



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 Environmental Impact Assessment Report (EIAR) 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 EIAR 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 (1) criteria of the EIA Regulations, by the 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 EIAR.
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 EIA regulations (Scottish Government, 2017);
 - Scottish Planning Policy (Scottish Government, December 2020);
 - Planning Advice Note (PAN) 1/2013 Environmental Impact Assessment (Scottish Government, 2017);
 - 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 (IEMA, 2017);
 - EIA Guide to Shaping Quality Development (IEMA, 2015); and
 - EIA Guide to Delivering Quality Development (IEMA, 2016);
 - EIA Handbook (V5) (Scottish Natural Heritage¹, 2018); and

¹ Now known as NatureScot (formerly Scottish Natural Heritage).

- Assessing the Cumulative Impact of Onshore Wind Energy Developments, (Scottish Natural Heritage, 2012).

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

Required Information (EIA Regulations)	Where this is addressed within this EIAR
<ol style="list-style-type: none"> 1. A description of the development, including in particular: <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; (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; and (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>The Proposed Development is described in Chapter 4: Development Description. This includes a description of construction activities and associated works, and the operational phase, including maintenance.</p> <p>Figure 1.1 Site Location shows the Site Location and the Proposed Development layout is illustrated in Figure 4.1 Site Layout.</p> <p>Expected residues and emissions are addressed, where relevant, in the appropriate technical chapters of the EIAR (Chapters 5 to 13).</p>
<ol style="list-style-type: none"> 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 3: Site Selection and Design describes why the Proposed Development Site was chosen, along with the approach to the design of the Proposed Development.</p>
<ol style="list-style-type: none"> 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 current state of the environment is provided within each technical chapter of the EIAR (Chapters 5 to 13).</p> <p>Evolution of the Site without the Proposed Development being implemented (the "do-nothing scenario") is provided in Chapter 3: Site Selection and Design.</p>
<ol style="list-style-type: none"> 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>The receptors likely to be significantly affected by the Proposed Development are provided in each of the technical chapters of the EIAR (Chapters 5 to 13). This is informed by the Scoping Opinion and consultation feedback.</p>

Required Information (EIA Regulations)	Where this is addressed within this EIAR
<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; (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; and (g) the technologies and the substances used. <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>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 EIAR (Chapters 5 to 13). This includes detailing the nature and duration of the potential likely significant effects.</p> <p>Cumulative effects are provided in each technical chapter of the EIAR.</p> <p>The overall approach and methods used for the environmental assessment are provided in this Chapter 2: EIA Process and Methodology. The specific approaches and methods used for each technical assessment are included within the relevant technical chapter of the EIAR (Chapters 5 to 13).</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 2: EIA Process and Methodology.</p> <p>The methods used for each technical assessment are included within the relevant technical chapter of the EIAR (Chapters 5 to 13).</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 within Section 2.7 of this chapter. Specific mitigation measures are included within each technical chapter of the EIAR (Chapters 5 to 13) and the committed mitigation measures are detailed in Appendix 14.1 Schedule of Commitments.</p>

Required Information (EIA Regulations)	Where this is addressed within this EIAR
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.	Scoped out of the EIA. See Appendix 2.1 Scoping Opinion .
9. A Non-Technical Summary (NTS) of the information provided under points 1 to 8.	The NTS is provided as a stand-alone document.
10. A reference list detailing the sources used for the descriptions and assessments included within the EIAR.	References are provided at the end of each chapter of the EIAR.

Table 2.1: Information Required Within the EIAR

2.3 EIA Framework and Consultation

2.3.1 EIA Screening

8. 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.
9. 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

10. The purpose of scoping and consultation is to:
 - ensure that statutory consultees and other bodies with a particular interest in the environment are informed of the Proposed Development and provided with an opportunity to comment at an early stage in the EIA process;
 - obtain baseline information regarding existing site conditions;
 - establish key environmental issues and potential effects to be evaluated during the EIA;
 - identify those issues which are likely to require more detailed study and those which can be justifiably excluded from further assessment; and
 - agree on the most appropriate methods of assessment.
11. An initial meeting was held with the Energy Consents Unit (ECU) on 20 February 2019 to discuss the proposal, its programme and key constraints and opportunities for the Site. This included discussions on key Site constraints including landscape and visual impacts, the Dark Sky Park and presence of Osprey close to the Site Boundary, as well as consultation and survey work undertaken to date.
12. An EIA Scoping Report was submitted to the ECU in May 2020 to accompany a request to Scottish Ministers to adopt a Scoping Opinion under regulation 15 of the EIA Regulations. The list of those organisations consulted and whether they responded is shown in **Table 2.2**.

Consultee	Response Received
Ayrshire Rivers Trust (also responding on behalf of the River Stinchar and River Girvan District Salmon Fishery Boards)	Yes
British Telecoms (BT)	Yes
Crosshill, Straiton and Kirkmichael Community Councils	Yes
Dailly Community Council	Yes

Consultee	Response Received
Defence Infrastructure Organisation	Yes
Dumfries and Galloway Council	Yes
East Ayrshire Council	Yes
Energy Consents Unit	Yes
Galloway Fisheries Trust	Yes
Galloway and Southern Ayrshire Biosphere	Yes
Glasgow Airport	Yes
Glasgow Prestwick Airport	Yes
Historic Environment Scotland	Yes
Joint Radio Company	Yes
Marine Scotland	Yes
Met Office	Yes
Mountaineering Scotland	Yes
NatureScot ²	Yes
NATS Safeguarding	Yes
RSPB Scotland	Yes
Scottish Environment Protection Agency	Yes
Scottish Forestry	Yes
Scottish Rights of Way and Access Society	Yes
South Ayrshire Council (including responses from the Landscape Consultant, Environmental Health, ACCON UK Ltd Noise Consultants, Ayrshire Roads Alliance and West of Scotland Archaeology Service)	Yes
The Coal Authority	Yes
Transport Scotland	Yes
Barr Community Council	No
British Horse Society	No
Civil Aviation Authority – Airspace	No
Crown Estate Scotland	No
Fisheries – River Doon District Salmon Fisheries Board	No
Fisheries Management Scotland	No
Game and Wildlife Conservation Trust	No
Health and Safety Executive	No
Joint Nature Conservation Committee	No
John Muir Trust	No
National Farmers Union of Scotland	No
National Trust for Scotland Regional Office	No
Ofcom	No
Royal Air Force (RAF)	No
Ramblers Association (Scotland)	No
Saving Scotland's Red Squirrels	No
Scottish Badgers	No

² Formerly Scottish Natural Heritage (SNH).

Consultee	Response Received
Scottish Outdoor Access Network	No
Scottish Raptor Study Group	No
Scottish Water	No
Scottish Wild Land Group	No
Scottish Wildlife Trust	No
South West Scotland Environmental Information Centre	No
Sustrans Scotland	No
The Woodland Trust	No
Visit Scotland	No

Table 2.2: Scoping Consultees

13. A Scoping Opinion was received from the ECU on behalf of the Scottish Ministers under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 on 02 October 2020. The full Scoping Opinion is provided in (**Appendix 2.1 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 within the EIA.
14. 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 within the EIAR and through the design of the Proposed Development (refer to **Appendix 2.2 Gatecheck Report**).

2.3.3 Further Consultation

15. 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.

2.3.4 Public Information Days and Community Consultation

16. Public consultation is a key element of the environmental assessment process. As part of a wide consultation process, attention was given to community engagement considering 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 meetings with Statutory Consultees as follows:
 - the initial round of public consultation took the form of leaflets introducing the Applicant and describing the Proposed Development and need for an EIA. These were distributed in June 2020 and provided an opportunity for individuals to provide feedback via email or post. These leaflets were distributed to 4784 residents and businesses local to the Proposed Development within 10 kilometres (km) of the Site. A total of 24 individual responses were received – 22 emails and two letters; and
 - a second round of consultation took place in October/November 2020 which presented an updated iteration of the Proposed Development. This consultation comprised public consultation leaflet distribution as described above and an online public information event presented on the Applicant's website between 14 October – 4 November 2020. The public information event was advertised in the local press (Ayrshire Post and Ayr Advertiser/Carrick Herald) and at points throughout the local communities. A total of four feedback forms were received.

Further information on feedback received following consultation is contained within the Pre-Application Consultation (PAC) Report which is submitted as a separate document as part of the Section 36 Application.

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 PAC 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.
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 EIAR.
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 which is currently proposed to be in 2024. The future baseline is established by making assumptions which cannot be accurately measured. Therefore, a detailed consideration of the effects of the Proposed Development against the future baseline would generally not result in a robust assessment. Within the EIAR, a description of the likely significant effects arising in relation to the future baseline is provided within each technical chapter.

2.6 Assessment of Effects

26. For the purposes of this EIAR 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; and
 - operational period: this covers the effects (mainly permanent) arising from the existence of the windfarm from commissioning to its eventual decommissioning along with any effects arising specifically from its operation including routine maintenance activities.
27. Decommissioning effects are likely to be similar to construction period effects but considered to be of a lesser magnitude as no excavation is expected to be required (therefore smaller machinery is generally used) and the duration is likely to be shorter. The consent is also being sought 'in perpetuity', i.e. with no time limit, and therefore decommissioning of the Proposed Development as a whole is not proposed. The effects of decommissioning have therefore been scoped out of this EIAR.
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 impact/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 (SSSI)) and quantifiable data, where possible. Each technical chapter has defined what constitutes a particular level of magnitude of change and sensitivity of receptor and this is defined within each technical chapter. Professional

judgement is however equally important in establishing the suitability of this guiding 'formula' to the assessment of the significance of each individual effect.

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

Table 2.3: Guide to the Inter-Relationship Between Magnitude of Impact/Change and Sensitivity of Receptor

31. The following terms are used in this EIAR, 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; and
 - 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 EIA (IEMA, 2004), the assessments within this EIAR 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 this EIAR. 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 (regulation 7) of the EIA Regulations requires the EIA to present a description of the measures envisaged "to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects...and...of any proposed monitoring arrangements". There are different types of mitigation used in this EIAR, 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 EIA 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. Good practice measures are included within **Appendix 4.2 Outline Construction Environmental Management Plan**.

36. The technical assessment **Chapters 5 to 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 within this EIAR is presented within **Appendix 14.1 Schedule of Commitments**. Any additional mitigation plans that are proposed are provided as an appendix in the relevant technical chapter.

2.7.3 Enhancement

40. Similar to the reporting of mitigation measures, where opportunities for environmental enhancement are proposed, these have been included within the summary of environmental commitments reported at the end of each technical chapter and within **Appendix 14.1 Schedule of Commitments**. Enhancement measures are also detailed in **Appendix 7.6 Outline Habitat Management Plan**.

2.7.4 Monitoring

41. Where monitoring has been proposed for the operational phase of the Proposed Development, this is included within 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, regulation 5(e) of the EIA Regulations states that the EIAR 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 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".
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 described below.

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 determined and key sites have been agreed in conjunction with stakeholders through the Scoping Process, Scoping Opinion and subsequent stakeholder consultation as necessary. The requirements will differ for different technical assessments and may include existing as well as proposed windfarm developments. For other forms of new development, it is proposed that they are limited to wind farm 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. Following a review of cumulative developments on 16 July 2021, it was confirmed at the time that there were no developments which meet the requirements listed.
48. Cumulative effects have been considered in detail and in accordance with guidance related to each topic 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). This cumulative assessment includes developments at appeal but not those refused at appeal. The cumulative situation changes frequently as applications are made or withdrawn, and the layouts of submitted windfarm applications are changed. It is therefore necessary to decide on a cut-off date when the sites and layouts to be included are fixed. The EIAR includes operational, consented and application stage wind energy developments as of 16 July 2021. Post this date, checks have been made for any application windfarms that would have a significant bearing on the assessment and none have been found. 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. However, due to the proximity of the cumulative development Knockcronal Windfarm (which was in Scoping at the agreed cut off date and when the Proposed Development's assessments were carried out but whose status has since changed to in Planning on 17 November 2021), for the purposes of this EIAR, this cumulative development has been considered within the assessment. Information was provided by the Knockcronal developer ensuring that sufficient information was available in order to carry-out a proper assessment. The specific methodologies and developments included are detailed within each of the technical assessments within **Chapters 5 to 13**.
49. The cumulative assessment for in-combination effects is presented in the Cumulative Assessment sections of each of the technical assessments within **Chapters 5 to 13**.

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 within **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 EIAR 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 16 July 2021;
- 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. These will be detailed within the relevant technical 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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