

Sure Partners Limited

ARKLOW BANK WIND PARK  
PHASE 2  
**ONSHORE GRID  
INFRASTRUCTURE**

**ENVIRONMENTAL IMPACT  
ASSESSMENT REPORT**

**VOLUME II**

**Chapter 3** EIA Methodology

ARUP

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Renewables

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## 3 EIA Methodology

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### 3.1 Introduction

This Environmental Impact Assessment Report (EIAR) is a statement of the potential effects on the environment which may result from the proposed development.

The objectives of the EIAR methodology are:

- To identify the likely significant environmental effects of the proposed development during the construction and operational phases and decommissioning (where relevant), having regard to the characteristics of the local environment; and
- To evaluate the magnitude and significance of likely effects and to propose appropriate measures to mitigate potential adverse effects.

This chapter outlines the Environmental Impact Assessment (EIA) methodology used in this report to assess the effects of the proposed development. This includes the planning process, the information to be included in the EIAR, the structure of the EIAR, the rating and significance of effects, mitigation measures, the cumulative and interactive effects and the consultation undertaken.

### 3.2 Legislation and Guidance

A European Directive for EIA has been in force since 1985 following the adoption of Council Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment.

The EIA Directive of 1985 has been amended three times by Council Directives 97/11/EC, 2003/35/EC and 2009/31/EC. It was repealed and replaced by Council Directive 2011/92/EU of the European Parliament and of the Council on 13 December 2011. This Directive was amended in 2014 by Council Directive 2014/52/EU. The amended directive sets out the requirements for member states on the assessment of the effects of certain public and private projects on the environment.

The EIA Directive, as amended, requires the competent authority to undertake an EIA of certain public and private projects that are likely to have significant effects on the environment as part of the consent decision making process. In Ireland, the requirements of the EIA Directive, as amended, in relation to planning consents have been transposed into Irish legislation in Part X of the Planning and Development Act, 2000, as amended, and in Part 10 of the Planning and Development Regulations, 2001, as amended.

The EIAR has been prepared to comply with the requirements of the Act and Regulations. Additionally, due regard will be given to the following overarching guidelines for EIA and the preparation of EIARs:

- Environmental Protection Agency (2017) *Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports (Draft August 2017)* (EPA Draft Guidelines)
- Environmental Protection Agency (2015) *Advice Notes for Preparing Environmental Impact Statements Draft September 2015*
- European Commission (2017) *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Report.*
- European Commission (1999) *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions.*

All effects will be described in accordance with the recommended terminology from the EPA Draft Guidelines.

Due regard will also be given to the following guidance:

- Department of the Housing, Planning, Community and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment;*
- Department of Housing, Planning, Community and Local Government (2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licensing Systems;* and
- Department of Housing, Planning, Community and Local Government (2017) *Circular PL 1/2017 – Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive): Advice on the Administrative Provisions in Advance of Transposition.*

Further details on topic-specific guidance used to undertake assessments is identified in **Chapters 7 - 19** as appropriate.

## 3.3 Overview of the Consent Process

### 3.3.1 Statutory Consent Process

Sure Partners Limited (SPL), the Developer, is seeking planning permission for the onshore grid infrastructure (the proposed development) associated with the Arklow Bank Wind Park Phase 2 (the Project). An Bord Pleanála (the Board) has, following the statutory pre-application consultation process, determined that the proposed development is Strategic Infrastructure Development (SID), under Section 182A of the Planning and Development Act 2000, as amended (the Act). The consent application will therefore be submitted for approval to the Board under Section 182A(1) of the Act.

### 3.3.2 EIA Process and Role of the EIAR

The EIA is part of the consenting process for certain specified development projects. It ensures that consent decisions for those projects are made in the knowledge of the environmental consequences of the project.

Article 1(2)(g) of the EIA Directive as amended provides the following definition:

*“environmental impact assessment” means a process consisting of:*

- (i) the preparation of an environmental impact assessment report by the developer, as referred to in Article 5(1) and (2);*
- (ii) the carrying out of consultations as referred to in Article 6 and, where relevant, Article 7;*
- (iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer in accordance with Article 5(3), and any relevant information received through the consultations under Articles 6 and 7;*
- (iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and*
- (v) the integration of the competent authority's reasoned conclusion into any of the decisions referred to in Article 8a.”*

For the purpose of the EIA, SPL is the ‘developer’ proposing the Arklow Bank Wind Park Phase 2 Onshore Grid Infrastructure development and the Board is the ‘competent authority’ that will undertake the EIA and decide whether to grant consent for the proposed development.

The principal elements of the EIA process can be described as follows (as per the EPA Draft Guidelines):

1. **Screening** – deciding whether an EIA is required to be undertaken for the proposed development;
2. **Scoping** – determining the issues to be considered as part of the EIA, further issues identified by consultees and the availability of data. The EIA Scoping Report provides consultees with information on the proposed development and describes the intended level of detail and content of the EIAR so that they can provide comments/input to the final scope and content of the EIAR;
3. **Consideration of alternatives** – describing the reasonable alternatives studied by the developer (for example in terms of design, technology, location, size and scale) and indicating the reasons for selecting the chosen option;
4. **Description of baseline environment** – description of the existing conditions against which the likely environmental effects of the proposed development will be evaluated;
5. **Description of the proposed development** – providing the relevant information on the site, design and other relevant features of the proposed development, having regard to the vulnerability of the proposed development to risks of major accidents and/or disasters;
6. **Identification and assessments of effects** – an iterative process whereby the significance of likely effects is determined;

7. **Monitoring and Mitigation** – description of the mitigation measures proposed to avoid, prevent and reduce significant adverse effects and a description of proposed monitoring arrangements;
8. **Reporting** – the findings of the assessment are reported and published in an EIAR which is submitted to the Board as part of the application for planning permission;
9. **Scrutiny** – the Board (as the competent authority) will undertake the EIA as part of its consideration of the proposed development. The Board will have regard to the information in the EIAR, and the submissions of statutory and non-statutory bodies and the general public in its determination whether consent should be granted; and
10. **Enforcement and monitoring** - If consent is granted, the developer is obliged to adhere to the measures and commitments contained in the EIAR, as modified by any conditions attached to the consent.

### 3.4 EIA Scoping

In August 2017, the EPA published the latest edition of the Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EPA, 2017). The Guidelines have been drafted with a view to facilitating compliance with the EIA Directive as amended by Directive 2014/52/EU. The EPA Draft Guidelines state that the scoping process should focus effort and resources on key significant issues that are guided by the following criteria:

- Use of likelihood and significance as the principal criteria for determining what environmental aspects need to be considered and addressed in the EIAR;
- Consider precedence to ensure any EIARs for similar projects on similar sites are used to develop an appropriate technical scope and robust assessment; and
- Recognise potential direct and indirect interactions that may magnify effects and/or give rise to cumulative significant effects (from multiple non-significant effects).

The EIA Scoping Report, issued in September 2020, provides an overview of the likely significant environmental effects that may arise from the proposed development and describes the methods which will be used to evaluate them as part of the preparation of the EIAR. It includes information on the following:

- Information and studies needed to characterise the existing environment;
- Methods used to predict the magnitude of environmental effect where applicable;
- Criteria against which the significance of effects will be evaluated;
- Consultations to be carried out; and
- The envisaged structure and content of the EIAR.

### 3.5 Information to be Included in the EIAR

An EIAR is best defined as “a statement of the effects, if any, which the proposed development, if carried out, would have on the environment” (EPA, 2017). As outlined in Article 5(3)(a) of the EIA Directive, the EIAR must be prepared by competent experts. Annex IV of the EIA Directive specifies that the following information must be provided in an EIAR:

- “1. Description of the project, including in particular:
  - a) a description of the location of the project;
  - b) a description of the physical characteristics of the whole project, 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 project (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;
  - 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.
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 project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.
3. A description of the relevant aspects of the current state of the environment (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 environmental information and scientific knowledge.
4. A description of the factors specified in Article 3(1) likely to be significantly affected by the project: 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.
5. A description of the likely significant effects of the project on the environment resulting from, *inter alia*:
  - a) the construction and existence of the project, 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 projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;*
- f) *the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;*
- g) *the technologies and the substances used.*

*The description of the likely significant effects on the factors specified in Article 3(1) 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 project. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project.*

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.*
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.*
8. *A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council (\*) or Council Directive 2009/71/Euratom (\*\*) or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.*
9. *A non-technical summary of the information provided under points 1 to 8.*
10. *A reference list detailing the sources used for the descriptions and assessments included in the report.*



Section 4 of the EPA Draft Guidelines outlines the information to be presented in an EIAR as follows:

*“To assist assessment and increase clarity and the systematic organisation of information in an EIAR; it is good practice to separately describe the:*

- i) key alternatives considered*
- ii) proposed project*
- iii) receiving environment*
- iv) likely significant effects*
- v) mitigation and monitoring measures and*
- vi) residual effects.*

*A non-technical summary must also be provided.*

*The receiving environment and the effects of the project are explained by reference to its possible effects on a series of environmental factors:*

- *Population and Human Health*
- *Biodiversity*
- *Land & Soils*
- *Water*
- *Air*
- *Climate*
- *Material Assets*
- *Cultural Heritage*
- *Landscape*
- *Interactions.”*

### **3.5.1 Structure of the EIAR**

This EIAR has been prepared to provide information on the likely significant effects of the proposed development on the environment as per Schedule 6 of the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, S.I. No. 296 of 2018:

- *“A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development;*
- *A description of the potential effects on the environment of the proposed development;*
- *A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset potential adverse effects on the environment of the development;*

- *A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment”*

This EIAR comprises of the following:

- **Volume 1** provides the non-technical summary. This summarises the findings of the EIAR in a clear, accessible format that uses non-technical language and supporting graphics. The non-technical summary describes the proposed development, existing environment, effects and mitigation measures and relevant aspects of the EIAR in a manner that can be easily understood by the general public;
- **Volume 2** encompasses the main EIAR including introductory chapters in addition to ‘assessment’ chapters for each environmental aspect in accordance with Article IV of the EIA Directive. The front-end chapters (**Chapters 1 – 6**) provide the relevant project context whilst the assessment chapters (**Chapters 7 -19**) provide a description of the relevant environmental aspects and likely significant effects with summary chapters provided thereafter (**Chapters 20-22**);
- **Volume 3** provides the technical appendices that support and are cross-referenced with Volume 2. Volume 3 includes relevant drawings, modelling outputs, background reports and/or supporting documents.

### 3.5.2 Front-end Chapters

The front-end chapters facilitate a systematic approach to understanding the context of the proposed development, provide a comprehensive description of the proposed development and ensure that all matters identified in Annex IV of the EIA Directive have been addressed in order to provide all relevant information to An Bord Pleanála.

The front-end chapters address the following:

- **Introduction (Chapter 1)** – this will outline the background and need for the proposed development;
- **Policy Context (Chapter 2)** - this chapter will examine the proposed development in the context of relevant EU national, regional and local planning and energy plans, policies and objectives. Consideration will also be given to relevant non-statutory plans and guidance. The chapter will provide an evaluation of compliance with these plans and policies;
- **EIA Methodology (Chapter 3)** – the role of the EIAR in the EIA process and the methodology for preparation of the EIAR, including the environmental assessment approach, is described (the subject of this chapter);
- **Consideration of Alternatives (Chapter 4)** – the reasonable alternatives studied by the developer including alternative locations, layouts, designs, processes and the ‘do nothing’ scenario of no development, is described;

- **Description of Development (Chapter 5)** – the design and operation of the proposed development is described. The description is supported by appropriate graphics and scheme drawings;
- **Construction Strategy (Chapter 6)** – the approach to the construction of the proposed development, including indicative durations will be described. The description will form the basis of the environmental assessments to establish the likely significant effects which could arise during construction. The Construction Environmental Management Plan (CEMP) is included in the EIAR (**Appendix 6.1 of Volume 3**), and the Contractor will be required to comply with this plan during the construction phase of the scheme. The decommissioning activities on cessation of operations will also be addressed.

### 3.5.3 Assessment Chapters

The assessment chapters have been completed by the relevant technical specialists (competent experts) in accordance with Article 5 3(a) of the EIA Directive (details of competent experts are summarized in **Appendix 3.1 of Volume 3**).

The assessment chapters include the following:

- Air Quality (**Chapter 7**);
- Climate (**Chapter 8**);
- Land and Soils (**Chapter 9**);
- Water (**Chapter 10**);
- Noise and Vibration (**Chapter 11**);
- Biodiversity (**Chapter 12**);
- Traffic and Transport (**Chapter 13**);
- Landscape and Visual (**Chapter 14**);
- Archaeology, Architectural & Cultural Heritage (**Chapter 15**);
- Resource & Waste Management (**Chapter 16**);
- Material Assets (**Chapter 17**);
- Population & Human Health (**Chapter 18**);
- Major Accidents & Disasters (**Chapter 19**).

The assessment chapters will provide detail on the existing environment and relevant standards, the assessment methodology, the likely significant effects, mitigation and monitoring measures and residual effects for each environmental aspect. The potential for cumulative effects (during both construction and operational phases) will be assessed in these chapters.

The general structure of the individual assessment chapters will be as follows:

- **Introduction:** A short introduction to the assessment will be presented.

- **Baseline Environment:** There will be a description of the relevant aspects of the current state of the environment (baseline scenario) and an outline thereof without implementation of the project as far as natural changes from the baseline scenario will be assessed on the basis of the availability of environmental information and scientific knowledge.
- **Impact Assessment methodology:** There will be a description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of compiling the required information and any uncertainties involved.
- **Characteristics of the Proposed Development:** There will be a description of the aspects of the proposed development that are of particular relevance to the assessment topic. There will be reference made to the detail descriptions given in **Chapter 5 Description of Development** and **Chapter 6 Construction Strategy**.
- **Assessment of significant effects:** There will be a description of the likely significant effects (direct and indirect) in accordance with the EIA Directive, Draft EPA Guidelines and other topic specific guidelines where appropriate. The Do-Nothing scenario will also be described. Both construction and operational phases will be addressed, and decommissioning will be addressed where relevant.
- **Mitigation measures and monitoring:** There will be a description of the relevant mitigation measures envisaged to avoid, prevent and reduce significant adverse effects and a description of proposed monitoring arrangements. Both construction and operational phases will be addressed, and decommissioning will be addressed where relevant.
- **Cumulative Effects:** There will be a description of the likely significant effects of the proposed development on the environment (relevant to the assessment topic) resulting from the cumulation of effects with other existing and/or approved projects and other relevant proposed projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources. The cumulative effects will be described for both the construction and operational phase of the proposed development.
- **Residual effects:** There will be a description of the residual effects including the quality, significance and duration once mitigation measures have been implemented. The description of likely significant residual effects will be described separately for both the construction and operational phases.

### 3.5.4 Summary Chapters

The following chapters will be provided at the end of the EIAR to summarise what was reported in each of the specialist chapters. Inputs will be required from all specialists to these chapters.

- **Inter-related Effects (Chapter 20)** – Interactive effects will be considered in each of the assessment chapters, however, they will be summarised in this stand-alone chapter. This section will identify any direct or indirect effects which are caused by the interaction of environmental aspects (i.e. interactive effects or ‘inter-related effects’).
- **Summary of Cumulative Effects (Chapter 21)** – Cumulative effects will be considered in each of the assessment chapters however they will be summarised in this stand-alone chapter. It will address the potential for other projects or proposals in the locale to exacerbate or create larger, more significant effects (i.e. cumulative effects).
- **Summary of Mitigation measures and Residual Effects (Chapter 22)** – this section will summarise the proposed mitigation measures and residual effects outlined in the EIAR. Monitoring will be detailed where relevant. All residual effects will be described in accordance with the recommended terminology from the EPA Guidelines.

### 3.6 Rating and Significance of Effects

Section 3.7 of the Draft EPA Guidelines (EPA, 2017) advises that the EIAR should focus on likely, significant effects and descriptions of effects that are accurate and credible.

Likely effects are considered to be those which are planned to take place and those which can be reasonably foreseen to be inevitable consequences of normal construction and operation of the proposed development, including the vulnerability of the proposed development to risks from major accidents. Significance of effects is understood to mean the importance of the outcome of the effect (i.e. consequence of change) and is determined by a combination of objective (scientific, often quantitative) and subjective (social, often qualitative) concerns.

The factors outlined in **Table 3.1** Description of Effects (Source: EPA, 2017) are therefore to be considered when determining likely significant effects of the proposed development on environmental aspects.

**Table 3.1 Description of Effects (Source: EPA, 2017)**

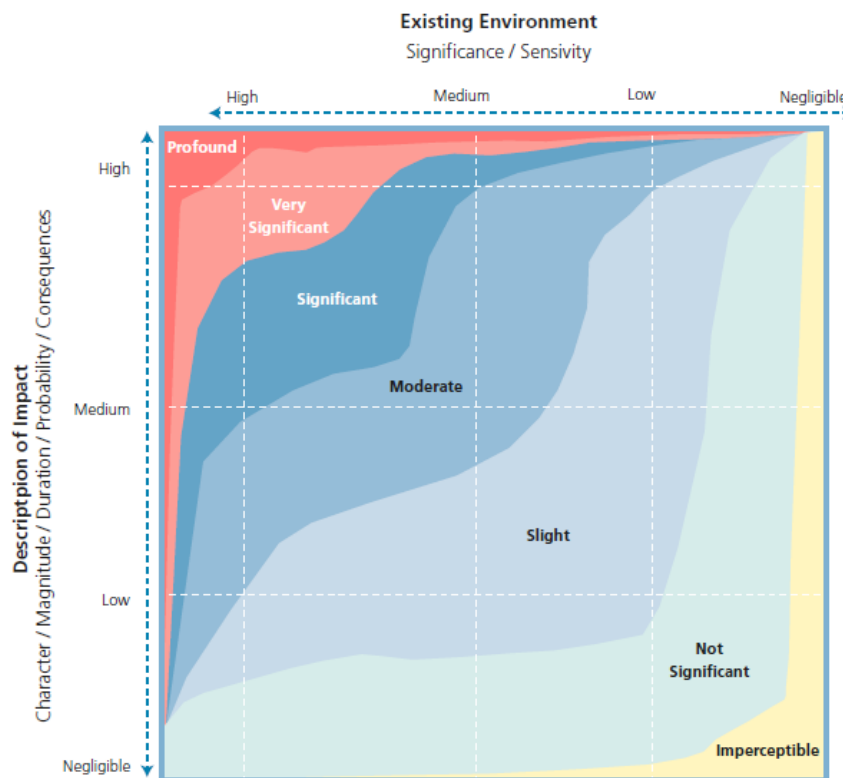
Nature	Description	Definition
Quality of effects	Positive effect	A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities)
	Neutral effect	No effect(s) and/or effects that are imperceptible within normal bounds of variation or within margin of forecasting error
	Negative effect	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance)

<b>Nature</b>	<b>Description</b>	<b>Definition</b>
Significance of effects	Imperceptible	An effect capable of measurement but without significant consequences
	Not significant	An effect which causes noticeable changes in the character of the environment but without significant consequences
	Slight effect	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities
	Moderate effect	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends
	Significant effect	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment
	Very significant effect	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment
	Profound effect	An effect which obliterates sensitive characteristics
Extent and Context of effects	Extent	Describe the size of the area, the number of sites, and the proportion of a population affected by an effect
	Context	Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability of effects	Likely effect	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented
	Unlikely effect	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented
Duration and Frequency of effects	Momentary effect	Effect lasting from seconds to minutes
	Brief effect	Effect lasting less than a day
	Temporary effect	Effect lasting less than one year
	Short-term effect	Effect lasting one to seven years
	Medium-term effect	Effect lasting seven to fifteen years
	Long-term effect	Effect lasting fifteen to sixty years
	Permanent effect	Effect lasting over sixty years
	Reversible effect	Effects that can be undone, for example through remediation or restoration
	Frequency of effects	Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)
Type of effects	Indirect effect	Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway
	Cumulative effect	The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects

Nature	Description	Definition
	Do-nothing effect	The environment as it would be in the future should the subject project not be carried out
	Worst-case effect	The effects arising from a project in the case where mitigation measures substantially fail
	Indeterminable effect	When the full consequences of a change in the environment cannot be described
	Irreversible effect	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost
	Residual effect	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	Synergistic effect	Where the resultant effect is of greater significance than the sum of its constituents, (e.g. combination of SOx and NOx to produce smog)

### 3.6.1 Determining Significance

The significance of the effect is a function of both the character of the predicted impact and the sensitivity of the receiving environment. **Figure 3.1** below, based on Figure 3.5 in the EPA Draft Guidance (EPA 2017) indicates how significance is determined.



**Figure 3.1 Chart showing typical classifications of the significance of impacts (Source: EPA, 2017)**

Specific specialist topics may use topic-specific definitions of significance.

## 3.7 Mitigation Measures

The magnitude and significance of the likely environmental effects are evaluated in order to propose appropriate measures to mitigate potential adverse effects. This involves an iterative approach in which a feedback loop is used to initially assess a significant adverse effect and changes are made to the proposed development in order to reduce the magnitude of the effect. This process is repeated until the effect is no longer significant. If this is not possible for the particular effect, the significance of the overall effect is presented in the EIAR.

The iterative approach to the impact assessment process has been used as a means of informing the design of the proposed development. The significance of the effects presented in the EIAR is representative of the worst-case scenario, the maximum effect that the proposed development will have, should the application be approved.

As mentioned in **Section 3.5.4**, a summary of the mitigation measures detailed within the topic chapters of the EIAR is provided in **Chapter 22**.

## 3.8 Cumulative and Inter-related Effects

### 3.8.1 Approach to Cumulative and Inter-related Effects

**Chapter 20** and **Chapter 21** will describe the approach adopted in the EIAR to the assessment of direct or indirect effects which are caused by the interaction of environmental effects which can cause more significant effects in combination with the effects of the proposed development.

The cumulative assessment is presented within each topic chapter (**Chapters 7 to 19**) in a separate section. A tiered approach to the cumulative assessment has been undertaken, in which the proposed development is considered cumulatively with other projects as follows:

Tier 1 -

- ABWP Phase 2 Offshore Infrastructure;
- ABWP Phase 2 Operations and Maintenance Facility (OMF);
- EirGrid Grid Upgrade Works; and
- Irish Water Upgrade Works.

Tier 2 -

- Other relevant projects currently under construction;
- Other relevant projects with consent;
- Other relevant projects in the planning process; and
- Other existing projects that were not operational when baseline data were collected.



This tiered approach was adopted to provide an explicit assessment of the ABWP Phase 2 Project as a whole and cumulatively with other projects.

The wide range of existing, under construction and permitted projects in the general vicinity of the proposed development were screened to determine if there was a potential for cumulative effects. A source – pathway – receptor model was used in the screening process, with the receptor being the proposed development.

The pathways considered varied, depending on the environmental topic, and included air, climate, surface or ground waters, habitat or species linkages, road networks, landscape, cultural heritage linkages, resource and waste management facility capacities, population and human health linkages and major accident and disaster zones of risk. Similarly, the length of the pathways varied, depending on their characteristics.

The sources of potential cumulative impact were considered. Existing and permitted projects and projects under construction were identified. Existing projects, which were operational at the time that the baseline studies were undertaken, were excluded, as their impacts are already included as part of the baseline. Existing projects, which were not operational at the time of the baseline studies, were included. A planning search was conducted to identify permitted projects. Permitted projects, the permits of which had expired, were excluded. Projects which, due to their nature or scale were unlikely to result in a cumulative impact, or to which there was no pathway, were excluded.

Other relevant projects, which do not have permission, were included in the cumulative assessment as they were considered to be significant projects in close proximity to the proposed development. These are the Arklow Flood Relief Scheme, Echelon data centre new application, the Echelon data centre 110kV substation application and the potential maintenance and/or repair of Avoca River Business Park Flood Embankment.

The result of the screening exercise was to narrow down the wide range of projects to those listed in **Chapter 21 Summary of Cumulative Effects**.

### **3.8.2 Summary of Monitoring, Mitigation and Residual Effects**

This chapter will summarise the proposed monitoring, mitigation measures and residual effects identified in the assessment chapters. Where appropriate, consultation will be undertaken with the relevant authorities and stakeholders throughout the preparation of the EIAR to determine the practicality, acceptability, enforceability and appropriateness of the proposed mitigation and monitoring measures. All residual effects will be described in accordance with the recommended terminology from the EPA (outlined in **Table 3.1**).

## 3.9 Consultation Undertaken

### 3.9.1 Overview

As detailed previously, the proposed development is part of a wider Project, the Arklow Bank Wind Park Phase 2.

The Developer has engaged in a stakeholder engagement campaign with key stakeholders, since the start of the Project, both in terms of the Project and the specifics of the proposed development, the subject of this EIAR.

This campaign has been delivered in five phases. No phase was ever concluded, despite the initiation of a subsequent phase. Once a stakeholder was engaged, the Developer has sought to maintain an open and ongoing dialogue with them throughout the project development process and ensuring an opportunity for continuous feedback is maintained. The five phases of the campaign are outlined as follows:

**Phase 1 Strategic Engagement:** this included but is not limited to engaging to relevant Government Departments, state and semi state bodies, TD's, Senators and County Councillors for Co. Wicklow, and North Wexford, members of the Executive Team in Wicklow and Wexford County Councils.

**Phase 2 National Engagement:** this phase included engagement with state and semi state bodies, including many deemed as Statutory Stakeholders. In addition non statutory stakeholders were also engaged.

**Phase 3 Regional Engagement:** at this point in the engagement process the Developer sought to brief regional stakeholders on the Project, and on the benefits of offshore wind, secure feedback. This engagement comprised of outreach to Chambers of Commerce, regional assemblies, Municipal District Councils, Town Teams, PPN's, local offices for IDA and Enterprise Ireland, etc. At this stage the media were also briefed.

**Phase 4 Public Information Campaign:** Once the above stakeholders were informed, and feedback was secured, the Developer progressed to promote the project locally to the general public, through public meetings, specific fisheries engagement, schools engagement and the development of project materials.

**Phase 5 Consenting Process:** this represents the process of engagement that has been underway, in the main during 2020 to engage with stakeholders in relation to the preparation of the EIAR, statutory consent application and the scheme design for the proposed development. During this phase a Community Engagement Manager (CEM) was appointed.

The Developer sought to engage and hear from the widest range of stakeholders, including all those engaged during earlier phases. It should be noted that March 2020, was the point at which the county entered its first lockdown owing to COVID-19 and continues to remain in lockdown to varying degrees. While the Developer's preference is to engage communities and stakeholders face to face, and in a location that is convenient to them, and local to the project, where

relevant, COVID-19 has meant that communication has been increasingly online using new methods, as well as traditional written forms.

A detailed Consultation Report (for the Project) is included in **Appendix 3.2 of Volume 3** which documents the consultation process to date.

Consultation has been undertaken with a range of stakeholders during the development of the EIAR in order to:

- Provide information on the proposed development;
- Ascertain and understand the views of stakeholders; and
- Seek input from stakeholders on the design, construction and assessment aspects of the proposed development.

It should be noted that this section describes project-wide consultation (both for the Project and the proposed development). Where appropriate, **Chapters 7 – 19** identify specific consultation that has been undertaken to support individual assessments and assessment chapters.

### 3.9.2 EIA Scoping Consultation

An informal EIA scoping exercise was undertaken, and an EIA Scoping Report was prepared and circulated to relevant stakeholders on 18 September 2020. The EIA Scoping Report described the key elements of the proposed development and outlined the level of detail and information to be included in the EIAR.

Feedback was sought from the following stakeholders to further inform the content and scope of the EIAR:

- An Bord Pleanála – SID unit
- Wicklow County Council
- Commission for Regulation of Utilities
- EirGrid
- Department of Culture, Heritage and the Gaeltacht
- Department of Housing, Planning and Local Government
- Department of Communications, Climate Action and Environment
- Department of Agriculture, Food and the Marine
- Development Applications Unit: The National Parks and Wildlife Service and the National Monuments Service
- Department of Transport, Tourism and Sport
- Eastern & Midland Regional Assembly
- Environmental Protection Agency
- Transport Infrastructure Ireland
- National Transport Authority

- Irish Water
- ESB Group
- Gas Networks Ireland
- Health and Safety Authority
- Health and Safety Executive
- Inland Fisheries Ireland
- Heritage Council
- Fáilte Ireland
- An Chomhairle Ealaíon (The Arts Council)
- Marine Institute
- Office of Public Works
- An Taisce
- BirdWatch Ireland
- Irish Wildlife Trust
- Bat Conservation Ireland
- IDA
- Enterprise Ireland
- Aer Corps

Submissions were received in response to the EIA Scoping Report from a number of stakeholders. Points raised of relevance to the proposed development and the associated action taken by the EIA team are summarised in **Table 3.2** below.

The Scoping Report was published on the project website as part of the second-round of non-statutory consultation, see link below:

- <https://www.sserenewables.com/media/shhd4g5z/271715-00-rep-04-eia-scoping-report-arklow-bank-onshore-grid.pdf>

### 3.9.3 Meetings with Statutory Bodies

As part of the EIA scoping process and the evolving design and EIAR, a number of meetings were held with statutory bodies and relevant stakeholders to provide additional information with regard to the proposed development and to ensure that all relevant feedback was provided, so as to inform the EIAR.

The following meetings were held:

- Meeting with National Parks and Wildlife Service (NPWS) on 18 September, 2020
- Meeting with Office of Public Works (OPW) on 26 January, 2021

- Meeting with Irish Rail, in January 2021, following an application for works adjacent to a railway
- Engagement with EirGrid during 2020 and 2021
- Meeting with GNI in January 2021

The matters raised at these meetings, together with how we have addressed these matters in the EIAR are summarised in **Table 3.2** below.

### 3.9.4 Consultation with Other Stakeholders

In relation to Arklow Bank Wind Park Phase 2, the Developer has sought to maintain an open dialogue with all elected representatives in Wicklow, and North Wexford. At key points throughout the lifecycle of the project their views have been sought, and they have been continuously briefed in relation to all important announcements. The Developer has also engaged with a number of other relevant stakeholders at a project-wide level, since 2018. This includes engagement with elected representatives, industry bodies, local businesses and business representative bodies (such as Arklow Chamber), utility companies, An Garda Síochána, among others.

During 2020, the Developer briefed the following stakeholders, often on multiple occasions:

- Ministers Darragh O’Brien, Eamon Ryan, and Peter Burke
- All TDs and Senators for Wicklow and Wexford
- All County Councillors for Wicklow and North Wexford
- Wicklow County Council Executive
- Wicklow County Council, Full Council Meeting
- Arklow and Wicklow Municipal District Councils
- Arklow Chamber of Commerce

Consultation with these parties was by email, newsletter and phone calls, with a number of meetings (face to face and virtual meetings, where COVID-19 restrictions required) also taking place. Generally, any responses were supportive, particularly in relation to the opportunity for community gain, such as funding, employment, training, education and engagement in the area. Any specific feedback in relation to proposed development and this EIAR, is summarised in **Table 3.2** below. Further detail is provided in the Consultation Report, in **Appendix 3.2** of **Volume 3** herein.

### 3.9.5 Pre-Application Consultation with An Bord Pleanála

Prior to being determined as a strategic infrastructure development (SID) application, a prospective applicant is required by the Planning and Development Act, 2000, as amended, to enter into pre-application consultation with the Board, to provide the Board with the information necessary to make a determination as to whether the proposed development is SID.

The Developer commenced pre-application consultations with the Board in February 2020. Two meetings were held with the Board, on 17 June 2020 and 02 September 2020. Details of the consultations are available at <http://www.pleanala.ie/casenum/306662.htm>.

Following a request from the Developer in October 2020, to conclude the pre-application consultation process, the Board concluded the consultations and in a letter dated 20 November 2020, stated that *“it is of the opinion that the proposed development falls within the scope of section 182A of the Planning and Development Act, 2000 as amended. Accordingly, the Board has decided that the proposed development would be strategic infrastructure within the meaning of section 182A of the Planning and Development Act, 2000, as amended. Any application for approval for the proposed development must therefore be made directly to An Bord Pleanála under section 182A(1) of the Act”*.

### 3.9.6 Public Consultation

As outlined above, from the start of the Project, the Developer has been engaging with the general public, to ensure that appropriate and adequate information is provided to them, in respect of the Project (and in particular, the proposed development). This process is documented in the Consultation Report prepared by RPS, which is included in **Appendix 3.2 of Volume 3** and is summarised below.

A variety of measures have been implemented by the Developer to ensure that open and ongoing two-way consultation was undertaken. Particular cognisance was given to ensuring that the consultation process was as accessible and inclusive as possible, given the challenges posed by the ongoing COVID-19 restrictions in place throughout.

The consultation process included the following measures, which are detailed in the Consultation Report (**Appendix 3.2 of Volume 3**):

- Appointment of a Community Engagement Manager (CEM), to facilitate engagement and to act as the point of contact for the community
- Provision of an information service, with:
  - A dedicated email address and phone line manned from 9.00am to 5.00pm, Monday to Friday and a messaging service outside these hours
  - a project postal address for hard copy submissions
  - an email address for the dedicated CEM
- A dedicated set of project webpages hosted by SSE Renewables website, found at the following address: <https://www.sserenewables.com/offshore-wind/projects/arklow-bank/> as well as a redirect in place from: <https://www.sserenewables.com/arklowbank>
- A public consultation campaign from 14 October to 11 November 2020, to provide information and to gather feedback and local knowledge to inform the Project as summarised below.

### 3.9.6.1 Public Consultation Events, Exhibitions and Briefings

The public consultation campaign ran from 14 October to 11 November 2020, as referenced above. This public consultation included a public consultation event on 04 November 2020, which due to COVID-19 restrictions was held online.

The online event was to brief the community on the proposed plans, answer questions (previously submitted from the public and via live email and text), receive feedback from the attendees and to provide an opportunity for the community to meet the CEM. Eight members of the project team contributed to the live event and the public were also encouraged to complete a Feedback Form, which was available on the website.

Public exhibitions were also put in place at four locations in Co. Wexford and Co. Wicklow, being:

- Bridgewater Shopping Centre, North Quay, Arklow, Co Wicklow;
- Arklow Library, Main Street, Arklow, Co Wicklow;
- Town Hall, Market Square, Wicklow Town, Co Wicklow; and
- Seamount/Main Street, Courtown, Co Wexford.

Again, due to COVID-19 restrictions, these exhibitions were unmanned, with exhibition opening times corresponding to the opening times of each individual venue. Two of these, Seamount/Main Street in Courtown and Bridgewater Shopping Centre were unaffected by changing COVID-19 restrictions and ran until 11 November and 31 December 2020 respectively. The exhibitions at Arklow Library and the Town Hall in Wicklow were however affected (access could not be maintained) by increased COVID-19 restrictions during the consultation period.

In advance of the launch of the public consultation, the CEM also called to all households within approximately 1km of both the substation and landfall sites. These households were identified due to their proximity to key infrastructure components of the Project, the project team were keen to ensure that they were appropriately briefed, in advance of the wider consultation and could voice their concerns and queries, in person in so far as possible. Where no one was available, a letter was left to provide relevant information on the Project and contact details for the CEM, should any additional information be required.

To ensure that the local community and the general public were informed about the Project and the public consultation process, the Developer provided information in the following ways:

- Information on the overall Project was (and remains) on the websites referenced above; this information includes specific details on the offshore and onshore aspects, details of the proposed operation and maintenance facility (OMF), a recording of the online community briefing event, a project brochure, locations where project information could be read in person and contact details for the CEM;

- A Project Brochure (see Consultation Report in **Appendix 3.2** of **Volume 3** herein) provided an overview of the Project and was available in several locations both in hard copy and digital format; at the exhibition stand at the Bridgewater Shopping Centre; from the website and by request in the post;
- A comprehensive advertising campaign, including local radio (East Coast FM) and local newspapers, as well as on Wicklownews.net. This campaign ran for the duration of the consultation phase;
- Information posters were erected at various locations such as credit unions and shopping centres (subject again to COVID-19 restrictions); and
- Approximately 15,000 information leaflets were distributed to homes and retail outlets.

### 3.9.6.2 Feedback from Public Consultation

Feedback from the public consultation process was received by phone, email, post, as well as via feedback forms at Bridgewater Shopping Centre and from verbal communications. Records of all such consultation feedback were maintained.

Details of the feedback received are included in the Consultation Report in **Appendix 3.2** of **Volume 3**. The feedback received of relevance to the proposed development and this EIAR is summarised in **Table 3.2** below and reference is made to how the concern / issue raised is addressed in the EIAR, if applicable.

**Table 3.2 Issues / Aspects Raised During Consultation Process**

Consultee	Issue/Aspect Raised	How/where this is addressed in EIAR?
National Parks Wildlife Service (NPWS)	NPWS highlighted the potential for whooper swans and curlews in an area of grassland north of the landfall site; they also noted that there is a peregrine falcon resident in a tower at the IFI site.	Monthly vantage point surveys were undertaken in areas identified by NPWS as being of interest. See Chapter 12 Biodiversity.
Inland Fisheries Ireland (IFI)	IFI noted the importance of fish stock in the Avoca River and other watercourses along the route, also noted time constraints on instream works and preference for trenchless crossings. IFI also requires the CEMP to include a frack-out contingency plan and that a site assessment of substation site, to confirm any contamination should be undertaken.  IFI also noted that access tracks temporary crossing of watercourses and drainage channels to facilitate	See Chapter 12 Biodiversity for details of potential impacts on fish stocks; Chapter 5 Description of Development describes the proposed development, while Chapter 6 Construction Strategy describes the construction strategy and details watercourse crossings, as well as measures to be implemented re potential frack-out and contamination at the substation site. Chapter 10



Consultee	Issue/Aspect Raised	How/where this is addressed in EIAR?
	movement of construction plant should be addressed within the EIAR.	Water addresses potential impacts on water quality.
Wicklow County Council (WCC) Planning Department	Regarding the cabling, positive comments were received from WCC regarding the choice of underground cabling as there would be no visual impact. The presence of the SAC to the north of the landfall was highlighted with regard to the cabling. WCC also noted the reports that would be required – AA screening or AA and NIS. WCC recommended to consult with TII and Wicklow County Council Roads Department regarding potential road crossings as soon as possible.	See Chapter 12 Biodiversity and the Natural Impact Statement (NIS) in relation to the presence of the SAC; see Chapter 14 Landscape and Visual for a detailed landscape and visual assessment. TII and WCC Roads Department were also consulted.
WCC Roads Department	The developer has engaged with the WCC Roads Department on the crossing locations of the cable route and particularly the crossing of the M11.	See Chapter 6 Construction Strategy which describes the proposed crossing methodology.
EirGrid	<p>The developer has engaged with EirGrid during 2020 and 2021 on the connection of the Project to the NETN including EirGrid review of above ground designs for the proposed onshore 220kV substation and it's loop-in connection to the Arklow – Lodgewood 220kV circuit. During this engagement EirGrid raised several points relating to specific design details.</p> <p>The developer also engaged EirGrid to perform grid stability studies for the Projects connection to the NETN.</p>	See Chapter 5 Description of Development, which reflects substation and loop-in design following consideration of points raised by EirGrid.
GNI	Regarding potential interactions between cable route and GNI pipelines, GNI noted their existing knowledge of the area and provided input on GNI requirements. On gas pipeline crossing at Forest Road, GNI noted to minimise the time the pipeline was exposed, and that	See Chapter 6 Construction Strategy which describes the proposed crossing methodology.

<b>Consultee</b>	<b>Issue/Aspect Raised</b>	<b>How/where this is addressed in EIAR?</b>
	crossing design does not need to be formally approved in advance of works.	
Irish Rail	Meeting held after application by developer for works adjacent to a railway; developer introduced the development and took them through possible interfaces with Irish Rail infrastructure. Irish Rail raised concerns with traversing the Arklow – Gorey railway line for the purposes of removing and constructing towers between railway and south bank of the Avoca River.	See Chapter 6 Construction Strategy, which details the approach now proposed for access to the area, and as reflected in the planning (red line) boundary.
Department of Agriculture, Food and the Marine	Any trees to be removed will require a felling licence	See Chapter 12 Biodiversity
Transport Infrastructure Ireland (TII)	TII noted that consent will be required to cross the M11	See Chapter 1 Introduction, as well as Chapters 5 Description of Development and 6 Construction Strategy.
Office of Public Works (OPW)	Appropriate consents will be needed for watercourse crossings	See Chapter 1 Introduction, as well as Chapters 5 Description of Development and 6 Construction Strategy.
Elected Representatives/NGOs	Community Gain – importance of measures in this regard – including funding, employment (and associated supply chain), adult education/training and engagement opportunities	See Chapter 5 Description of the Development and Section 5.9 in particular, for details in respect of proposed Community Gain measures
Irish Water	IW confirmed that a water supply connection could be provided for the proposed substation	See Chapter 5 Description of Development which describes the proposed development and Chapter 17 Material Assets
Public Consultation	Concerns raised about lack of consultation about other projects in the area – and the need to ensure adequate consultation at all stages	See details of consultation undertaken herein and as detailed in Consultation Report, Appendix 3.2
Public Consultation	Concern about possible night-time works and noise impact of same and	See Chapter 11 – Noise and Vibration

<b>Consultee</b>	<b>Issue/Aspect Raised</b>	<b>How/where this is addressed in EIAR?</b>
	noise impact from piling and HDD works.	
Public Consultation	Description of development; infrastructure/buildings required at landfall, along cable route.	See Chapter 5 Description of Development which provides details of the proposed development.
Public Consultation	Concerns raised about impact from construction works on local residents	The EIAR addresses how potential impacts during the construction stage are avoided or mitigated. In particular, see Chapter 6 Construction Strategy, which describes the proposed construction methodology, the CEMP (Appendix 6.1) as well as Chapter 7 Air Quality, Chapter 11 Noise and Vibration, Chapter 13 Traffic and Transportation and Chapter 18 Population and Human Health
Public Consultation	Concerns were raised about the potential visual impact of the overall project	While most concerns related to the offshore infrastructure (turbines), see Chapter 14 Landscape and Visual for a detailed landscape and visual assessment, including cumulative impacts with the offshore infrastructure

### 3.10 References

Department of Housing, Planning and Local Government (2018) Circular PL05/2018 - *Transposition into Planning Law of Directive 2014/52/EU amending Directive 2011/92/EU on the effects of certain public and private projects on the environment (the EIA Directive): Advice on the Administrative Provisions in Advance of Transposition*

Department of Housing, Planning, Community and Local Government (2017) *Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licensing Systems*

Department of Housing, Planning, Community and Local Government (2017) *Key Issues Consultation Paper on the Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems;*

Environmental Protection Agency (Draft August 2017) *Draft Guidelines on the Information to be contained in Environmental Impact Assessment Reports*

European Commission (2017) *Environmental Impact Assessment of Projects: Guidance on the preparation of the Environmental Impact Assessment Reports*

Department of the Housing, Planning, Community and Local Government (2018) *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*

European Commission (1999) *Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions.*

Environmental Protection Agency (2015) *Advice Notes for Preparing Environmental Impact Statements Draft September 2015*

Planning and Development Regulations, 2001 (S.I. 600 of 2001)

Arklow Bank Wind Park Phase 2 Stakeholder Engagement Campaign (SSE) (2020) EIA Scoping Report Consultation [online] Available at: SSE website - <https://www.sserenewables.com/media/shhd4g5z/271715-00-rep-04-eia-scoping-report-arklow-bank-onshore-grid.pdf> [Accessed February 2021]