

Chapter 4 Approach to EIA

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4 Approach to EIA

4.1 Introduction

- 4.1.1 This chapter of the EIA Report sets out the approach taken to produce the Environmental Impact Assessment (EIA) for the Proposed Development.
- 4.1.2 The EIA process aims to assist Scottish Ministers in their determination of the application by identifying where significant environmental effects are predicted. This assessment has been completed in conjunction with consultation with statutory consultees, interested parties and the general public.
- 4.1.3 The structure of the EIA Report follows the requirements of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and relevant good practice guidance. The EIA Report comprises a Non-Technical Summary (NTS), the main EIA Report text, accompanying figures and technical appendices.
- 4.1.4 This chapter is structured as follows:
- overview of the relevant legislation, policy and guidance;
 - an outline of the EIA process utilised;
 - the scope of the assessment completed;
 - details of the assessment of potential effects;
 - the consultation undertaken; and
 - the assumptions, likely limitations and uncertainty.
- 4.1.5 This chapter is supported by the following appendices:
- **Technical Appendix 4.1** - Torfichen Wind Farm Scoping Report
 - **Technical Appendix 4.2** - EIA Scoping Opinion
 - **Technical Appendix 4.3** - EIA Gatecheck Report
 - **Technical Appendix 4.4** - Further Consultation

4.2 Legislation, Policy and Guidelines

- 4.2.1 During the EIA, a number of legislative and best practice documents have informed the process.
- 4.2.2 The European Commission Directive 2011/92/EU, amended in 2014 by Directive 2014/52/EU, requires that certain projects, both public and private, must be assessed with regards to their impacts on the environment. This is currently implemented in respect of Section 36 consents by the

Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 ('the EIA Regulations').

- 4.2.3 The EIA process and structure of the EIA Report follow the criteria listed within the EIA Regulations.
- 4.2.4 The Proposed Development is considered to fall within Schedule 2 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. The Applicant has voluntarily accepted that an EIA is required to be undertaken. The information provided within this EIA Report has been prepared in accordance with the Directive and the EIA Regulations.
- 4.2.5 Paragraph 3(2)(a) of Schedule 9 of the Electricity Act requires the Scottish Ministers when considering applications under Section 36 to have regard to the matters mentioned in 3(1)(a) (i.e. the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest.) The information required to enable the Scottish Ministers to have regard to such matters is included in the EIA Report.
- 4.2.6 In addition to the above, the regulations and best practice of core relevance to the EIA process and which have been taken into account in undertaking this assessment are as follows:
 - National Planning Framework 4 (NPF4) (Scottish Government, 2023);
 - Planning Advice Note 1/2013: Environmental Impact Assessment (Scottish Government, 2013);
 - Planning Circular 1/2017: Environmental Impact Assessment Regulations (Scottish Government, 2017);
 - Guidelines for Environmental Impact Assessment, Institute of Environmental Management and Assessment (IEMA, 2006);
 - Good Practice During Wind Farm Construction 4th Edition (Scottish Government et al., 2019);
 - Assessing the Cumulative Impact of Onshore Wind Energy Developments (NatureScot, 2021);
 - Siting and Designing Wind Farms in the Landscape Version 3a (SNH, 2017); and
 - Environmental Impact Assessment Handbook Version 5 (SNH, 2018).

- 4.2.7 Additional topic-specific legislation, policy and guidance documents are noted within the technical assessment chapters of this EIA Report (**Chapters 6 to 14**).

4.3 Legal Framework for the EIA

Overall EIA Process

- 4.3.1 For the EIA process to be as effective as possible it is approached as an iterative process throughout the design stage, rather than a single assessment performed once the design is finalised. When used as an iterative process, the findings of the EIA can be incorporated within the design of the proposal to provide an optimum design with regard to the Applicant's requirements and the environment.
- 4.3.2 The findings of the EIA are presented in this EIA Report, which has been prepared in accordance with the EIA Regulations.
- 4.3.3 The broad approach which has been followed in undertaking the EIA is presented in this chapter and an overview of the methodology adopted for each technical study is provided within the respective technical chapters (**Chapters 6 to 14**).

Screening and Scoping

- 4.3.4 Screening is the process by which it is determined whether or not an EIA should be conducted for a proposed development. As set out above, the Proposed Development falls within Schedule 2 of the EIA Regulations. Schedule 3 of the EIA Regulations sets out 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.
- 4.3.5 The Applicant recognised that the Proposed Development would have the potential to have significant environmental effects, and therefore, an EIA would be required. Therefore, rather than undertaking a formal EIA screening process, the Applicant voluntarily elected to undertake an EIA.
- 4.3.6 The EIA scoping process is undertaken to identify the potentially significant environmental issues which should be considered when assessing the potential effects of the Proposed Development, and an EIA Scoping Opinion may be obtained from the Energy Consents Unit (ECU).
- 4.3.7 An EIA Scoping Opinion was requested from the ECU in January 2023 through the submission of an EIA Scoping Report (**refer to Technical Appendix 4.1**). The EIA Scoping Report contained details of the site baseline and the



Proposed Development. It also proposed which environmental impacts would be assessed in the EIA, and the assessment methodologies that would be used.

- 4.3.8 The ECU consulted with a variety of statutory and non-statutory consultees before providing an EIA Scoping Opinion in March 2023. This information has informed the Proposed Development's EIA. This EIA Report is based on the Scoping Opinion received as included in **Technical Appendix 4.2**.
- 4.3.9 Direct consultation has also been undertaken with consultees, to confirm and agree the approach and scope of technical surveys and assessments on a topic-by-topic basis. Details of relevant consultations are included in each technical chapter as appropriate.
- 4.3.10 A summary of how the Scoping responses received would be addressed in this EIA Report was provided to the ECU within an EIA Gatecheck Report in July 2023 (refer to **Technical Appendix 4.3**).

4.4 The EIA Process

- 4.4.1 EIA is the systematic process of compiling, assessing, presenting and mitigating all the significant environmental effects of a proposed development. 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 and operated.
- 4.4.2 The main steps in the EIA assessment process for the Proposed Development have been:
 - Baseline surveys (where appropriate) to provide information on the existing environmental character of the Proposed Development site and the surrounding area.
 - Consideration of the possible interactions between the Proposed Development and the existing and predicted future site conditions. These interactions or effects are assessed using criteria based on accepted guidance and best practice.
 - Using the outline design parameters for the Proposed Development, prediction of the environmental effects, including direct, indirect, cumulative, short, medium and long-term, permanent and temporary, beneficial and adverse effects.

- Identification of mitigation measures designed to avoid, reduce or offset adverse effects and enhance beneficial effects.
- 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 impact predicted, in line with the methodology identified below.
- Identification of any uncertainties inherent in the methods used, the predictions made, and the conclusions drawn during the course of the assessment process.
- Reporting of the results of the EIA in this EIA Report.

Assessment of Effects

- 4.4.3 Throughout the assessment, a distinction has been made between the term ‘impact’ and ‘effect’. The EIA Regulations refer to the requirement to report the significance of ‘effects’. An impact has been defined as the physical change of the characteristics of the receiving environment as a result of the Proposed Development (e.g. shadow flicker from turbines), whereas an effect refers to the significance of this impact (e.g. a significant residual shadow flicker effect on residential properties). These terms have been adopted throughout this EIA Report to present a consistent approach to the assessment and evaluation of effects and their significance.
- 4.4.4 In some instances, particularly in relation to the Landscape and Visual Impact Assessment (LVIA), the term ‘change’ is used interchangeably with ‘impact’. The LVIA classifies the level of physical and perceptual change to the receiving environment as the ‘magnitude of change’ in line with the recommendations of the Guidelines for Landscape and Visual Impact Assessment third edition (GLVIA3) (Landscape Institute, 2013). This terminology should be considered interchangeable with ‘magnitude of impact’ and should be regarded as having the same meaning.
- 4.4.5 Within this EIA Report, the assessment of effects for each environmental topic takes into account the environmental impacts of the construction, operational and decommissioning phases of the Proposed Development; and how the environmental baseline is expected to evolve in the absence of the Proposed Development (the do-nothing scenario).
- 4.4.6 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. These significance criteria vary between topics but generally include:
- 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.

4.4.7 Effects that are considered to be significant are identified within the EIA Report. The significance of the resultant effect is informed by professional judgement as to the importance or sensitivity of the affected receptor(s) and the nature and magnitude of the predicted changes. For example, a high magnitude of impact on a low sensitivity receptor will have an effect of lesser significance than the same impact on a high sensitivity receptor. **Table 4.1** below is used as a guide to demonstrate the relationship between the sensitivity of the identified receptor and the anticipated magnitude of an impact. Professional judgement is, however, equally important in verifying the suitability of this guiding ‘formula’ to the assessment of the significance of each individual effect. Therefore, the table below may change between technical assessments, as is outlined in the respective technical chapters of the EIA Report (**Chapters 6 to 14**).

Table 4.1 Guid 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	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

4.4.8 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 major improvement (or deterioration) to the existing environment;

- **moderate beneficial or adverse effect** - where the Proposed Development would result in a moderate improvement (or deterioration) to the existing environment;
 - **minor beneficial or adverse effect** - where the Proposed Development would result in a minor improvement (or deterioration) to the existing environment; and
 - **negligible** - where the Proposed Development would result in no discernible improvement (or deterioration) to the existing environment.
- 4.4.9 Using professional judgement and with reference to relevant guidance, the majority of the assessments within this EIA Report consider effects of moderate or greater significance to be significant, with those of minor significance or less to be non-significant. If there are deviations from this these will be clearly stated within the individual technical chapters.
- 4.4.10 Summary tables are provided at the end of each technical chapter of the EIA Report and within **Chapter 15 and 16** that outline:
- the predicted effects associated with an environmental issue;
 - the appropriate mitigation measures required to address these effects; and
 - the subsequent overall residual effects.
- 4.4.11 Distinction has also been made between direct and indirect, short and long term, permanent and temporary effects.

Cumulative Effects

- 4.4.12 Part 5 of Schedule 4 of The EIA Regulations sets out the matters that require to be incorporated within EIA Reports. The EIA Regulations state 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*”.
- 4.4.13 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 effect of individual impacts from the Proposed Development and combined impacts of several developments, as noted within the guidance document “Assessing the Cumulative Impact of Onshore Wind Energy Developments” (NatureScot, 2021). Developments considered in

addition to the Proposed Development are existing and other proposals, covering all major developments, including other wind farms.

- 4.4.14 Within this EIA Report, cumulative effects for each technical discipline are covered as required on a chapter by chapter basis with a summary of overall effects included in the residual effects in Chapter 16.
- 4.4.15 The key cumulative wind farm developments considered are shown within **Figure 6.28**.

4.5 Scope of the EIA

Technical Scope

- 4.5.1 The technical scope of the EIA covers all the impacts mentioned in **Table 4.2** below, with the following exceptions relating to technical topics where these have been scoped out of the EIA.

Forestry

- 4.5.2 There is limited tree coverage within the Proposed Development site. Measures to avoid and mitigate potential impacts upon the small pockets of woodland have been embedded in the design process of the Proposed Development through the siting of turbines and associated infrastructure outwith forested areas where possible.
- 4.5.3 There is one proposed turbine located within a small area of woodland to the south-west. All other turbines and associated infrastructure have been sited outwith the forested areas. The minimal anticipated impact on forestry means that there is no requirement for detailed survey and assessment. Potential for impacts on woodland is discussed further in **Chapter 8: Ecology** and **Chapter 14: Aviation, Radar and Other Assessments**.

Population and Human Health

- 4.5.4 Effects on population and human health are assessed under the respective technical studies and reported within the following technical chapters: landscape and visual impacts (**Chapter 6**), impacts on private water supplies (**Chapter 10**), noise (**Chapter 12**), socio-economics, recreation and tourism (**Chapter 13**), and shadow flicker (**Chapter 14**). Mitigation measures to ensure human safety will be implemented through a Construction Environmental Management Plan (CEMP) and an Access Management Plan. A dedicated, standalone assessment of population and human health has therefore been scoped out of the EIA.

Major Accidents and Disasters

4.5.5 Given the nature and location of the Proposed Development, the risk of major accidents and disasters is considered to be extremely low. Design risk has been considered during the design phase to ensure risks are appropriately assessed and mitigated to a level deemed as low as reasonably practicable. During the operational phase of the Proposed Development, routine maintenance inspections will be completed in order to ensure the safe and compliant operation of all built infrastructure. A Peat Landslide Hazard and Risk Assessment (PLHRA) has been undertaken and is reported as **Technical Appendix 10.1**. A standalone assessment of the risk of major accidents and/or disasters has therefore been scoped out of the EIA.

Air Quality

4.5.6 The air quality at the site is good due to the rural location, with few pollution sources. Construction-phase vehicle exhaust emissions and dust that may be generated by development activities are unlikely to result in significant effects, given the scale and nature of construction activities and the distance between construction and the nearest residential receptors. An operational wind farm produces no notable atmospheric emissions, and the operation of the Proposed Development would therefore have no discernible adverse effects on local or national air quality. Relevant mitigation measures for air quality and pollution control, including dust and vehicle emissions, will be captured within the site-specific CEMP. An assessment of air quality has therefore been scoped out of the EIA.

Utilities

4.5.7 The Penicuik to Boon National Grid Gas pipeline intersects the north-east of the Proposed Development boundary. Any further underground services, including water, electrical and gas infrastructure, will be identified through a standard pre-construction utilities survey so as to avoid disruption. Further assessment of effects on utilities has therefore been scoped out the EIA.

Spatial Scope

4.5.8 The spatial scope of the EIA, i.e., the geographical coverage of the assessment undertaken, has taken account of a number of factors, in particular:

- the extent of the Proposed Development, as defined by the planning application boundary (refer to **Figure 1.1**);

- 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 the proposed physical works.

Temporal Scope

- 4.5.9 The baseline years used for the assessment of environmental effects are 2020 to 2023, as this is the period in which the baseline environmental surveys were undertaken.
- 4.5.10 For the purposes of the EIA, if approved, construction is expected to last for approximately 24 months. The proposed operational life for the Proposed Development is 50 years, after which time it will be decommissioned.
- 4.5.11 For construction effects, the assessment 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. Proposed works are to be undertaken between 07:00 to 19:00 Monday to Friday and 07:00 to 13:00 on Saturdays, unless agreed otherwise or in the case of emergency works.

4.6 EIA Report

- 4.6.1 Schedule 4 of the EIA Regulations specifies the “information for inclusion in Environmental Impact Assessment Reports”. **Table 4.2** below details where the information has been provided within the EIA Report.

Table 4.2: Summary of Residual Effects

Required Information (Schedule 4 of the EIA Regulations)	Relevant Reference within this EIA Report
<p>1. A description of the development, including in particular:</p> <ol style="list-style-type: none"> 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; 	<p>The Proposed Development is described in Chapter 3: Project Description, including information on anticipated construction methods and the operation of the Proposed Development.</p> <p>The land use requirements during construction and operational phases are also described in Chapter 3.</p>

Required Information (Schedule 4 of the EIA Regulations)	Relevant Reference within this EIA Report
<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>	Expected residues and emissions are addressed, where relevant, in the appropriate technical chapters of this EIA Report.
<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>	Chapter 2: Site Selection and Design Iteration of the EIA Report describes the design iteration process and details how the Proposed Development was chosen, and the environmental constraints taken into consideration in determining the final layout which is the subject of the Application.
<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 assessed with reasonable effort on the basis of the availability of relevant information and scientific knowledge.</p>	A description of the existing environment and how it would be expected to evolve in the absence of the Proposed Development is provided within each technical chapter.
<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 potentially affected by the Proposed Development are detailed within each of the technical chapters.</p> <p>Effects of population and human health are assessed in relation to visual impacts (Chapter 6), socio-economics, recreation and tourism (Chapter 13), traffic and transport (Chapter 11), acoustics (Chapter 12) and shadow flicker (Chapter 14).</p>

Required Information (Schedule 4 of the EIA Regulations)	Relevant Reference within this EIA Report
	<p>Biodiversity is covered in the ecology and ornithology chapters (Chapter 8 and 9).</p> <p>Impacts on soils and water are covered in the geology, hydrology and hydrogeology chapter (Chapter 10).</p> <p>Impacts on air quality have been scoped out of detailed assessment as noted in Paragraph 4.5.5; relevant mitigation measures for air quality are captured in the outline CEMP (Appendix 3.1).</p> <p>Material assets are addressed through the assessment of cultural heritage effects and other chapters as appropriate.</p> <p>Landscape effects are discussed in Chapter 6.</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"> 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 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; 	<p>The predicted significant effects of the Proposed Development are reported after relevant mitigation measures have been applied to an identified effect, in each of the technical chapters of the EIA Report. Effects have been predicted in relation to both the construction / decommissioning and operational 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 within Chapter 4: Approach to EIA (i.e. this chapter). Prediction methods are discussed in detail within each relevant technical chapter of the EIA Report.</p>

Required Information (Schedule 4 of the EIA Regulations)	Relevant Reference within this EIA Report
<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>h) 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>	
<p>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.</p>	<p>An overview of the methodology of the assessment is provided within Chapter 4 (i.e. this chapter) while the individual technical chapters provide details of each technical assessment (Chapter 6 to 14).</p>
<p>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.</p>	<p>The overall approach to mitigation is discussed within Chapter 4 (i.e. this chapter). Specific mitigation measures are reported in each relevant technical section of the EIA Report and in schedule of committed mitigation measures presented in Chapter 15: Schedule of Environmental Commitments.</p>
<p>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</p>	<p>The predicted significant effects of the Proposed Development are reported after relevant mitigation measures have been applied to an identified impact, in each of the</p>

Required Information (Schedule 4 of the EIA Regulations)	Relevant Reference within this EIA Report
<p>concerned. Relevant information available and obtained through risk 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>technical chapters of the EIA Report.</p> <p>An assessment of major accidents and/or disasters has been scoped out as detailed in paragraph 4.5.4.</p>
<p>9. A non-technical summary of the information provided under points 1 to 8.</p>	<p>A Non-Technical Summary is presented as a standalone 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>

4.7 Consultation

Regulatory Consultation

- 4.7.1 Consultation is a key component of the EIA process. In order to inform the EIA, there has been ongoing consultation with statutory consultees, engagement through correspondence and meetings, as required.
- 4.7.2 Consultation with organisations who were contacted either directly by the Applicant or by the ECU through the formal EIA application process, is described as appropriate in each technical chapter of this EIA Report and included within **Technical Appendix 4.4**.

Public Consultation

- 4.7.3 A standalone Pre-Application Consultation (PAC) Report has been prepared which gives details of the correspondence, online and in-person public consultation and other discussions which have taken place with the communities closest to the Proposed Development site. The PAC Report also details findings of that work and illustrates the ways in which community engagement has helped identify potential issues arising from the emerging

development proposal, and where appropriate, shape the final proposal which is now the subject of application for Section 36 consent.

- 4.7.4 The Applicant is grateful to the local community for their input into the pre-application community engagement process and for their participation in the discussions.

4.8 Consideration of Alternatives

- 4.8.1 Paragraph 5(2)(d) and Schedule 4 of the EIA Regulations requires the consideration of alternatives and an indication of the reasons for selecting the site, except were limited by constraints of commercial confidentiality.
- 4.8.2 The Applicant has an ongoing search for potential onshore wind farm sites. This involves a desk-based assessment utilising secondary data and a Geographical Information System (GIS) to identify constraints at a particular site. Sites that are not deemed suitable at one given time (i.e. ‘the alternatives’) may at a later date be re-assessed, hence, for commercial reasons and in accordance with PAN 1/2013, it is not possible to disclose the names or positions of the alternative sites.
- 4.8.3 The Applicant considered a number of alternative layouts and different scales of turbine for the Proposed Development, to arrive at the design for which consent is sought. A full description of the iterative design process is provided in **Chapter 2** of this EIA Report.

4.9 Assumptions, Limitations & Uncertainty

- 4.9.1 The EIA process is designed to enable informed decision-making based on the best available information about the environmental implications of a proposed development. 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, data reliability or uncertainty, the potential for minor alterations to the Proposed Development following completion of the EIA Report and/or the limitations of the prediction processes.
- 4.9.2 A number of assumptions were made during the EIA process and are detailed below:
- The principal land uses adjacent to the site remain unchanged during the course of the Proposed Development’s lifetime.
 - Current applications for wind energy projects are included within the assessment of cumulative effects for each technical aspect.

- Information provided by third parties (including publicly available information and databases) is correct at time of submission.
- 4.9.3 Specific assumptions may also be made with regards to the individual technical disciplines, which are detailed within each technical chapter.
- 4.9.4 The main limitation to the assessment has been that while the 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.
- 4.9.5 There is also the potential for a degree of necessary flexibility as certain aspects of the Proposed Development may be subject to change until a detailed design has been finalised. The maximum design envelope has been considered to ensure a robust assessment and any design flexibility will not exceed these. This flexibility can come in the forms of:
- turbine selection;
 - foundation and infrastructure design; and
 - micro-siting of the turbines and associated infrastructure which may change due to investigation findings or implementation of mitigation measures.
- 4.9.6 Any limitations to the EIA are summarised in each technical chapter, where relevant, together with the means proposed to mitigate these.
- 4.9.7 Information on the construction of the Proposed Development 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 of optimum construction methods will rest with the Contractor and may differ from those used in this assessment, with any such uncertainty stated in the EIA Report. Any changes to these methods will remain within the maximum design envelope.

4.10 Summary

- 4.10.1 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 have been detailed. General assumptions, limitations and uncertainties are also stated.

4.11 References

European Commission (EC) (2011). Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (Text with EEA relevance). Available at: <http://data.europa.eu/eli/dir/2011/92/oj>

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