

# Environmental Impact Assessment Report

Beinneun 2 Wind Farm

Volume 1

Chapter 2: EIA Methodology

Document prepared by Envams Ltd for: Beinneun 2 Ltd

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## 2 EIA METHODOLOGY

### 2.1 INTRODUCTION

The Environmental Impact Assessment (EIA) process identifies and evaluates the potential significant effects of a proposed development on the environment, and outlines measures to mitigate or manage any adverse impacts. The results of the EIA for the proposed Beinneun 2 Wind Farm (the Development) on land approximately 5.4 km northwest of Invergarry and approximately 11.3 km southwest of Fort Augustus, Highland (the Site) are presented in this EIA Report (EIAR). The Development is described in Chapter 4. This chapter summarises this process and the consultation undertaken up to the submission of the application.

### 2.2 EIA PROCESS

The EIA process typically involves the following steps:

- Site selection and feasibility;
- EIA 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 any cumulative effects;
- Determination of appropriate mitigation to avoid or reduce the effects through iterative design process and other approaches;
- Assessment of any residual effects;
- Preparation and submission of the application, including the EIA Report;
- Consideration of the application and the EIA Report by the Scottish Government, the relevant local authority (The Highland Council), other statutory and non-statutory consultees and the public;
- Determination of the application; and
- Implementation and monitoring.

### 2.3 EIA SCOPING

As the Applicant volunteered to carry out an EIA, no Screening Opinion has been requested or received and none is needed.

The aim of the Scoping process is to identify environmental issues at an early stage, to determine which environmental aspects may be subject to likely significant environmental effects from the Development and to identify any potential issues that can be 'scoped out' of the assessment. The Scoping exercise is used to inform the scope of surveys and assessments needed to inform the EIA Report.

A request for a Scoping Opinion was submitted to the Scottish Government's Energy Consents Unit in February 2024. Consultee responses and the Scoping Opinion issued by the Scottish Government's Energy Consents Unit (ECU) in September 2022 have been included within Technical Appendix A2.1 of this EIA Report.

The following consultees and organisations responded to the EIA Scoping Opinion:

- The Highland Council;
- Historic Environment Scotland;
- SEPA;
- NatureScot;
- Aberdeen Airport;
- BT;
- Defence Infrastructure Organisation;
- Edinburgh Airport;
- Fisheries Management Scotland;
- Glasgow Airport;
- Glasgow Prestwick Airport;
- Highland and Islands Airports Limited (HIAL);

- Joint Radio Company;
- Mountaineering Scotland;
- NATS Safeguarding;
- Office for Nuclear Regulation
- Scottish Forestry;
- Scottish Water; and
- Transport Scotland

This EIA Report is based on the Scoping Opinion and advice contained within it regarding assessment methodology, topics and consultee comments. Accordingly the following topics have been **scoped in** to the EIA and are covered by the EIA Report:

- Landscape and Visual (Chapter 5);
- Ecology (Chapter 6);
- Ornithology (Chapter 7);
- Archaeology and Cultural Heritage (Chapter 8);
- Noise (Chapter 9);
- Climate Change (Chapter 10);
- Traffic and Transport (Chapter 11);
- Hydrology, Hydrogeology and Soils (Chapter 12);
- Socio-economics, Recreation and Tourism, and Land Use (Chapter 13); and
- Other issues, including Aviation, Telecommunications and Utilities (Chapter 14).

Each technical chapter summarises any issues raised during consultation with both statutory and non-statutory consultees during the EIA Scoping process and how those issues have been considered in the EIA process.

## 2.4 REGULATIONS AND GOOD PRACTICE GUIDANCE

The preparation and production of this EIA Report has been conducted in accordance with relevant regulations and good practice guidance. The overarching regulation, policy and guidance documents that have been used in preparing this EIA Report are:

- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017<sup>1</sup> (as amended) (“the EIA Regulations”);
- National Planning Framework 4 (NPF4)<sup>2</sup>;
- Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment, 2013<sup>3</sup> which, whilst prepared to inform EIAs under the Town and Country Planning (Scotland) Act 1997 as amended<sup>4</sup>, is also relevant to EIAs produced under the EIA Regulations;
- Planning Circular 1/2017: Environmental Impact Assessment Regulations, 2017<sup>5</sup>;
- Environmental Impact Assessment Handbook (Scottish Natural Heritage, 2018)<sup>6</sup>; and

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<sup>1</sup> Scottish Government (2017) The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended). Available at: <https://www.legislation.gov.uk/ssi/2017/101/contents/made> [Accessed 24/06/2025].

<sup>2</sup> Scottish Government (2023) National Planning Framework 4 (NPF4). Available at: <https://www.gov.scot/publications/national-planning-framework-4/> [Accessed 24/06/2025].

<sup>3</sup> Scottish Government (2013) Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment. Available at: <https://www.gov.scot/publications/planning-advice-note-1-2013-environmental-impact-assessment/> [Accessed 24/06/2025].

<sup>4</sup> Scottish Government (1997) Town and Country Planning (Scotland) Act 1997 (as amended). Available at: <https://www.legislation.gov.uk/ukpga/1997/8/contents> [Accessed 24/06/2025].

<sup>5</sup> Scottish Government (2017) Planning Circular 1/2017: Environmental Impact Assessment Regulations. Available at: <https://www.gov.scot/publications/planning-circular-1-2017-environmental-impact-assessment-regulations-2017/> [Accessed 24/06/2025].

<sup>6</sup> Scottish Natural Heritage and Historic Environment Scotland (2018) Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. Available at: <https://web.archive.org/web/20220901050635/https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf> [Accessed 24/06/2025].

- Environmental Impact Assessment Guide to Delivering Quality Development (Institute of Environmental Management and Assessment [IEMA], 2016)<sup>7</sup>.

Further legislation, policy and guidance are also referred to in each of the relevant technical chapters.

## 2.5 TECHNICAL CONSULTATION

In addition to the formal Scoping process, where appropriate, authors of technical assessments within this EIA Report have engaged directly with statutory and non-statutory consultees to further refine the scope for each assessment and have documented any such consultation within the relevant technical chapters. Examples of this include consultation with SEPA, to discuss how on site constraints had been adhered to as far as practicable and show the how peat had been considered in the design. The Civil Aviation Authority have also been consulted to propose a reduced lighting scheme for the Development.

## 2.6 PUBLIC CONSULTATION

Details of the public consultation undertaken for the Development are set out in the Pre-Application Consultation Report (PAC Report) provided along with this application, with relevant aspects summarised here.

Public engagement comprised the following principal activities:

- Meetings with Community Councils, and the Glengarry Forest Trust;
- Project website; and
- Public consultation events.

### 2.6.1 Project Website

The project website was hosted on: <https://beinneun2.communityuk.site/>. This webpage was continually updated to include all the information and materials prepared in relation to the Development including the information presented at the consultation events. The website also provided the facility to make comments directly to the project team through the use of a 'Proposal Feedback Form.' The website provides details of the Applicant, the Development, and the proposed timeline as well as the required application documents.

### 2.6.2 Public Consultation Events

A series of consultation events were held in March and April 2025 to present the Development to the public and provide an opportunity for information exchange. These included both in person and online events to allow for complete accessibility. The in-person events were advertised in the local press and letters to local people, with letters being delivered to 285 addresses within the surrounding area (all properties within c. 12 km of the Site centre co-ordinate).

The dates and venues for the in person events were as follows:

- Monday 24<sup>th</sup> March 2025, 2:30pm to 6:30pm at Glenmoriston Millennium Hall, Invermoriston;
- Thursday 25<sup>th</sup> March 2025, 2:30pm to 6:30pm at Glengarry Community Hall, Invergarry;

The online event was held on 29<sup>th</sup> April 2025 using the communityUK online platform. This involved a presentation detailing what has driven the project design so far, as well as giving the public the opportunity to ask questions of the developer team. The online event was recorded and archived to allow those who could not make the live event the opportunity to watch the recording and ask any questions they may have. As with the in-person events, letters were delivered to 285 addresses in the local area advertising the event.

Approximately 17 people attended the March in-person events, and approximately 20 people participated in the April online event.

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<sup>7</sup> Institute of Environmental Management and Assessment (IEMA) (2016) Environmental Impact Assessment Guide to Delivering Quality Development. Available at: <https://www.iema.net/content/iema-impact-assessment-guidance/> [Accessed 24/06/2025].

The feedback from the consultation events centred mostly around noise and visibility.

## 2.7 CONTENT OF THE EIA REPORT

The EIA Report conveys the findings of the assessment of the potential significant environmental effects of the Development during the project lifeline of enabling works, construction, operation and decommissioning. The EIA Regulations require that an EIA Report should include a range of information including a description of the Development (Chapter 4: Development Description), a description of any reasonable alternatives explored by the developer and the decisions taken (Chapter 3: Site Selection and Design Evolution), baseline information, a description of the likely significant effects of the Development, and mitigation measures amongst other factors (Chapters 5-14). A non-technical summary of the EIA Report is also to be provided (in Volume 4). The structure of this EIA Report is presented in Chapter 1: Introduction.

Each of the technical chapters follow systematic approach with the main steps taken as follows:

- Introduction, including a summary of relevant consultation;
- Legislation, Policy and Guidance that is relevant to how the assessment is carried out;
- Assessment methodology and significance criteria;
- Baseline conditions;
- Assessment of potential effects;
- Cumulative effects assessment;
- Mitigation and residual effects;
- Summary of effects; and
- Statement of significance.

Planning policy, and an assessment of how the Development complies with it, is not part of the EIA process and so is presented in the Planning Statement, which is provided alongside the EIA Report as part of the application.

## 2.8 ESTABLISHING A BASELINE

To establish a baseline against which the effects of the Development can be evaluated, existing environmental conditions were recorded initially through desktop studies which were undertaken to gain a better understanding of the study area using appropriate parameters set by best practise guidance for each technical 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 methodology for data collection process and approach to describing baseline conditions is detailed within each topic chapter of the EIA. This includes the rationale for determining the study area for assessment (Chapter 5 to 14), as each discipline requires a bespoke study area.

The baseline information has been gathered from various sources including:

- Online/digital resources;
- Data searches, e.g. GroundSure, Historic Environment Record etc;
- Stakeholder engagement;
- Baseline site surveys; and
- Environmental information submitted in support of other planning applications for developments in the vicinity.

The baseline has been used to assess the sensitivity of receptors within the study areas. Constraints to development were identified using this baseline information and used to inform the design process and layout of the Development.

### 2.8.1 Future Baseline

The future baseline conditions in the absence of the Development have also been considered in each topic chapter. However, future baseline 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. In Chapter 10, Climate Change, a qualitative review is undertaken

whether climate change predictions would modify the future baseline to the point that it would change the results of the assessments undertaken in other chapters.

## 2.9 SIGNIFICANCE OF EFFECT

The purpose of an EIA is to identify the likely 'significance' of environmental effects (beneficial or adverse) with the potential to arise from a development. The significance of effects resulting from the Development will be determined through a combination of the sensitivity of the receiving environment (the sensitivity of receptors) and the predicted degree of change (the magnitude of change) from the baseline state. Within each technical chapter the assessment of effects will combine professional judgement together with consideration of various factors, potentially including the following:

- The extent of the effect (whether it is local, regional or national);
- The sensitivity of the resource or receptor under consideration;
- The magnitude of the potential effect in relation to the degree of change which occurs as a result of the Development;
- The nature of the effect (i.e., direct/indirect, adverse, beneficial or neutral);
- The probability of the effect occurring (i.e., certain, likely or unlikely);
- Duration of the effect (whether it is short term, medium or long term); and
- Whether the effect is temporary, permanent and/or reversible.

A generalised methodology for assessing significant effects is detailed below, however each individual technical area may have their own guidelines for assessment, and an explanation of their methodologies will be presented in the relevant topic chapter. The assessment of impact significance is undertaken using appropriate quality standards. Where no such standards exist, the professional judgement is applied and justification for the attributed significance provided.

### 2.9.1 Stages of Development

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 design and operation of the Development are generally considered to be long term effects.

### 2.9.2 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 of the EIA 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 very high, high, medium, low or negligible. Table 2.1 details a general framework for determining the sensitivity of receptors; however, each technical assessment will specify their own appropriate sensitivity criteria; in accordance with best practice guidance, legislation, statutory designations and / or professional judgement; that will be applied during the EIA and details of this will be provided in each technical chapter.

**Table 2.1: Framework for Determining Sensitivity of Receptors**

| Sensitivity of Receptors | 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 of low environmental value, or local importance.  |
| Negligible               | The receptor is resistant to change and is of little environmental value.   |

### 2.9.3 Magnitude

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. General criteria for assessing the magnitude of an effect are presented in Table 2.2. Each technical assessment will apply their own appropriate magnitude of effects criteria during the EIA, with the details provided in the relevant EIA Report chapter.

**Table 2.2: Framework for Determining Magnitude of Change**

| Magnitude of Impact | Criteria for Assessing Effect  |
|---------------------|--|
| Major               | A fundamental change to the baseline condition of the asset, leading to total loss or major alteration of character. |
| Moderate            | A material, partial loss or alteration of character.   |
| Minor               | A slight, detectable, alteration of the baseline condition of the asset.   |
| Negligible          | A barely distinguishable change from baseline conditions.  |

### 2.9.4 Identifying Significance of Effect

The sensitivity of the receptor and the magnitude of the predicted change will be used as a guide, in addition to professional judgement, to predict the significance of the likely effects. The significance of an effect can be considered adverse or beneficial.

Table 2.3 summarises guideline criteria for assessing the significance of effects. Typically, effects that are assessed as having a significance of “major” or “moderate” are considered to be significant in terms of the EIA Regulations, although professional judgment also plays a role here and any deviations from this general guide are explained in the technical EIA Report chapters (5-14).

**Table 2.3: Framework for Assessment of the Significance of Effects**

| Magnitude of Change | Sensitivity of Receptor |          |            |            |            |
|---------------------|-------------------------|----------|------------|------------|------------|
|                     | Very High               | High     | Medium     | Low        | Negligible |
| Major               | Major                   | Major    | Moderate   | Moderate   | Minor      |
| Moderate            | Major                   | Moderate | Moderate   | Minor      | Negligible |
| Minor               | Moderate                | Moderate | Minor      | Negligible | Negligible |
| Negligible          | Minor                   | Minor    | Negligible | Negligible | Negligible |

## 2.10 MITIGATION

### 2.10.1 Development of Design, Impact Avoidance & Mitigation

The design process for the Development has been informed by early technical surveys and the EIA Scoping process. The Development design has thus evolved to include measures to avoid, reduce or mitigate potential impacts on the environment based on legal obligations and current good practice guidelines.

Mitigation measures applied include:

- Changes to the Development design;
- Physical measures applied on Site; and
- Measures to control particular aspect of construction or operation of the Development.

Appropriate mitigation measures are discussed within each technical EIA Report chapter (5-14) as relevant.

In line with the mitigation hierarchy identified in NPF4, the strategy of avoidance, reduction, and remediation is a hierarchical one, which seeks:

- First to avoid potential effects;
- Then to reduce those which remain;
- To mitigate remaining effects where practicable; and
- Lastly, where no other measures are possible, to propose compensatory measures.

Where appropriate, additional environmental enhancements (improvements to the environment above those required to reduce adverse effects) have also been embedded into the Development design.

Where mitigation is proposed prior to the assessment stage, the mitigation is treated as being part of the Development and assessments are not made of the Development in the absence of this mitigation (this is often referred to as 'embedded mitigation'). The design process is expanded on in Chapter 3: Site Selection and Design.

### 2.10.2 Monitoring

Where potentially significant adverse effects have been identified and mitigation has been proposed to limit them, monitoring will be undertaken where required to verify that mitigation measures achieve their intended outcomes. This allows for early intervention and implementation of suitable remediation measures if required. Where monitoring is to take place this is discussed within the relevant technical chapter.

## 2.11 RESIDUAL EFFECTS

Where potential for significant effects is identified, additional mitigation measures will be proposed, where practicable, to avoid, prevent, reduce or, if possible, offset the likely significant adverse effects to acceptable levels. Residual effects following the adoption of additional mitigation will then be assessed to conclude the residual effect significance.

Likely residual effects on the environment are identified within each technical chapter alongside an assessment of their significance. Effects are typically considered to be significant for the purposes of the EIA Regulations where the effect is classified as being of 'major' or 'moderate' significance although professional judgment also plays a role here and any deviations from this general guide are explained in the technical EIA Report chapters (5-14).

## 2.12 CUMULATIVE EFFECTS

In accordance with Schedule 4 paragraph 5 (e) of the EIA Regulations, cumulative effects have been considered. By definition, these are effects that result from incremental changes caused by past, present or reasonably foreseeable developments together with the Development being assessed. This includes the combination of effects from the Development and from other existing or approved schemes in its vicinity which could act together to generate elevated levels of effects.

Cumulative assessment addresses the addition of the Development to a baseline of identified wind farms on each environmental aspect scoped into the EIA.

The EIA considers the potential of likely significant effects on the environment resulting from committed developments. The extent of any cumulative assessment is defined in each technical assessment chapter and can include both existing and proposed wind farm developments and other forms of development. 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. Other developments which may come forward in the future, but which do not currently have sufficient information available in relation to their likely effects to make an informed cumulative assessment (e.g., those within Scoping), are not considered in detail in this EIA Report.

## **2.13 ASSUMPTIONS AND LIMITATIONS**

General assumptions and limitations are presented below; any topic specific assumptions or limitations are presented in the topic chapters:

- The assessments assume the baseline conditions at the time of the EIA preparation unless otherwise stated in the topic chapter. Due to the dynamic nature of the environment, conditions may change during the site preparation, construction and operational phases;
- Assessments are based on published sources of information and primary data collection, as outlined in Section 2.8, unless otherwise stated. Sources are provided as necessary. These are assumed to be correct at time of submission;
- Assessments are based on the description of the Development, as provided in Chapter 4;
- It is assumed that current surrounding land uses do not change, with the exception of the committed and reasonably foreseeable developments identified; and
- The consent/planning permission, if granted, will include conditions that will be sufficient to secure the mitigation and enhancement measures to ensure that the Development is acceptable in planning terms.