MORAY WEST
OFFSHORE WINDFARM

Onshore Transmission Infrastructure Environmental Impact Assessment (EIA)

Moray Offshore Windfarm (West) Limited

Chapter 3 The Environmental Impact Assessment Process

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Acronyms	
Acronyms	**Expanded Term**
AC	Aberdeenshire Council
CIEEM	Chartered Institute of Ecology and Environmental Management
EIA	Environmental Impact Assessment
EU	European Union
MC	Moray Council
OnTI	Onshore Transmission Infrastructure
PAB	Planning Application Boundary
PPP	Planning Permission in Principle
SEPA	Scottish Environmental Protection Agency
SNH	Scottish Natural Heritage

3 The Environmental Impact Assessment Process

3.1 Introduction

3.1.1.1 This chapter of the Environmental Impact Assessment (EIA) Report sets out the general approach applied to the EIA of the Moray West Onshore Transmission Infrastructure (OnTI). It outlines the overarching processes for identifying and evaluating the OnTI's potentially significant environmental effects. Information on discipline specific methodologies, including surveys, is presented within the relevant technical assessment chapters.

3.1.1.2 EIA is a systematic procedure that must be followed for certain categories of development before they can be granted planning permission or, where applicable, authorised through other consenting processes. Its purpose is to assess a development's potential significant environmental effects (positive or negative) and determine how these can be reduced or enhanced depending upon their nature. This helps to ensure that the predicted effects of a development are properly understood by statutory consultees, other interested parties including the public, and the relevant determining authority before a decision is made on the planning application.

3.2 Regulatory Context

3.2.1.1 The requirement for EIA within European Union (EU) Member States is set out in Directive 2014/52/EU of the European Parliament and of the Council (European Union, 2014). This was enacted on 15 May 2014, amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (European Union, 2011). For planning applications submitted under the Town and Country Planning (Scotland) Act 1997 (as amended) (United Kingdom Parliament, 1997), Directive 2014/52/EU was transposed into Scottish law by The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 (the EIA Regulations) (The Scottish Parliament, 2017) on 16 May 2017.

3.2.1.2 The general approach applied to the EIA of the OnTI also draws upon a number of EIA principles, regulations and guidance documents, including relevant guidance issued by other government and non-governmental organisations (e.g. Scottish Natural Heritage (SNH), 2013) and receptor specific guidance documents (e.g. Chartered Institute of Ecology and Environmental Management (CIEEM), 2016).

3.2.2 The Environmental Impact Assessment Report

3.2.2.1 Where a development necessitates an EIA, the process and its conclusions must be detailed in an EIA Report for submission with the planning application. Schedule 4 of the EIA Regulations specifies that, amongst other matters, an EIA Report should include the following information:

- A description of the development, including its location, physical characteristics, land use requirements, process characteristics and estimated residues and operational emissions;
- An outline of the reasonable alternatives studied and an indication of the main reasons for the choice made, taking into account the environmental effects;
- A description of the relevant aspects of the current state of the environment and an outline of the likely evolution thereof without implementation of the development;
- A description of the aspects of the environment likely to be significantly affected by the development, particularly including population, human health, biodiversity, land, soil, water, air, climate, material assets and landscape;
- A description of the likely significant effects of the development on the environment, considering whether they are direct or indirect, secondary, cumulative, transboundary, short-term, medium-term or long-term, permanent, temporary, positive or negative;

- A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties encountered compiling the required information and the main uncertainties involved; and
- A description of the measures envisaged to avoid, prevent, reduce and where possible offset any significant negative effects on the environment.
- A description of the expected significant negative 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.

3.2.2.2 An EIA Report should also be accompanied by a non-technical summary that sets out the findings of the EIA in non-technical language.

3.2.2.3 The EIA Report for the OnTI conforms with all applicable assessment and information requirements detailed in the EIA Regulations.

3.3 The Scoping Process

3.3.1.1 In accordance with Regulation 17 of the EIA Regulations, the process of establishing which aspects of the environment are likely to experience significant effects as a result of a development, and thus need to be considered by an EIA, is referred to as 'Scoping'.

3.3.1.2 A developer may request a 'Scoping Opinion' from a determining authority, this being an opinion on the scope and level of detail to be provided within an EIA Report. Moray Offshore Windfarm (West) Limited (Moray West) submitted a single Scoping Report (Moray West, 2017) to both Aberdeenshire Council (AC) and Moray Council (MC) with a request for a Scoping Opinion in June 2017. The Scoping Report set out proposed scopes for the assessments to be presented within the EIA Report, as well as a preliminary EIA methodology.

3.3.1.3 A joint Scoping Opinion was received from AC and MC in August 2017, accompanied by Scoping consultation responses from Historic Environment Scotland, Scottish Environment Protection Agency (SEPA), SNH and Scottish Water. The Scoping Opinion and scoping responses are included in Technical Appendix 3.1: Scoping Opinion and Scoping Responses, with their content being summarised in the technical assessment chapters of the EIA Report.

3.3.2 Further Consultation and Evolution of the Scope

3.3.2.1 The content of the Scoping Opinion and Scoping responses has generally informed the technical assessments presented within the EIA Report. However, further post Scoping consultation has been undertaken throughout the EIA. This was considered necessary to provide opportunities for a number of additional consultees to comment on the OnTI and to follow up certain requests within the Scoping Opinion and Scoping responses. These further consultations and their outcomes are also set out within the relevant technical assessment chapters of the EIA Report.

3.4 Assessment Methodology

3.4.1.1 The assessment methodologies presented within the EIA Report are based on recognised good practice and guidelines specific to each discipline; details are provided in the relevant technical assessment chapters. Stages in the EIA process generally include:

- Collection and collation of existing baseline information about the receiving environment and completion of primary surveys to fill any gaps in knowledge or update any historic information, along with identification of any relevant trends in, or evolution of, the baseline;
- Consultation with experts and other relevant consultees to define the scope of the assessment and study area and subsequent consultation in response to emergent findings;

- Consideration of the OnTI's potential effects on the baseline, followed by engagement with the wider EIA team and engineers / designers in a design iteration process seeking to optimise the OnTI to avoid or reduce any predicted negative effects (embedded mitigation);
- Assessment of the OnTI and identification of any additional mitigation measures required for potential significant effects, together with an evaluation of residual effects after additional mitigation measures have been applied; and
- Compilation of the technical assessment chapters of the EIA Report.

3.4.1.2 In reality, many of the effects are relevant to more than one discipline and careful attention must be paid to interrelationships to ensure a full consideration of a development, and to avoid duplication between technical assessment chapters. For example, the assessment of indirect effects upon the setting of publicly accessible features in Chapter 8: The Historic Environment, will be aided by the considerations given to visual effects upon visitors to those features in Chapter 7: Landscape and Visual Amenity. Similarly, increases in traffic flows can result in secondary effects on air quality. The effects of the OnTI on traffic and transport are considered in Chapter 9: Traffic and Transport, while the potential for increased traffic flows resulting from the OnTI to lead to air quality effects is considered in Chapter 11: Air Quality.

3.4.1.3 The following format has generally been adopted for the presentation of information within each technical assessment chapter of the EIA Report (in some cases, technical data and analysis have been moved to Technical Appendices contained within Volume 4 of the EIA Report):

- Introduction – Sets the scene for the discipline, the nature of the receptors to be considered, and how the OnTI might cause changes to the baseline conditions;
- Approach to Assessment – Describes the planning and legislative context for the discipline, the scope of the assessment, how baseline data have been gathered and the methods used to predict effects and evaluate their significance;
- Baseline Conditions – Describes the current condition of the receiving environment in terms of the discipline, as well as the likely evolution of the identified receptors and any natural changes that might be expected in the absence of the OnTI;
- Embedded Mitigation – Identifies any discipline specific mitigation measures that are assumed to be inherent in the design of the OnTI. These are usually design commitments (e.g. the location of infrastructure) or construction practises (e.g. good practice onsite or construction techniques);
- Assessment of Potential Effects – Assesses the potential environmental effects predicted to arise as a result of implementing the OnTI. Provides a judgement of effect significance in the absence of any additional mitigation or enhancement measures;
- Additional Mitigation and Enhancement Measures – Identifies measures to avoid, reduce or remedy potential negative effects identified by the assessment;
- Residual Effects – Presents an assessment of the potential effects following the application of any additional mitigation or enhancement measures;
- Assessment of Cumulative Effects – Presents an assessment of any cumulative effects that might arise when the effects of the OnTI are combined with those of other developments; and
- References.

3.4.2 Assessment Parameters

3.4.2.1 Chapter 2: The Proposed Development provides a detailed description of the OnTI. This information has been used as the basis of the technical assessments presented within the EIA Report.

3.4.2.2 Moray West is seeking Planning Permission in Principle (PPP) for the OnTI under the Town and Country Planning (Scotland) Act 1997 (as amended). Certain details of the OnTI will not therefore be determined until the detailed design and planning stages, after PPP has been granted. For example, an exact route for the onshore cable circuits within the planning application boundary (PAB) is not currently identified.

3.4.3 Characterisation of the Existing Environment

3.4.3.1 In order to assess the effects of the OnTI, it has been necessary to understand the existing state of the receiving environment. Characterisation of the existing environment has been undertaken in order to determine the baseline conditions. This involved the following steps:

- Define a study area for each receptor based on their relevant characteristics (e.g. mobility, range and connectivity);
- Review the available baseline data and information;
- Consider the potential effects that might be expected to arise from the OnTI;
- Determine if there is sufficient baseline data to make robust judgements about the significance of the potential effects;
- If required, ensure the gathering of further baseline data is targeted and directed at answering the key question and filling key data gaps; and
- Review the baseline data gathered to ensure the environment can be characterised in sufficient detail.

3.4.3.2 Discipline specific approaches to establishing a robust environmental baseline (upon which effects can be assessed) are set out within each technical assessment chapter of the EIA Report.

3.4.4 Assessment of Potential Significant Effects

3.4.4.1 For the purposes of the EIA, 'impact' is used to define a change that is caused by an action. For example, the use of certain construction plant (action) will result in increased levels of airborne noise (impact). Impacts can be defined as direct, indirect, secondary, cumulative and inter-related. They can also be positive or negative, although the relationship between them is not always straightforward. In addition, for certain impacts, reversibility is relevant to its overall effect. An irreversible (permanent) impact may occur when recovery is not possible, or not possible within a reasonable timescale. In contrast, a reversible (temporary) impact is one where natural recovery is possible over a short time period, or where mitigation measures can be effective at reversing the impact. The term 'effect' is used in the EIA to express the consequence of an impact. Using the construction plant example again, operation of the plant (action) results in increased levels of airborne noise (impact), with the potential to disturb local residents (effect).

3.4.4.2 Effects are presented as 'significance of effect', which takes into account the magnitude of an impact in combination with the sensitivity (or importance) of the receptor or resource, in line with defined significance criteria.

3.4.4.3 The impacts assessment process considers the following:

- The magnitude of the impact;
- The sensitivity of the receptor to the impact;

- The probability that the impact will result in a given effect;
- The significance of the resulting likely environmental effect; and
- The level of certainty inherent within the assessment.

Defining Magnitude and Sensitivity

3.4.4.4 Determining the magnitude of an impact is influenced by a range of factors, including:

- Spatial extent – The geographical area over which the impact occurs;
- Duration – The time over which the impact occurs (this may be expressed as short-term or long-term, and temporary or permanent);
- Frequency – How often the impact occurs over the lifetime of the OnTI; and
- Reversibility – The ability for the receiving environment / exposed receptor to return to baseline conditions.

3.4.4.5 Regarding duration, temporal scope typically covers the period from commencement of the first phase of the OnTI (construction) through to its operational and maintenance phase (operation) and ultimately completion of operations and restoration of the site (decommissioning) as follows:

- Construction – Effects may arise from the construction activities themselves, or from the temporary occupation of land. Effects are often of limited duration although there is potential for permanent effects. Where construction activities create permanent change, the effects will obviously continue into operation;
- Operation – Effects may be permanent, or they may be temporary, intermittent, or limited to the life of a development until decommissioning; and
- Decommissioning – Effects may arise from the decommissioning activities themselves, or from the temporary occupation of land. The effects would generally be temporary and of limited duration and additional permanent change would normally be unlikely unless associated with restoration.

3.4.4.6 Categorisation of impact magnitude may vary between disciplines, but will broadly follow the principles set out in Table 3.4.1 below in so far as it is relevant.

Table 3.4.1: Determining Magnitude of Impacts

Impact Magnitude	Description
High	Total loss or major alteration to key elements / features of the baseline conditions.
Moderate	Partial loss or alteration to one or more key elements / features of the baseline conditions.
Low	Minor shift away from the baseline conditions.
Negligible	Very slight change from baseline conditions.

3.4.4.7 Depending upon the specific topic, sensitivity will generally be defined in terms of the quality, value, rarity or importance of the receptor being considered. The ability of a receptor to adapt to change, tolerate, and / or recover from potential impacts will be key in assessing its sensitivity. Expert judgement is particularly important when determining the sensitivity of receptors, but guidance will also be taken from the values attributed through designations or protection under law. The sensitivity of a receptor can generally be determined using factors identified in Table 3.4.2.

Table 3.4.2: Determining Sensitivity

Sensitivity Factor	Description
Adaptability	The degree to which a receptor can avoid or adapt to an impact.
Tolerance	The ability of a receptor to accommodate temporary or permanent change without a significant negative effect.
Recoverability	The temporal scale over, and the extent to which a receptor will recover following an impact.
Value	A measure of the importance of a receptor in terms of ecological, social / community and / or economic value.

3.4.4.8 Sensitivity is classed herein as 'low', 'moderate' or 'high'. The definition of each sensitivity level will be identified within each technical discipline and in some instances it may be necessary to use a fourth sensitivity level of 'negligible'.

Evaluation of Significance

3.4.4.9 In each of the technical assessment chapters, professional judgement is used in combination with relevant guidance to determine effects by assessing the interaction of the receptor's sensitivity with the predicted magnitude of impact upon it. In some cases, professional judgement can be guided by quantitative values, whilst in other cases qualitative descriptions are used. The categorisation of magnitude of impact and the scale of sensitivity is generally determined on a discipline by discipline basis. However, examples are used in Table 3.4.3 to aid an understanding of how the level of an effect and its significance are established.

3.4.4.10 The type of categorisation illustrated in Table 3.4.3 provides a guide only, and may be moderated by the professional that undertakes an assessment in accordance with judgement and experience. In particular, the divisions between categories of receptor sensitivity, magnitude of impact and level of effect should not be interpreted as definitive, and the lines that represent the boundaries between categories should in many cases be considered as 'blurred'. The level of the effect may also need to be qualified with respect to the scale over which it may apply (e.g. local, regional, national and international). Any variations are described within the technical assessment chapters.

Table 3.4.3: Determining Significance of Effects			
Magnitude of Impact	**Sensitivity of Receptor**		
	Low	**Moderate**	**High**
Negligible	Negligible / Minor	Minor	Minor / Moderate
Low	Minor	Minor / Moderate	Moderate
Moderate	Minor / Moderate	Moderate	Moderate / Major
High	Moderate	Moderate / Major	Major

3.4.4.11 Having defined the level of an effect, professional judgement, informed by guidance and standards, is then applied to identify which can be considered significant when discussed in terms of the EIA Regulations. For some disciplines there is published guidance on the evaluation of significance; however for others it is necessary to develop methodologies based on previous experience.

3.4.4.12 A definition of how the terms are derived for each discipline is set out in the corresponding technical assessment chapters, along with the relevant explanation and descriptions of receptor sensitivity, magnitude of impact and the levels of effect that are considered significant in terms of the EIA Regulations.

Mitigation

3.4.4.13 For the purposes of the EIA, the following two types of mitigation have been defined:

- Embedded mitigation – Consisting of measures that are identified and adopted as part of the design evolution, or measures otherwise incorporated as controls on the construction or operation of the OnTI. Such measures are considerations in the assessment of effect significance (i.e. they are assumed to form part of the design of the OnTI prior to any assessment); and
- Additional mitigation – Consisting of measures that the EIA has identified as being necessary to reduce or eliminate any effects that are predicted to be significant. These will subsequently be adopted as commitments in delivering the OnTI (i.e. they are considerations in the assessment of residual effect significance only).

3.4.4.14 Where appropriate, enhancement measures that enable the OnTI to have a positive environmental effect may be proposed (e.g. the installation of bat boxes or other habitat provisions).

Assessing Residual Effects

3.4.4.15 Following the identification of any necessary additional mitigation measures, effects are re-assessed and all residual significance is described. Where significant effects are predicted and no additional mitigation measure is proposed, explanations are provided for why the significance cannot be reduced.

3.4.5 Cumulative Effects Assessment

3.4.5.1 In isolation, a development's effects may be assessed as not significant. However, when considered in the context of other developments located in the surrounding area, or occurring within similar timeframes, the significance of these effects can increase cumulatively.

3.4.5.2 In order to identify whether there are other developments that may lead to cumulative effects in combination with the OnTI, Moray West undertook consultation with AC and MC. To aid the identification and selection of other relevant developments, Moray West proposed the following criteria:

- Zone of influence – The other developments should be within 5 km of the PAB;
- Scale and nature of development – The other developments should be EIA and / or Major / National developments, as defined by the Town and Country (Hierarchy of Developments) (Scotland) Regulations 2009 (The Scottish Parliament, 2009);
- Level of certainty – The other developments must be either permitted (but not implemented), at the application stage (but not determined) or EIA developments for which a Scoping Report has been submitted;
- Temporal scope – Where the construction programmes for developments are likely to overlap with that of the OnTI, these developments should be included.; and
- Available information – There must be sufficient publicly available information on the other developments to allow for robust assessments.

3.4.5.3 Partly due to the proposed rural location of the OnTI, no other developments were identified within Aberdeenshire. However, the following two developments were identified within Moray:

- Aultmore Wind Energy Project – A consented 13 turbine wind energy development proposed for a commercial forestry site approximately 2 km west of the PAB, south of Deskford; and
- Lurg Hill Wind Farm – A five turbine wind energy development proposed for a commercial forestry immediately east of the PAB, south of Deskford (planning application submitted in July 2017).

3.4.5.4 Discipline specific assessments of cumulative effects are presented within the relevant technical assessment chapters of the EIA Report considering the appropriate guidance (e.g. SNH (2013) and CIEEM (2016)).

3.5 References

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