



# Chapter 2

## EIA Process and Methodology

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# Chapter 2

## 2 EIA Process and Methodology

### 2.1 Introduction

1. This chapter of the EIA Report sets out the broad approach taken to the Environmental Impact Assessment (EIA) of the Proposed Development.
2. The EIA process assists the Scottish Ministers in their determination of the application by identifying where significant environmental effects are predicted. This assessment has taken account of contributions provided from consultation with statutory consultees, interested parties and the general public.
3. The structure of the EIA Report follows the requirements of Regulations 4, 5 and Schedule 4 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and other relevant good practice guidance.

### 2.2 Legislation, Policy and Guidance

4. During the EIA, several legislative and best practice documents have informed the process. Specific legislation and best practice guidance have also been referenced at the end of each technical chapter.
5. The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (hereinafter referred to as the 'EIA Regulations') provide the legal framework. The Proposed Development meets the Schedule 2, Category (a) criteria of the EIA Regulations, by nature of it being classified as a generating station which requires consent under Section 36 of the Electricity Act 1989. 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. Schedule 4 of the EIA Regulations provides details of the information to be included within the EIA Report.
6. In addition to the above, the following legislation, 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);
  - Guidance on Siting and Designing Wind Farms in the Landscape (Scottish Natural Heritage, 2017);
  - Guidelines for Environmental Impact Assessment, Institute of Environmental Management and Assessment (IEMA, 2004);
  - IEMA's guidance documents on EIA practice including Delivering Proportionate EIA; Environmental Impact Assessment Guide to Shaping Quality Development and Environmental Impact Assessment Guide to Delivering Quality Development;
  - 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).
  - General pre-application and scoping advice for onshore wind farms (Scottish Natural Heritage, 2020)

7. **Table 2.1** below sets out how the information required under Schedule 4 of the EIA Regulations 'Information for inclusion in Environmental Impact Assessment Reports' of the EIA Regulations has been provided in this EIA Report.

Required Information (EIA Regulations)	Where this is addressed within this EIA Report
1. A description of the development, including in particular: <ol style="list-style-type: none"> <li>(a) a description of the location of the development;</li> <li>(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;</li> <li>(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;</li> <li>(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.</li> </ol>	The Proposed Development is described in <b>Chapter 4: Development Description</b> of the EIA Report. This includes a description of construction activities and associated works, and the operational phase including maintenance.  <b>Figures 1.1 and 1.2</b> show the Site location and the Proposed Development layout is illustrated in <b>Figure 4.1</b> .  Expected residues and emissions are addressed, where relevant, in the appropriate technical chapters of the EIA Report ( <b>Chapters 5 to 13</b> ).
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.	<b>Chapter 3: Site Selection and Design</b> of the EIA Report describes why the Proposed Development Site was chosen, along with the approach to the design of the Proposed Development.
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.	A description of the current state of the environment is provided in each technical chapter. Evolution of the Site without the Proposed Development being implemented (the "do-nothing scenario") is provided in <b>Chapter 3: Site Selection and Design</b> .
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.	The receptors likely to be significantly affected by the Proposed Development are provided in each of the technical chapters ( <b>Chapters 5 to 13</b> ). This is informed by the Scoping Opinion and consultation feedback.
5. A description of the likely significant effects of the development on the environment resulting from, inter alia: <ol 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> </ol>	The potential likely significant effects arising from the construction and operation of the Proposed Development, along with the measures required to mitigate these and the predicted significant residual effects are provided in each of the technical chapters of the EIA Report

Required Information (EIA Regulations)	Where this is addressed within this EIA Report
<p>(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;</p> <p>(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);</p> <p>(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> <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 as Union or Member State level which are relevant to the development including in particular those established under <i>Council Directive 92/43/EEC</i> and <i>Directive 2009/147/EC</i>.</p>	<p><b>(Chapters 5 to 13)</b>. This includes detailing the nature and duration of the potential likely significant effects.</p> <p>Cumulative effects are provided in each technical chapter.</p> <p>The overall approach and methods used for the environmental assessment are provided in this chapter (<b>Chapter 2: EIA Process and Methodology</b>). The specific approaches and methods used for each technical assessment are included in the relevant technical chapter of the EIA Report (<b>Chapters 5 to 13</b>).</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>The general approach is described in this chapter (<b>Chapter 2: EIA Process and Methodology</b>). The methods used for each technical assessment are included in the relevant technical chapter of the EIA Report (<b>Chapters 5 to 13</b>).</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 included in <b>Section 2.7</b> of this chapter. Specific mitigation measures are included in each technical chapter of the EIA Report (<b>Chapters 5 to 13</b>) and the committed mitigation measures are detailed in <b>Appendix 14.1 Schedule of Commitments</b></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 concerned.</p>	<p>Scoped out of the EIA. See <b>Appendix 2.1 Scoping Opinion</b></p>
<p>9. A Non-Technical Summary of the information provided under points 1 to 8.</p>	<p>The Non-Technical Summary (NTS) is provided as a stand-alone document.</p>
<p>10. A reference list detailing the sources used for the descriptions and assessments included within the EIA Report.</p>	<p>References are provided at the end of each chapter of the EIA Report.</p>

Table 2.1: Information Required in the EIA Report

## 2.3 EIA Framework and Consultation

### 2.3.1 EIA Screening

- The Proposed Development falls within Schedule 2 of the EIA Regulations. 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.
- A formal screening opinion was not sought from the Scottish Ministers. The Applicant acknowledges that the Proposed Development is likely to have significant environmental effects and has therefore voluntarily undertaken an EIA.

### 2.3.2 EIA Scoping

- An EIA Scoping Report was submitted to the Energy Consents Unit (ECU) in April 2020 to accompany a request to Scottish Ministers to adopt a Scoping Opinion under Regulation 15 of the EIA Regulations. A Meeting was held with the ECU in advance of the scoping submission on 2 March 2020 and a further meeting was held with the ECU, Dumfries and Galloway Council, Scottish Natural Heritage (SNH, now NatureScot) and the Scottish Environment Protection Agency (SEPA) during the scoping consultation on 7 May 2020.
- A Revised Scoping Opinion was received from the ECU on 11 August 2020 containing responses from an earlier scoping opinion and additional scoping responses which were omitted (refer to **Appendix 2.1: Scoping Opinion** for the revised Scoping Opinion). Where relevant, the Scoping Opinion is detailed in the consultation tables contained within **Chapters 5 to 13**, with reference to how the comments have been addressed in the EIA. The list of the organisations consulted and whether they responded is shown in **Table 2.2**.

Required Information (EIA Regulations)	Response Received
British Horse Society	Yes
BT	Yes
Civil Aviation Authority - Airspace	No
Crown Estate Scotland	Yes
Defence Infrastructure Organisation	Yes
District Salmon Fisheries Board – Annan	Yes
District Salmon Fisheries Board – Nith	Yes
Dumfries and Galloway Council	Yes
Fisheries Management Scotland	Yes
Galloway and Southern Ayrshire Biosphere	No
Glasgow Airport	No
Glasgow Prestwick Airport	Yes
Historic Environment Scotland	Yes
Joint Radio Company	Yes
John Muir Trust	No
Marine Scotland	Yes
Mountaineering Scotland	No
NATS Safeguarding	Yes
NatureScot	Yes
RSPB Scotland	Yes
Scottish Environmental Protection Agency	Yes
Scottish Forestry	No
Scottish Rights of Way and Access Society (ScotWays)	Yes



Required Information (EIA Regulations)	Response Received
Scottish Water	Yes
Scottish Wildlife Trust	No
Scottish Wild Land Group (SWLG)	No
South Lanarkshire Council	No
The Coal Authority	Yes
Transport Scotland	Yes
Visit Scotland	No
West of Scotland Archaeology Service	No
Ae Community Council	No
Kirkmichael Community Council	Yes
Auldgirth and District Community Council	No
Closeburn Community Council	No
Johnstone Community Council	No
Kirkmahoe Community Council	No
Tinwald Parish Community Council	No

Table 2.2: Scoping Consultees

12. As part of the ECU Gatecheck Process, a Gatecheck Report has been prepared which also provides detail on how consultee scoping responses have been addressed in the EIA Report and through the design of the Proposed Development (refer to **Appendix 2.2 Gatecheck Report**).

### 2.3.3 Further Consultation

13. Further consultation has taken place with statutory consultees to discuss and agree the methodologies for specific topics in more detail. Details are included in each technical chapter as relevant and in **Appendix 2.3 Further Consultation**. Consultations to obtain baseline data have also been reported in each technical chapter.
14. An on-site meeting was offered to the ECU and statutory consultees which took on 7<sup>th</sup> August 2020 and was attended by the Dumfries and Galloway Council Planning Case Officer and NatureScot Officer. The purpose of the site visit was to allow key statutory consultees to gain a greater understanding of the Proposed Development by seeing the Site, the context with the operational Harestanes Windfarm and wider area.
15. The Applicant also wrote to the above listed community councils to provide updates on the project and offer meetings to discuss details of the project.

### 2.3.4 Public Information Days and Community Consultation

16. Public consultation is a key element of the environmental assessment process; therefore, as part of a wide consultation process, attention was given to community engagement in cognisance of the Planning Advice Note (PAN) 3:2010: Community Engagement. Local community councils were contacted during the development of the proposals and notified of consultation activities.
17. In addition to the consultation on the scope of the EIA, two rounds of public consultation have taken place in addition to a meeting with Ae Community Council as follows:
- Public Consultation Leaflets introducing the Applicant and describing the Proposed Development and need for an EIA were distributed in May 2020, which provided an opportunity for individuals to provide feedback. These leaflets were distributed to 7,182 residents and businesses local to the Proposed Development (within 10km of the Site). A total of 16 responses were received; and
  - A second round of consultation took place in August/September 2020 which presented the final iteration of the Proposed Development as intended for submission with the application. This consultation comprised the distribution of a Public Consultation Leaflet to the same recipients, which provided an update of how the

design has changed and directed readers to a Public Consultation Event which was held on the Applicant's website. At this event there was the opportunity for the public to put questions to the Applicant's project team and also arrange to speak with a member of the team. There was also a longer consultation period for responses to be received. A total of 14 responses were received during this second round of consultation

18. The format of these consultations was heavily influenced by the COVID-19 lockdown, and is in compliance with the guidelines as provided by the Scottish Government on Public Consultation during this period; Coronavirus (COVID-19): planning guidance on pre-application consultations for public events (Scottish Government, 2020).
19. Further details on the two consultation periods are presented in the Pre-Application Consultation Report submitted with the application for consent for the Proposed Development including how the responses were taken into consideration.

## 2.4 The EIA Process

20. EIA is the systematic process of compiling, assessing and presenting 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 Proposed Development and the way in which it is constructed. The EIA Report is based on the Revised Scoping Opinion and further scoping consultation as described in **Section 2.3**.
21. The main steps in the EIA assessment process for the Proposed Development have been:
- Identification of the existing and future baseline conditions at the site and surrounding area;
  - Prediction of the likely environmental effects, including direct effects and any indirect, 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 2.6**);
  - Identification of any uncertainties inherent in the methods used, the predictions made, and the conclusions drawn during the course and the assessment process; and
  - Reporting of the results in this EIA Report.
22. The EIA process is an iterative process where its findings have informed the design evolution of the Proposed Development.
23. 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". For example, the construction phase may result in the loss of mature hedgerow and trees; this would be an impact. The effect of this impact would be the opening up of new views to the windfarm or changing the perception of local landscape character. These terms have been adopted throughout this EIA to present a consistent approach to the assessment and evaluation of effects and their significance.

## 2.5 Identification of Baseline

24. To identify the scale of likely significant effects as a result of the Proposed Development, it is necessary to establish the existing baseline environmental conditions at the Site and surrounding area. The baseline scenario was established through the following methods, where relevant:
- site visits and surveys;
  - desk-based studies;
  - review of existing information;
  - modelling;
  - review of relevant national and local planning policies;
  - consultation with the relevant statutory consultees; and
  - identification of Sensitive Receptors.
25. The assessment has also taken into consideration how the current baseline conditions may change going forward at the point of construction, 2022. Due to the limitations, necessary assumptions and lack of evidence associated with the future baseline (i.e. it cannot be accurately measured), a detailed consideration of the effects of the Proposed Development against the future baseline would generally not result in a robust assessment depending on the length of future prediction. However, consideration has been given, in descriptive terms, within each topic chapter to likely significant effects arising when compared to the future baseline.

## 2.6 Assessment of Effects

26. For the purposes of this EIA Report the applicable assessment periods of the Proposed Development lifecycle are as follows:
- Construction period: this covers the effects arising from the enabling works, construction works, commissioning and reinstatement.
  - Operational period: this covers the effects (mainly permanent) arising from the existence of the line from commissioning to its eventual decommissioning along with any effects arising specifically from its operation including routine maintenance activities.
27. The consent is being sought 'in perpetuity', i.e. with no time limit. However, should decommissioning of any of the Proposed Development be required, or part thereof, it is considered that the environmental effects of decommissioning would be similar to, or less than, those during construction; smaller machinery is generally used and the duration is likely to be shorter. The effects of decommissioning have therefore been scoped out of this EIA Report.
28. Should the Proposed Development as described in **Chapter 4: Development Description** not be consented (the do-nothing scenario), it is anticipated that the Proposed Development Site will not significantly alter from the current baseline described in **Chapter 3: Site Selection and Design** and within **Chapters 5 to 13**.
29. 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 the following:
- 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.

30. Effects have been assessed taking account of the predicted magnitude of change and the sensitivity of the receptor. **Table 2.3** is used as a guide to determine an overall significance of effect using the relationship between the sensitivity of the identified receptor and the anticipated magnitude of an impact/change. The **magnitude of change** for each effect has been identified and predicted as a deviation from the established baseline conditions. The **sensitivity of the receptor** / receiving environment to change has been determined using professional judgement, consideration of existing designations (such as Sites of Special Scientific Interest (SSSIs)) and quantifiable data, where possible. Each technical topic has defined what constitutes a particular level of magnitude of change and sensitivity of receptor and their relationship to determine significance in line with methodologies specific to the respective topic. Professional judgement is however equally important in establishing the suitability of this guiding 'formula' to the assessment of the significance of each individual effect.

		Sensitivity of Receptor to Change			
		High	Medium	Low	Negligible
Magnitude of impact/change	High	Major	Major to Moderate	Moderate	Negligible
	Medium	Major to Moderate	Moderate	Moderate to Minor	Negligible
	Low	Moderate	Moderate to Minor	Minor	Negligible
	Negligible	Minor to Negligible	Negligible	Negligible	Negligible

Table 2.3: Matrix for Determining the Significance of Effects

31. 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 deterioration) of the existing environment.
  - Moderate beneficial or adverse effect – where the Proposed Development would result in a noticeable improvement (or deterioration) of the existing environment.
  - Minor beneficial or adverse effect – where the Proposed Development would result in a small improvement (or deterioration) of the existing environment.
  - Negligible – where the Proposed Development would result in no discernible improvement (or deterioration) of the existing environment.
32. Using professional judgement and with reference to the Guidelines for Environmental Impact Assessment (IEMA, 2004), 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. Where there are deviations from this these will be clearly stated within the individual technical chapters.
33. Summary tables that outline the predicted effects associated with an environmental topic, the appropriate mitigation measures required to address those 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.

## 2.7 Mitigation Measures

34. Schedule 4 (paragraph 7) of the EIA Regulations requires the EIA to present a description of the measures proposed "to avoid, reduce and, if possible, offset significant adverse effects...and...of any proposed monitoring

arrangements”. There are different types of mitigation used in this report, embedded mitigation and additional mitigation.

### 2.7.1 Embedded Mitigation

35. ‘Embedded mitigation’ comprises both design features and construction good practice. These measures are assumed to be in place prior to impact assessment and effectively form part of the Proposed Development.
- Design Mitigation: The layout and design of the Proposed Development has specifically considered the potential impacts on sensitive receptors and features of the surrounding environment. The iterative design process has sought to minimise the potential permanent effects of the Proposed Development; more detail is provided in **Chapter 3: Site Selection and Design**.
  - Construction Good Practice: This includes tried and tested mitigation measures which it is reasonable to assume are being implemented and standard construction practices or legislative requirements including recommended published guidance from statutory bodies.

36. The technical assessment **Chapters 5-13** will state where design or construction good practice measures are assumed prior to assessment.

### 2.7.2 Additional Mitigation Measures

37. Wherever reasonably practicable, additional mitigation measures are proposed for each significant environmental effect predicted, and can take various forms including:

- changes to the Proposed Development design;
- physical measures applied on Site; and
- measures to control particular aspects of the construction or operation of the Proposed Development.

38. 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 a level of certainty can be ensured, such as through the use of planning conditions.

39. A schedule of all of the mitigation measures proposed in this EIA Report is presented within **Appendix 14.1 Schedule of Commitments**.

### 2.7.3 Enhancement

40. 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 within **Appendix 14.1 Schedule of Commitments**.

### 2.7.4 Monitoring

41. Where monitoring has been proposed for the operational phase of the Proposed Development, this is included in the summary of environmental commitments reported at the end of each technical chapter and within **Appendix 14.1 Schedule of Commitments**.

## 2.8 Cumulative Effects

42. 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.
43. Schedule 4, Paragraph 5(e) of the EIA Regulations states that the EIA Report should include a description of the likely significant effects of the development on the environment resulting from “*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*”.

44. Regulation 4 paragraph 2 refers to the need to assess “*the factors specified in paragraph (3) and the interaction between those factors*”, this is referring to the topic-specific factors.

45. An assessment of cumulative effects has been undertaken in line with the EIA Regulations and current guidance including SNH guidance on Assessing the Cumulative Impact of Onshore Wind Energy Developments (2012) and other applicable current guidance as appropriate. It considers the two types of cumulative effects as follows and as described below:

- In Combination Effects; and
- Effect Interactions.

### 2.8.1 In-Combination Effects

46. In-combination effects are the combined effect of the Proposed Development together with other reasonably foreseeable developments on a common receptor.

47. Development proposals that should be included in a cumulative assessment have been agreed with Dumfries and Galloway Council through scoping consultation. The requirements will differ for different technical assessments and may include existing as well as proposed windfarm developments. For other forms of development, a search of developments which are classified as EIA development and which have planning applications submitted, approved or are under construction, and are located within a 10km radius of the site was undertaken however none were identified.

48. Cumulative effects have been considered in detail within the Landscape and Visual, Noise and Archaeology and Cultural Heritage impact assessments. These are numbered **Chapters 5, 9 and 10** respectively. The cumulative assessments have considered all wind turbine developments that are operational, under construction, consented or at planning application stage (SNH, 2012). The cumulative situation changes frequently as applications are made or withdrawn, and the layouts of submitted application windfarms are changed. It is therefore necessary to decide on a cut-off date when the sites and layouts to be included are fixed. The EIA Report includes operational, consented and application stage wind energy developments as of 21 August 2020. Schemes that are at the pre-planning or scoping stage are not generally considered in the assessment of cumulative effects because firm information on which to base the assessments is not available.

49. The cumulative assessment for in-combination effects is presented in each of the technical assessments in **Chapters 5 to 13** in the Cumulative Assessment section.

### 2.8.2 Effect Interactions

50. Effect Interactions are the combined or synergistic effects as a result of the Proposed Development on a particular receptor which may collectively cause a more significant effect than individually. A theoretical example is the culmination of disturbance from dust, noise, vibration, artificial light, human presence and visual intrusion on sensitive fauna (e.g. certain bat species) adjacent to a construction site.

51. The Cumulative Effect Interactions assessment is presented in **Chapter 13: Other Issues**.

## 2.9 Assumptions, Limitations and Uncertainty

52. 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 because of the level of detailed information available at the time of assessment, the potential for minor alterations to the Proposed Development following completion of the EIA Report and/or the limitations of the prediction processes.



53. A number of assumptions were made during the EIA process and are described below:
- The developments included within the cumulative assessments are based on sites and their status (operational, consented or in planning) on or before 21 August 2020;
  - the principal land uses adjacent to the Site remain unchanged during the course of the Proposed Development's lifetime; and
  - Information provided by third parties, including publicly available information and databases are correct at the time of submission.
54. Specific assumptions may also have been made with regards to the individual technical disciplines, which are described within each chapter.
55. The main limitation has been that while baseline conditions are accurate at the time of surveying, due to the dynamic nature of the environment, these conditions could change during site preparation, construction and operation.
56. Any limitations to the EIA are summarised in each technical chapter, where relevant, together with the means proposed to mitigate these.
57. Figures for land take and habitat loss should be considered as approximate and could vary slightly as a result of the micro-siting process once the final design is developed.

## 2.10 References

Council of the European Union (1992). Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Available online at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>.

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