.3 The exception to this is the Landscape and Visual Impact Assessment which classifies the level of change to the receiving environment as the "magnitude of change" in line with the recommendations of the Guidelines for the Landscape and Visual Impact Assessment (V3) (Landscape Institute, 2013). However, this terminology should be considered interchangeable with "magnitude of impact".
- 4.4.4 The main steps in the EIA assessment process for the Proposed Development have been:
- Baseline surveys (where appropriate and where possible) to provide information on the existing environmental character of the proposed site and the surrounding area.
  - Consideration given to the possible interactions between the Proposed Development and the existing and predicted future site conditions. These interactions or effects are assessed using stated criteria based on accepted guidance and best practice.
  - Using the outline design parameters for the Proposed Development, prediction of the likely environmental effects, including direct effects and any indirect, secondary, short, medium and long-term, permanent and temporary, positive and negative effects.
  - Identification of mitigation measures designed to avoid, prevent or reduce or, if possible, offset adverse effects as well as enhancement measures that could result in beneficial effects.
  - Assessment of alterations to the design and the reassessment of previously proposed mitigation to establish suitable mitigation for the Proposed Development.
  - Assessment of the significance of any residual effects after mitigation, in relation to the sensitivity of the feature impacted upon and the magnitude of the effect predicted, in line with the methodology identified below (refer to Section 4.7).

- Identification of any uncertainties inherent in the methods used, the predictions made, and the conclusions drawn during the course and the assessment process.
  - Reporting of the results of the EIA in this EIA Report.
- 4.4.5 The EIA process is an iterative process where its findings have informed the design evolution of the project.

## 4.5 Scope of the EIA

### ***Technical Scope***

- 4.5.1 The technical scope of the assessment will cover all the matters aforementioned in **Table 4.1**, with the following exceptions relating to technical topics which were scoped out of the EIA, with agreement from ECU.
- 4.5.2 No significant health and safety effects have been identified with respect to construction and operation of the Proposed Development, which would not be appropriately mitigated through good practice in construction and adherence to relevant legislation and guidance, as noted in Sections 3.4 and 3.5 of this EIA Report. Infrastructure including roads and properties have been appropriately buffered and are sufficiently separated from the proposed turbine locations to limit any potential health and safety concerns. Therefore, further assessment of health and safety effects has been scoped out of the EIA.
- 4.5.3 The Proposed Development is not considered likely to cause any significant effects to air quality during operation, therefore assessment of effects on air quality during the operational phase has been scoped out of the EIA.
- 4.5.4 The distance between the entrance to the site and the closest residential receptor is approximately 250 m, therefore under the Institute of Air Quality Management (IAQM) guidance on the Assessment of Dust from Demolition and Construction (2014), the sensitivity of the area to dust soiling would have a maximum of medium and for human health would be low. The Applicant will implement the good-practice measures and site-specific measures outlined in the IAQM guidance to minimise these identified risks such that the impact of dust is expected to be negligible and therefore not significant. These will be detailed in the Construction and Decommissioning Environmental Management Plan (CEMP). Assessment of effects on air quality during construction has therefore been scoped out of the EIA (refer to Appendix 4.4).
- 4.5.5 All other technical topic areas identified in **Table 4.1** have been assessed as part of the EIA process and are reported in the relevant sections of this EIA Report.
- 4.5.6 Each issue has been considered to the appropriate level of detail in the EIA Report, using the information collated through surveys, from the Scoping Opinion received from ECU (Appendix 4.3) and from ongoing consultation with consultees. For each impact the baseline condition has been described, with the receptor sensitivity identified. The potential effects have been predicted and assessed for their significance. Where possible and applicable, mitigation measures have been identified and any potential residual environmental effects assessed.

### ***Spatial Scope***

- 4.5.7 The spatial scope of the EIA, in other words the geographical coverage of the assessment undertaken, has taken account of a number of factors, in particular:
- the extent of the Proposed Development (refer to **Figure 1.2**);
  - the nature of the baseline environment, sensitive receptors and the likely impacts that could arise; and
  - the distance over which predicted effects are likely to remain significant and in particular the existence of pathways which could result in the transfer of effects to a wider geographical area than the extent of proposed physical works.

### ***Temporal Scope***

- 4.5.8 The baseline years used for the assessment of environmental effects is 2016-2019, as these are the years in which the assessment work was undertaken.
- 4.5.9 For the purposes of the EIA, construction is assumed to commence in 2022 / 2023. The proposed operational life for the Proposed Development is 30 years, after which time it will be decommissioned.
- 4.5.10 For construction effects, the assessment also takes into account the time of day that works are likely to be undertaken, for example if any night time working is required to minimise disruption to road users.

## **4.6 Consultation**

### ***Consultees***

- 4.6.1 Consultation remains a critical component of the EIA process and is a legal requirement under the EIA Regulations. In order to inform the EIA, there has been ongoing consultation with statutory and non-statutory consultees, engagement through the EIA Scoping and the ECU Gatecheck 1 processes and subsequent discussions, correspondence and meetings. Full details of these are provided within each technical chapter.

### ***Public***

- 4.6.2 The Applicant has consulted widely with the general public on the Proposed Development, including mail-drops, public exhibitions and attendance at community council meetings. Full details of all the public consultation that has been undertaken can be found within the Pre-Application Consultation Report.

## **4.7 Assessment of Effects**

- 4.7.1 Within the EIA Report, the assessment of effects for each environmental topic takes into account the environmental impacts of both the construction/decommissioning and operational phases of the Proposed Development and the likely environmental impacts that would occur should the Proposed Development not be consented (the do-nothing scenario).
- 4.7.2 Should the Proposed Development as described in Chapter 3 (Proposed Development) not be consented (the “do-nothing scenario”), it is anticipated that the Proposed Development site will not alter from the current baseline described in Chapter 2 (Design Iterations) and in Chapters 6-15.
- 4.7.3 In order to determine whether or not the potential effects of the Proposed Development are likely to be ‘significant’ a number of criteria are used. The significance criteria vary between topics but generally take into account:
  - international, national and local designations or standards;
  - relationship with planning policy;
  - sensitivity of the receiving environment;
  - magnitude of impact;
  - reversibility and duration of the effect; and
  - inter-relationship between effects.
- 4.7.4 Effects that are likely to be significant, prior to mitigation, are identified within the EIA Report. The significance attributed to the resultant effect is informed by professional judgement, as to the sensitivity of the affected receptor(s) and the nature and magnitude of the predicted changes/impacts. For example, a major adverse change/impact on a feature or site of low importance will have an effect of lesser significance than the same impact on a feature or site of high importance. **Table 4.2** below is used as a guide to the relationship between the sensitivity of

the identified receptor and the anticipated magnitude of an impact/change. Professional judgement is however equally important in establishing the suitability of this guiding ‘formula’ to the assessment of the significance of each individual effect.

**Table 4.2 - Guide to the Inter-Relationship between Magnitude of Impact and Sensitivity of Receptor**

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

- 4.7.5 The following terms are used in the EIA Report, unless otherwise stated, to determine the level of effects predicted to occur:
- major beneficial or adverse effect – where the Proposed Development would result in a significant improvement or, in respect of an adverse effect, deterioration, to the existing environment;
  - moderate beneficial or adverse effect – where the Proposed Development would result in a noticeable improvement or, in respect of adverse effect, deterioration, to the existing environment;
  - minor beneficial or adverse effect – where the Proposed Development would result in a small improvement or, in respect of adverse effect, deterioration, to the existing environment; and
  - negligible – where the Proposed Development would result in no discernible improvement (or deterioration) to the existing environment.
- 4.7.6 Using professional judgement and with reference to the Guidelines for Environmental Impact Assessment (IEEMA, 2004), the majority of the assessments within this EIA Report consider effects of moderate and greater significance to be significant, while those of minor significance and less to be non-significant. If there are deviations these will be clearly stated within this individual technical chapters.
- 4.7.7 It should be noted that the assessment of effects on ecological and ornithological receptors follows the CIEEM guidance at assess the significance of effects on receptors at geographical areas rather than following the matrix in Table 4.2.
- 4.7.8 Summary tables that outline the predicted effects associated with an environmental issue, the appropriate mitigation measures required to address these effects and subsequent overall residual effects are provided at the end of each technical chapter of the EIA Report. Distinction has also been made between direct and indirect, short and long term, permanent and temporary, beneficial and adverse effects.
- ### Cumulative Effects
- 4.7.9 Part 5 of Schedule 4 of The EIA Regulations states that EIA Reports should include an assessment of “*the cumulation of effects with other existing and/or approved development, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources*”. Where appropriate, the description of the likely significant effects on the factors specified in regulation 4(3) of the EIA Regulations must cover the

cumulative effects of the proposed development. This would include any cumulative effects on population and human health, biodiversity, protected species and habitats, land, soil, water, air and climate; and material assets, cultural heritage and the landscape.

- 4.7.10 Cumulative effects are those which result from incremental changes caused by past, present or reasonably foreseeable future actions resulting from the introduction of the Proposed Development. These cumulative effects cover the combined effects of individual impacts from the Proposed Development and combined impacts of several developments, as noted within the guidance provided by SNH in the document "Assessing the Cumulative Impact of Onshore Wind Energy Developments" (2012). Developments considered in addition to the Proposed Development are existing, approved and proposed developments (those awaiting determination within the planning process), covering all types of developments, including other wind farms (SNH, 2012).

## 4.8 Mitigation Measures

- 4.8.1 The EIA Regulations require the EIA to present a description of the measures proposed to avoid, reduce or prevent and, if possible, offset significant adverse effects. Wherever reasonably practicable, mitigation measures are proposed for each significant environmental effect predicted, and can take various forms including:
- changes to the scheme design;
  - physical measures applied on site; and
  - measures to control particular aspects of the construction or operation of the scheme.
- 4.8.2 Where none of the above are deemed practicable, offsetting measures will be considered where feasible.
- 4.8.3 Mitigation measures are presented as commitments in order to ensure a level of certainty as to the environmental effects of the Proposed Development. There are various ways in which mitigation measures can be secured, such as through the use of planning conditions.
- 4.8.4 A schedule of all of the mitigation measures proposed in this EIA Report is presented in Chapter 17.

### ***Enhancement***

- 4.8.5 Similar to the reporting of mitigation measures, where opportunities for environmental enhancement are proposed, these have been included in the summary of environmental commitments reported at the end of each technical chapter and in Chapter 17.

## 4.9 Residual Effects

- 4.9.1 **Chapter 18** summarises the residual effects resulting from the Proposed Development following implementation of the proposed mitigation measures.

## 4.10 Assumptions, Limitations and Uncertainty

- 4.10.1 The EIA process is designed to enable informed decision-making based on the best available information about the environmental implications of a proposed development at the time of writing. Furthermore, the reasoned conclusion of the Scottish Ministers on the likely significant effects on the environment must have regard to current knowledge and methods of assessment<sup>1</sup>. However, there will always be some uncertainty inherent in the scale and nature of the predicted environmental effects as a result of the level of detailed information available at the time of assessment, and/or the limitations of the prediction processes.
- 4.10.2 A number of assumptions were made during the EIA process and are described below:
- The developments included within the cumulative assessment are based on those identified prior to 31 January 2019.

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<sup>1</sup> Regulation 21(4) of the EIA Regulations

- The principal land uses adjacent to the site remain unchanged during the course of the Proposed Development's lifetime.
  - Information provided by third parties, including publicly available information and databases are correct at the time of submission.
- 4.10.3 Specific assumptions may also be made with regards to the individual technical disciplines, which are described within each chapter.
- 4.10.4 The main limitation has been that while baseline conditions have been assumed to be accurate at the time of surveying, due to the dynamic nature of the environment, these conditions may change during site preparation, construction and operation.
- 4.10.5 There is also the potential for a degree of uncertainty as certain aspects of the Proposed Development may be subject to change until a detailed design has been finalised. This uncertainty can come in the forms of:
- turbine selection;
  - foundation and infrastructure design; and
  - micro-siting of the turbines which may change due to investigation findings or implementation of mitigation measures.
- 4.10.6 The assessment has followed a Rochdale envelope approach to ensure that worst-case scenarios have been considered and these precautionary assumptions mean that in reality effects are likely to be less than predicted.
- 4.10.7 Any limitations to the EIA are summarised in each technical chapter, where relevant, together with the means proposed to mitigate these.
- 4.10.8 Figures for land take and habitat loss should be considered as approximate and could vary slightly once the detailed design is developed.
- 4.10.9 Information on the Proposed Development construction has been developed by the project team based on professional judgement and outline design works, on the most likely methods of construction, plant, access routes and working areas etc. for the purposes of the EIA. The final choice on construction methods will rest with the contractors and may differ from those used in this assessment, and any such uncertainty is stated in Section 3.4 of the EIA Report.

## **4.11 Summary**

- 4.11.1 This chapter has detailed the methodology used to conduct the EIA and produce the EIA Report for the Proposed Development. An overview of the relevant legislation and guidance documents has been provided with the main legislative document being The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended). Following this, the EIA process and the scope of the assessment are detailed.

## 4.12 References

- Institute of Environmental Management and Assessment (2006). *Guidelines for Environmental Impact Assessment*.
- Landscape Institute (2013). *Guidelines for the Landscape and Visual Impact Assessment – Version 3*. Landscape Institute, IEMA.
- Scottish Government (2014). *Scottish Planning Policy*. Available at:  
<http://www.gov.scot/Topics/Built-Environment/planning/Policy>
- Scottish Government (2017a). *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017*. Available at: <http://www.legislation.gov.uk/ssi/2017/101/contents/made>
- Scottish Government (2017b). *The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 (as amended), Planning Circular 1/2017*. Available at:  
<https://beta.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/pages/16/>
- Scottish Government (2017c). *Planning Advice Note (PAN) 1/2013 Environmental Impact Assessment*. Available at: <http://www.gov.scot/Resource/0052/00521028.pdf>
- Scottish Natural Heritage (2012). *Assessing the Cumulative Impact of Onshore Wind Energy Developments*. Available at: <https://www.nature.scot/sites/default/files/2017-09/A675503%20-Assessing%20the%20cumulative%20impact%20of%20onshore%20wind%20energy%20developments.pdf>
- Scottish Natural Heritage (2018). *A Handbook on Environmental Impact Assessment – Version 5*. Available at: <https://www.nature.scot/sites/default/files/2017-06/A1198363.pdf>