5 EIA METHODOLOGY

5.1 Introduction

Environmental Impact Assessment (EIA) is a process to ensure that permissions for developments with potentially significant effects on the environment are granted only after assessment of the likely significant environmental effects has been undertaken. The assessment must be carried out following consultation with statutory consultees, other interested bodies and members of the public. This Chapter of the Environmental Impact Assessment Report (EIA Report) describes the EIA process for the proposed Ladyfield Renewable Energy Park (the Development).

5.2 EIA Process

With an overall generating capacity of over 50 megawatts (MW), (but not exceeding 99.9 MW – with 58.5 MW of wind and 41.4 MW of Battery Energy Storage System (BESS)), consent for the Development is being sought from the Scottish Ministers under Section 36 of the Electricity Act 1989[42]. The requirements that apply to EIA in Scotland for wind farm generating stations with an electrical output capacity in excess of 50 MW are provided under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017[43] (hereafter referred to as the 'EIA Regulations').

The EIA Regulations outline the process of an EIA and the criteria that would determine if an EIA is necessary or not, the relevant environmental studies and statements, how the information is evaluated by the Scottish Ministers, Planning Authority and consultative bodies, and how this is implemented through consent under Section 36 of the Electricity Act 1989.

Schedule 2 of the EIA Regulations lists developments for which an EIA is required for certain types of development where there are likely to be significant effects on the environment by virtue of factors such as the nature, size or locations of the development proposal.

The results of the EIA are presented in this EIA Report which, as prescribed in the EIA Regulations, is required to include a "description of the likely significant effects" of the Development; the effects which are not considered to be significant do not need to be described. Likely significant effects were identified through the scoping process. The Scoping Opinion was issued by the Scottish Ministers in March 2022 and is provided in Technical Appendix A3.1. The Scoping Opinion is also available on the Scottish Government Energy Consents Unit online portal (https://www.energyconsents.scot/Default.aspx) under reference ECU00003291.

5.3 EIA Methodology

The EIA Report has been prepared following a systematic approach to EIA and project design. The process of distinguishing environmental effects is iterative and cyclical, running concurrently with the design process, whereby the design of the Development is refined in order to avoid or reduce potential adverse environmental effects using mitigation as necessary.

The EIA process follows a number of stages broadly in line with the following:

- Site selection and feasibility;
- Screening – to determine if an EIA is required (unless an Applicant volunteers an EIA, as is the case with the Development);
- Pre-application consultation with statutory and non-statutory consultees;
- Scoping - to identify the parameters of the assessment issues on which the EIA should focus;
- Baseline studies - to establish the current environmental conditions at the Site;
- Identification of potential environmental effects, including cumulative effects;

[42] UK Government, Electricity Act 1989 [Online] Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents (Accessed 22/03/2023)
[43] The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. London: HMSO [Online] Available at: http://www.legislation.gov.uk/ssi/2017/101/contents/made (Accessed 25/05/2023)

- Mitigation to avoid or reduce the effects through iterative design process;
- Assessment of residual effects;
- Preparation of an EIA Report;
- Submission of the EIA Report;
- Consideration of application and environmental information by the relevant local authority (Argyll and Bute Council, referred to as 'the Council') and other statutory and non-statutory consultees;
- Determination of application; and
- Implementation and monitoring (assuming the scheme is consented and built).

The EIA Regulations require that an EIA Report should include a range of information including: a description of the development, a description of reasonable alternatives, baseline information, a description of the likely significant effects of the development, and mitigation measures amongst other factors.

This EIA Report has been prepared in accordance with the EIA Regulations and includes the required information.

5.4 Consultation

Consultation has formed an essential part of the EIA. The EIA team and Ladyfield Renewable Energy Park Ltd have proactively engaged interested parties throughout the EIA process to determine their views on the Development and assessment methodology, and to collect baseline information. This engagement has principally been undertaken within the following key stages:

- Scoping – Outlining EIA methodology and documentation of key issues (Scoping Report issued to the ECU on June 2021);
- Further Technical Consultation – Gathering baseline information from relevant organisations and confirming survey methodologies outwith the formal Scoping process;
- Public Engagement - Informing site design through Public Exhibitions and regular updates – communication with local communities and consideration of baseline information; and
- Gatecheck – The Gatecheck Report was submitted to the ECU in February 2023.

Further detail on each stage is included in the following subsections.

5.4.1 Scoping

The aim of the Scoping process is to identify key environmental issues at an early stage; determine which elements of the Development are likely to cause significant environmental effects; and identify issues that can be 'scoped out' of the assessment due to a lack of likely significant effects. This exercise for the Development established the studies and level of detail required to inform the EIA Report.

In line with Regulation 12 of the EIA Regulations[44], the Applicant sought a Scoping Opinion from the Scottish Ministers to confirm the scope of the required assessment which is to be provided in the EIA Report.

A Scoping Report was submitted with the request for a Scoping Opinion in June 2021 which described the Development, identified potential environmental effects, and proposed a methodology to assess the environmental effects. The Scoping Report was issued to a list of statutory and non-statutory consultees as agreed with the ECU and listed in Table 5.1.

The Scoping Opinion was issued by the Scottish Ministers in March 2022 and is available in Technical Appendix A3.1 and on the Scottish Government Energy Consents Unit online portal (https://www.energyconsents.scot/Default.aspx) under reference ECU00003291.

[44] Scottish Government (2017) Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 [Online] Available at: https://www.legislation.gov.uk/ssi/2017/101/contents/made(Accessed 25/05/2023)

Table 5.1 provides an overview of the issues raised by the consultees at the Scoping stage. The detail of the individual responses received during the EIA, including at the Scoping stage, is set out in the relevant technical chapters. Where appropriate, reference is provided as to where the comments have been addressed within this EIA Report.

Table 5.1: Scoping Responses

Consultee	No Response	No Comments	Landscape and Visual	Archaeology and Cultural Heritage	Ecology / Ornithology	Hydrology / Hydrogeology	Geology and Peat	Noise, Public safety and Amenity	Existing Infrastructure	Forestry	Socio-economics / recreation	Access / Traffic	Climate Change / Carbon Balance	Cumulative Effects	Overarching EIA Comments	Relevant Chapter
Argyll and Bute Council			✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	Chapter 6, 7, 8, 9, 10, 11, 12, 13, 14, & 15
Scottish Environment Protection Agency (SEPA)					✓	✓	✓			✓			✓			Chapter 8, 10, 11, 14 & 16
NatureScot			✓		✓		✓									Chapter, 6, 7, & 8
Historic Environment Scotland				✓												Chapter 9
Argyll District Salmon Fishery Board					✓											Chapter 8
British Telecommunications									✓							Chapter 17
Crown Estate Scotland		✓														N/A
Defence Infrastructure Organisation									✓							Chapter 17
Fisheries Management Scotland					✓											Chapter 8

Consultee	No Response	No Comments	Landscape and Visual	Archaeology and Cultural Heritage	Ecology / Ornithology	Hydrology / Hydrogeology	Geology and Peat	Noise, Public safety and Amenity	Existing Infrastructure	Forestry	Socio-economics / recreation	Access / Traffic	Climate Change / Carbon Balance	Cumulative Effects	Overarching EIA Comments	Relevant Chapter
Glasgow Airport		✓														N/A
Glasgow Prestwick Airport									✓							Chapter 17
Highlands and Islands Airports Limited		✓														N/A
JRC		✓							✓							Chapter 17
Marine Scotland					✓	✓										Chapter 8 & 10
NATS Safeguarding									✓							N/A
RSPB Scotland					✓		✓						✓			Chapter 7 & 16
Scottish Forestry										✓	✓					Chapter 14 & 15
Scottish Water		✓														N/A
Transport Scotland												✓				Chapter 13

5.4.2 Further Technical Consultation

In addition to the formal Scoping process, where appropriate, authors of technical assessments within this EIA Report engaged directly with statutory and non-statutory consultees throughout the duration of the EIA Report preparation stage to further refine the scope for each assessment. Consultees contacted in this manner include NatureScot and Historic Environment Scotland.

Technical consultees were further consulted about the redesign of the Development and where possible, their recommendations have been incorporated into the final layout.

A summary of all relevant consultation is documented in the relevant Technical Chapters 5 to 17 of this EIA Report.

5.4.3 Gatecheck

In line with the ECU Gatechecking procedure[45] for Section 36 developments, a Gatecheck report was issued to the ECU and statutory consultees once an advanced design had been reached in February 2023. The Gatecheck report described how the design of the Development has evolved since the scoping stage, highlighting influencing factors on the design either as a response to environmental constraints identified during the EIA process or through consultation feedback from statutory or non-statutory consultees.

A key element to the Gatecheck report was the collation of scoping responses with details on how the points raised by various consultees have been addressed and how this has influenced the design of the Development and the progression of the EIA.

The Gatecheck Report was submitted to the ECU and shared with relevant consultees on 14th March 2023. Comments were received and the Applicant held meetings with the ECU on 25th May 2023 as part of the Gatecheck 2 procedure. The Gatecheck Report is available on the Scottish Government Energy Consents Unit online portal (https://www.energyconsents.scot/Default.aspx) under reference ECU00003291.

5.4.4 Community Engagement

Engagement with the local community has been a key element of the pre-application consultation exercise.

The COVID-19 pandemic affected the normal means of community engagement during 2021 and 2022. However, the Applicant developed alternative ways to engage with the local community, namely 'online public exhibitions'. One initial online public exhibition was held over Zoom on the 17th August 2021. This public exhibition event was advertised via: https://ridgecleanenergy.com/ladyfield/.

As of September 2021, guidance allowed for public exhibitions to be held in person. As such, two in-person public exhibitions were held on 2nd and 3rd February 2022 at the following locations respectively:

- Dalmally Community Centre, Dalmally, PA33 1AX (16:30 – 20:30); and
- Inveraray Inn, Front St E, Inveraray, PA32 8XB (16:30 – 19:30).

One further round of in-person public events was also held on 24th October 2022. These events were held at:

- Inveraray Inn, Front St E, Inveraray, PA32 8XB.
  - 24th October (by appointment); and
  - 25th October (16:30 – 20:00)

[45] Scottish Government (2020), Gate-checking process for Section 36 and Section 37 applications [Online] Available at: https://www.gov.scot/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/Guidance/Gatecheckingprocessforsection36andsection37applica (Accessed on 22/02/2023)

Details of all public exhibitions were published in the Argyllshire Advertiser.

Inveraray Community Council was contacted via email to advise them of both in-person exhibitions.

All adverts, letters and emails were sent in advance of the both the online and in-person exhibitions with the intention that recipients would have 1 week notice prior to the events.

5.4.4.1 Online Public Exhibitions

The 'online public exhibition' provided an opportunity for engagement with the local community via a virtual platform.

The public exhibition was hosted online due to the Scottish Government's COVID-19 advice and guidelines[46] in place at the time. In the absence of a face-to-face exhibition, materials were provided via the dedicated project webpage (https://ridgecleanenergy.com/ladyfield/). The stated aims of the exhibition were to introduce the Applicant, inform the local community of the Development and to receive feedback from the community. Information, including graphics and visualisations were provided in relation to the following:

- Project facts including maps of the renewable energy park location and layout;
- Work undertaken to date;
- The application, determination and public consultation processes; and
- Project and community benefits.

Attendees were invited to complete a short survey providing feedback on the Development. In addition, attendees were provided the opportunity to speak or communicate directly with the Applicant and their representatives via telephone, email or by postal address.

During this initial exhibition period two residents living within close vicinity to the site attended the online exhibition where they were informed on the details of the development in this early stage. It was agreed that the developer would keep in regular contact with these attendees as the project developed.

In line with COVID-19 guidance at the time, multiple opportunities were made available for two-way communication during the public consultation response period. A number of communication platforms were available for the public to provide feedback, request additional information and seek clarification if needed. These opportunities for communication included providing comments or requesting a call back from a member of the project team, emails to provide comments or request information, as well as the use of post.

Members of the public were also able to request wireline visualisations to understand the extent of the Development with regard to residential, recreational and tourist viewpoints. Monthly project updates were also given to residents living in Glen Aray, who would be most susceptible to impacts from the Development than residents living outside the Glen. A representative of the ICC councillors, and Jenni Minto MSP were included in these updates.

5.4.4.2 First Round of In-Person Public Exhibitions

A second round of public consultation, held as in-person exhibitions, took place in Dalmally and Inveraray in early February 2022. An overview can be seen below in Table 5.2.

Table 5.2: Overview of First Round of In-Person Public Exhibitions

Project	Venue	Day	Date	Time	Attendees
Ladyfield Renewable Energy Park	Dalmally Community Centre, Dalmally, PA33 1AX	Wednesday	2nd February 2022	16:30 – 20:30	1

[46] The Scottish Government (2020) Online Public Exhibition established in accordance with COVID-19 Scottish Government advice and regulations [Online] Available online at: https://www.gov.scot/publications/coronavirus-covid-19-planning-guidance-on-pre-application-consultations-for-public-events/ (Accessed: 22/02/2023)

Project	Venue	Day	Date	Time	Attendees
	Inveraray Inn, Front St E, Inveraray, PA32 8XB	Thursday	3rd February 2022	16:30 – 19:30	~ 24

The purpose of these sessions was to update the community on the Proposed Development and provide a further opportunity to submit feedback.

During the second public consultation period, 143 visits were made to the project website and 2 formal feedback forms were completed during the feedback period.

As well as the feedback included within the two completed feedback forms, general feedback was also received during the public exhibition events.

A summary of the key issues/considerations raised is noted below:

- Community Benefit – comments and suggestions included:
  - Inveraray Pier upgrades;
  - Discussions with the Inveraray Community Company to set up an annual fund;
  - Subsidisation of energy bills;
- Number and height of turbines and visual impact, particularly for residents along A819;
- Proximity of turbines to properties along A819;
- Known golden eagles in the area;
- Construction traffic along A819;
- Cumulative impact with the SSE Overhead Line;
- QA Session for residents along A819 and Inveraray Community Council would be helpful.

Similar to the first round of consultations, members of the public were encouraged to communicate with the Applicant to seek further clarifications, obtain additional information (including wireline visualisations), and provide further feedback during the second consultation period.

Some residents living along the Glen Aray Road (the closest residents to the proposal) had asked to be kept appraised of the progress of the project. Monthly emails were sent from the Applicant to these residents, with a local councillor and the local MSP also copied.

5.4.4.3 Second Round of In-Person Public Exhibition Events

A third round of public consultation took place in Inveraray in October 2022. An overview can be seen in Table 5.3.

Newsletters advertising the exhibitions were sent to households nearest the site (within 3 km of the Site Boundary) as well as community councils, Argyll & Bute Councillors, MP and MSP. Posters were put up in Inveraray and neighbouring towns. Notices were also posted on the Inveraray Community Council Facebook page and 'All About Dalmally' Facebook pages, as advised by attendees to the February public exhibitions.

Table 5.3: Overview of the Second Round of In-Person Public Exhibitions

Project	Venue	Day	Date	Time	Attendees
Ladyfield Renewable Energy Park	Inveraray Inn, Front St E, Inveraray, PA32 8XB	Monday	24th October 2022	By appointment	10
		Tuesday	25th October 2022	16:30 – 20:00	11

The purpose of these sessions was to update the community on the Development and provide a further opportunity to submit feedback.

Specific wirelines were made available for residents living nearest the site to contextualise views from their houses. These were made from three locations within Glen Aray representative of the locations of residents properties.

During this public consultation period, 49 visits were made to the project website. Feedback forms were also made available to attendees.

Feedback from this round of public consultation was generally positive and local people appreciated the fact that the number of turbines has been reduced to reduce visual impacts. There was also positive feedback acknowledging the positive partnership work that has developed between the Applicant, Inveraray Community Council (ICC) and local community groups.

The applicant also provided water cylinder insulation jackets and sheep's wool chimney pillows (to block draughts) to help reduce household energy costs. A number of these were taken by visitors to the exhibition, with the remainder left in Inveraray to be distributed locally. Energy information flyers were also made available.

5.4.4.4 Community Council Meetings

Councillors were invited to all public exhibitions including the online event in August 2021. The Chair of the council and other councillors attended the public exhibitions in February and October 2022. The Applicant had a number of Zoom meetings to update the councillors including monthly updates to Argyll & Bute councillors and Jenni Minto MSP on the project and Community initiatives, such as Inveraray Pier.

Specifically, the Applicant is working closely with Inspire Inveraray and the ICC on the pier project, the Applicant has facilitated an Option to Purchase agreement being exchanged between Inspire Inveraray and the current pier owner and have worked with Inspire Inveraray on a fundraising plan and on a number of fundraising applications. These have resulted in pledges of funding for over £200,000, with more expected for the pier project. RCE and Inspire Inveraray have gained the support from district councillors, MSP and MP for the pier project.

The Applicant has also supported Inveraray Senior Citizens at Nicoll Hall and have instigated the 'Warm Spaces' initiative in partnership with ICC and The George Hotel. In partnership with ICC, the Applicant are supporting the Breakfast Club at Inveraray Primary School. The Applicant has met with the Reverend of West Lochfyneside church to provide a 'Heat and Meet' project in Furnace. Refer to the accompanying Pre-Application Consultation report for further detail.

5.4.4.5 Members of Scottish Parliament and Local Member Consultation

Councillors were invited to all public exhibitions including the online event in August 2021. The Chair of the council and other councillors attended the in-person public exhibitions in February and October 2022.

The applicant has also held a number of Zoom meetings and provided monthly updates to Argyll & Bute councillors, ICC councillors, and Jenni Minto MSP on the project and community initiatives, such as Inveraray Pier.

5.5 The EIA Report

The information that an applicant is required to submit as part of the EIA process is presented in this EIA Report and within the Non-Technical Summary, included in the application as a standalone document. The preparation and production of this EIA Report has been conducted in accordance with relevant regulations and good practice guidance. Relevant legislation, policy and guidance are referred to in each of the technical assessments within the EIA Report. Overarching regulation, policy and guidance documents have been used in preparing this EIA Report are:

- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended)[47];
- National Planning Framework 4 (NPF4) (February 2023)[48];
- Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment, 2013[49];
- Planning Circular 1/2017: Environmental Impact Assessment Regulations, 2017[50]
- Environmental Impact Assessment Handbook (Scottish Natural Heritage, 2018)[51]; and
- Environmental Impact Assessment Guide to Delivering Quality Development (Institute of Environmental Management and Assessment (IEMA), 2016)[52].

This EIA Report conveys the findings of the assessment of the potential significant environmental effects of the Development during construction, operation and decommissioning.

The EIA Report comprises of the following documents:

- Volume 1 - EIA Report Text;
- Volume 2 - EIA Report Figures;
  - Volume 2a - Figures excluding Landscape and Visual Impact Assessment (LVIA);
  - Volume 2b - LVIA Plan Figures;
  - Volume 2c - LVIA Visualisations Part 1 of 2;
  - Volume 2d - LVIA Visualisations Part 2 of 2;
- Volume 3 - EIA Report Technical Appendices; and
- Volume 4 - EIA Report Non-Technical Summary (NTS).

The EIA Report includes chapters covering the following technical areas:

- Chapter 6 - LVIA;
- Chapter 7 - Ornithology;
- Chapter 8 - Ecology;
- Chapter 9 - Archaeology and Cultural Heritage;
- Chapter 10 - Hydrology and Hydrogeology;
- Chapter 11 - Geology, Soils and Peat;
- Chapter 12 - Noise;
- Chapter 13 - Traffic and Transport;
- Chapter 14 - Forestry;
- Chapter 15 - Land Use, Socio-economics, Tourism and Recreation;
- Chapter 16 - Climate Change and Carbon Balance;
- Chapter 17 - Other Issues; and
- Chapter 18 - Intra-Project Cumulative Effects

Each of the technical chapters (with the exception of Chapter 14 – Forestry which follows its own identified structure and methodology) follows the broad assessment principles outlined in Section 5.6.

[47] Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 [Online] Available at: http://www.legislation.gov.uk/ssi/2017/101/contents/made (Accessed 22/02/2023)
[48] The Scottish Government (2023) National Planning Framework 4 [Online] Available at: https://www.gov.scot/publications/national-planning-framework-4/ (Accessed 02/03/2023)
[49] The Scottish Government (2013, Rev. 2017) Planning Advice Note 1/2013 Environmental Impact Assessment [Online] Available at: http://www.gov.scot/Publications/2013/08/6471 (Accessed 22/02/2023)
[50] The Scottish Government (2017) Planning Circular 1/2017 Environmental Impact Assessment Regulations [Online] Available at: https://www.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/ (Accessed on 22/02/2023)
[51] NatureScot (2018) Environmental Impact Assessment Handbook [Online] Available at: https://www.nature.scot/handbook-environmental-impact-assessment-guidance-competent-authorities-consultees-and-others (Accessed 23/02/2023)
[52] IEMA (2016) Environmental Impact Assessment Guide to: Delivering Quality Development

5.6 Technical Assessments

5.6.1 Overview

Each of the technical assessments follows a systematic approach with the main steps as follows:

- Introduction, assessment methodology and significance criteria;
- Description of the baseline conditions;
- Assessment of potential effects;
- Further Mitigation measures and residual effects;
- Cumulative effects assessment;
- Summary of effects (residual effects); and
- Statement of significance.

A summary of each step is highlighted below.

5.6.2 Introduction, Assessment Methodology and Significance Criteria

Each technical assessment sets out the relevant legislation, policy and guidance together with scope and methodology used to carry out the assessment of potential effects, including the criteria that are used to establish which effects are significant. The methodology seeks to ensure transparency in the assessment. Each technical assessment has the criteria set out for assessing significance. Where an impact's level of significance is attributed to an effect, this is based on technical guidance and professional judgement, informed by consideration of the sensitivity of the receptor and the degree of the effect.

This section also sets out the scoping requirements and pre-application consultation responses that form the framework and scope of the specialist assessment work for the topic.

5.6.3 Description of Baseline Conditions

In order to evaluate the potential environmental effects, the existing environmental conditions were recorded through field and desktop research. Prior to the initiation of fieldwork studies, desktop studies were undertaken to gain a better understanding of the study area. Site-specific baseline field surveys were then undertaken by experienced professionals to provide an understanding of the current condition of the development site and the surrounding area. The desk studies, field surveys and understanding of current land management then form the baseline, and prediction of site conditions into the future. Such predictions can involve a high number of variables and be subject to large uncertainties, and as a result, in some cases, the current baseline condition is assumed to remain unchanged throughout the timeframe of the Development.

The baseline has been used to assess the sensitivity of receptors within the study areas. Wind farms that are operational or consented at the time of commencing the assessments are treated as being part of the existing baseline except where specific guidance advises to the contrary.

The approach to describing baseline conditions is set out in each relevant technical chapter. Baseline information has been used to inform the layout of the Development. From baseline information, constraints were identified which were considered as part of the design process. Further detail on the design process adopted for the Development is detailed in Chapter 2 - Development Description and Chapter 3 - Site Selection and Design.

5.6.4 Assessment of Potential Effects

The prediction of potential significant effects covers the three phases of the Development: construction, operation and decommissioning, as different environmental effects are likely to arise during the different stages. The effects during construction and decommissioning are generally considered to be short term effects, and those arising as a result of the operation of the Development are generally considered to be long term effects. Each technical assessment

considers the nature of effects and includes cumulative effects with other developments where appropriate.

Following identification of potential environmental effects, the baseline information is used to predict changes to existing conditions and conduct an assessment of these changes.

The significance of effects resulting from the Development will be determined through a combination of the sensitivity of the receiving environment (the sensitivity) and the predicted degree of change (the magnitude) from the baseline state.

5.6.4.1 Sensitivity of Receptors

Environmental sensitivity may be categorised by multiple factors, such as the presence of rare or endangered species, transformation of natural landscapes, soil quality and land-use etc. The initial assessment, consultation and scoping stages identified these factors along with the implications of the predicted changes.

The sensitivity classification of the receiving environment varies between the different technical areas of assessment (e.g., landscape and visual, ecology, noise etc). Sensitivity is normally defined as high, medium, low, or negligible. Table 5.4 details a general framework for determining the sensitivity of receptors; however, each technical assessment will specify their own appropriate sensitivity criteria that will be applied during the EIA and details will be provided in each technical chapter.

Table 5.4: Framework for Determining Sensitivity of Receptors

Sensitivity of Receptor	Definition
Very High	The receptor has little or no ability to absorb change without fundamentally altering its present character, is of very high environmental value, or of international importance.
High	The receptor has low ability to absorb change without fundamentally altering its present character, is of high environmental value, or of national importance.
Medium	The receptor has moderate capacity to absorb change without significantly altering its present character, has some environmental value, or is of regional importance.
Low	The receptor is tolerant of change without detriment to its character, is low environmental value, or local importance.
Negligible	The receptor is resistant to change or is of little environmental value.

5.6.4.2 Magnitude of Effect

For the purposes of environmental assessment, the magnitude of an 'effect' is generally dependent on the degree to which the change affects the feature or asset, from a fundamental, permanent or irreversible change that changes the character of the feature or asset, to barely perceptible changes that may be reversible. Magnitude would also encompass the certainty of whether an impact would occur. Magnitude is generally classified as high, medium, low, or negligible. General criteria for assessing the magnitude of an effect are presented in Table 5.5. Each technical assessment will apply their own appropriate magnitude of effects criteria during the EIA, with the details provided in the relevant EIA chapter.

Table 5.5: Framework for Determining Magnitude of Effects

Magnitude of Effects	Definition
High	A fundamental change to the baseline condition of the asset, leading to total loss or major alteration of character.

Magnitude of Effects	Definition
Medium	A material, partial loss or alteration of character of baseline conditions.
Low	A slight, detectable, alteration of the baseline condition of the asset.
Negligible	A barely distinguishable change from baseline conditions.

If the effects of zero magnitude (i.e., none / no change) are identified, this will be made clear in the assessment.

5.6.4.3 Significance of Effect

The sensitivity of the asset and magnitude of the predicted impacts will be used as a guide, in addition to professional judgement, to assess the level of effects. Table 5.6 summarises guideline criteria for assessing the significance of effects.

Table 5.6: Framework for Assessment of the Significance of Effects

Magnitude of Effect	Sensitivity of Receptor				
	Very High	**High**	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Moderate	Minor
Medium	Major	Major / Moderate	Moderate	Minor	Negligible
Low	Moderate	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Minor	Negligible	Negligible	Negligible

Effects predicted to be of major or moderate significance are considered to be 'significant' in the context of the EIA Regulations and are shaded in light grey in the above table.

Zero magnitude effects upon a receptor will result in no effect, regardless of sensitivity.

This EIA Report generally follows the above principles in relation to the identification of significant effects; however, some technical assessments may adopt a variation process. The assessment criteria used to determine the significance of effects are made explicit in each technical assessment chapter within this EIA Report.

5.6.5 Mitigation Measures and Residual Effects

The IEMA EIA Guide to Delivering Quality Development Report demonstrates that EIA is an iterative process rather than a unique, post-design, environmental appraisal. In adopting this approach, the findings of the technical environmental studies used to inform the design of the project, and hence achieve a 'best fit' with the environment. This approach has been adopted in respect of the Development; where potentially significant effects have been identified, their avoidance or minimisation has been prioritised at the design stage. This is referred to within this EIA Report as 'embedded mitigation' (i.e., mitigation that is embedded within the project design, and includes best practice as well as design features).

In line with the mitigation hierarchy identified in the updated PAN 1/2013 (V1.0, 2017), the strategy of avoidance, reduction, and remediation is a hierarchical one, which seeks to:

- First to avoid potential effects;
- Then to reduce those which remain; and

- Lastly, where no other measures are possible, to propose compensatory measures.

Appropriate mitigation measures are discussed within each technical chapter as relevant, including any proposed monitoring. Each chapter first details any embedded mitigation, which is mitigation taken into account prior to undertaking the assessment. These may be mitigation measures that are part of the Development design and/or included in the construction environmental management plan.

Following the completion of the assessment, further mitigation measures are detailed to reduce any identified significant effects, where possible.

5.6.6 Cumulative Effects Assessment

In accordance with the EIA Regulations, the assessment has considered 'cumulative effects'. The Institute of Environmental Management and Assessment (IEMA) recognises two types of cumulative assessment[53], which are:

- Intra-project effects - These effects occur where a single receptor is affected by more than one source of effect arising from different aspects of the project. An example of an intra-project effect would be where a local resident is affected by dust, noise and traffic disruption during the construction of a scheme, with the combined result being the potential for a greater nuisance than each individual effect alone; and
- Inter-project effects – These effects occur as a result of a number of developments, which individually might not be significant, but when considered together could create a significant cumulative effect on a shared receptor and will include developments separate from and related to the project.

Consideration of inter-cumulative effects have been undertaken for all technical assessments and are included in the relevant chapters. Where no cumulative effects are likely, this is stated. Operational wind farms are considered to be part of the baseline in the majority of assessments. In relation to some of the technical chapters, specific guidance and policy exists advising that effects associated with existing wind farm developments should be considered as cumulative effects. Where relevant, these are noted within each chapter.

Consideration of intra-cumulative assessment have also been undertaken with findings presented within Chapter 18: Intra-Project Cumulative Effects.

5.6.7 Summary of Effects

The residual effects of the Development are those that remain following successful implementation of the identified mitigation and enhancement measures.

Residual effects are identified in each technical assessment alongside an assessment of whether any residual effects are significant or not in terms of the EIA Regulations.

5.7 Assumptions and Limitations of EIA

A number of assumptions have been made during preparation of this EIA Report, as set out below. The assumptions are:

- The principal land uses adjacent to the development site remain as they are at the time of the submission of the application, except in cases where permission has already been granted for development. In these cases, it is assumed that the approved development will take place, and these have been treated as contributing to "cumulative" effects; and

[53] Institute of Environmental Management and Assessment, 2020. Impact Assessment Outlook Journal Volume 7: Demystifying Cumulative Effects. Thought pieces from UK practice. Available at: https://www.iema.net/resources/reading-room/2020/07/17/impact-assessment-outlook-journal-volume-7-demystifying-cumulative-effects-july-2020 (Accessed 01/09/2023)

- Information provided by third parties, including publicly available information and databases is correct at the time of submission.

The EIA has been subject to the following limitations:

- Baseline conditions are accurate at the time of the physical surveys but, due to the dynamic nature of the environment, conditions may change during the site preparation, construction and operational phases; and
- The assessment of cumulative effects has been reliant on the availability of known information relating to existing wind farm developments as of February 2023.

Assumptions specific to certain environmental aspects are discussed in the relevant Chapters of this EIA Report.