

ABWP Phase I Decommissioning

Introduction

Volume 2, Chapter 1



Project name ABWP Phase I Decommissioning

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Glossary

Term	Meaning
Arklow Bank Wind Park (ABWP) Phase I	Arklow Bank Wind Park (ABWP) Phase I comprises: - Offshore infrastructure seaward of High Water Mark (HWM), including: - Seven Wind Turbine Generators (WTG) with a combined capacity of 25.2 MW; - One meteorological (met) mast; - Inter-array cables connecting the WTGs and met mast; and - One offshore export cable connecting WTG T4 with landfall at HWM; - Onshore infrastructure landward of HWM including: - One onshore cable connecting landfall at HWM with the onshore substation; and - One onshore substation compound, where the onshore substation and ancillary infrastructure are located.
ABWP Phase II	ABWP Phase II comprises: - Offshore Infrastructure, including: 53 or 47 WTGs and two Offshore Substation Platforms (OSPs) located within the "Array Area"; - Inter-array cables connecting WTGs with the OSPs; and - Two offshore export cables; - Onshore grid connection infrastructure, including a 220 kV substation at Shelton Abbey with an associated connection to the existing National Electricity Transmission Network; - Operations and Maintenance Facility (OMF) at South Dock, Arklow Harbour; and - EirGrid Upgrade Works.
Additional mitigation	Actions that will be required to reduce the significance of environmental effects of the Proposed Works, which will be dependent on the significance of effects assessed in the EIAR. Also referred to as secondary mitigation in Institute of Environmental Management and Assessment (IEMA) (2024). IEMA is now the Institute of Sustainability and Environmental Professionals (ISEP).
Arklow Energy	Arklow Energy Limited, the entity seeking planning permission for the Proposed Works, i.e. the applicant.
Alternatives	A description of other options that have been considered during the conception of the Proposed Works (Environmental Protection Agency (EPA), 2022). Article 5(1) and Annex IV of the Environmental Impact Assessment (EIA) Directive require "a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, including a comparison of the environmental effects" (EIA Directive 2011/92/EU (as amended)).
Appropriate Assessment (AA)	An assessment of the likely significant effects of a plan or project (in combination with other plans or projects) on the Natura 2000 site network, which in Ireland comprises Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). These sites are protected by National and European law. The assessment is underpinned by the precautionary principle whereby a proposal cannot be granted permission if significant impacts are anticipated or cannot be ruled out. It entails the preparation of a Natura Impact Statement (NIS) for projects, or a Natura Impact Report (NIR) for plans under the Planning and Development (Amendment) Act 2010 (Office of the Planning Regulator, n.d.).
AA screening	A process undertaken by the competent authority to assess, in view of best scientific knowledge, if a proposed development, individually or in combination with other plan or project is likely to have a significant effect on a European site, and whether an appropriate assessment (AA) is required or not (Section 177U(1), Planning and Development Act 2000 (as amended)).

Term	Meaning
Baseline	A description of the relevant aspects of the current state of the environment (baseline scenario) (EIA Directive 2014/52/EU).
Comparative Assessment	Systematic process that evaluates different decommissioning options in a structured way providing the information needed to make a robust decommissioning recommendation (International Association for Oil & Gas Producers (IOGP), 2024).
Competent authority	Are those authorities that are entitled to give authorisation or consent to a plan or project. In the planning system, this means planning authorities and An Coimisiún Pleanála. There are, however, a wide range of other competent authorities in respect of other consent regimes e.g. EPA (environmental licensing), Minister for Agriculture, Food and the Marine (forestry, aquaculture and foreshore management), and various state bodies that have authority to undertake development under Part 9 of the Planning and Development Regulations (e.g. An Garda Síochána, defence forces, the courts service). The competent authority for this planning application is An Coimisiún Pleanála (ACP).
Consent	This shall include any licence, permission, permit, approval or other such authorisation granted by a public authority for any activity, or project where the authority is obliged to have regard to the requirements of the Environmental Impact Assessment (EIA) and/or Habitats Directive(s) (MDB, 2017).
Conservation Objective (CO)	A specified population size and distribution objective for a species, or a specified area and quality objective for a habitat, to ensure that a site contributes as best as possible to achieving favourable conservation status at national, biogeographical or European level (Article 1(k) of the Habitats Directive (92/43/EEC)).
Cumulative effect	The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects (EPA, 2022). Cumulative effects within this EIAR comprise those arising from the Proposed Works with other developments, i.e. plans and projects that are 'reasonably foreseeable' (Planning Inspectorate (PINS), 2024).
Cumulative effects assessment	Assessment of potential environmental effects resulting from the Proposed Works cumulatively with other plans, projects or reasonably foreseeable activities.
Decommissioning	The final closing down and putting into a state of safety of a development, project or process when it has come to the end of its useful life (EPA, 2022).
Designated sites	Unless otherwise specified, the term 'designated' is used to refer to international sites, European sites and national sites (that are legally designated, or are going through the process of designation) (MDB, 2017).
'Do-nothing' scenario	The situation or environment which would exist if the Proposed Works were not carried out. This scenario needs to take account of the continuation or change of current management regimes, as well as the continuation or change of trends currently evident in the environment (EPA, 2022). In this EIAR, the do-nothing scenario is described under "Future Baseline Conditions" in Volume 2, Chapters 4 – 8 .
Dumping	Any deliberate disposal in the maritime area (including side-cast dredging, plough dredging, water injection dredging and other such dredging techniques of a substance or material from or in conjunction with a vessel or aircraft or offshore installation (Dumping at Sea Act 1996 (as amended))).
Effect	The consequence of an impact on a receptor. For example, in the offshore environment, vessel activity (activity) results in increased levels of underwater noise (impact), with the potential to disturb marine mammals (effect).
EIA Scoping	The scoping stage provides an opportunity for both developers and the Competent Authority to determine those key environmental impacts and issues of concern that are likely to be of the utmost importance to the project proposal's decision-making and eliminates those that are less of a concern (European Commission (EC), 2017).

Term	Meaning
EIA Scoping Presentation	Presentation scoping the likely environmental impacts of the Proposed Works to be further considered in the Environmental Impact Assessment Report (EIAR). The EIA Scoping Presentation is included in Volume 3, Appendix 1.1 of the EIAR.
Embedded mitigation	Mitigation measures included as part of the Proposed Works. Include modifications arising through the iterative design process; and standard industry practice that would occur even without input from the EIA process, e.g. actions undertaken to meet other existing legislative requirements, or actions that are standard practices used to manage commonly occurring environmental effects. Correspond to primary and tertiary mitigation defined in IEMA (2024) (now Institute of Sustainability and Environmental Professionals (ISEP)).
Environmental Impact Assessment (EIA)	Process of assessment of the effects of a project or development proposal on the environment. In the planning area, it is undertaken by a planning authority or An Coimisiún Pleanála during the consideration of applications for planning permission, taking account of an Environmental Impact Assessment Report (EIAR). The projects which require EIA are listed in Annex I and Annex II of the EIA Directive, as amended (Office of the Planning Regulator, n.d.).
Environmental Impact Assessment Report (EIAR)	A report or statement of the effects, if any, that Proposed Works, if carried out, would have on the environment. It is prepared by the developer to inform the EIA process (Office of the Planning Regulator, n.d.).
European site	Meaning assigned to it in the EC (Birds and Natural Habitats) Regulations 2011, which is also commonly known as a Natura 2000 site (Office of the Planning Regulator, n.d.).
Exclusive Economic Zone (EEZ)	Area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part (UNCLOS, 1982). The EEZ in Ireland extends up to 200 nautical miles (nm) from the outer edge of the territorial sea.
Foreshore	The bed and shore, below the line of high water of ordinary or medium tides, of the sea and of every tidal river and tidal estuary and of every channel, creek, and bay of the sea or of any such river or estuary. Its outer limit is coterminous with the seaward limit of the territorial sea (Foreshore Act 1933 (as amended)), which is at a distance of 12 nm from the nearest point of the baseline or otherwise prescribed (Maritime Jurisdiction Act 2021 (as amended)).
Geographic Information System (GIS)	An array of technological tools for the management, analysis and display of spatial data that can provide evidence-based information to support biodiversity impact assessment and natural resource management (Office of the Planning Regulator, n.d.).
Good Environmental Status (GES)	Environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations (Marine Strategy Framework Directive (MSFD) (2008/56/EC)).
High Water Mark (HWM)	Level reached by the sea level at high tide, measured as the mean of high tides.
Impact	A change brought about by the Proposed Works.
In-combination effects	Incremental effects resulting from a combination of two or more plans and/or projects, an assessment requirement under the Habitats Directive (92/43/EEC). In-combination effects referred to in the Habitats Directive are considered to have a similar meaning to "cumulative effects" in the Environmental Impact Assessment (EIA) Directive (2011/92/EU (as amended)).
Indirect impact	Impacts on the environment, which are not a direct result of the Proposed Works, often produced away from (the Offshore / Onshore Site) or as a result of a complex pathway (EPA, 2022).
Inter-array cables	Subsea power lines that link individual wind turbine generators (WTGs) together in an offshore wind farm, forming an electrical network. In ABWP

Term	Meaning
	Phase I, inter-array cables connect WTGs and the met mast to each other and have an overall length of 7.4 km.
Intertidal	The area between the HWM and the Low Water Mark (LWM).
Landfall	The point where the offshore export cable transitions from the offshore marine environment to the onshore terrestrial environment.
Loading	Act of taking on board or placing a specified quantity of a substance or material onto a vessel or aircraft for subsequent dumping at sea. Loading does not apply in the case of plough dredging, water injection dredging or side-cast dredging (EPA, 2026).
Low Water Mark (LWM)	Level reached by the sea at low tide, measured as the mean of low tides.
Maritime Area Consent (MAC)	State-issued right required to occupy a specific part of the maritime area for development. Maritime Area Consents (MACs) are managed by the Maritime Area Regulatory Authority (MARA).
Maximum design scenario (MDS)	Represents 'realistic worst case' assessment parameters for each impact.
Meteorological (Met) mast	A mast with a number of meteorological sensors located at different heights to record meteorological and sea condition data
Mitigation measures	Measures to avoid, prevent or reduce impacts (EPA, 2022), which comprise both embedded and additional mitigation, see separate definitions for these.
Monitoring	The periodic or continuous observation of biodiversity indicators and of other parameters that may affect biodiversity for any changes that may occur over time, so as to confirm predictions made with respect to likely effects and identify adverse changes that may require remedial action (Office of the Planning Regulator, n.d.).
Monopile (MP)	Hollow steel cylinder driven into the seabed typically used to anchor an offshore wind turbine generator (WTG). In ABWP Phase I, MPs support the seven WTGs as well as the meteorological (met) mast.
Natura 2000 network	Network EU-wide network of nature conservation areas established under the 1992 Habitats Directive (and 1979 Birds Directive). The aim of the network is to assure the long-term survival of Europe's most valuable and threatened species and habitats. It includes Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) (Office of the Planning Regulator, n.d.).
Natura Impact Statement (NIS)	A statement, for the purposes of Article 4 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites. This is prepared by the applicant (Office of the Planning Regulator, n.d.).
Nautical mile (nm)	Measurement used for distances at sea. 1 nm equates to 1.852 km.
Offshore export cable	Subsea power cable that transports the total generated power from an offshore wind farm to the onshore power grid. In ABWP Phase I, the offshore export cable connects the wind turbine generator (WTG) T4 to landfall with an approximate overall length of 15.6 km. At landfall, the offshore export cable transitions to the onshore cable connecting to the onshore substation.
Offshore Site	Part of the site where Proposed Works Offshore are proposed to take place. In this application for planning permission, the Offshore Site comprises the Sub Lease Area, where the ABWP Phase I wind turbine generators (WTGs), met mast and inter-array cables are located, and the offshore export cable 10 m corridor connecting WTG T4 to the landfall at high water mark (HWM) near Arklow Harbour.
Onshore cable	Land-based portion of the power cable that transports the total generated power from an offshore wind farm to the onshore power grid. In ABWP Phase I, the onshore cable connects the landfall point at HWM to the onshore substation building.
Onshore Site	Part of the site where Proposed Works Onshore are proposed to take place. In this application for planning permission, the Onshore Site comprises the onshore substation compound that hosts the onshore substation building and ancillary facilities; the onshore cable 10 m corridor connecting the landfall

Term	Meaning
	point from high water mark (HWM) to the onshore substation, and the area that will temporarily be used for temporary storage of plant, vehicles, machinery, excavated soil and materials.
Onshore substation compound	Fenced compound that hosts the onshore substation building and ancillary facilities, including the 38 kV transformer.
Pathway	The route by which an effect is conveyed between a source and a receptor (EPA, 2022).
Planning permission	Formal, legal approval required from a local planning authority or An Coimisiún Pleanála (ACP) to carry out development. The Proposed Works require planning permission submitted from ACP under Section 291 of the Planning and Development Act 2000, as amended.
Proposed Works	The Proposed Works include decommissioning of ABWP Phase I offshore infrastructure (Proposed Works Offshore) and decommissioning of ABWP Phase I onshore infrastructure (Proposed Works Onshore).
Precautionary principle	The approach aims at ensuring a higher level of environmental protection through preventative decision-taking in the case of risk. The general principles of risk management remain applicable when the precautionary principle is invoked. These are proportionality between the measures taken and the chosen level of protection; non-discrimination in application of the measures; consistency of the measures with similar measures already taken in similar situations or using similar approaches; examination of the benefits and costs of action or lack of action; review of the measures in the light of scientific developments (MDB, 2017).
Qualifying Features	In Ireland, habitats and/or species which are the reason(s) for the designation of an SAC are referred to as 'Qualifying Interests' (QIs). For SPAs, bird species and their habitats which are the reason for a particular site designation are referred to as 'Special Conservation Interests' (SCIs). In this AA Screening Report, QIs and SCIs are together referred to as qualifying features.
Receptor	Any element in the environment which is subject to impacts (EPA, 2022).
Residual effect	The final predicted effect / impact remaining after mitigation (EPA, 2022).
Scour protection	Engineered barrier typically placed on the seabed around WTG foundations and subsea cables to prevent sediment erosion caused by accelerated water currents and waves, safeguarding the WTG's stability and protecting subsea cables. In ABWP Phase I, scour protection was originally introduced in the form of rock armour, however, this proved ineffective, and was removed in 2005. Since then, scour protection has been introduced through sandbags.
Sensitivity	The potential of a receptor to be significantly affected (EPA, 2022).
Significance	The importance of the outcome of the impact (or the consequence of change) for the receiving environment (EPA, 2022).
Source	The activity or place from which an effect originates (EPA, 2022)
Special Areas of Conservation (SACs)	Sites designated under the Habitats Directive (92/43/EEC). This requires the conservation of important, rare or threatened habitats and species (not birds, which are protected by Special Protection Areas (SPAs)) across Europe (Office of the Planning Regulator, n.d.).
Special Protection Areas (SPAs)	Sites designated under the Birds Directive (79/409/EEC), to conserve the habitats of certain migratory or rare birds (Office of the Planning Regulator, n.d.).
Statutory consultees	An organisation or authority stipulated by legislation to be notified by a competent authority or developer if an application is made which might give that organisation a cause for concern. These are specified in the applicable legislation, e.g. Article 28 of the Planning and Development Regulations, 2001 (as amended) (EPA, 2022).
Sub Lease Area	Area where the ABWP Phase I WTGs, met mast and inter-array cables are located, as defined in the Sub Lease granted by Sure Partners Limited (SPL) to Arklow Energy Limited (Arklow Energy) to construct and operate ABWP Phase I.

Term	Meaning
Territorial sea	Belt of sea adjacent to a coastal State's land territory and internal waters, over which the State has sovereignty. A coastal State may claim up to 12 nautical miles from its baseline (usually the low-water line along the coast) (UNCLOS, 1982).
Transboundary effects	Potential environmental effects that may occur across jurisdictional boundaries (MDB, 2017).
Transition Piece	The steel connection structure between the tower and the monopile (MP) foundation.
Wind Turbine Generator (WTG)	Structure that converts the kinetic energy of ocean winds into electrical energy. ABWP Phase I includes seven GE Energy 3.6s WTGs with a rated capacity of 3.6 megawatts (MW) per WTG.
Zone Of Influence (ZoI)	The potential geographic area that could be affected by the implementation of the Proposed Works, having regard to the source-pathway-target risk assessment concept.

Acronyms

Acronym	Meaning
AA	Appropriate Assessment
ABWP	Arklow Bank Wind Park
ACP	An Coimisiún Pleanála
CEA	Cumulative Effect Assessment
DaS	Dumping at Sea
DCEE	Department of Climate, Energy and the Environment
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
DRP	Decommissioning and Reinstatement Plan
EC	European Commission
EU	European Union
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EN	European Norm
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
GE	General Electric
GES	Good Environmental Status
HOOW	Harnessing Our Ocean Wealth
HWM	High Water Mark
ICPC	International Cable Protection Committee
IEMA	Institute of Environmental Management and Assessment
IOGP	International Association for Oil & Gas Producers

Acronym	Meaning
IMO	International Maritime Organisation
INNS	Invasive non-native species
IROPI	Imperative Reasons of Overriding Public Interest
ISEP	Institute of Sustainability and Environmental Professionals
ISO	International Organisation for Standardisation
IWEA	Irish Wind Energy Association
LAP	Local Area Plan
LMP	Lighting and Marking Plan
LPF	Local Planning Framework
LWM	Low Water Mark
MAC	Maritime Area Consent
MAP	Maritime Area Planning
MARA	Maritime Area Regulatory Authority
MDS	Maximum Design Scenario
MPPS	Marine Planning Policy Statement
MP	Monopile
MSFD	Marine Strategy Framework Directive
NIS	Natura Impact Statement
NMPF	National Marine Planning Framework
NPF	National Planning Framework
NSIP	Nationally Significant Infrastructure Projects
NSRs	Noise sensitive receptors
O&M	Operations and Maintenance
OMF	Operations and Maintenance Facility
OOS	Out-of-Service
ORE	Offshore Renewable Energy
OSP	Offshore Substation Platform
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
OWEKH	Offshore Wind Evidence and Knowledge Hub
PINS	Planning Inspectorate
SAC	Special Area of Conservation
S.I.	Statutory Instrument
SPA	Special Protection Area
SPL	Sure Partners Limited
TP	Transition piece
UK	United Kingdom
UNCLOS	United Nations Convention on the Law of the Sea
WCC	Wicklow County Council
WCDP	Wicklow County Development Plan
WFD	Water Framework Directive

Acronym	Meaning
WMP	Waste Management Plan
WTG	Wind Turbine Generators
WZ	Waterfront Zone
ZoI	Zone of Influence

Units

Unit	Meaning
km	Kilometre
kV	kilovolt
MW	megawatt
nm	nautical mile

1 INTRODUCTION

1.1 Overview

- 1.1.1.1 This chapter of the Environmental Impact Assessment Report (EIAR) presents an introduction to the decommissioning of Arklow Bank Wind Park (ABWP) Phase I (referred to hereafter as 'the Proposed Works') and the Environmental Impact Assessment (EIA) process conducted.
- 1.1.1.2 This chapter provides background information on the Proposed Works, its policy and legislative context and the approach to the EIA process. It also outlines the structure of the EIAR and introduces the Applicant and the EIA team.
- 1.1.1.3 This chapter should be read in conjunction with the following chapters:
- **Volume 2, Chapter 2: Description of Alternatives;** and
 - **Volume 2, Chapter 3: Proposed Works Description.**
- 1.1.1.4 This chapter also draws on information contained in the **Planning Report** and **Consultation Report** submitted in support of the planning application for the Proposed Works, and on information within the following appendices of the EIAR:
- **Volume 3, Appendix 1.1: EIA Scoping Presentation;**
 - **Volume 3, Appendix 1.2: Cumulative Screening;**
 - **Volume 3, Appendix 1.3: Transboundary Screening;**
 - **Volume 3, Appendix 1.4: Marine Strategy Framework Directive Assessment;** and
 - **Volume 3, Appendix 1.5: Ecosystem Services Assessment.**
- 1.1.1.5 Further details on topic- specific methodologies are provided in the relevant EIAR technical chapters (**Volume 2, Chapters 4 – 8**) and associated appendices (**Volume 3**).

1.2 Background

1.2.1 General Overview

- 1.2.1.1 ABWP Phase I was constructed between 2003 and 2004 and is owned and operated by Arklow Energy Limited (Arklow Energy). The Proposed Works include decommissioning of ABWP Phase I offshore infrastructure (Proposed Works Offshore) and decommissioning of ABWP Phase I onshore infrastructure (Proposed Works Onshore).
- 1.2.1.2 The Proposed Works Offshore will be undertaken within the Offshore Site (see **Volume 2, Chapter 3: Proposed Works Description** and **Section 1.2.2**), which includes:
- The Sub Lease Area, located on the long narrow Arklow Bank sand bank, situated approximately 10 km off the coast of Arklow, southeast Ireland, where seven wind turbine generators (WTGs) and foundations, associated scour protection, 7.4 km of inter-array cables and one met mast are located; and
 - A 10 m wide cable corridor along the 15.6 km offshore export cable route connecting WTG T4 to the landfall point at High Water Mark (HWM).
- 1.2.1.3 The Proposed Works Onshore will be undertaken within the Onshore Site (see **Volume 2, Chapter 3**), located landward of the HWM in Ferrybank, off North Quay road, within Arklow Harbour, and comprises:
- A fenced compound that hosts the onshore substation building and ancillary facilities; and
 - A 10 m wide cable corridor along the onshore cable connecting the landfall point from HWM to the onshore substation.
- 1.2.1.4 ABWP Phase I WTGs have reached the end of their design life and operational activity is no longer possible, with electricity generation ceasing in May 2024 (see **Volume 2, Chapter 2: Description of Alternatives**). The Foreshore Lease Documentation governing the construction and operation of ABWP Phase I offshore also requires Arklow Energy to make provision for and

to carry out decommissioning works and reinstatement of the Sub Lease Area and, if necessary, any adjacent Foreshore to the satisfaction of the Minister (see **Section 1.3.2**).

- 1.2.1.5 Arklow Energy is seeking planning permission from An Coimisiún Pleanála (ACP) under Section 291 of the Planning and Development Act 2000 (as amended) ('the 2000 Act') for the Proposed Works.
- 1.2.1.6 The EIA Scoping Presentation (see **Volume 3, Appendix 1.1**) was issued to prescribed bodies in March 2026 to informally request feedback on the proposed scope of the EIAR (see **Section 1.4.3**).
- 1.2.1.7 This EIAR has subsequently been prepared to report on the effects, if any, which the Proposed Works, if carried out, would have on the environment, including the information specified in Annex IV of the EIA Directive (EPA, 2022), and supports the application for planning permission for the Proposed Works.

1.2.2 Proposed Works Overview

- 1.2.2.1 A detailed description of the offshore and onshore infrastructure and the Proposed Works is provided in **Volume 2, Chapter 3**.
- 1.2.2.2 The Offshore and Onshore Site boundaries are shown in **Figure 1.1**. The location of offshore and onshore infrastructure within these is further detailed within **Volume 2, Chapter 3**.
- 1.2.2.3 The Proposed Works Offshore involve the full permanent removal of WTGs, met mast and associated TPs; and inter-array and offshore export cables; as well as partial removal of MP foundations and scour protection. In order to ensure safe vessel access, there is potential for some localised dredging to be required, depending on the seabed levels encountered at the time of decommissioning.
- 1.2.2.4 The Proposed Works Onshore involve the full permanent removal of the onshore substation and associated infrastructure, including the onshore cable located within the Onshore Site boundary.
- 1.2.2.5 The planning application is seeking a planning permission valid up to and including 2033 in order for the permission to be contemporaneous with the Sub Lease (see **Section 1.3.2**), as this will allow programming works when seabed level conditions are favourable to safe vessel access and to minimise the extent of dredging works required or avoid them all together.

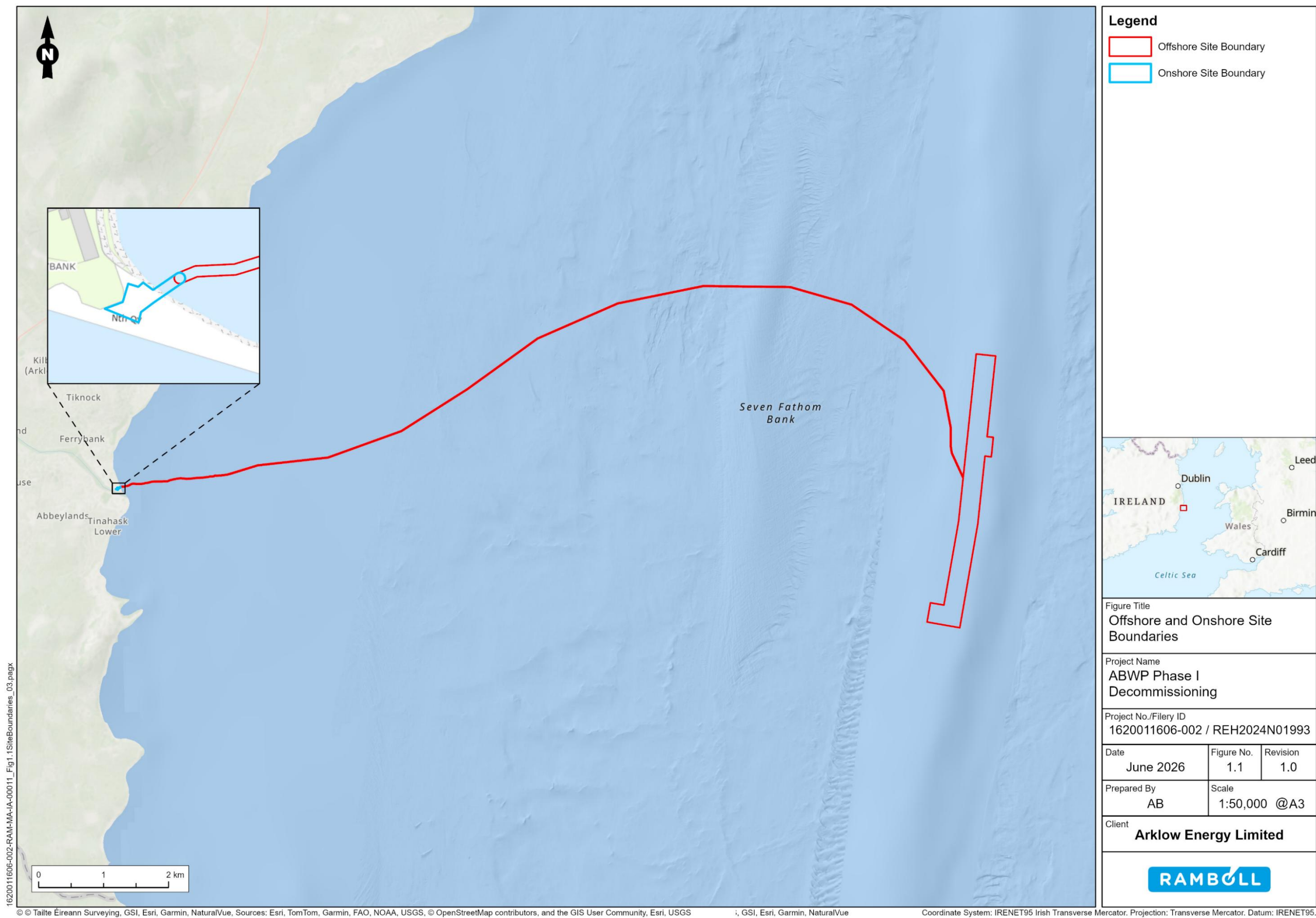


Figure 1.1: Offshore and Onshore Site boundaries

1.3 Policy and Legislative Context

1.3.1 Overview

- 1.3.1.1 The Proposed Works are located in Ireland, with Proposed Works Offshore located within the Irish territorial sea, which extends to 12 nautical miles (nm) from the baseline (usually mean Low Water Mark (LWM)). Within its territorial sea, Ireland has full sovereignty over the waters, seabed, subsoil and airspace, including the right to regulate activities such as offshore wind developments and associated decommissioning. The territorial sea is also subject to certain international norms, such as innocent passage rights for foreign ships under the United Nations Convention on the Law of the Sea (UNCLOS).
- 1.3.1.2 This section provides a summary of leases and consents currently governing ABWP Phase I, as well as an overview of the consenting framework, key policies and legislation that have been considered in the definition of the Proposed Works and throughout the EIA process.
- 1.3.1.3 Policy and legislation relevant to technical chapters of the EIAR are described within each technical chapter (see **Volume 2, Chapters 4 – 8**).

1.3.2 Existing Leases and Consents

Foreshore Lease Documentation

- 1.3.2.1 Sure Partners Limited (SPL) was granted the Foreshore Lease FS005349 (the 'Head Lease') by the Minister for Communications, Marine and Natural Resources (the 'Minister') on 11 January 2002 (under Section 2(1) of the Foreshore Act 1933) to construct, locate and operate a wind farm comprising up to 200 wind turbines on the area known as Arklow Bank (the 'Leasehold Area'). The Head Lease has a 99-year term from its effective date. In the Head Lease, decommissioning of the wind farm is provided for at clause 18.
- 1.3.2.2 Arklow Energy was granted a Foreshore Sub Lease (the 'Sub Lease') by SPL on 20 June 2003 for the development of ABWP Phase I, comprising seven turbines (type GE Wind 3.6sl) with a combined maximum export capacity of approximately 25.2 MW to be installed on the Sub Lease Area, within the wider Leasehold Area.
- 1.3.2.3 The Minister consented to the granting of such Sub Lease on the terms and conditions set out in the Tri-partite Deed dated 20 June 2003, which formalised the agreement between the Minister, Arklow Energy and SPL. The Head Lease, the Sub Lease and the Tri-partite Deed together are referred to as the 'Foreshore Lease Documentation'.
- 1.3.2.4 A Deed of Regularisation between the Minister, SPL and Arklow Energy was agreed on 14 July 2023 in order to correctly reflect the boundaries of ABWP Phase I, a small part of which was located outside the boundaries of the area originally described in the Tri-partite Deed. The Deed of Regularisation substituted the Sub Lease Area description in Schedule 1 of the Tri-partite Deed and replaced the annexed map with a Substitute Map.
- 1.3.2.5 A Deed of Variation between the Minister and SPL was also agreed on 14 July 2023, recording the amendments to the Foreshore Lease deemed to have taken effect by virtue of the Surrender Notice dated 14 March 2023, served by SPL pursuant to Clause 7.5 of the Foreshore Lease. The Deed of Variation amended the definition of 'Facilities' at clause 1.1(32) of the Foreshore Lease, the Leasehold Area description, the Leasehold Area map and the Proposed Generating Capacity (from 60 MW to 25.2 MW), so as to reflect the reduction of the Foreshore Lease to ABWP Phase I.
- 1.3.2.6 Clause 4.1 of the Tri-partite Deed indicates that it will be the responsibility of Arklow Energy, at its cost, to make provision for and to carry out decommissioning of the 'Facilities' and reinstatement of the Leasehold Area and, if necessary, any adjacent Foreshore to the satisfaction of the Minister by:

- Submitting a Decommissioning and Reinstatement Plan (DRP) in accordance with Clause 4.2;
 - Obtaining the approval of the Minister to the DRP;
 - Complying with any approved DRP and any conditions imposed by the Minister in granting such approval; and
 - Complying with all applicable Laws in relation to the decommissioning of the Facilities or reinstatement of any Foreshore.
- 1.3.2.7 The term 'Facilities' was defined in the Tri-partite Deed as 7 GE 3.6 MW electricity generating wind turbines to be installed in the Leasehold Area, including foundations and necessary associated works, and all cables associated with such turbines, or any of them.
- 1.3.2.8 Prior to the commencement of the Maritime Area Planning Act 2021 ('the MAP Act') (see **paragraphs 1.3.3.1 to 1.3.3.7**) the grant of a lease, under Section 2 of the Foreshore Act 1933, functioned as a development consent for defined works to be carried out within the foreshore. Accordingly, the Foreshore Lease Documentation functioned as development consent for ABWP Phase I.
- 1.3.2.9 The Maritime Area Regulatory Authority (MARA) was established pursuant to Section 42 of the MAP Act. Under the MAP Act, MARA assumed the regulatory functions previously exercised by the Minister in relation to foreshore matters. Accordingly,, references to the Minister in the Foreshore Lease Documentation are to be construed as references to MARA. As such, under Clause 4.1 of the Tri-partite Deed, MARA is required to approve the DRP.
- 1.3.2.10 During pre-application consultations with MARA (see **Stakeholder Consultation and Engagement Report** prepared in support of the application for planning permission), MARA clarified that the DRP would be approved in accordance with the planning permission for the Proposed Works Offshore.
- 1.3.2.11 A close-out report will be prepared following the completion of Proposed Works Offshore to provide a final "as-left" account of the Proposed Works Offshore, demonstrating compliance with the planning permission and approved DRP.

Onshore Lease and Consents

- 1.3.2.12 Arklow Energy was granted planning permission by Arklow Town Council to construct the onshore substation and associated fenced onshore substation compound (referred to as a switch station building and compound) at North Quay in 2002. An additional planning permission by Arklow Town Council was granted to install the transformer in 2004.
- 1.3.2.13 Arklow Energy was granted a transfer of the lease and Sub Lease for the North Quay Switch House and Isolation Transformer (within the fenced onshore substation compound) from SPL by the Arklow Harbour Commissioners in 2010, and responsibility for the lease was transferred from Arklow Harbour Commissioners to Wicklow County Council (WCC) as part of S.I. No. 664/2011 - Harbours Act 1996 (Arklow Harbour Commissioners) Transfer Order 2011. The original term of the lease is 75 years from the 1st January 2003.

1.3.3 Consenting Framework

Marine Area Planning Act 2021 (as amended) ('the MAP Act')

- 1.3.3.1 In 2021, the MAP Act established a new consenting regime for development within Ireland's maritime area.
- 1.3.3.2 The MAP Act provides for the granting of a Maritime Area Consent (MAC), which grants legal permission for a developer to occupy a specific part of the maritime area (seabed) for a designated purpose. Under Section 75(1) of the MAP Act, securing a MAC from MARA is a pre-requisite for submitting a planning application to ACP or the local Coastal Planning Authority (if the proposed development is located within 3 nm).

- 1.3.3.3 Section 76A of the MAP Act provides that neither Section 75 nor Section 76 shall apply for a maritime usage in a part of the maritime area consisting of development (including the laying of cables or pipelines or both) authorised by—
- (a) a lease made under Section 2 of the Act of 1933 pursuant to an application for such lease made under that Act before the establishment day, or
- (b) a licence granted under Section 3 of the Act of 1933 pursuant to an application for such licence made under that Act before the establishment day.
- 1.3.3.4 ABWP Phase I was authorised under the Foreshore Lease Documentation, granted pursuant to the Foreshore Act 1933. Therefore, Arklow Energy does not require a MAC in respect of the Proposed Works Offshore.

Planning and Development Act 2000 (as amended) ('the 2000 Act') and the Planning and Development Regulations 2001 (as amended) ('the 2001 Regulations')

- 1.3.3.5 The Planning and Development Act 2000 ('the 2000 Act') provides the statutory framework for planning and environmental assessment in Ireland and transposes the requirements of the EIA Directive (Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (as amended)) into Irish law. It sets out the process for applying for and attaining planning permission, including the requirements for an EIA.
- 1.3.3.6 The main regulations that underpin the 2000 Act are the 2001 Regulations (Statutory Instrument (S.I.) No. 600/2001).
- 1.3.3.7 The MAP Act also amends the 2000 Act by introducing provisions in respect of permission to carry out 'development' in the maritime area by way of Section 286 of the 2000 Act. 'Development', as defined in Section 278 of the 2000 Act, means the carrying out of any works in the maritime area, or the making of any material change in the use of the sea, seabed or any structure in the maritime area, and includes the reclamation of land in the nearshore area. Under section 286 (3)(c) the 2000 Act, the holder of a lease granted under section 2 of the Foreshore Act is eligible to make an application under section 291 of the 2000 Act.
- 1.3.3.8 ACP is responsible for granting planning permission in the maritime area under Part XXI of the 2000 Act. Arklow Energy is applying to ACP for planning permission for the Proposed Works under Section 291 of the 2000 Act.. Consultation with the local Coastal Planning Authority, in this case WCC, has been undertaken during the preparation of this EIAR and planning application, see **Stakeholder Consultation and Engagement Report** prepared in support of the application for planning permission.
- 1.3.3.9 The EIA Directive requires that certain projects that are likely to have significant effects on the environment be made subject to an assessment prior to development consent being given. Article 4 of the EIA Directive makes provision for EIAs required in respect of certain projects listed in Annexes I (mandatory EIA) and II (projects that require a determination as to whether an EIA is required, through a case-by-case examination or thresholds or criteria set by Member States).
- 1.3.3.10 This EIAR has been prepared and is submitted in support of the application for planning permission for the Proposed Works to ACP, competent authority for the determination of the application of planning permission under the 2000 Act.

1.3.4 Offshore Decommissioning Policy

United Nations Convention on the Law of the Sea

- 1.3.4.1 UNCLOS (1982) is an international treaty that establishes a legal framework for all marine and maritime activities.

- 1.3.4.2 Article 60(1) grants exclusive rights to coastal states within the Exclusive Economic Zone (EEZ), defined as the maritime area beyond and adjacent to the territorial sea, extending up to 200 nm from a coastal state's baseline, to construct, authorise and regulate the construction, operation and use of installations and structures for the purposes provided for in Article 56 and other economic purposes, including: "other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds".
- 1.3.4.3 Article 60(3) prescribes that within the EEZ, "any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organisation. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed".
- 1.3.4.4 Accordingly, UNCLOS requires full removal of installations and structures only insofar as is necessary to ensure safety of navigation, taking into account relevant international standards, and partial removal is specifically referenced under Article 60(3). In fact, UNCLOS provisions envisage that some structures will not be entirely removed and therefore, it is clear that partial removal is compliant with the UNCLOS obligation once it is publicised appropriately. The Irish domestic implementation of UNCLOS uses identical terminology and therefore it is open to and indeed appropriate for ACP to condition partial removal.
- 1.3.4.5 Although the Proposed Works Offshore are located within the territorial sea, and therefore outside the EEZ, UNCLOS is considered relevant to the Proposed Works Offshore and has been considered in this EIAR, particularly as part of **Volume 3, Appendix 2.1: Comparative Assessment Report**. It should be noted that inter-array and offshore export cables are considered subsea infrastructure rather than "installations or structures", which makes the above provisions only relevant to the decommissioning of WTGs and associated transition pieces TPs and foundations (i.e. MPs).

International Maritime Organisation

- 1.3.4.6 The International Maritime Organisation (IMO) is the United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships.
- 1.3.4.7 In 1989, the IMO adopted the Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the EEZ (IMO, 1989). They stem from Article 60 of UNCLOS, and state that abandoned or disused offshore installations or structures on any continental shelf or in any EEZ are required to be removed, except where non-removal or partial removal is consistent with the stated guidelines and standards. The guidelines also state that any decisions for non-removal must be made on a case-by-case evaluation by the competent authority of the following matters:
- Any potential effect on the safety of surface or subsurface navigation, or of other uses of the sea;
 - The rate of deterioration of the material and its presence and possible future effect on the marine environment;
 - The potential effect on the marine environment, including living resources;
 - The risk that the material will shift from its position at some future time;
 - The costs, technical feasibility, and risks of injury to personnel associated with removal of the installation or structure; and
 - The determination of a new use or other reasonable justification for allowing the installation or structure or parts thereof to remain on the seabed.
- 1.3.4.8 As in the case of UNCLOS, although the Proposed Works Offshore are located within the territorial sea, and therefore outside the EEZ, IMO guidelines are considered relevant to the Proposed Works Offshore and have been considered in this EIAR, particularly as part of **Volume 3, Appendix 2.1**. In this case, it is also understood that guidelines were primarily

designed for navigational hazards introduced by large standing structures, and therefore guidelines may not be directly relevant to the decommissioning of cables.

International Cable Protection Committee

- 1.3.4.9 The International Cable Protection Committee (ICPC) is the world's leading organisation promoting submarine cable protection and resilience.
- 1.3.4.10 ICPC Recommendation No. 1 on the Management of Decommissioned and Out-of-Service (OOS) Cables indicates that, under UNCLOS and customary international law, there is no requirement for the removal of OOS Cables in any maritime zone beyond the territorial sea.
- 1.3.4.11 In deciding whether to remove an OOS Cable, the ICPC recommends considering the following factors, among others:
- Any potential effect on the safety of surface navigation or other uses of the sea;
 - Present and possible future effects on the marine environment. The comparative environmental impact of leaving the cable in place compared to the disruption caused by attempting to remove the cable should be considered;
 - The risk that the cable will significantly shift position at some future time;
 - The costs and technical feasibility associated with removal of cables;
 - The determination of a new use for allowing the cable or parts thereof to remain on the seabed;
 - The management of OOS cables as part of the cable protection program; and
 - The potential socio-economic benefits of recovering the cable.
- 1.3.4.12 It is recommended that all cable recovery operations are planned to minimise future interference to other seabed users by leaving remaining cable, if possible, in no worse condition than it was prior to the recovery.
- 1.3.4.13 Although the Proposed Works Offshore are located within the territorial sea and therefore outside the EEZ, ICPC recommendations are considered relevant to the Proposed Works Offshore, particularly for inter-array and offshore export cables, and have been considered in this EIAR, particularly as part of **Volume 3, Appendix 2.1**.

OSPAR Convention

- 1.3.4.14 Ireland is a contracting party to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) (OSPAR, 1992), a treaty that aims to prevent and eliminate pollution and conserve the marine ecosystems of the North-East Atlantic.

OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations

- 1.3.4.15 OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations (as amended by OSPAR Decision 2024/21) (OSPAR Commission, 2024) prohibits "the dumping and the leaving wholly or partly in place, of disused offshore installations within the maritime area", where offshore installations are defined as "any man-made structure, plant or vessel or parts thereof, whether floating or fixed to seabed, placed within the maritime area for the purpose of offshore activities", and where offshore activities are defined "as activities carried out in the maritime area for the purposes of the exploration, appraisal or exploitation of liquid and gaseous hydrocarbons".
- 1.3.4.16 Given that offshore infrastructure to be decommissioned as part of the Proposed Works Offshore is not for the purpose of oil and gas exploration, Proposed Works Offshore are considered to fall outside the scope of OSPAR Decision 98/3 as amended, and therefore the prohibition on leaving offshore installations in place does not apply to the Proposed Works Offshore.
- 1.3.4.17 It should be noted that for oil and gas exploration, OSPAR Decision 98/3 (as amended) allows for a number of exceptions (or derogations). Each decommissioning option for derogation requires a comparative evaluation or assessment, which needs to take into account technical

and engineering aspects, timing of works, safety considerations, impacts on the marine environment, and economic aspects.

1.3.4.18 Annex 2 of OSPAR Decision 98/3 (as amended) provides a framework for the assessment of proposals for the disposal at sea of disused offshore installations by competent authorities.

1.3.4.19 While OSPAR Decision 98/3 is specifically concerned with disused offshore oil and gas structures, rather than renewable energy structures, Annex 2 is a widely accepted framework for comparative evaluation, which has been applied in **Volume 3, Appendix 2.1** by analogy.

OSPAR Guidance on Environmental Considerations for Offshore Wind Farm Development

1.3.4.20 OSPAR Guidance on Environmental Considerations for Offshore Wind Farm Development (OSPAR, 2008) provides that, in accordance with OSPAR's policy on waste disposal at sea, decommissioned wind farm components should generally be removed and disposed of on land.

1.3.4.21 Where the competent authority determines that components are to remain in situ, it "should be ensured" that they have no significant adverse environmental impact and that any remaining parts should be monitored and if necessary, any other appropriate measures should be taken.

1.3.4.22 OSPAR (2008) is considered applicable and relevant to the Proposed Works Offshore and has therefore been considered in this EIAR, particularly as part of **Volume 3, Appendix 2.1**.

1.3.5 Planning Policy

1.3.5.1 This section provides an overview of relevant planning policies that have been considered in the definition of the Proposed Works and throughout the EIA process. The **Planning Report** prepared in support of the application for planning permission demonstrates compliance of the Proposed Works in relation to these.

Draft Marine Planning Policy Statement

1.3.5.2 The draft Marine Planning Policy Statement (MPPS) (Department of Climate, Energy and the Environment (DCEE), 2025a) was available for public consultation in the summer of 2025. The draft MPPS is an overarching policy document guiding the development, management, and protection of the country's maritime area. It sets the strategic principles and priorities for all statutory bodies involved in marine decision-making, balancing sustainable economic growth with environmental conservation, and works hand-in-hand with the National Marine Planning Framework (NMPF), which is Ireland's overarching marine spatial plan. Of particular relevance to the Proposed Works Offshore are the following principles:

- The alignment with terrestrial planning ensuring that land-sea interactions are provided for;
- The application of an ecosystem-based approach;
- The protection and restoration of biodiversity;
- The compatibility of the collective pressure of activities with the achievement and maintenance of the Good Environmental Status (GES);
- The effective use of the maritime area through the identification of opportunities for co-location and co-existence where feasible;
- The promotion of safety-at-sea; and
- The assurance that all activities and development are regulated within a robust governance structure, which will oversee compliance with conditions for authorisations and licences.

Climate Action Plan 2025

1.3.5.3 The Climate Action Plan 2025 CAP25 (DCEE, 2025b) is the third statutory annual update to the Climate Action Plan under the Climate Action and Low Carbon Development (Amendment) Act 2021. It sets out a roadmap of actions required to support the achievement of the national climate objectives of pursuing and achieving the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy by 2050. The plan aligns with the

legally binding economy-wide carbon budgets and sectoral emissions ceilings that were agreed by the Government in 2022.

National Marine Planning Framework (NMPF)

- 1.3.5.4 The NMPF (DCEE, 2024) provides the overarching planning framework for activities within Ireland's maritime area and sets out policies relevant to offshore renewable energy (ORE), including requirements relating to the lifecycle of offshore infrastructure, from development through to decommissioning.
- 1.3.5.5 Relevant to the Proposed Works, the NMPF includes objectives for ORE which require that infrastructure is decommissioned at the end of its operational life in accordance with international best practice. Planning policies that make specific reference to decommissioning activities are related to ensuring safety at sea (Safety at Sea Policies 1 – 5).
- 1.3.5.6 The NMPF also includes policies relating to the protection of the marine environment, sustainable use of marine resources, and the avoidance of adverse effects on other marine users. These policies are of direct relevance to the Proposed Works.
- 1.3.5.7 **Volume 3, Appendix 1.4: Ecosystem Services Assessment** further considers whether ecosystem services provided by the marine environment may be affected by Proposed Works Offshore, in line with NMPF policy requirements.

National Planning Framework 2040

- 1.3.5.8 The National Planning Framework (NPF) (Government of Ireland, 2018a), sets out Ireland's long-term strategy for sustainable development to 2040 and provides the overarching national policy context for development, including principles relating to sustainable resource use, environmental protection and the transition to a low-carbon economy.
- 1.3.5.9 National Policy Objective 56 promotes the sustainable management of waste, including construction and demolition waste, and supports circular economy principles with an emphasis on waste prevention, reuse, recycling and recovery.
- 1.3.5.10 This is of relevance to the Proposed Works, which will generate waste. Waste arising from the Proposed Works Onshore and Offshore will be managed through the preparation and implementation of Detailed Onshore and Offshore Waste Management Plans (WMPs) (see outline versions in **Volume 3, Appendices 3.3 and 3.9** respectively), consistent with these policy objectives.

Wicklow County Development Plan 2022–2028

- 1.3.5.11 The Wicklow County Development Plan (WCDP) (WCC, 2022), sets out the statutory planning framework for development within the county, including policies and objectives relating to land use, infrastructure and environmental protection.
- 1.3.5.12 The WCDP primarily relates to new development and does not include specific policies relating to decommissioning or end-of-life management of infrastructure relevant to the Proposed Works.
- 1.3.5.13 The Proposed Works will be undertaken having regard to relevant general policies within the WCDP, including those relating to environmental protection, waste management and sustainable development, where relevant.

Draft Arklow Local Planning Framework 2025

- 1.3.5.14 The Draft Arklow Local Planning Framework (LPF) Variation No.5 (WCC, 2025), will, when adopted, form part of the WCDP and will provide a more detailed planning framework for the development of Arklow and its surrounding area.
- 1.3.5.15 The onshore substation is located within the B:2 Waterfront Zone (WZ), to the east of the Arklow Wastewater Treatment Plant, and there are three opportunity sites to the west and northwest of the treatment plant.

- 1.3.5.16 There are a series of Waterfront Strategy Objectives (ARK 8 to ARK 14). In particular, ARK 8 indicates that applications for the development of such lands (including, in particular, any development that entails demolition and / or site excavation) shall include appropriate site and ground surveys / investigations / remediation measures / waste management plans as required taking in account current and previous/historic land uses / site activities. The removal of the onshore substation, as part of Proposed Works Onshore, will free up the area for other suitable waterfront development.
- 1.3.5.17 The draft LPF does not include specific policies relating to decommissioning or end- of- life management of infrastructure. However, it includes objectives relating to the management of construction and demolition of waste, indicating that where required, a Resource Waste Management Plan will be prepared in accordance with Environmental Protection Agency (EPA) guidance, which has been considered in the preparation of outline versions of the Offshore and Onshore WMPs in **Volume 3, Appendices 3.3 and 3.8** respectively.

1.3.6 Other Key Legislation

Habitats and Birds Directive

- 1.3.6.1 The European Union (EU) Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') requires that Member States contribute to the creation of a coherent ecological network of sites through the identification and designation of Special Areas of Conservation (SACs) relating to habitats and species listed in Annex I and Annex II of the Habitats Directive. The EU Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive') requires the protection of bird species listed in Annex I of the Birds Directive, and of regularly occurring migratory bird species and their habitats, including through the designation of Special Protection Areas (SPAs).
- 1.3.6.2 SACs and SPAs are referred to as European sites and are collectively part of the Natura 2000 network, comprising a network of areas of highest biodiversity importance for rare and threatened habitats and species across the EU.
- 1.3.6.3 Article 6(3) of the Habitats Directive requires that, "Any plan or project not directly connected with or necessary to the management of the (European) site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment (AA) of its implications for the (European) site in view of the (European) site's conservation objectives.
- 1.3.6.4 Article 6(2) of the Habitats Directive provides an initial two-stage process:
- Screening for AA to identify the need for an AA; and
 - AA, only applicable if screening for AA concludes that an AA is required. In Ireland, data and information on the project and on the site and an analysis of potential effects on a given European site must be obtained and presented by the applicant in a Natura Impact Statement (NIS).
- 1.3.6.5 For the purposes of applications for planning permission in Ireland, Part XAB of the Planning and Development Act 2000 (as amended), transposes the obligations under the Habitats and Birds Directives into Irish law.
- 1.3.6.6 The application for planning permission for Proposed Works is supported by an **AA Screening Report** and a **NIS**.

Marine Strategy Framework Directive

- 1.3.6.7 The Marine Strategy Framework Directive (MSFD) (Directive 2008/56/EC) of the European Parliament and of the Council, June 2008, established a framework of community action in the field of marine environmental policy. It establishes the overarching framework for achieving Good Environmental Status (GES) in EU marine waters through a series of qualitative descriptors.

- 1.3.6.8 The MSFD is transposed into Irish law through the European Communities (Marine Strategy Framework) Regulations 2011 (S.I. No. 249 of 2011) (as amended).
- 1.3.6.9 An assessment of compliance with relevant MSFD objectives is assessed in **Volume 3, Appendix 1.4: Marine Strategy Framework Directive Assessment**.

Water Framework Directive

- 1.3.6.10 The Water Framework Directive (WFD) (Directive 2000/60/EC) of the European Parliament and of the Council of October 2000 established a framework for community action in the field of water policy, a framework for the protection and sustainable management of water resources. Requiring all EU Member States to achieve good ecological and good chemical status in inland and coastal waters. The WFD applies to coastal water bodies extending up to 1 nm from the baseline for ecological status, while assessments of chemical status extend across territorial waters out to 12 nm.
- 1.3.6.11 The WFD is transposed into Irish law through the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003), as amended, and the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. No. 272 of 2009), as amended.
- 1.3.6.12 An assessment of compliance with relevant WFD objectives is presented in **Volume 3, Appendix 4.5: Water Framework Directive Assessment**.

Dumping at Sea Act 1996

- 1.3.6.13 The EPA is responsible for issuing Dumping at Sea (DaS) permits under the Dumping at Sea Act 1996 (as amended), which regulates the dumping of material at sea in Irish waters. Dumping activities also include plough dredging, water injection dredging, side-cast dredging and other such dredging techniques, which also require a DaS permit.
- 1.3.6.14 The Dumping at Sea Act 1996 (as amended) implements the requirements of international Conventions regulating the disposal of a substance or material, including dredged materials, from or in conjunction with a vessel or aircraft or offshore installation at sea, including the OSPAR Convention.
- 1.3.6.15 Given that Proposed Works Offshore include potential dredging required to facilitate safe vessel access (and associated disposal of dredge material) and disposal of sediment extracted from inside MPs, the Proposed Works Offshore will require a DaS permit.

Waste Management Act 1996

- 1.3.6.16 The principal waste legislation for the Proposed Works is the Waste Management Act 1996 (as amended), which provides the main legal framework for waste prevention, collection, transfer, recovery and disposal in Ireland, and requires waste to be managed without causing environmental pollution.
- 1.3.6.17 The waste hierarchy applies to all waste generated by the Proposed Works under Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste (as amended). Additional detail on waste-related policy and legislation is presented in the Outline Offshore WMP (**Volume 3, Appendix 3.8**) and Outline Onshore WMP (**Volume 3, Appendix 3.3**).

1.4 Approach to Environmental Impact Assessment

1.4.1 EIA Process Overview

- 1.4.1.1 The purpose of the EIA process is to examine the anticipated environmental effects of the Proposed Works – from consideration of environmental factors at design stage, through consultation and preparation of the EIAR, evaluation of the EIAR by a competent authority, and

the subsequent decision as to whether the Proposed Works should be permitted to proceed, encompassing public response to that decision (EPA, 2022).

1.4.1.2 As indicated in **Section 1.3.3**, the 2001 Regulations apply to projects under the 2000 Act and outline the requirements for EIA.

1.4.1.3 This EIAR has been prepared in accordance with the 2001 Regulations and enables consultees and ACP to understand the likely significant effects of the Proposed Works, accompanying the application for planning permission under Section 291 of the 2000 Act to ACP.

1.4.1.4 As illustrated in Error! Reference source not found., the EIA process includes several stages (EPA, 2022):

- **Screening:** Determination of whether the Proposed Works are likely to have significant effects on the environment and therefore require an EIA, having regard to the relevant criteria set out in the 2001 Regulations. This includes consideration of the nature, scale and location of the Proposed Works, as well as the characteristics of potential impacts, in line with EPA (2022) guidance. This EIAR provides sufficient information for ACP to screen the Proposed Works for EIA as part of the consent determination process (EPA, 2022);
- **Scoping:** Process of identifying the content and extent of the information to be submitted to the Competent Authority under the EIA process. This process ensures that the EIAR focuses on potential environmental impacts which could become significant, and the level of assessment is proportionate to the scale and nature of the Proposed Works. **Section 1.4.3** describes the scoping process and outcomes for the Proposed Works in more detail. Scoping consultation with the competent authority and other stakeholders can be undertaken in a statutory or a non-statutory (informal) basis. As described in **Section 1.4.3**, non-statutory scoping consultation has been undertaken;
- **Consideration of alternatives:** Consideration of reasonable alternatives to the Proposed Works, including alternative design methodologies. The assessment of alternatives takes into account environmental considerations and provides justification for the selected approach, having regard to the potential for avoiding or reducing likely significant environmental effects. **Volume 2, Chapter 2** describes the alternatives considered by Arklow Energy, and the environmental factors taken into account;
- **Identification and assessment of impacts:** Identification and the assessment of the likely effects of the Proposed Works on the environment, taking into account the sensitivity of environmental receptors and the magnitude of predicted impacts. This includes consideration of direct, indirect, secondary and cumulative effects, as well as short term, medium term and long-term effects, in accordance with EPA (2022) guidance;
- **Mitigation and monitoring proposals:** Identification of measures to avoid, prevent, reduce, where possible, offset likely significant adverse environmental effects. Where appropriate, monitoring measures are proposed to verify the accuracy of the assessment and the effectiveness of mitigation measures during the implementation of the Proposed Works;
- **Scrutiny and consent:** Submission of the EIAR as part of the planning application to ACP, enabling review by ACP, statutory consultees and the public. This stage includes the formal examination of the EIAR and associated documentation to inform the decision-making process; and
- **Enforcement and monitoring:** Implementation of any conditions attached to the consent, including monitoring requirements where specified. This ensures that mitigation measures are effectively implemented and that any significant environmental effects are appropriately managed throughout.

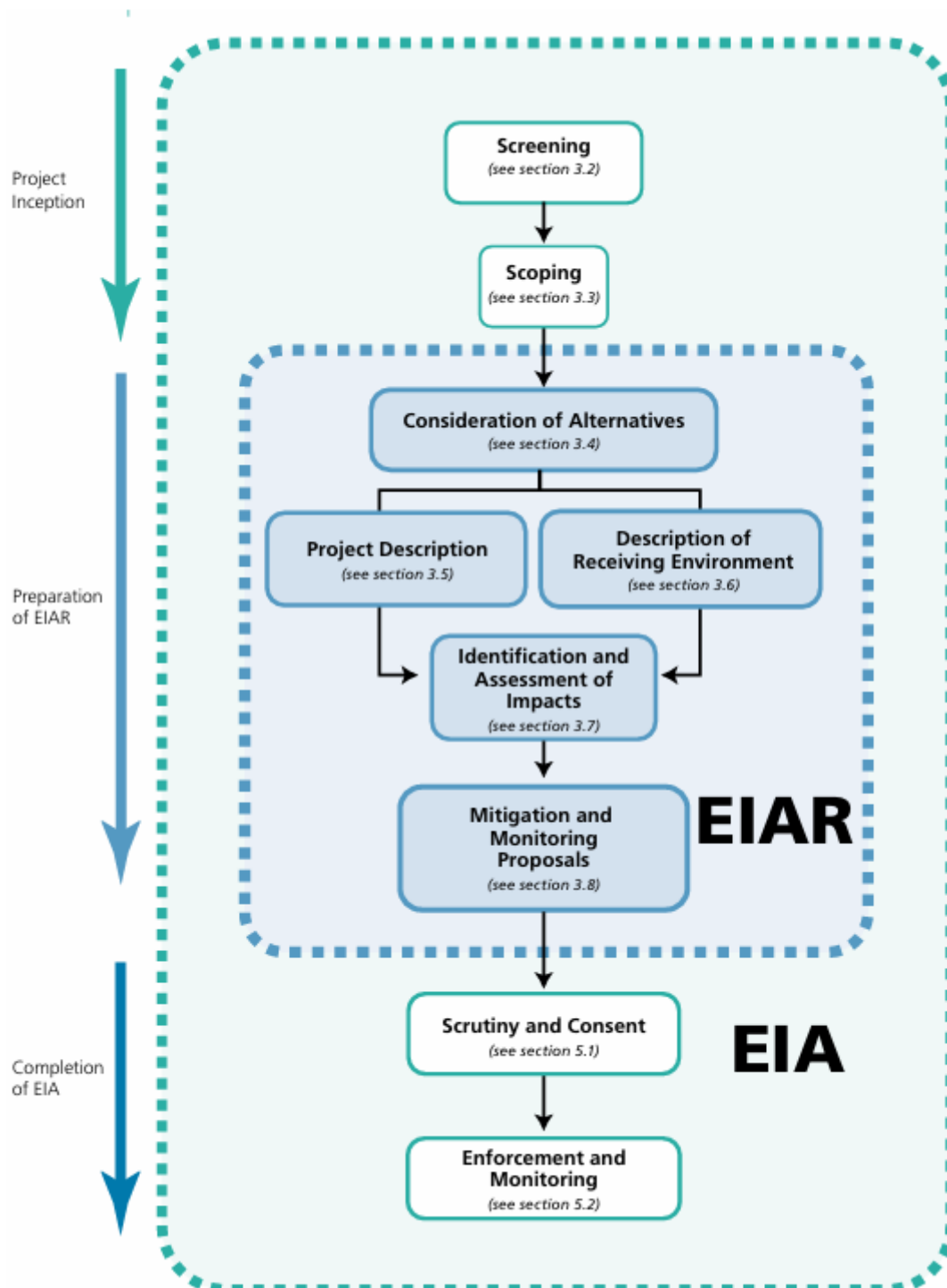


Plate 1.1: The position of an EIAR within the EIA process

Source: EPA (2022)

- 1.4.1.5 In accordance with EPA Guidelines (2022), the EIA process is a structured and iterative process that involves the compilation of baseline information, prediction of likely environmental effects and the assessment of those effects to inform the consent decision. The process enables likely significant effects to be anticipated and, where possible, avoided or reduced through design development and mitigation.

1.4.2 Relevant EIA Guidance

- 1.4.2.1 This EIAR has been prepared in accordance with the requirements of the EIA Directive and relevant Irish legislation, see **Section 1.3**, which also details how relevant national and local planning policy have been used to inform the definition of Proposed Works and the preparation of this EIAR.
- 1.4.2.2 The following European, Irish and UK guidance has been used to inform the EIA process and production of this EIAR. Technical chapter-specific methodologies and guidance that have been used in the assessment of specific environmental factors are set out in technical chapters of this EIAR (see **Volume 2, Chapters 4 – 8**):
- Guidance on Scoping (European Commission (EC), 2017a);
 - Guidance on the preparation of the Environmental Impact Assessment Report (EC, 2017b);
 - Guidelines on the Assessment of Indirect and Cumulative Impacts as well as Impact interactions (EC, 1999);
 - EPA Guidelines on the information to be contained in EIARs (EPA, 2022);
 - Government of Ireland Guidelines on carrying out EIA (Government of Ireland, 2018b);
 - Guidance on the preparation of Environmental Impact Statements and Natura Impact Statements for Offshore Renewable Energy Projects (MDB, 2017);
 - Best-Practice Guidelines for the Irish Wind Energy Industry (Irish Wind Energy Association (IWEA), 2012);
 - Evidence Review Note on EIA of Offshore Wind Projects (Offshore Wind Evidence and Knowledge Hub (OWEKH), 2025);
 - UK Planning Inspectorate (PINS) Advice on Cumulative Effects Assessment (PINS, 2024);
 - PINS Advice on Transboundary Impacts and Process (PINS, 2025);
 - Implementing the Mitigation Hierarchy from Concept to Construction (Institute of Environmental Management and Assessment (IEMA), 2024); and
 - A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice (IEMA, 2017).

1.4.3 Scope of the EIAR

Overview

- 1.4.3.1 Existing guidance advocates for the delivery of proportionate EIAs, appropriately focused on the most important environmental impacts (IWEA, 2012; EC, 2017a; EC, 2017b; IEMA, 2017; EPA, 2022; OWKHE, 2025). The scoping stage provides an opportunity for both developers and stakeholders to determine those key environmental impacts and issues of concern that are likely to be of the utmost importance to the Project proposal's decision-making and eliminates those that are less of a concern (EC, 2017a).
- 1.4.3.2 This EIAR has applied EPA (2022) scoping criteria as follows:
- Use 'Likely' and 'Significant' as the principal criteria for determining what should be addressed. Any issues that are not likely or anticipated to become significant should be omitted (scoped out). However, all the prescribed environmental factors (i.e. Population and Human Health, Biodiversity, Land, Soil, Water, Air, Climate, Material Assets, Cultural Heritage, Landscape and Interactions between these factors) need to be listed in the scoping section of the EIAR:
 - The EIA Scoping Presentation (see Volume 3, Appendix 1.1) presents the initially proposed scope of the EIAR;
 - **Table 1.3** in **Section 1.4.3** provides additional supporting information that justifies the omission or scoping out of environmental issues due to the unlikelihood of potential effects to become significant. Where all subtopics comprising an environmental factor are scoped out, then logically by default the entire environmental factor is scoped out. This is in accordance with the EIA Directive; and
 - For those environmental issues scoped in, **Table 1.3** and **Volume 2, Chapters 4 – 8** further justify the omission or scoping out of certain potential effects due to the unlikelihood of these to become significant;

- Precedence, where EIARs for other project proposals for the same site are available, these can be useful references:
 - Given the location of the Offshore Site in relation to the proposed ABWP Phase II site boundary (see **Figure 1.2**), baseline information described in the EIAR prepared in support of ABWP Phase II application for planning permission (SSE Renewables, 2026) has been used to inform the EIA Scoping Presentation and EIAR for the Proposed Works;
- Interactions, carefully considering direct and indirect pathways for effect that can magnify effects through interactions or accumulation of effects:
 - **Volume 3, Appendix 1.2: Cumulative Screening** presents the process followed in the identification of other developments considered in the assessment of potential cumulative effects with the Proposed Works, with the assessment of potential cumulative effects associated with environmental factors scoped in included within **Volume 2, Chapter 4 – 8**, and a summary presented in **Volume 2, Chapter 10: Summary of Cumulative Effects**. See **Section 1.4.6** for an overview of the methodology followed in the assessment of cumulative effects; and
 - The interaction between potential effects associated with environmental factors scoped in has been considered within **Volume 2, Chapter 4 – 8**, with a summary presented in **Volume 2, Chapter 9: Summary of Interaction of Effects**. See **Section 1.4.5** for an overview of the methodology followed in the assessment of interaction of effects.

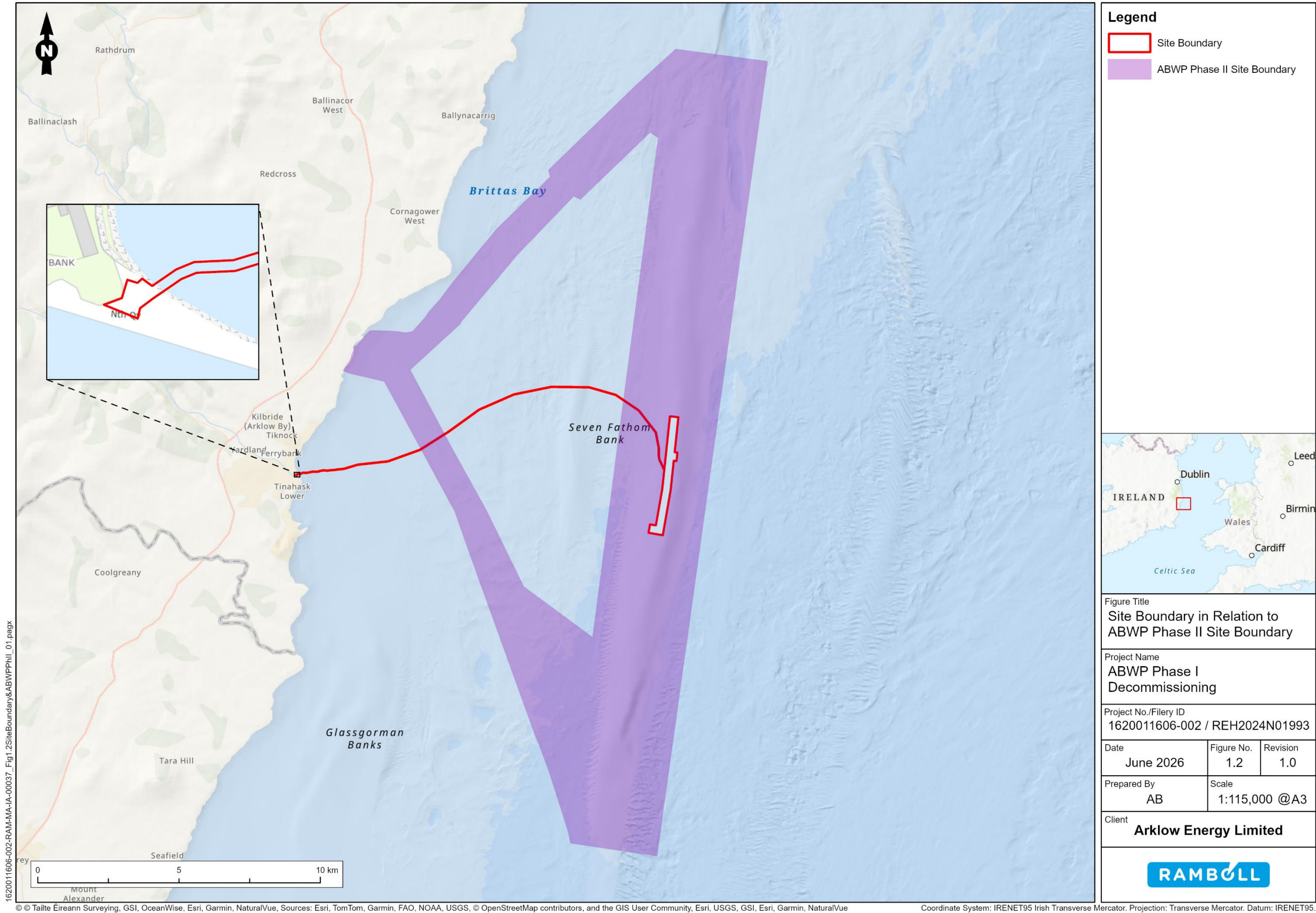


Figure 1.2: Site boundary in relation to ABWP Phase II site boundary

EIA Scoping Presentation

- 1.4.3.3 The EIA Scoping Presentation (see **Volume 3, Appendix 1.1**) was submitted to ACP and prescribed bodies in March 2026 to obtain informal feedback on the proposed scope of the EIAR, and on the assessment approach to be taken for the 'scoped in' technical assessments to be included in the EIAR. It should be noted that the submission of the EIA Scoping Presentation did not constitute a formal scoping request under Article 117 of the 2001 Regulations, but has been used for non-statutory consultation.
- 1.4.3.4 Feedback provided in response to the EIA Scoping presentation, as well as wider stakeholder engagement feedback, is presented in the **Stakeholder Consultation and Engagement Report** accompanying the application for planning permission. For each technical topic, the key comments raised and details of how these comments have been addressed are presented within the relevant technical chapters of this EIAR (**Volume 2, Chapters 4 – 8**).
- 1.4.3.5 **Table 1.1** sets out comments raised by ACP during pre-application meeting discussions in relation to the scoping process / overall approach to the EIA, with details of how these comments have been addressed within the EIAR.

Table 1.1: Summary of consultation relating to the proposed scope of the EIAR and approach to assessment.

Comment	How and where considered in the EIAR
Maritime Area Regulatory Authority, written response to EIA Scoping Presentation, 30th March 2026	
MARA notes the relevant Foreshore lease (FS005249) granted by the Minister for Marine and Natural Resources to Sure Partners Limited on 11 January 2002, for the purpose of constructing and operating a Wind Farm. This lease has a 99 year term from the effective date. The subject portion of the leasehold area was then sub-leased to Arklow Energy Limited, for a period of 30 years, in accordance with the terms and conditions set out in the Tri-partite agreement dated 20 June 2003. The applicant should be cognisant of the terms and particulars of this Tri-partite agreement and its expiry date.	Noted. Reference to existing leases and consents of relevance to Proposed Works is made in Volume 2, Chapter 1: Introduction, Section 1.3.2 of the EIAR.
MARA wish to draw the applicant's attention to MAC reference no; 2022-MAC-002), which was granted to Sure Partners Limited for the purposes of occupying the maritime area adjacent to the proposed application location. The permitted maritime usage is 'The construction and operation of an offshore windfarm and associated infrastructure (including decommissioning and other works required on foot of any Development Permission for such Offshore Wind Farm).' for a term of 45 years with a commencement date of the 23/12/2022.	Noted. The adjacent 2022-MAC-002, granted to Sure Partners Limited and associated planning application for ABWP Phase II development have been considered in the assessment of potential cumulative effects in EIAR Volume 2: Chapters 4 – 8 , also summarised in Volume 2, Chapter 10: Summary of Cumulative Effects .

Comment	How and where considered in the EIAR
MARA has a MUL application on hand for Uisce Éireann (MUL reference no; MUL240026) which is overlapping part of the proposed site area. The MUL is for a maritime usage license to conduct strategic modelling of water currents and bathymetry along the Southeast coast of Ireland under Schedule 7(3) of the MAP Act. The licence application is for a period of five years. The activities are required to support the design and consenting of wastewater infrastructure, by conducting a strategic modelling study of water currents and bathymetry along the Southeast coast of Ireland between Dungarvan, Co. Waterford and Greystones, Co. Wicklow. MARA has issued a 'Minded to Determine Notice' on the 13/03/2026 pursuant to Section 119(6)(b) of the Maritime Area Planning Act 2021 which gives notice to Uisce Éireann that MARA is minded to granting the above licence subject to conditions. The applicant has until the 03/04/2026 to provide any supplementary material in view of the reasons set out in the proposed licence which MARA will consider before making its final determination on the matter.	Noted. The MUL application MUL240026 has been considered in the screening of cumulative effects presented in Volume 2, Chapter 1.2: Cumulative Screening.
(...) It is important to make the distinction that MARA is not a development consent authority, and therefore, does not have remit for the assessment and evaluation of matters in relation to any development consent application. Any particulars for future agreement, that may require planning and environmental assessment, should be a matter for An Coimisiún Pleanála, as the relevant consent authority.	Noted.
Where the application particulars and associated development consent requires monitoring to be undertaken, it is important that such monitoring is adaptive in nature to allow for mitigation of issues that may be identified during the course of this monitoring.	The Proposed Works Offshore include post-decommissioning monitoring to validate decommissioning assumptions and to provide a final, "as-left" account of the Proposed Works Offshore, demonstrating compliance with the planning application and approved Decommissioning and Reinstatement Plan (DRP), see Volume 2, Chapter 3.
The future application should address liability for remaining residuals and responsibility for long-term monitoring. The applicant should be cognisant, in their decommissioning plan, of the long-term implications to the State of leaving structures or materials in situ and potential for deterioration over time. The management of the States maritime area is the responsibility for MARA.	The Proposed Works Offshore include post-decommissioning monitoring to validate decommissioning assumptions and to provide a final, "as-left" account of the Proposed Works Offshore, demonstrating compliance with the planning application and approved Decommissioning and Reinstatement Plan (DRP), see Volume 2, Chapter 3.
Consideration could also be given to the reuse of materials removed as a result of decommissioning and should be considered with regards to the circular economy.	Anticipated waste streams, including reuse of materials removed as a result of the Proposed Works Offshore are estimated in EIAR Volume 3, Appendix 3.8: Outline Offshore WMP. Project Waste Management Objective #4 states the aim to divert as much waste as possible from landfill through prevention, reuse, recycling and recovery where practicable. Measures recommended in the Outline Offshore WMP, such as blade segmentation to preserve recovery value, transition piece clean-steel recovery and the preparation of a rotor blade circularity plan, are in service of this objective and will be elaborated upon in the Detailed Offshore WMP, to be prepared by the Principal Decommissioning Contractor following the achievement of relevant project consents and permissions.

Comment	How and where considered in the EIAR
Depending on the full nature and extent of the activities proposed, MARA applications and licences may need to be considered in the context of cumulative impacts on the marine environment.	MARA applications and licences have been considered as part of the cumulative screening (Volume 3, Appendix 1.2 of the EIAR) undertaken to inform the Cumulative Effect Assessment (CEA) included in Volume 2, Chapters 4 – 8 of the Environmental Impact Assessment Report (EIAR), as well as the Appropriate Assessment (AA) Screening Report prepared in support of the application for planning permission of the Proposed Works.
Department of Agriculture, Food and the Marine (DAFM), written submission in response to EIA Scoping Presentation, 31st March 2026	
If the proposed development will involve the felling or removal of any trees, the developer must obtain a Felling License from this Department before trees are felled or removed (...).	The Proposed Works do not involve the felling or removal of any trees, and therefore will not seek a Felling License.
Fáilte Ireland, written submission in response to EIA Scoping Presentation, 7th April 2026	
Please see attached a copy of Fáilte Ireland's Guidelines for the Treatment of Tourism in an EIA, which you may find informative for the preparation of the Environmental Impact Assessment for the proposed project. The purpose of this report is to provide guidance for those conducting Environmental Impact Assessment and compiling Environmental Impact Assessment Reports (EIAR), or those assessing EIARs, where the project involves tourism or may have an impact upon tourism. These guidelines are non-statutory and act as supplementary advice to the EPA EIAR Guidelines outlined in section 2.	Noted. The EIA Scoping Presentation (Volume 3, Appendix 1.1) and Section 1.4.3 (Scope of the EIAR) in Volume 2, Chapter 1: Introduction include a justification on why tourism has been scoped out from the EIAR.
Department of Transport, written submission in response to EIA Scoping Presentation, 8th April 2026	
Where ducting, cables, and chambers within the public road are made redundant by the decommissioning process, and not under the ownership/maintenance of the Distribution Network Operator or the Transmission Network Operator, this infrastructure is to be removed and/or made good to the satisfaction of the Roads Authority.	No ducting, cables or chambers within the public road that are not under ownership/maintenance of Distribution/Transmission Network Operator are to be made redundant by decommissioning process.
The developer shall consult with the Roads Authority its requirements for decommissioning of assets within the public road and the potential for further reuse of ducting following cable decommissioning.	No decommissioning of assets within the public road form part of this application.
ACP, Post Meeting Note, 10th April 2026	
The principle of scoping down and scoping out is considered to be consistent with the provisions of the EIA Directive which requires assessment of likely significant effects but does not require the assessment of effects for which no credible pathway to significance exists. Where it can be demonstrated that an environmental factor or heading gives rise to no likely significant effects, that factor may be scoped down through the scoping out of subtopics, headings or effects and where justified the removal of the requirement for a standalone chapter in the EIAR. Of note, scoping down does not mean that an environmental factor can be omitted from the EIAR entirely and all environmental factors must be clearly identified in the EIAR and scoped down chapters presented in a consolidated "other environmental factors" chapter. Where this approach is followed the rationale for this approach must be clearly explained in the EIAR.	The EIAR considers the likely significant effects arising from the Proposed Works in relation to environmental factors / EIA topics and sub-topics. For those topics and subtopics where no likely significant effects have been identified, these are scoped out and not brought forward for assessment. Sufficient information is provided to support these conclusions in Table 1.3, Volume 2, Chapter 1 (this chapter). Where all sub-topics of an environmental factor are individually scoped out, it is logical that as a result the entire applicable environmental factor is scoped out. The Post Meeting Note suggests the inclusion of an 'Other Environmental Factors' chapter. However, Volume 2, Chapter 1 presents the Scope of the EIAR, thus negating the need for an 'Other Environmental Factors' chapter.
ACP, Inspector's Report (ACP 321635-25) – Matters arising, 7th May 2026	

Comment	How and where considered in the EIAR
Prospective Applicant's eligibility to request pre-application consultation in accordance with section 287 of the Planning Act and make a planning application in accordance with section 291 of the Planning Act. The Prospective Applicant outlined their eligibility to make a planning application having regard to the Foreshore Sub Lease. Section 2.0 / 3.0 of this Report summarises the situation with regard to the lease.	Noted. This EIAR is submitted in support of the application of planning permission of Proposed Works under Section 291 of the 2000 Act.
Defining the scope of the proposed development and completion of the Comparative Assessment analysis, in light of the Prospective Applicant not seeking an opinion on design flexibility under S.287	Noted. Volume 2, Chapter 2 provides an overview of alternatives considered and process followed to define the requirements of the Proposed Works Offshore, which include the completion of a Comparative Assessment Report (Volume 2, Appendix 2.1).
National Marine Planning Framework (NMPF) and in particular the need to clearly indicate project compliance with NMPF policies and objectives.	Noted. A separate Planning Report is submitted in support of the application of planning permission of Proposed Works to outline compliance with the NMPF.
Policy context surrounding the proposal ranging from strategic to local. Documentation needs to be robust in its assessment against national, regional and local policy and use of best available scientific data.	Noted. Volume 2, Chapter 1 provides an overview of relevant policy and legislation to Proposed Works, and this is detailed for each environmental factor scoped in in relevant chapters (Volume 2, Chapters 4 – 8).
Importance of having up-to-date, site-specific survey information in establishing the baseline environment to enable the Commission to determine a future planning application. Methodologies adopted, modelling assumptions and any data gaps are to be clearly set out.	Volume 2, Chapter 4 – 8 and accompanying appendices (Volume 3) specify information and data used to describe baseline conditions, justifying these as considered representative and indicating any assumptions or limitations found. These chapters / appendices also specify the assessment methodologies used, including any modelling undertaken, and assumptions / limitations associated with these, where relevant.
Potential impact on coastal processes including coastal erosion and deposition	Volume 2, Chapter 4 includes the assessment of potential impacts associated with coastal processes and water quality (e.g. temporary increase in suspended sediment concentrations (SSC) and deposition) and indirect impacts along the coastline, such as potential coastal erosion, see Section 4.7 .
Health and safety/navigational considerations as a result of leaving the monopiles partially in situ and their potential risk of exposure.	Volume 2, Chapter 7 includes the assessment of potential collision (vessel-to-structure) risks, including in relation to residual MPs with potential to become exposed post-decommissioning, see Section 7.7 .
Potential impact on biodiversity, including seabed and benthic communities and species, and migratory and /or mobile species (incl. European sites, seabirds, bats, marine mammals, fisheries), in particular potential noise impacts during the decommissioning works, including the transmission of noise into the water column.	Volume 2, Chapter 5 includes the assessment of potential impacts on marine biodiversity, including justification for scoping out bats. Among others, this chapter is informed by underwater sound modelling presented separately in Volume 3, Appendix 5.3 .
Potential impacts on water quality and the importance of providing a robust waste management plan for both the onshore and offshore elements of the proposed development. It was noted that a Dumping-at-Sea licence may be required for the proposed works.	Volume 2, Chapter 4 includes the assessment of potential impacts on water quality (e.g. temporary increase in suspended sediment concentrations (SSC) and deposition), see Section 4.7 . Waste generated during Proposed Works Onshore and Offshore will be managed in line with the Onshore and Offshore Waste Management Plans (WMPs) to be implemented by the Principal Decommissioning Contractor (see outline versions of these in Volume 3, Appendices 3.3 and 3.8 respectively). The applicant will secure a Dumping at Sea (DaS) permit for relevant Proposed Works Offshore.
Impact on commercial fisheries, shipping and navigation.	Volume 2, Chapter 6 includes the assessment of potential impacts on commercial fisheries and aquaculture. Volume 2, Chapter 7 includes the assessment of potential impacts on shipping and navigation.

Comment	How and where considered in the EIAR
Potential impacts on ecosystem functions and services.	Volume 3, Appendix 1.5 includes an assessment of potential impacts on ecosystem services from Proposed Works Offshore.
Consideration of potential cumulative impacts, in particular with regards to the five live Irish Sea offshore renewable projects.	Volume 3, Appendix 1.2 presents the cumulative screening undertaken for the Proposed Works, which uses the cumulative Zone of Influence of the Proposed Works to determine whether “other developments” should be considered in the assessment of potential cumulative effects. Volume 2, Chapters 4 – 8 include an assessment of potential cumulative effects, summarised in Volume 2, Chapter 10 .
Duration of permission in the context of the Foreshore Sublease expiring in 2033 and the associated rights the Prospective Applicant would have to undertake works/monitoring in the site area post this date.	As explained in Volume 2, Chapter 1 , planning permission is sought up to 2033 to align with provisions of the Sub Lease. Arklow Energy does not anticipate any requirement for further licensing post 2033. Notwithstanding this, should any other licences be needed for post-decommissioning monitoring, these will be obtained, if required.
Procedural Matters: Application should be accompanied by a website; Digital version of planning documentation should be word searchable; Consistency throughout planning documentation	Noted.
The Prospective Applicant is advised to ensure that all environmental factors are covered in the planning documentation. In the event that an EIAR does not identify or adequately describe all environmental effects, Section 172(1 D)(b) of the Planning Act provides that the Commission can require an applicant to furnish, within a specified period, such further information, prescribed under section 177, which is necessary to ensure the completeness and quality of the EIAR, and which is directly relevant to reaching the reasoned conclusion on the significant effects on the environment of the proposed development, as the Commission considers necessary to remedy such defect.	Noted. See response above.

Content of the EIAR

1.4.3.6 The scope of the EIAR has been informed by Schedule 6 of the 2001 Regulations and EPA (2022), which outlines the information to be contained in an EIAR, as well as the nature, size and location of Proposed Works, feedback on the EIA Scoping presentation and stakeholder engagement undertaken to date.

1.4.3.7 **Table 1.2** summarises the scope of the EIAR in the context of the requirements set out by the 2001 Regulations.

Table 1.2: Location of 2001 Regulations Schedule 6 requirements within the EIAR

2001 Regulations Schedule 6 Required information		Location within EIAR
Proposed Works description		
1(a)	A description of the proposed development comprising information on the site, design and size of the proposed development	Volume 2, Chapter 3: Proposed Works Description provides a description of ABWP Phase I offshore and onshore infrastructure and the Proposed Works (limited to the decommissioning phase, so construction and operational phases are not relevant). This includes outlining assessment parameters used within this EIAR. It also specifies embedded mitigation considered to be part of the Proposed Works.
2(a)(i)	A description of the physical characteristics of the whole proposed development and the land-use requirements during the construction and operational phases	

2001 Regulations Schedule 6 Required information		Location within EIAR
2(a)(ii)	A description of the main characteristics of the production processes, for instance, nature and quantity of the materials used	
1(b)	A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.	
Description of alternatives		
1(d)	An outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice, taking into account the effects on the environment.	Volume 2, Chapter 2: Description of Alternatives, describes the alternatives considered by Arklow Energy, and the environmental factors taken into account.
Environmental factors to be considered		
2(b) A description of the aspects of the environment likely to be significantly affected by the proposed development, including in particular:	human beings	Volume 2, Chapter 6: Commercial Fisheries and Aquaculture and Volume 2, Chapter 7: Shipping and Navigation detail the baseline environmental conditions relevant to commercial fisheries and aquaculture and shipping and navigation. Other human being receptors have been scoped out, see Table 1.3.
	fauna and flora	Volume 2, Chapter 5: Marine Biodiversity details the baseline environmental conditions relevant to marine biodiversity. Other biodiversity subtopics and associated potential impacts / headings have been scoped out, see Table 1.3.
	soil	Volume 2, Chapter 4: Coastal Processes, Water and Sediment Quality details the baseline environmental conditions relevant to coastal processes, water and sediment quality. Other soil and water subtopics and associated potential impacts / headings have been scoped out, see Table 1.3.
	water	
	air, climatic factors	Scoped out, see Table 1.3.
	landscape	Scoped out, see Table 1.3.
	material assets, including the architectural and archaeological heritage, and the cultural heritage	Volume 2, Chapter 8: Marine Archaeology details the baseline environmental conditions relevant to marine archaeology. Other material assets subtopics and associated potential impacts / headings have been scoped out, see Table 1.3.
	inter-relationship between the above factors	Volume 2, Chapter 9: Summary of Interaction of Effects presents an assessment of interaction between environmental factors considered in the EIAR.
Assessment of effects and mitigation measures		
1(c)	The data required to identify and assess the main effects which the proposed development is likely to have on the environment	Details of the baseline environmental conditions, methodologies used (and associated limitations), mitigation measures and likely

2001 Regulations Schedule 6 Required information		Location within EIAR
2(a)(iii)	An estimate, by type and quantity, of expected residues and emissions (including water, air and soil pollution, noise, vibration, light, heat and radiation) resulting from the operation of the proposed development	effects are provided in each of the technical chapters set out within Volume 2 : • Chapter 4: Coastal Processes, Water and Sediment Quality; • Chapter 5: Marine Biodiversity; • Chapter 6: Commercial Fisheries and Aquaculture; • Chapter 7: Shipping and Navigation; • Chapter 8: Marine Archaeology; and • Associated appendices presented in Volume 3.
(2)(c)	A description of the likely significant effects (including direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative) of the proposed development on the environment resulting from: • The existence of the proposed development, • The use of natural resources, • The emission of pollutants, the creation of nuisances and the elimination of waste; and • A description of the forecasting methods used to assess the effects on the environment	
2(d)	An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information	
Non-technical summary		
Regulation 94(e)	A summary in non-technical language of the information required under paragraphs (a) and (b).	Volume 1, Non-technical Summary (NTS)

Environmental Factors Scoped out of the EIAR

1.4.3.8 **Table 1.3** details all the relevant potential impacts, subtopics and, where applicable if all subtopics are identified, environmental factors scoped out of the EIAR. The technical scope of those environmental factors scoped in is further detailed in **Volume 2, Chapters 4 - 8**.

1.4.3.9 In summary, the following environmental factors have been scoped out of the EIAR on the basis that there is no credible pathway to significance for all relevant environmental subtopics or environmental headings (or potential impacts), and therefore there is no requirement for a standalone chapter to be included within the EIAR for the following:

- Land and soils;
- Air;
- Climate;
- Material Assets; and
- Landscape.

Table 1.3: Environmental factors, subtopics and potential impacts (or headings) to be scoped out of the EIAR

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
Offshore Environment			
Biodiversity	Marine biodiversity	Accidental release of pollutants	The Detailed Offshore Decommissioning Environmental Management Plan (DEMP) ¹ and Detailed Vessel Management Plan (VMP) ² (see outline versions in Volume 3, Appendices 3.4 and 3.5) will include management measures and controls for accidental spills, minimising the likelihood and magnitude of any potential impacts associated with the accidental release of pollutants. It is therefore considered that any potential impacts from accidental release of pollutants are unlikely to become significant and this heading has been scoped out of the EIAR.
	Marine biodiversity	Increased collision risk	The temporary increase in vessel activity introduced by Proposed Works Offshore has potential to result in increased collision risks, mainly relevant to marine megafauna, including sea turtles, large fish species, such as basking sharks (<i>Cetorhinus maximus</i>), and marine mammals. Sea turtles are present in the Irish Sea, with distribution and presence driven by jellyfish abundance (APEM, 2026a; 2026b). However, sea turtle activity is considered concentrated around the southern and western coasts of Ireland rather than the eastern coast where the Offshore Site is located (APEM, 2026a; 2026b). During site-specific aerial surveys for the ABWP Phase II, no turtles were identified. Furthermore, only one leatherback turtle was recorded during observations undertaken as part of site investigations in 2020. Due to the limited extent of the Proposed Works Offshore, highly temporary nature of expected impacts and few records of turtle presence in the Study Area, and any potential environmental effects, including those resulting from increased collision risk, to sea turtles are considered unlikely to become significant and has been scoped out. Basking sharks are known to migrate through the Irish Sea during spring and summer and migration routes cover large distances from the north of Scotland to North Africa. A single basking shark was recorded in October 2019 following two years of aerial surveys undertaken to support ABWP Phase II development. Whilst there is potential for basking shark to be present within the Sub Lease Area, high numbers are not considered likely (Southall <i>et al.</i>, 2005). Given the low number of sea turtle and basking shark occurrences within the Offshore Site, the probability of an encounter / collision is considered to be very low and unlikely to become significant. Accordingly, it is proposed that this heading is scoped out of the EIAR. There are several marine mammal species present in the Irish Sea and that occur within the Offshore Site. Increased collision risk has been assessed as part of the potential impact pathway "injury and / or disturbance from vessels activity", which has been scoped in the EIAR, see Volume 2, Chapter 5.

¹ The Detailed Offshore DEMP will present standard industry practice and legal requirements for environmental management and mitigation in the marine environment as well as any additional mitigation identified in the EIAR. An Outline Offshore DEMP will be submitted to support the EIAR and will present a framework for future Principal Decommissioning Contractor(s) to develop in detail before decommissioning works commence.

² The Detailed Offshore VMP will define best practice vessel management measures, including transit routes, speed restrictions, timing of activities, pollution prevention and crew environmental awareness to minimise disturbance, collision risk and environmental harm.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
	Marine biodiversity (Marine mammals)	Visual and / or airborne noise disturbance to marine mammals	Site specific surveys for ABWP Phase II were undertaken between 2018 to 2020, and in 2025 (HiDef, 2020; APEM, 2024a; APEM 2026c). Between 2018 to 2020, only 15 grey seals and two harbour seals were identified in the marine mammal Study Area (APEM, 2024a; HiDef, 2020). Updated vantage point surveys conducted between June to November 2025 at the ABWP Phase II landfall site (approximately 7 km north of the Offshore Site) recorded a total of 30 individual grey seals and no harbour seals (APEM, 2026g). There are no specific haul-out sites recorded on this region of the coastline however (Morris and Duck, 2019). Overall presence of grey seals during the ABWP Phase II surveys from June to November 2025 was relatively low and suggested low level and opportunistic usage of the wider offshore area by grey seals (APEM, 2026g). Airborne noise generated by the Proposed Offshore Works is expected to be minimal, short-term and negligible from background noise levels at the Offshore Site. In addition, the nearest haul-out site recorded by APEM (2026g) is located approximately 7 km north of the Offshore Site, making visual disturbance highly unlikely. Therefore, visual and/or airborne noise disturbance to seals hauled out, from the Proposed Works Offshore is unlikely to be significant and has been scoped out.
	Marine biodiversity (Marine mammals and marine ornithology)	Increased suspended sediment concentration (SSC) and associated deposition	Increased SSC and associated deposition could occur where activities interact with the seabed, such as dredging, disposal and inter-array and offshore export cable removal works. However, marine mammals are known to forage in turbid waters with low visibility and therefore are considered to have low sensitivity to turbidity. For instance, harbour porpoise and harbour seals were found to forage under strong tidal flows in the UK demonstrating that elevated SSCs are not likely to cause a significant impact on marine mammals (Pierpoint, 2008; Marubini <i>et al.</i>, 2009; Hastie <i>et al.</i>, 2016). This is a result of marine mammals relying on hearing instead of vision for navigation, foraging and socialisation (Hanke <i>et al.</i>, 2010; Hanke and Dehnhardt, 2013; Hanke <i>et al.</i>, 2013). For instance, seals are able to sense their environment by detecting water movements using mystacial vibrissae (whiskers) when vision is compromised. Whilst there is the potential for elevated SSCs to be experienced by marine mammals as a result of activities such as dredging, disposal and cable removal works, it is expected that the majority of the sediments will settle to the seabed within one tidal excursion. As indicated in Volume 2, Chapter 5, suspended sediments are not anticipated to reach any key areas for marine mammals such as Special Areas of Conservation (SACs) designated for marine mammals or take place in proximity to seal haul outs. The area potentially effected by elevated SSCs is likely to be spatially limited in the context of the wider available habitat. Significant impacts from increased SSC and associated deposition are considered unlikely to affect marine mammals and have been scoped out from the EIAR. Diving birds may be susceptible to increases in SSC when foraging. However, any increase of SSC and associated deposition as a result of the Proposed Works Offshore are expected to be highly localised. Due to the high mobility of marine birds, alternative foraging habitat will be available elsewhere. Furthermore, any increase in SSC will occur close to the seabed and be highly temporary, beyond the foraging and diving depth of marine birds. Therefore, for marine ornithology, any potential impacts from increased SSC and deposition are considered unlikely to be significant and have been scoped out.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
		Disturbance / remobilisation of sediment bound contaminants	Disturbance and/or remobilisation of sediment bound contaminants could occur where activities interact with the seabed (if contaminated), including dredging, disposal and cable removal works. Sampling undertaken (see Volume 2, Chapter 4) has demonstrated that contamination in the offshore sediments is low and at levels which are unlikely to result in any significant effects on marine mammals or marine ornithology. Furthermore, given the tolerance of marine mammals and marine ornithology to increased SSCs described above, significant impacts from disturbance/ remobilisation of sediment bound contaminants are considered unlikely and have been scoped out of the EIAR.
	Marine biodiversity (marine ornithology)	Underwater noise	Although there are limited empirical data on hearing sensitivity of birds underwater, mounting evidence indicates that diving birds detect and respond to underwater sound (Zeyl <i>et al.</i>, 2022). Plunge diving birds include both 'pursuit-plunging' species such as gannets, cormorants and shearwaters and 'surface-plunging' species, particularly terns. The middle ears of such birds show adaptations, with most pronounced differences observed in deep-diving and underwater-pursuit species, for underwater hearing. However, some of the structural differences observed may also play a role in baroprotection, as well as underwater hearing (Zeyl <i>et al.</i>, 2022), such that some level of protection from underwater sound is afforded. Available evidence from gannets and cormorants indicates the underwater hearing range of birds is from 1 to 4 kHz (Hansen <i>et al.</i>, 2017). The Arklow Bank sandbank and wider area supports a typical Irish Sea seabird assemblage which includes the following diving species: the manx shearwater (<i>Puffinus puffinus</i>), gannets (<i>Morus bassanus</i>) and both common and little terns (<i>Sterna Hirundo</i> and <i>Sterna albifrons</i> respectively). However, there are no European or other protected sites designated for seabirds within 15 km of the Offshore Site, indicating that the presence of such birds on Arklow Bank is opportunistic and the area is part of these species significantly wider foraging ranges. The underwater sound resulting from Proposed Works Offshore activities includes non-impulsive sound sources such as from support vessels, dredging, dynamic positioning, jet lancing, underwater mechanical cutting, vibratory extraction tools and vessel noise from the jack-up barge (JUB). These sound sources are of low intensity and occurring in a very small localised area. There will be some impulsive sound from geophysical survey activities, such as sub-bottom profiling and ultra-short baseline (USBL) survey, but these sound sources will occur for a matter of days only. Thus, although some diving bird species can detect underwater sound, exposure is limited to the short periods when birds are submerged and is therefore intermittent. Given the temporary, localised and spatially limited nature of the underwater sound sources, any potential disturbance would be short-term, temporary and reversible. Birds are also highly mobile and able to use alternative foraging areas. Thus, significant effects on birds from underwater sound are therefore considered to be highly unlikely and this pathway can be scoped out from further consideration.
		Removal of potential bird roosting / resting / nesting site	Given that Proposed Works offshore may be phased, Transition Pieces (TPs) and monopiles (MPs) may be temporary left <i>in situ</i> without operating wind turbine generators (WTGs), resulting in these becoming attractive spots for bird roosting, resting and/or nesting. However, the TPs lack shelves, ledges or other features suitable for nesting, and the temporary breaks between campaigns are considered unlikely to lead to the establishment of significant roosting / resting habitat. Accordingly, removal of potential offshore bird roosting / resting / nesting sites is unlikely to become significant and has therefore been scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
	Marine biodiversity (offshore bats)	Disturbance and / or displacement of offshore bats	ABWP Phase II offshore bat surveys (undertaken between 2021 – 2023 and 2024 – 2025) (SPL, 2024; APEM, 2026c) suggest that offshore bat activity at Arklow Bank is low and limited to occasional detections of three migratory species: Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>), soprano pipistrelle (<i>Pipistrellus pygmaeus</i>), common pipistrelle (<i>Pipistrellus pipistrellus</i>) and Leisler's bat (<i>Nyctalus leisleri</i>), during spring, summer and autumn periods. Offshore bat presence within the Offshore Site is expected to be very infrequent, highly seasonal, and restricted to individual bats in transit (SPL, 2024; APEM, 2026c). Furthermore, bat activity recorded by detectors on coastal headlands around the Arklow coastline was significantly higher than offshore activity (APEM, 2026c). However, despite an increased presence of bats around onshore headlands (APEM, 2026c), the onshore walkover survey at the landfall did not identify suitable roosts or foraging habitat (SPL, 2024). Therefore, disturbance and / or displacement of bats from the Proposed Works Offshore is unlikely to become significant and has been scoped out.
Water	Coastal processes, water and sediment quality	Introduction of marine litter	A limited number of sandbags used for scour protection may remain on the seabed following Proposed Works Offshore where complete removal is not practicable. These materials are localised, inert, and confined to the Sub Lease Area, and do not constitute a dispersed or accumulating source of marine litter. In the context of MSFD Descriptor 10, the relevant assessment criterion (D10C1) relates to the composition, quantity, and spatial distribution of litter and whether these result in harm to the marine environment. The residual sandbags are not expected to result in ingestion, entanglement, or other adverse biological interactions, nor do they contribute to widespread litter distribution. Furthermore, these materials are already present as part of the baseline conditions associated with the operational phase of ABWP Phase I. The Proposed Works Offshore will therefore not result in any measurable increase in marine litter or deterioration in environmental status. On this basis, the presence of residual sandbags is not considered to result in harm to marine ecosystems, and therefore the effect is considered negligible and compliant with the requirements of MSFD Descriptor 10, and scoped out from this assessment.
		Accidental release of pollutants	As noted above, the Detailed Offshore DEMP and VMP (see outline versions in Volume 3, Appendices 3.4 and 3.5) will include management measures and controls for accidental spills, minimising the likelihood and magnitude of any potential impacts. It is therefore considered that any potential impacts from accidental release of pollutants are unlikely to become significant and this heading has been scoped out of the EIAR.
		Release of carbon through sediment disturbance	High energy sandy seabed sediments such as mobile sandbanks typically exhibit low organic carbon stocks and low burial efficiency whereas significant carbon stocks are associated with fine-grained muddy sediments and low energy depositional environments (Graves <i>et al.</i>, 2002). The majority of the Offshore Site is on Arklow Bank which is a high energy sandy seabed environment and therefore not likely to be a significant carbon sink. Proposed Works Offshore interacting with sediments considered to be carbon sinks, such as muddy sediments, are limited in scale to the offshore export cable corridor only which is 10 m wide. It is considered that the potential to significantly release carbon through sediment disturbance during the Proposed Works Offshore is unlikely and therefore this heading is scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
		Impact to sediment quality from associated deposition associated with increased SSC	The modelling presented in Volume 3, Appendix 4.2: Coastal Processes Modelling predicts that dredging and cable removal activities are expected to result in the following deposition levels: - Access dredging: Maximum deposition thicknesses of 14 cm in very localised and isolated pockets around the dredge release locations. Outside of these isolated pockets, a maximum of 5 cm or lower is predicted. - Maintenance dredging: Maximum deposition thicknesses of 5 cm within the Sub Lease Area and 1 cm outside the boundary of the Sub Lease Area, which continuously decreases up to 7 km from the area of disturbance (maximum extent of sediment deposition); - Internal monopile dredge disposal: Negligible deposition thicknesses, with a maximum deposition of 0.03 cm in the Sub Lease Area. - Offshore export cable removal: Any increase in SSC and deposition is not expected to be discernible above background sediment disturbance. The deposition thickness is minimal compared to the changing background processes of the bank and will be quickly reworked. Additionally, the material that will be deposited from the SSC plume associated with the Proposed Works Offshore will be of similar composition as the seabed. Therefore, an impact to the bank and seabed is not anticipated. However, impacts from settlement of sediment on marine ecological receptors are considered in Volume 2, Chapter 5.
Air	Airborne noise	Increase of airborne noise at noise sensitive receptors along the coastline	It should be noted that no piling activities are envisaged as part of the Proposed Works Offshore. Given the distance from the Offshore Site to the coastline and noise sensitive receptors (NSRs), which are limited to Arklow Harbour land users and the town of Arklow residential and commercial population; the current noise climate characterising the Offshore Site, which is dominated by routine marine activity; and the temporary nature and small scale of airborne-noise generating activities, which are not expected to be audible beyond 6 km (based on ABWP Phase II airborne noise generation, see SSE Renewables 2026, which are considered of larger scale and magnitude to Proposed Works Offshore), no significant airborne noise levels are expected to be generated and therefore this heading is scoped out of the EIAR.
Cultural Heritage	Marine archaeology	Indirect impacts on the setting of terrestrial cultural heritage assets	The Proposed Works Offshore will result in the removal of all above water infrastructure and associated vessel activities which will result in an indirect positive impact on the setting of any terrestrial cultural heritage assets. During the Proposed Works Offshore, the activities will be temporary and of short duration and within the context of vessel activity in the wider area. It is considered that the potential indirect impacts on the setting of terrestrial cultural heritage assets is not significant and therefore this heading is scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
Population and Human Health	Shipping and navigation	Displacement of vessel traffic	All larger commercial vessels actively avoid the Sub Lease Area as a result of the shallow depths of Arklow Bank and associated grounding risks. Based on available vessel traffic data, instances of vessels passing over the Arklow Bank are very rare (mainly small recreational vessels on a very infrequent basis). On the basis of limited vessel movements over Arklow Bank and the use of localised and temporary work areas around the Sub Lease Area and along the offshore export cable (see additional information on proposed work areas in Volume 2, Chapter 3: Proposed Works Description and Appendix 3.7: Outline Lighting and Marking Plan), and the management of any potential interactions by adherence to COLREGS, there is limited potential for significant impacts in regard to the displacement of vessel traffic. In addition, details of the Proposed Works Offshore will be circulated in advance using Marine Notices which will be published and available on the Department of Transport's webpage. Therefore, the displacement of vessel traffic has been scoped out of assessment in the EIAR.
		Port access restrictions	The Proposed Works Offshore will generate a number of vessel trips to and from various European and Irish ports which will be confirmed once the Principal Decommissioning Contractor(s) has been appointed, however the number of trips associated with the Proposed Works Offshore is relatively limited. As described above, the majority of vessels actively avoid Arklow Bank due to limited water depth and associated grounding risk and as such any established routeing into ports will not be affected by the Proposed Works Offshore. Additionally, the Detailed Offshore DEMP (see outline version in Volume 3, Appendix 3.4) will include the advance issuing of Marine Notices, as published on the Department of Transport's website and circulated to relevant port and harbour authorities, will ensure that authorities and other vessels are aware of the activity of vessels associated with the Proposed Works Offshore. It is therefore considered that any potential impacts for restriction to port access are unlikely to become significant and therefore this heading is scoped out of the EIAR.
		Cable interaction risk	As described on Volume 2, Chapter 3: Proposed Works Description , both offshore export / inter-array cables will be removed as part of the Proposed Works Offshore, and so, existing cable interaction risks would be eliminated. Accordingly, this potential impact has been scoped out of the EIAR.
		Diminished emergency response capability	The temporary increase in vessel activity during Proposed Works Offshore may temporarily increase the likelihood of an incident requiring an emergency response and consequently could diminish emergency response capability in the region. However, local emergency response stakeholders indicated that no impact on emergency response capability would be anticipated as part of ABWP Phase II development (SPL, 2024). Furthermore, the baseline incident rate is considered low with an average of 40 to 41 incidents per year reported in by the ABWP Phase II development, with only three within its array area. On this basis, it is considered unlikely that the Proposed Works Offshore would significantly impact the local emergency response capability and therefore this heading is scoped out of the EIAR.
	Commercial fisheries and aquaculture	Loss of or restricted access to aquaculture sites	The Proposed Works Offshore do not overlap with any licensed aquaculture sites. The nearest site is located approximately 4.5 km from the closest point of the offshore export cable route; therefore, no loss of access or exclusion effects are anticipated, and this heading is scoped out of the EIAR.
		Interference with aquaculture operations	Proposed Works Offshore will not occur within or in close proximity to aquaculture sites. No direct interaction between decommissioning vessels and aquaculture operations is anticipated, and this heading is scoped out of the EIAR. Potential indirect effects associated with temporary changes in water quality are considered under 'effects on commercially exploited species' in Volume 2, Chapter 6 .

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
		Displacement of aquaculture activity	Aquaculture operations are fixed to licensed sites and cannot be displaced. No impact pathway exists and this heading is scoped out of the EIAR.
		Gear interaction or damage	Aquaculture infrastructure is not located within or near the Proposed Works Offshore. Therefore, there is no potential for interaction between Proposed Works Offshore activities and aquaculture gear and this heading is scoped out of the EIAR.
	Marine infrastructure and other users	Displacement / disturbance to other users	Other users, such as recreational boating and diving, may be affected by restricted access to the Offshore Site, particularly along the offshore export cable corridor and its immediate vicinity. However, this is considered a relatively small area in the context of the wider area available to other users such as sailing, sea angling and diving activities. Marine Notices will be issued advising the location, nature and timing of activities ensuring that recreational activities can be planned accordingly. The Proposed Works Offshore will be temporary in nature and localised, overall considered unlikely to become significant, therefore this heading is scoped out of the EIAR.
		Increased SSC and associated deposition affecting recreational diving sites	Increased SSC and associated deposition could occur where activities interact with the seabed, such as dredging, disposal and cable removal works. Whilst there is the potential for elevated SSCs to be experienced by recreational diving sites as a result of activities such as dredging, disposal and cable removal works, it is expected that the majority of the sediments will settle to the seabed within one tidal excursion. Suspended sediments as are not anticipated to reach any recreational diving sites and the area potentially effected by elevated SSCs is likely to be spatially limited in the context of the wider available recreational diving sites. Significant impacts from increased SSC and associated deposition are considered unlikely and proposed to be scoped out from the EIAR.
		Restrictions to potential aggregate resource availability	No commercial extraction is currently permitted in Irish waters and Arklow Bank has not been identified as a High Potential Marine Aggregate Resource, therefore there is no relevant receptor, and this heading has been scoped out of the EIAR.
		Changes to wave climate	The potential for changes to wave climate affecting the surfing waves and surfing breaks recreational resource has been scoped out of assessment within the EIAR due to the distance of the Offshore Site from the shoreline. It is considered unlikely that significant effects will occur over this distance.
		Damage to waste water treatment plant (WWTP) pipe	The WWTP outfall pipe is located outside of the Offshore Site at a sufficient distance from the Proposed Works Offshore to avoid direct interaction. Therefore, significant effects are unlikely to occur and this heading has been scoped out of the EIAR.
Onshore Environment			
Water	Water quality	Surface run off contamination of nearby water resources (surface and groundwater)	The Onshore Site is located within 30 m to the Avoca Estuary and the sea, protected from coastal flooding risks by an existing breakwater. Given that Proposed Works Onshore will be temporary in nature and limited in extent, not physically interacting with surface / groundwater bodies, and not expected to increase flood risk, with the implementation of a Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1). The Detailed Onshore DEMP will include measures for appropriate storage of waste, secondary containment for hazardous materials, as well as procedures for any required refuelling activities for generators and/or machinery (if needed). The Proposed Works Onshore will be managed to ensure that any potential run off will be contained and groundworks managed, eliminating any potential pathways to surface and groundwater. Therefore, no significant impacts will occur and this heading has been scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
		Flood risk impacts	The Proposed Works Onshore are not expected to increase flood risk and will be programmed to be undertaken during favourable weather and sea state conditions to minimise exposure to potential flood risks. The Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) will incorporate an Emergency and Preparedness Response Procedure which will include an alert system for weather events and an evacuation plan. Any potential impacts associated with flood risk are considered unlikely and this heading has been scoped out of the EIAR.
Land and Soils	Land quality	Mobilisation of contaminated soils / sediments	The Onshore Site is characterised by urban soils and manmade subsoils associated with the existing substation, with no known history of contamination. The Proposed Works Onshore do not include any substantial excavation outside of the shallow excavation needed for the decommissioning of the existing infrastructure within the Onshore Site. Additionally, given that the Proposed Works Onshore will be temporary in nature, limited in extent and confined within the existing footprint of the Onshore Site boundary, with the implementation of the Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) and Detailed Onshore Waste Management Plan (WMP) (see outline version in Volume 3, Appendix 3.3), significant effects associated with the mobilisation of contaminated soils are not anticipated, and this heading has been scoped out of the EIAR.
		Loss of topsoil	The Onshore Site mostly consists of urban/made ground soils and man-made subsoils, with minimal or no natural topsoil layer remaining due to long-term industrial modification. Excavations will be shallow and strictly confined within the Onshore Site boundary. Given the absence of a natural topsoil resource and the limited scale of disturbance, significant loss of topsoil is considered unlikely and accordingly this heading has been scoped out of the EIAR.
		Compression of substrata	The substrata beneath the Onshore Site mainly consists of engineered fill and man-made material designed to support the existing onshore substation infrastructure. The Proposed Works Onshore do not involve heavy surcharging, piling or ground-loading activities that could lead to meaningful compaction effects. All Proposed Works Onshore will take place within an area already modified for industrial use. As a result, significant compression of substrata is unlikely, and accordingly this heading has been scoped out of the EIAR.
Air	Noise and vibration	Increased noise and vibration emissions	The Onshore Site is located within an existing developed industrial environment, and baseline conditions are characterised by noise from the operational substation, marine traffic associated with Arklow Harbour and activities at the adjacent wastewater treatment plant. NSRs are located at distances of approximately 330 to 350 m from the Onshore Site. The Proposed Works Onshore are of small scale, with a short duration and not involving piling or heavy compaction or other high energy practices. A Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) will include standard noise-management measures (e.g. best-practice equipment use, daytime working, minimising idling, etc), ensuring noise or vibration levels remain within permissible levels. Therefore, increased noise and vibration emissions will not be significant and accordingly this heading has been scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
Biodiversity	Onshore biodiversity	Disturbance of fauna	The Onshore Site comprises urban modified habitats of low ecological value, including hardstanding buildings and sparse ruderal vegetation, baseline conditions indicate a highly disturbed environment with limited ecological sensitivity, see Onshore Preliminary Ecological Appraisal appended to Volume 3, Appendix 1.1: EIA Scoping Presentation. It should be noted that although since the Onshore Preliminary Ecological Appraisal was prepared, the Onshore Site boundary has been revised to include the area that will temporarily be used for the temporary storage of plant, machinery, excavated soil and materials, see Volume 2, Chapter 3, the additional Onshore Site area is located within "Spoil and Bare Ground" (ED2) and the conclusions presented in the Onshore Preliminary Ecological Appraisal remain applicable. No designated sites are located within or directly connected to the Onshore Site, no evidence of protected species use, or invasive non-native species (INNS) presence has been recorded. The Proposed Works Onshore will be confined to the Onshore Site and be land-based, with no interaction with the intertidal zone anticipated, and will only temporarily introduce noise (e.g. from traffic, machinery use, etc). Proposed Works Onshore will also be restricted to daylight times, minimising the introduction of additional artificial light sources, will avoid the bird breeding season where possible or nest checks will be undertaken before the Proposed Works Onshore commence if this is not possible. Overall, given the scale and temporary nature of Proposed Works Onshore and the low ecological importance of the Onshore Site, significant disturbance from Proposed Works Onshore is considered unlikely and this heading has therefore been scoped out of the EIAR.
		Increased risk of INNS introduction / spread	The Onshore Site comprises urban modified habitats of low ecological value, including hardstanding buildings and sparse ruderal vegetation, baseline conditions indicate a highly disturbed environment with limited ecological sensitivity, see Onshore Preliminary Ecological Appraisal appended to Volume 3, Appendix 1.1: EIA Scoping Presentation. No INNS presence has been recorded. The Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) will include biosecurity measures to manage and control potential risks of INNS introduction from vehicles and machinery accessing the Onshore Site. In addition, no in-stream works are proposed and no direct hydrological pathway for the spread of INNS will be created. Overall, given the nature of Proposed Works Onshore and the absence of INNS within the Onshore Site, significant risk of INNS introduction / spread are considered unlikely and this heading has therefore been scoped out of the EIAR.
		Habitat loss	Proposed Works Onshore will result in the loss / modification of mostly urban-modified habitats of negligible ecological importance and will also comprise the reinstatement of the Onshore Site. Overall, given the low ecological value of the habitats found within the Onshore Site (see Onshore Preliminary Ecological Appraisal appended to Volume 3, Appendix 1.1: EIA Scoping Presentation) and the scale of Proposed Works Onshore, habitat loss is not considered to have a significant ecological impact, and this heading has therefore been scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
Material Assets	Traffic and transport	Increased traffic congestion / disruption	As the Onshore Site is located within an established urban and industrial road network characterised by moderate to high traffic flows, baseline conditions indicate a transport environment already accommodating regular vehicular activity. The Proposed Works Onshore will generate some temporary level of traffic to and from the Onshore Site, however, no need for long-term lane closures on the primary links or other traffic disruptions are anticipated to be needed. The Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) and Detailed Traffic Management Plan (TMP) (see outline version in Volume 3, Appendix 3.2) will provide additional detail on anticipated traffic movements associated with the Proposed Works Onshore, and include traffic management measures and good practices that will be implemented to minimise potential impacts to the local transport network. The Proposed Works Offshore will not use Arklow harbour for the receipt of offshore components decommissioned but a larger port, for example Rosslare, Waterford or Dublin. The Proposed Works Onshore will be temporary, localised and limited in scale, and will be managed through standard measures set out in the Detailed Onshore DEMP and TMP. No requirement for significant traffic management interventions is anticipated. On this basis, no significant effects are anticipated, and this heading has therefore been scoped out of the EIAR.
	Onshore infrastructure and utility services	Disturbance / interruption to services	Due to the presence of established onshore infrastructure and utility services within the wider area, baseline conditions indicate a well serviced and managed urban environment. Given the distance between the Onshore Site and known onshore infrastructure and utility services, the Proposed Works Onshore are not anticipated to interfere with any onshore infrastructure and utility services. Additionally, the Proposed Works Onshore will also be coordinated with ESB, who will be responsible for the termination and isolation of electricity supplies and will also decommission the rest of the onshore cable section located outside the onshore substation compound. The Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) will require the appointed Principal Decommissioning Contractor(s) to map onshore infrastructure and utility services to identify the need for the implementation of safety zones or any particular management / mitigation measures associated with any infrastructure / utilities unknown at this stage. Therefore, the significant effects associated with disturbance or interruption of services are not anticipated, and this heading has been scoped out of the EIAR.
Cultural Heritage	Cultural heritage and archaeology	Direct / indirect impact on known archaeological or cultural heritage assets	The nearest recorded cultural heritage feature is the navigation beacon within Arklow harbour located approximately 330 m to the northwest of the Onshore Site with other features located beyond 500 m of the Offshore Site. These cultural heritage assets are located sufficiently away from the Proposed Works Onshore that significant direct (e.g. physical interaction) and indirect (e.g. setting impacts) impacts are unlikely and therefore this heading is scoped out of the EIAR.
		Direct / indirect impact on unknown archaeological or cultural heritage assets	The Onshore Site is located within previously disturbed and urban-modified ground, baseline conditions indicate a low potential for the presence of archaeological remains. The Proposed Works Onshore will be limited to the Onshore Site, within previously disturbed and modified ground, and the probability of encountering unknown archaeological or cultural heritage asset is therefore considered very low. In the unlikely event of discovery of archaeological finds or remains, the Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) will require immediate notification to the National Monuments Service (NMS) and National Museum of Ireland (NMI), and the required procedures/report will be developed by the Principal Decommissioning Contractor. Overall, significant impacts on unknown archaeological or cultural heritage assets / remains are unlikely and therefore this heading has been scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
Combined Offshore and Onshore Environment			
Air	Air quality	Changes to air quality	Given the Onshore and Offshore Sites are located within a coastal and marine environment, baseline conditions indicate generally good air quality with pollutant levels below relevant ambient standards and no significant local sources of emissions. The Proposed Works Offshore will involve a number of vessels and machinery that will lead to temporary emissions to the atmosphere, however, these will be limited and of short-term nature and any emissions offshore will rapidly disperse over open water and unlikely to reach sensitive receptors located onshore. The Detailed Offshore DEMP (see outline version in Volume 3, Appendix 3.4) will include standard industry practice and requirements related to offshore emissions, such as adherence to MARPOL requirements. Significant changes to air quality associated with Proposed Works Offshore are considered unlikely. Proposed Works Onshore will involve localised excavation works and the use of machinery and vehicles that will lead to temporary emissions to the atmosphere, including dust generation. The Detailed Onshore DEMP (see outline version in Volume 3, Appendix 3.1) will include standard industry practice to manage emissions to the atmosphere and dust control measures to minimise any potential impacts, which, given the scale and temporary nature of Proposed Works Onshore, are considered unlikely to become significant. Therefore, this heading has been scoped out of the EIAR.
Climate	Climate change trends	Contribution to climate change	ABWP Phase I has been operating for over 20 years, generating renewable energy that has contributed to regional and national climate goals. Atmospheric emissions, including greenhouse gas (GHG) emissions that contribute to climate change, generated during Proposed Works Offshore and Onshore, are anticipated to be negligible within the context of regional and national emissions given the scale and temporary nature of Proposed Works. The release of embodied carbon (GHG emissions associated with a material across its lifecycle) associated with components to be decommissioned will be minimised by applying the waste hierarchy as part of the Detailed Offshore and Onshore WMPs (see outline versions in Volume 3, Appendix 3.3 and 3.8), which will prioritise reuse and recycling when this is considered technically and economically feasible. Overall, a significant contribution to climate change from the Proposed Works is considered unlikely, and therefore this heading has been scoped out of the EIAR.
Population and Human Health	Population and human health	Economic impact (employment and expenditure)	The Onshore and Offshore Sites are located within an established urban and maritime setting, baseline conditions indicate a stable local population supported by existing economic activity, community infrastructure and recreational resources. The Proposed Works will be temporary, localised and limited in scale, and are not expected to generate substantial employment nor place notable demand on local services. Therefore, significant effects are not anticipated, and this heading has been scoped out of the EIAR.
		Impact to the tourism / recreational sectors	Proposed Works are not anticipated to interfere with tourism / recreational facilities and/or attractions, and given their small scale and temporary nature, significant impacts to the tourism / recreational sector are unlikely and therefore this heading has been scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
Landscape	Seascape, landscape and visual amenity	Changes to seascape character	Baseline conditions at the Offshore Site indicate a seascape influenced by maritime activity and existing built elements, including ABWP Phase I. The Proposed Works Offshore involve removing existing infrastructure using vessels already characteristic of the area. No new permanent or visible offshore elements will be introduced, reverting to pre-construction baseline conditions. Given the scale and temporary nature of Proposed Works Offshore, significant changes to the seascape character are considered unlikely and therefore this heading is scoped out of the EIAR.
		Changes to landscape character	Baseline conditions at the Onshore Site indicate a working coastal and industrial landscape indicating a landscape influenced by maritime activity, harbour infrastructure and existing built elements, including ABWP Phase I. The Proposed Works Onshore involve removing existing infrastructure and will temporarily introduce traffic and machinery activity within the area around the Onshore Site. No new permanent or visible onshore elements will be introduced, reverting to pre-construction baseline conditions. Given the scale and temporary nature of Proposed Works Onshore, significant changes to the landscape character are considered unlikely and therefore this heading is scoped out of the EIAR.
		Visual impacts (Proposed Works Offshore)	Proposed Works Offshore will result in an increased temporary vessel activity offshore, which is considered characteristic of current baseline conditions. No new visible structures will be introduced. Given the scale and temporary nature of Proposed Works offshore, significant visual impacts are considered unlikely and therefore this heading is scoped out of the EIAR.
		Visual impacts (Proposed Works Offshore)	Proposed Works Onshore will result in increased temporary traffic / machinery activity to and from the Onshore Site. No new visible structures will be introduced. Given the scale and temporary nature of Proposed Works Onshore, significant visual impacts are considered unlikely and therefore this heading is scoped out of the EIAR.
Material Assets	Waste	Waste generation	The Proposed Works will generate waste associated with the decommissioning of existing infrastructure. The Detailed Onshore and Offshore WMPs (see outline versions in Volume 3, Appendix 3.3 and 3.8) will detail anticipated quantities of materials present in buildings and structures to be decommissioned using relevant industry guidance, such as the Institution of Civil Engineers (ICE) Demolition Protocol (2008) and determine appropriate waste management options. The Detailed Onshore and Offshore WMPs will require all materials to be managed by authorised waste collectors and transferred to licensed treatment or recycling facilities, ensuring compliance with applicable waste-management regulations and appropriate disposal routes for each waste type. The Proposed Works will be temporary and limited in scale, with all waste managed in accordance with the Detailed Onshore and Offshore WMPs, including segregation, reuse and recycling where practicable, and transfer by authorised contractors to appropriately licensed facilities. On this basis, significant effects associated with waste generation are not anticipated, and therefore this environmental heading has been scoped out of the EIAR.

Prescribed Environmental Factor	Environmental Subtopic	Potential Impacts (Heading)	Justification to scope out of the EIAR
Population and Human Health	Civil and military aviation	Introduction of physical obstacles affecting air traffic	There are no military, firing, test or exercise areas in the vicinity of the Onshore or Offshore Sites. The Offshore Site is located within controlled airspace and subject to established air traffic management procedures. The Proposed Works will involve the removal of existing infrastructure and will be temporary, localised and limited in scale. Proposed Works Offshore will be managed in accordance with the Detailed Lighting and Marking Plan (LMP) (see outline version in Volume 3, Appendix 3.7) to ensure compliance with civil and military aviation requirements. The Detailed LMP will define lighting and marking requirements that ensure compliance of Proposed Works Offshore with civil and military aviation requirements throughout its programme. No new features of aviation relevance will be introduced, with pre-construction baseline conditions being reinstated for civil and military aviation receptors following the completion of Proposed Works Offshore. Significant effects associated with the introduction of physical obstacles affecting air traffic and interference with civil and military radar systems are not anticipated, and therefore this heading has been scoped out of the EIAR.
		Interference with civil and military Primary Surveillance Radar (PSR) systems	There are no military, firing, test or exercise areas in the vicinity of the Onshore or Offshore Sites. The Proposed Works Offshore will remove existing infrastructure and will not introduce any new above-surface structures that could interact with radars' areas of influence, with pre-construction baseline conditions being reinstated for civil and military aviation receptors following the completion of Proposed Works Offshore. Given the nature and scale of Proposed Works, significant impacts associated with interference with PSR systems are considered unlikely and therefore this heading has been scoped out of the EIAR.
	Major accidents and natural disasters		Given the nature of the Proposed Works, which comprise the controlled decommissioning and removal of existing infrastructure, there is no identified pathway for the Proposed Works to give rise to a major accident or disaster scenario. While certain risks (e.g. fire, transport incidents, or external malicious acts) are theoretically possible, these are of low likelihood and will be appropriately managed through standard industry practices, embedded mitigation and emergency response procedures secured within the Detailed Offshore and Onshore DEMP's (see outline versions in Volume 3, Appendix 3.1 and 3.4). In addition, Ireland is characterised by a low baseline risk profile for many major accident and disaster scenarios (e.g. famine, large-scale displacement, nuclear events), and no credible, site-specific risks have been identified that would interact with the Proposed Works. Where relevant, potential risks (e.g. transport incidents or water contamination) are addressed within other EIAR chapters, and therefore do not require separate assessment under this environmental factor.

1.4.4 Assessment of Effects

Definition of Assessment Parameters

- 1.4.4.1 The EIAR must contain adequate information to enable the competent authority to carry out an assessment of all likely significant effects of a given project on the environment. However, it is acknowledged that certain details may only become available after planning permission is granted, e.g. following a procurement process, and accordingly, a description of a project should be provided to enable the worst-case effects of a project to be described in an EIAR (EPA, 2022).
- 1.4.4.2 **Volume 2, Chapter 3** describes not only the key activities associated with the Proposed Works but also specifies the assessment parameters that provide the basis for the assessment of effects presented within the technical chapters of this EIAR (**Volume 2, Chapters 4 – 8**).
- 1.4.4.3 Each technical chapter of this EIAR sets out the assumptions relevant to that chapter and assesses the Maximum Design Scenario (MDS) for each impact, which represents a 'realistic worst case' assessment parameters described in **Volume 2, Chapter 3**.
- 1.4.4.4 Ensuring the MDS for each impact is assessed, allows for the final methodology adopted to be compared with the MDS that has been assessed.
- 1.4.4.5 The definition of MDS should not be confused with the Rochdale Envelope approach commonly applied in planning applications for new offshore wind developments (MDB, 2017; PINS, 2018), which seeks flexibility or a range of options to be part of an application for planning permission. Arklow Energy has not requested the ACP for an opinion on flexibility under Section 287A of the 2000 Act.

Existing and Future Baseline Conditions

- 1.4.4.6 The baseline conditions represent the pre-existing environment immediately prior to an effect occurring as a result of the Proposed Works. Any change is measured against the baseline in order to measure the effect.
- 1.4.4.7 Effects can be temporary or permanent. The EIA has sought to describe effects on the basis of when they occur (e.g. during decommissioning or after decommissioning, if considered a residual effect) and to then describe the temporal duration of the effect (i.e. temporary or permanent).
- 1.4.4.8 Identification of baseline conditions must take into account predicted changes that would occur prior to Proposed Works and that are independent to these, i.e. how likely the existing baseline is to change before the execution of the Proposed Works (or following the execution of Proposed Works, if considering post-decommissioning residual effects).
- 1.4.4.9 Each technical chapter of the EIAR defines the baseline against which the environmental effects of the Proposed Works are assessed, as well as how future baseline conditions have been predicted and how any limitations in prediction have been managed in the methodology.

Definitions of Impact and Effect

- 1.4.4.10 The Proposed Works have the potential to create a range of 'impacts' and 'effects' with regard to the environment. Whilst the EPA (2022) refer to the terms 'impact' and 'effect' interchangeably, in this EIAR, the term 'impact' is used to define a change that is caused by an action. For certain impacts, the reversibility of an impact 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-term period, or where mitigation measures can be effective at reducing the impact.
- 1.4.4.11 The term 'effect' is used in this EIAR to express the consequence of an impact. Using the monopile (MP) removal as an example, the removal of a MP using a vibratory hammer results in

increased levels of underwater sound (the change or impact), with the potential to disturb marine mammals (the consequence or effect). Effects can be classified in a number of different ways, as detailed in **Table 1.4**.

Table 1.4: Types of effects

Effect	Explanation
Adverse	Detrimental or negative effect to an environmental resource or receptor.
Neutral	An effect that on balance, is neither beneficial nor adverse to an environmental resource or receptor or an effect that is equally beneficial and adverse to an environmental resource or receptor.
Beneficial	Advantageous or positive effect to an environmental resource or receptor.
Direct	Direct effects are those which arise as a direct consequence of a project action, e.g. the loss of habitat or the run-off of surface water to a watercourse.
Indirect	Indirect effects include, for example, the decline in the abundance of a species as a result of the loss of habitat or the damage to aquatic vegetation as a result of water pollution. Other common examples include the effect on air quality and ambient noise as a result of increased traffic flows.
Cumulative	Effects arising from the cumulation of effects between those from the Proposed Works and those from other existing and, or planned projects.
Inter-related	Effects arising from a number of separate impacts associated with the same project affecting a single receptor.
Long term	To be defined where relevant on an individual topic basis.
Medium term	
Short Term	
Reversible	Capable of being reversed so that the previous state or situation is restored.
Irreversible	Permanent.

Assessment Criteria

- 1.4.4.12 The EIA process requires the identification of likely significant effects of the Proposed Works on the receiving environment.
- 1.4.4.13 The determination of the significance of effects has been informed by the guidance set out in EPA (2022). This adopts a structured and transparent approach, whereby the significance of effects is determined through consideration of the sensitivity (or importance) of the receiving environment and the magnitude (or scale) of the predicted impact.
- 1.4.4.14 Professional judgement is applied in combining these factors to assign significance, supported by topic-specific methodologies set out within the relevant technical chapters.

Receptor Sensitivity

- 1.4.4.15 Baseline studies undertaken for each technical chapter have informed the identification of potential environmental receptors. Receptors vary in their sensitivity to environmental change depending on their characteristics, value and any relevant designation.
- 1.4.4.16 In accordance with EPA (2022), receptor sensitivity (or importance) reflects the relative value of the receptor and its capacity to accommodate change. This is informed by factors including:
- The value or importance of the receptor (for example, international, national, regional or local importance);
 - The vulnerability of the receptor to the type of change arising from the Proposed Works; and
 - The ability of the receptor to recover from potential impacts.
- 1.4.4.17 The general criteria used to define receptor sensitivity are set out in **Table 1.5** and are applied proportionately and adapted within each technical chapter, with refinement where required to reflect topic-specific considerations.

Table 1.5: Receptor sensitivity criteria

Sensitivity of receptor	Description
Very High	• Very high importance and rarity; • International scale; and/or • Very limited potential for substitution.
High	• High importance and rarity; • National scale; and/or • Limited potential for substitution.
Medium	• High or medium importance and rarity; • Regional scale; and/or • Limited potential for substitution.
Low	• Low or medium importance and rarity; and/or • Local scale.
Negligible	• Very low importance and rarity; and/or • Local scale.

Magnitude of Impact

1.4.4.18 For each of the impacts assessed in this EIAR, a magnitude has been assigned. In assigning magnitude, the spatial extent, duration, frequency and reversibility of the impacts from Proposed Works have been considered.

1.4.4.19 The general criteria used to define each of these magnitudes of impact categories are set out in **Table 1.6**, adjusted in each technical chapter as required.

Table 1.6: Magnitude of impact criteria

Magnitude of Impact	Description
High	A large-scale change to the baseline environment, resulting in a substantial alteration to its characteristics, function or value. Effects are likely to be extensive in spatial extent, long-term and/or irreversible.
Medium	A moderate-scale change to the baseline environment, resulting in a noticeable alteration to its characteristics, function or value. Effects may be regional or local in extent and medium-term or reversible over time.
Low	A small-scale change to the baseline environment, resulting in a minor alteration to its characteristics. Effects are typically localised, short-term and reversible.
Negligible	A very small change to the baseline environment, with no meaningful alteration to its characteristics or function.
No Change	No measurable change to the baseline environment and no observable effect.

Significance of Effect

1.4.4.20 The significance of the effect upon is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The general method employed for this assessment is presented in **Table 1.7**, adjusted in each technical chapter as required.

Table 1.7: General matrix used for the assessment of the significance of the effect

Sensitivity of receptor	Magnitude of impact				
	No change	Negligible	Low	Medium	High
Negligible	Neutral	Negligible	Negligible or minor	Negligible or minor	Minor
Low	Neutral	Negligible or minor	Negligible or minor	Minor	Minor or moderate
Medium	Neutral	Negligible or minor	Minor	Moderate	Moderate or major
High	Neutral	Minor	Minor or moderate	Moderate or major	Major
Very high	Neutral	Minor	Moderate or major	Major	Major

1.4.4.21 Following the classification of an effect using this methodology, a clear statement will then be made as to whether that effect is significant or not significant. Major and moderate effects are considered to be significant, whilst minor and negligible effects are considered to be not significant. However, professional judgement will also be applied in reaching conclusions as to the significance of effects. Moderate levels of effect have the potential, subject to the assessor's professional judgement to be significant or not significant. Moderate effects will be considered as significant or not significant in EIA terms, depending on the sensitivity and magnitude of change factors evaluated. These evaluations are explained as part of the assessment, where they occur. Typical definitions for the classification of effects are shown in **Table 1.8**.

Table 1.8: General significance definitions

Significance classification	Definition	Significant effect
Major	A large and detrimental change to a valuable/sensitive receptor, likely exceeding an accepted threshold. A large and beneficial change, resulting in enhancements in baseline conditions, transitioning from previously poor conditions to new legal compliance, or making a major contribution to national goals These effects may represent key factors in the decision-making process. Potentially associated with sites and features of national importance or likely to be important considerations at a regional scale. Major effects may relate to features that are unique and irreplaceable.	Significant
Moderate	A medium scale change that, although not beyond an accepted threshold, is still considered to be generally unacceptable, unless offset by significant positive benefits of the project. If adverse, these effects are likely to be important at a regional or local scale and on their own could influence decision making. A positive moderate effect is a medium scale change that improves baseline conditions sufficiently to contribute to guideline targets.	Significant
Minor	A minor adverse change that remains within legal and planning policy limits. Minor positive change that is unlikely to significantly impact the overall balance of considerations. These effects might be raised as local issues and could be relevant to the detailed design of a project, but they are unlikely to be critical in the decision-making process.	Not significant
Negligible	A very small change that is so inconsequential it can be considered acceptable to disregard. These effects fall below perceptible limits, lie within normal variations, or fall within the margin of forecasting error. They are unlikely to influence decision-making.	Not significant
Neutral	No noticeable change or effects within normal bounds of variation.	Not significant

1.4.5 Assessment of Interaction of Effects

- 1.4.5.1 Article 3(1) of the EIA Directive requires that the interaction between environmental factors is identified, described and assessed as part of EIAs. Similarly, the EPA (2022) requires careful consideration of pathways, direct and indirect, that can magnify effects through the interaction or accumulation of effects.
- 1.4.5.2 The assessment of interaction of effects has been carried out considering:
- Proposed Works lifetime effects: effects that occur both during Proposed Works and beyond (post-decommissioning phase) interacting to potentially create a more significant effect upon a receptor than if just assessed considering the Proposed Works alone (without consideration of the post-decommissioning phase); and
 - Receptor-led effects: effects that interact spatially and temporally resulting in interactive effects upon a single receptor. Receptor-led effects might be short term, temporary or transient effects, or incorporate longer term effects.
- 1.4.5.3 Impacts scoped out of the assessment (see **Section 1.4.3**) have not been considered within the assessment of interaction of effects, which focuses on environmental factors scoped into the EIAR. This approach reflects the principle of proportionality embedded within the EIA process, whereby assessment effort is directed towards likely significant effects. Interactions between effects can only give rise to significant interaction effects where there is an underlying effect pathway or receptor sensitivity of sufficient relevance to warrant detailed assessment.
- 1.4.5.4 The EPA (2022) requires that effects on different environmental factors are addressed as relevant throughout the EIAR and recommends using a matrix to show where interactions between effects on different environmental factors have been addressed, accompanied by text describing the interactions.
- 1.4.5.5 The interaction of effects has been identified and analysed through collaboration between environmental specialists and is presented in technical chapters presented in **Volume 2** of the EIAR. **Volume 2, Chapter 9: Summary of Interaction of Effects** presents the matrix of effect interactions and summarises these.
- 1.4.5.6 It should be noted that the assessment of interactions of effects does not include interaction with effects from other plans or projects, as they are considered within the assessment of cumulative effects, see **Section 1.4.6**.

1.4.6 Assessment of Cumulative Effects

- 1.4.6.1 Cumulative effects result from the addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects (EPA, 2022). The methodology for the assessment of cumulative effects is not prescribed in EPA (2022) nor in the EIA Directive, which only refers to these in Annex IV, requiring the description of likely significant effects on the environment, including cumulative effects.
- 1.4.6.2 As indicated in **Section 1.3.6**, the Habitats Directive also requires the consideration of in-combination effects.
- 1.4.6.3 Existing European Commission guidance (EC, 1999) and MDB (2017) outlines a number of different approaches and assessment frameworks that can be adopted in the assessment of cumulative effects.
- 1.4.6.4 In Ireland, ACP has recently been issuing requests for further information in response to planning applications for Irish Sea Phase 1 ORE Projects, calling for a consistent approach in the assessment of cumulative effects, and requesting alignment with the UK PINS advice note on cumulative effects assessment for Nationally Significant Infrastructure Projects (NSIP) (PINS, 2024).

1.4.6.5 In line with PINS (2024), cumulative effects within this EIAR comprise those arising from the Proposed Works with other developments, i.e. plans and projects that are 'reasonably foreseeable'. Given that ABWP Phase II responded to the ACP request for further information on the 14 April 2026, information publicly available up to 14 April 2026 has been used to inform the assessment of potential cumulative effects, which has followed a four-stage process:

- **Stage 1: Establish the long list of other developments to consider**, based on the location of other plans and projects located within the maximum Zone of Influence (ZoI) and/or study area defined within technical chapters of the EIAR for the offshore long list and the **AA Screening Report** for the onshore long list, classified into different plan / project types, status categories and 'tiers', according to the level of information publicly available about them:
 - Tier 1 (developments under construction; permitted applications but not yet implemented; submitted applications but not yet determined; and all refusals subject to appeal procedures not yet determined);
 - Tier 2 (developments associated with approved programmes where a scoping report has been submitted and is in the public domain); and
 - Tier 3 (developments associated with approved programmes where a scoping report has not been submitted; developments identified in relevant / emerging development plans; and developments identified in other plans and programmes, as appropriate, which set the framework for future development consents or approvals, where such development is reasonably likely to come forward).
- **Stage 2: Establish the short list of other developments to consider**, gathering key information publicly available and applying screening criteria in relation to each environmental factor to establish the short list of developments for consideration in each technical EIAR chapter (Volume 2, Chapters 4 – 8) and the AA Screening Report.

The shortlisting process (stages 1 and 2) is further detailed and documented in **Volume 3, Appendix 1.2: Cumulative Screening** with clear justifications provided for inclusion or exclusion of developments.

- **Stage 3: Information gathering.** Gathering of additional publicly available information on the following aspects of other developments to inform the assessment of cumulative effects in technical EIAR chapters (**Volume 2, Chapters 4 – 8**) and the **AA Screening Report** (stage 4):
 - The proposed design and location;
 - The proposed programme of construction, O&M and decommissioning;
 - Environmental assessments that set out baseline data and effects arising from other existing and, or approved development.
- **Stage 4: Assessment.** Where possible, the methodology for assessing cumulative effects aligns with that used for evaluating the effects of the Proposed Works alone, ensuring consistency across each technical chapter in the EIAR and facilitating relevant comparisons. However, this approach varies between technical chapters depending on factors such as the nature of the environmental factor, the developments shortlisted, the available data, and the practicalities of conducting the assessment of cumulative effects. The findings are detailed within each technical chapter of the EIAR and summarised in **Volume 2, Chapter 10: Summary of Cumulative Effects**.

1.4.7 Assessment of Transboundary Effects

1.4.7.1 Transboundary effects are those potential environmental effects that may occur across jurisdictional boundaries (MDB, 2017). Transboundary effects are typically divided into two categories:

- Effects likely to occur in or on the environment of another state; and
- Effects likely to occur to the interests of another state.

1.4.7.2 The United Nations Economic Commission for Europe Convention on EIA in a Transboundary Context, commonly referred to as the Espoo Convention (United Nations, 1991), was signed by Ireland in 1991, entering into force in 2002. The Espoo Convention promotes international

cooperation on the need to notify and consult on potential transboundary environmental effects. It requires the consideration of potential impacts across borders between Parties to the Espoo Convention of an activity likely to result in significant transboundary effects.

- 1.4.7.3 The Espoo Convention has been implemented by the Article 7 of the EIA Directive, which includes notification provisions.
- 1.4.7.4 EPA (2022) outlines that where a project is likely to cause significant transboundary effects, contact with the relevant authorities in the United Kingdom (UK) or other states should be made. However, the guidelines do not specify how to undertake such assessment.
- 1.4.7.5 In the UK, PINS, who acts on behalf of the UK Secretary of State to manage transboundary environmental impact consultations for UK Nationally Significant Infrastructure Projects (NSIPs), provides guidance on transboundary impacts and process (PINS, 2025) and introduces the concept of transboundary screening, which is usually undertaken by PINS using information provided by an applicant to determine whether a NSIP is likely to cause significant environmental effects in another European Economic Area (EEA) state considering the following screening criteria:
 - Characteristics of the project, i.e. size, use of natural resources, production of waste, pollution and nuisances, risk of accidents and use of technologies;
 - Location of the project, i.e. existing use, distance to EEA states and extent of the area of a likely impact under the jurisdiction of an EEA state;
 - Environmental importance, i.e. whether there are any particular environmental values likely to be affected; and
 - Potential impacts and carrier, i.e. by what means impacts could be spread (i.e. what pathways) and what are the characteristics of impacts in terms of extent, magnitude, probability, duration, frequency, reversibility, potential for cumulative impacts, etc).
- 1.4.7.6 In addition, the European Commission (EC) has developed guidance on the application of the EIA procedure for large-scale transboundary projects (EC, 2013), and although the Proposed Works are not considered to fall under this definition, i.e. the Proposed Works are not proposed to be implemented in at least two Member States or have at least two Parties of Origin, it is noted that EC (2013) highlight the need to focus on transboundary effects with potential to become significant.
- 1.4.7.7 The potential for transboundary effects has been screened and presented in **Volume 3, Appendix 1.3: Transboundary Screening**, which concludes that due to the temporary nature, relatively small scale and location of the Proposed Works in relation to other states, there are no identified pathways through which either direct or indirect impacts from the Proposed Works could result in significant transboundary effects.

1.4.8 Approach to Mitigation and Monitoring

- 1.4.8.1 Article 5(1) of the EIA Directive requires that “a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment” are included in the EIAR. Mitigation measures are defined as measures used to avoid, prevent or reduce impacts (EPA, 2022). This EIAR distinguishes between:
 - Embedded mitigation, measures included as part of the definition of Proposed Works, including primary and tertiary mitigation, as defined in IEMA (2024):
 - Modifications arising through the iterative design / methodology development process; and
 - Standard industry practice that would occur even without input from the EIA process, e.g. actions undertaken to meet other existing legislative requirements, or actions that are standard practices used to manage commonly occurring environmental effects.
 - Additional mitigation, actions that will be required to reduce the significance of environmental effects, which will be dependent on the significance of effects assessed in the EIAR.

1.4.8.2 The iterative approach to the impact assessment process for the Proposed Works involves a feedback loop. A specific impact, and the significance of the resulting effect, is initially assessed considering the effective implementation of embedded mitigation, and, if this is deemed to be a significant adverse effect in EIA terms, changes are made (where practicable) to design / methodologies in order to avoid, reduce or offset the magnitude of that impact. The assessment is then repeated, and the process continues, until:

- The effect has been reduced to a level that is not significant in EIA terms; or
- Having regard to other constraints, no further changes can be made to design / methodology in order to reduce the magnitude of impact and additional mitigation is required to avoid significant effects where possible.

1.4.8.3 The consideration of mitigation measures has followed a hierarchical approach, as outlined in **Figure 1.3**, which directs that mitigation measures to avoid and prevent potentially significant adverse effects should be prioritised over measures to reduce them, with offsetting measures only employed when no other mitigation options are feasible.

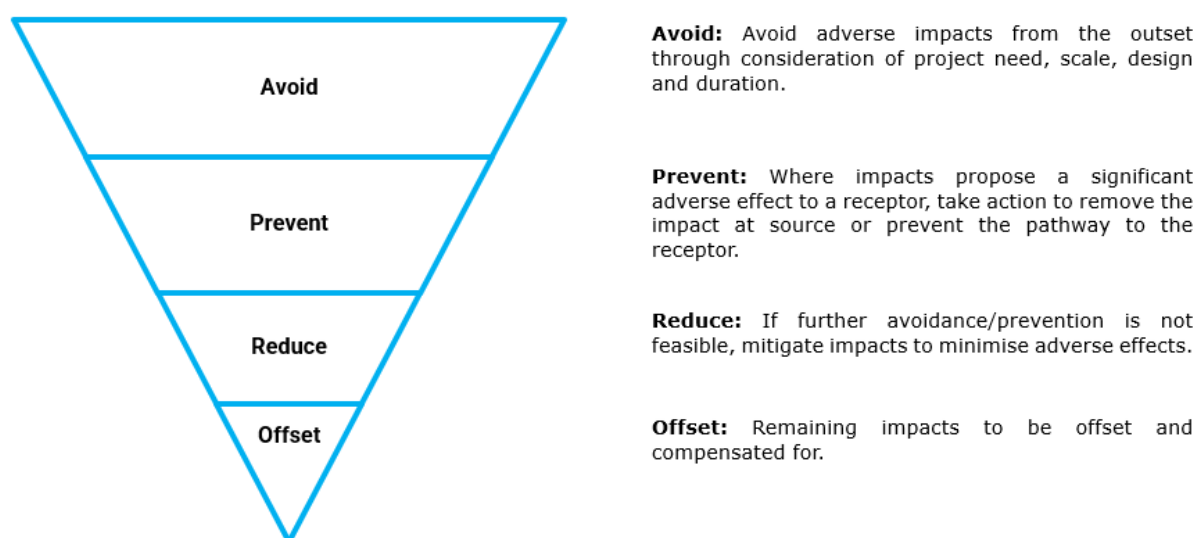


Figure 1.3: Mitigation hierarchy. Adapted from IEMA (2024)

1.4.8.4 Additionally, enhancement measures can also be developed, which create or enhance beneficial environmental effects.

1.4.8.5 Monitoring is defined as the observation, measurement and evaluation of environmental data to follow changes over a period of time, to assess the efficiency of control measures and/or to record any unforeseen effects in order to be able to undertake appropriate remedial action (EPA, 2022). This is particularly relevant where it has not been possible to rule out significant effects.

1.4.8.6 Mitigation and monitoring measures are specified in each technical chapter of the EIAR, and **Volume 2, Chapter 11: Summary of Mitigation, Residual Effects and Monitoring** provides a summary of the embedded mitigation measures, additional mitigation measures, residual effects and monitoring proposals.

1.5 Structure of the EIAR

1.5.1.1 The EIAR is divided into three volumes, as set out in **Table 1.9**.

Table 1.9: EIAR contents

Document Reference	Document Name
Volume 1: Non-technical Summary	
N/A	Non-technical Summary

Document Reference	Document Name
Volume 2: EIAR Chapters	
Chapter 1	Introduction
Chapter 2	Description of Alternatives
Chapter 3	Proposed Works Description
Chapter 4	Coastal Processes, Water and Sediment Quality
Chapter 5	Marine Biodiversity
Chapter 6	Commercial Fisheries and Aquaculture
Chapter 7	Shipping and Navigation
Chapter 8	Marine Archaeology
Chapter 9	Summary of Interaction of Effects
Chapter 10	Summary of Cumulative Effects
Chapter 11	Summary of Mitigation, Residual Effects and Monitoring
Volume 3: EIAR Appendices	
Appendix 1.1	EIA Scoping Presentation
Appendix 1.2	Cumulative Screening
Appendix 1.3	Transboundary Screening
Appendix 1.4	Marine Strategy Framework Directive Assessment
Appendix 1.5	Ecosystem Services Assessment
Appendix 2.1	Comparative Assessment Report
Appendix 3.1	Outline Onshore Decommissioning Environmental Management Plan
Appendix 3.2	Outline Traffic Management Plan
Appendix 3.3	Outline Onshore Waste Management Plan
Appendix 3.4	Outline Offshore Decommissioning Environmental Management Plan
Appendix 3.5	Outline Vessel Management Plan
Appendix 3.6	Fisheries Management and Mitigation Strategy
Appendix 3.7	Outline Lighting and Marking Plan
Appendix 3.8	Outline Offshore Waste Management Plan
Appendix 4.1	Seabed Mobility Assessment
Appendix 4.2	Coastal Processes Modelling
Appendix 4.3	Scour Assessment
Appendix 4.4	Sediment Sampling Results
Appendix 4.5	Water Framework Directive Assessment
Appendix 5.1	Benthic/Live Habitat Cable Survey and Observations Log
Appendix 5.2	Underwater Noise Modelling
Appendix 5.3	Marine Mammal Mitigation Protocol
Appendix 6.1	Commercial Fisheries and Aquaculture Baseline Report
Appendix 7.1	Navigational Risk Assessment
Appendix 8.1	Marine Archaeology Technical Report

1.5.1.2 An AA Screening Report and a NIS have also been prepared to address requirements of the Habitats and Birds Directive (see **Section 1.3.6**), and are provided alongside this EIAR in support of the application for planning permission.

1.6 The Applicant and the EIA Team

1.6.1 The Applicant

- 1.6.1.1 The Applicant is Arklow Energy Limited (Arklow Energy), a subsidiary of GE Vernova Inc. Arklow Energy was established to develop and manage ABWP Phase I.
- 1.6.1.2 GE Vernova Inc. is a global energy company headquartered in Cambridge, Massachusetts, U.S., with operations in approximately 100 countries. GE Vernova provides power generation, wind energy and electrification solutions.
- 1.6.1.3 GE Vernova's Wind segment supplied the GE Wind 3.6sl wind turbine generators installed at ABWP Phase I.

1.6.2 The EIA Team

- 1.6.2.1 The preparation of this EIAR has been led by Arklow Energy, with Ramboll UK Limited (Ramboll) serving as the principal EIA consultant.
- 1.6.2.2 Ramboll has been a member of the IEMA (now Institute of Sustainability and Environmental Professionals (ISEP)) EIA Quality Mark Scheme since its inception in 2011, ensuring our EIA activities continue to maintain their existing high quality. As an EIA Quality Mark registrant, Ramboll have an on-going commitment to excellence in delivering and promoting best practice. Ramboll was successful in renewing its Quality Mark accreditation in 2022 and complies with European Norm (EN) International Organisation for Standardisation (ISO) 9001:2015 on quality management, EN ISO 14001:2015 on environmental management.
- 1.6.2.3 In line with EPA (2022), which requires the inclusion in the EIAR introduction of a list of the experts who have contributed to an EIAR, showing which parts of the EIAR they have worked on, their qualifications, experience and any other relevant credentials, **Table 1.10** presents a summary of the relevant expertise for each topic author(s), also presented in each individual chapter / appendix of the EIAR.

Table 1.10: Statement of expertise of competent specialists involved in the preparation of the EIAR

Chapter/ Document	Organisation	Name	Qualifications	Relevant experience
Volume 1: Non-Technical Summary				
Non-technical Summary	Ramboll	Jorge N. Rosenvinge	Graduate in Environmental Engineering	Over three years’ experience in environmental and social impact assessment (ESIA), due diligence, permitting and environmental management for renewable energy and linear infrastructure projects (including waste and transport management planning) under IFC Performance Standards, Equator Principles and OECD Common Approaches across multiple geographies.
		Sara Méndez Roldán	BSc Environmental Sciences, University of Salamanca (Spain) MSc Coastal and Marine Resources Management, University of Portsmouth (UK)	Over 11 years’ international experience in permitting and environmental impact assessment for a wide range of coastal and marine developments, including offshore wind farms and subsea cables across a number of geographies, including Spain, the UK, Ireland, Poland and Denmark, among others.
		Matt Royall	BSc (Hons) Natural Environmental Science (Earth Sciences), University of Sheffield (UK) MSc Environmental Pollution Control, University of Leeds (UK) Chartered Environmentalist (CEnv)	Over 25 years’ experience of environmental impact assessment for a wide range of sectors, including windfarms. Experience is across a number of geographies including Ireland, UK, Poland, Lithuania and Romania.
		Kim Bridge	Master of Oceanography (MOcean), University of Southampton (UK)	Over 13 years’ experience in permitting, consenting and environmental assessment for a wide range of coastal and marine projects including offshore wind farms, subsea cables, ports and harbours and coastal development in geographies of UK and Ireland.
Volume 2: EIAR Chapters				
Chapter 1 - Introduction	Ramboll	Sara Méndez Roldán	As above	As above
		Kim Bridge	As above	As above
		Matt Royall	As above	As above

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
Chapter 2 - Description of Alternatives	Ramboll	Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Chapter 3 - Proposed Works Description	Ramboll	Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
		Kim Bridge	As above	As above
Chapter 4 - Coastal Processes, Water and Sediment Quality	Ramboll	César Jesus	Master Equivalent in Biology and Geology (Portugal) Master's in Applied Geology (Portugal) PhD in Marine Geosciences (Portugal and The Netherlands)	Background in marine geomorphology, with experience in coastal and seabed processes across research and applied projects. Hydrodynamic modelling has been a core component of his work, developed during his Master's thesis and further advanced in his post-doctoral research. In addition, he has followed up and integrated hydrodynamic modelling studies within several EIAs focused on offshore and marine environments over the past 15 years.
		Elena Henning	BSc (Hons) Geography, University of Edinburgh (UK)	4 years of experience in assessing risk associated with contamination to various offshore and terrestrial receptors. Experienced in authoring marine Environmental Impact Assessment chapters assessing water and sediment quality, including in offshore wind projects. Experienced in assessing projects against marine plans, policies and strategies.
		Oriol Sot Olivet	BSc Biology, University of Girona (Spain) MSc Environment, Sustainability and Sustainable Development Goals (SDGs) (Spain)	Experience in permitting and environmental impact assessment for a wide range of renewable energy projects.
		Sara Méndez Roldán	As above	As above
		Carys Lloyd	MSc Marine Science, Policy and Law, Southampton University. BSc Joint Honours Marine Biology and Oceanography, University of Wales, Bangor.	Over 16 years' experience in marine environmental assessment and consenting for large-scale offshore infrastructure, with a particular focus on offshore wind. Extensive experience leading EIAR chapters and coordinating multidisciplinary inputs. Has acted in lead author and reviewer roles on multiple offshore wind projects, providing technical assurance.

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
Chapter 5 - Marine Biodiversity	Ramboll	Melanie Downer	BSc (Hons) Ocean Sciences and Biology MSc Marine Ecosystem Management	Background in offshore consenting support, including geophysical survey licence applications and renewable energy developments. Previous experience evaluating potential effects on marine ecological receptors across diverse marine and coastal projects.
		Amelia Bywater	BSc (Hons) Marine Ecology MSc Marine Environmental Protection Associate Member of CIEEM	Previous experience in MARA Maritime Usage Licence and foreshore licence applications. Previous experience in offshore wind projects. Extensive experience in assessing potential effects on marine ecology receptors across a wide range of sectors.
		Jackie Hill	BSc (Hons) Marine Biology PhD, Marine Ecology	Marine Ecology lead with 20+ years of experience in marine ecology consultancy and research, environmental impact assessment, UK consenting regime and international projects. Particular expertise in benthic ecology, underwater sound impact assessments, determining survey scopes and understanding of UK regulatory requirements. Experience also includes EIA projects in Ireland and all phases of offshore wind development.
		Kim Bridge	As above	As above
Chapter 6 - Commercial Fisheries and Aquaculture	NiMa Consultants Ltd	Sarah MacNab	MSc Tropical Coastal Management (Distinction) from Newcastle University, 2004. BA (Hons) Geography (First Class Honours) from Nottingham University, 2003.	Sarah has over 20 years' experience in offshore energy consenting, specialising in commercial fisheries within Environmental Impact Assessments for offshore wind developments across the UK and Ireland. She leads fisheries impact assessment, mitigation and coexistence strategies, and develops post-consent monitoring and compliance plans. Sarah regularly advises developers on consent strategy, regulatory engagement and stakeholder management, and works collaboratively with industry, regulators and NGOs to support effective project delivery and risk management.
		Fiona Nimmo	BSc (Hons) in Marine Biology (First Class Honours) from Newcastle University, 2003.	Fiona has over 20 years' experience in commercial fisheries EIAs, including renewable energy developments for offshore wind and tidal projects across the UK and Ireland. She develops post-consent fisheries liaison and mitigation plans, as well as monitoring strategies to meet consent conditions. She

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
	Ramboll		BEng (Hons) in Chemical Engineering (2:1 Hons) from Edinburgh University, 2000.	also supports Fisheries Improvement Projects (FIPs) for UK nephrops and scallop fisheries, working collaboratively with industry, NGOs, and regulators through regular steering group meetings.
		Frank Fortune	BSc Marine Biology and Applied Microbiology, University of Portsmouth (UK) MSc Marine Resource Development and Protection, Herriot-Watt University (UK)	Marine biologist and EIA specialist, with over 32 years of experience of marine energy, coastal development and marine environmental management. Expertise spans projects including world leading renewable energy projects (offshore wind, tidal energy, wave energy, onshore wind, renewable heating / cooling), port and harbour developments, offshore decommissioning, major dredging and marine reclamation projects, coastal management and the provision of technical and expert advice to commercial clients, government and statutory government agencies.
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Chapter 7 - Shipping and Navigation	Ramboll	Christian Mathias Faber	M.Sc. in Engineering (Mathematical Modelling and Computation)	Data/risk analyst, and 5 years with Ramboll, department of risk and safety, working within operational risk analysis of infrastructure projects, including bridges, tunnels and wind farms. Experience performing Formal Safety Assessments (FSA) in accordance with International Maritime Organisation (IMO) guidelines, including analysis of ship traffic, ensuring navigational safety and performing advanced data analysis.
		Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above
		Carys Lloyd	As above	As above
		Matt Royall	As above	As above
Chapter 8 - Marine Archaeology	ADCO	Niall Brady	BA (UCD 1983) MA (UCD 1986) MA (Cornell University, USA 1994) PhD (Cornell University 1996) HSE Part III Commercial Diver (2000)	Dr Niall Brady, FSA is founding co-director of ADCO (1999) and is the company secretary. With more than two decades of experience in maritime related research and resolution, he is primarily responsible for project management and company growth initiatives. Dr Brady is a medievalist by training. Niall was project director for the Discovery Programme, Ireland's

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
				institute for advanced archaeological research, where he designed and implemented the Medieval Rural Settlement Project (2002-10). Niall has extensive project management experience in the consultancy sector, and has carried out a large number of excavations, monitoring projects, and Environmental Impact Assessments on land and underwater.
	GDG	Joey O'Connor	BSc (National University of Ireland, Galway 2007), MSc (University of Southampton 2009), MIMarEST (2025)	Joey is Head of Environmental in GDG, specialising in EIA, Appropriate Assessment and environmental consultancy. A Marine Scientist with coastal engineering expertise and extensive experience of delivering environmental assessments and consents for development activities and projects, Joey leads a team of environmental and consenting specialists within GDG's Advisory Team and has 17 years' experience across the public and private sectors and >10 years project and team management experience with a focus on managing delivery of scientifically robust marine environmental evidence and advice. Joey has worked on a range of infrastructure projects including onshore wind farms, ports and offshore wind farms, and was EIA Coordinator and Environmental Lead for the Rosslare Europort ORE Hub project.
	Ramboll	Carys Lloyd	As above	As above
		Matt Royall	As above	As above
Chapter 9 - Summary of Interaction of Effects	Ramboll	Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
		Kim Bridge	As above	As above
Chapter 10 - Summary of Cumulative Effects	Ramboll	Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
		Kim Bridge	As above	As above
	Ramboll	Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
Chapter 11 - Summary of Mitigation, Residual Effects and Monitoring		Matt Royall	As above	As above
		Kim Bridge	As above	As above
Volume 3: EIAR Appendices				
Appendix 1.1 – EIA Scoping Presentation	Ramboll	Jorge N. Rosenvinge	As above	As above
		Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Appendix 1.2 – Cumulative Screening	Ramboll	Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Appendix 1.3 – Transboundary Screening	Ramboll	Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Appendix 1.4 - Marine Strategy Framework Directive (MSFD) Assessment	Ramboll	Anna van Velsen	BA(Hons) Geography, University of Cambridge (UK)	3 years of experience in marine and terrestrial environmental impact assessment and consenting, including coastal development, coastal defence, ports and harbours and offshore wind. Experienced in assessing projects against marine plans, policies and strategies.
		Lotte High	BSc (Hons) Ocean Science and Marine Conservation, University of Plymouth (UK) MSc Tropical Biology and Conservation, James Cook University (Australia)	1 year of experience in authoring environmental impact assessment and marine consenting deliverables complying with relevant legislation for projects, including coastal defence schemes and shoreline management.
		Julia Thompson	BSc (Hons) Geography, Loughborough University (UK) MSc Polar and Alpine Change, University of Sheffield (UK)	Over 8 years of experience in marine consenting and EIA for marine and coastal development. Competent in the delivery of environmental assessments required to support consent applications for schemes in complex marine environments and differing consent regimes around the UK.

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
Appendix 1.5 – Ecosystem Services Assessment	Ramboll		ISEP Practitioner	
		Kim Bridge	As above	As above
		Jordan Noble	MSci Marine Biology	Jordan is a marine environmental consultant with a strong grounding in marine ecology and a proven track record of providing scientific advice on the potential ecological effects of marine and coastal developments. She has extensive experience supporting and coordinating Ecological Impact Assessments and Environmental Impact Assessments (EIAs) for a wide range of tidal, coastal and offshore projects, including river and coastal defences, port and harbour developments, subsea cables and offshore wind infrastructure. Jordan regularly liaises with statutory bodies including the Environment Agency, Marine Management Organisation (MMO) and Port of London Authority, providing clear, environmental advice to support consenting and post consent compliance.
		Emily Whiting	BSc Marine Biology MSc Marine Conservation	Emily is a senior marine environmental consultant with a strong technical background in marine ecology and a broad portfolio of work across UK offshore, coastal and intertidal environments. She has significant experience delivering Marine Environmental Appraisals, EIAs and a range of statutory marine assessments, applying detailed ecological understanding to evaluate effects on benthic, intertidal and wider marine receptors. Her work spans early-stage feasibility through to licensing, consent and post-consent support, with a focus on producing clear, evidence-led assessments and proportionate mitigation. She works closely with key regulatory bodies including the MMO, Natural England, Marine Directorate Licensing and Operations Team, Natural Resources Wales and the Government of Jersey, providing well-reasoned environmental advice to support decision-making.
		Kim Bridge	As above	As above
Appendix 2.1 – Comparative Assessment Report	Ramboll	Marie-Antoinette Schwarzkopf	BSc Civil Engineering, RWTH University (Germany)	Nine years of experience in international offshore wind project development, specializing in multi-disciplinary package management and early-stage project

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
			MSc Constructive Hydraulic Engineering, RWTH University (Germany)	development with a focus on T&I, O&M, and decommissioning strategy optimization, cost studies.
		Fernando Gallego	MSc Structural engineering, Universidad Politécnica de Madrid (Spain)	Thirteen years of experience in international offshore wind project development, specializing in transport and installation and decommissioning methods and strategies.
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Appendix 3.1 – Outline Onshore Decommissioning Environmental Management Plan (DEMP)	Ramboll	Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Appendix 3.2 – Outline Traffic Management Plan (TMP)	Ramboll	Jorge N. Rosenvinge	As above	As above
		Matt Royall	As above	As above
Appendix 3.3 – Outline Onshore Waste Management Plan (WMP)	Ramboll	Jorge N. Rosenvinge	As above	As above
		Hazel Comyn	MSc Engineering Geology over 25 years' experience in geo-environmental and contaminated land assessment	Hazel has over 25 years' experience in geo-environmental and contaminated land assessment, specialised in contaminated land investigation, quantitative risk assessment (QRA), waste classification and material management planning for sustainable soil and sediment management solutions. She has a technical background in geology, hydrogeology and contaminant risk assessment modelling. Hazel leads the UK groups responsible for land contamination risk assessment and waste classification, providing training and direction internally.
		Matt Royall	As above	As above
Appendix 3.4 – Outline Offshore Decommissioning Environmental Management Plan (DEMP)	Ramboll	Oriol Sot Olivet	As above	As above
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
		Kim Bridge	As above	As above
	Ramboll	Oriol Sot Olivet	As above	As above

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
Appendix 3.5 – Outline Vessel Management Plan (VMP)		Sara Méndez Roldán	As above	As above
		Carys Lloyd	As above	As above
		Matt Royall	As above	As above
Appendix 3.6 – Fisheries Management and Mitigation Strategy (FMMS)	NiMa Consultants Ltd	Sarah MacNab	As above	As above
		Fiona Nimmo	As above	As above
Appendix 3.7 – Outline Lighting and Marking Plan (LMP)	Ramboll	Finn Mølsted Rasmussen	B.Sc. Degree in Civil and Structural Engineering	Mr. Finn Mølsted Rasmussen is an experienced project manager and researcher in operational risk analysis of infrastructure projects, such as bridges, tunnels, wind farms, oil and gas installations, etc. Finn has extensive experience in leading Formal Safety Assessment (FSA) according to International Maritime Organisation (IMO) guidelines, analysing ship traffic, ensuring navigational safety, planning marking of offshore activities and real time simulation of ship traffic and performing data analysis.
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Appendix 3.8 – Outline Offshore Waste Management Plan (WMP)	Ramboll	Jorge N. Rosenvinge	As above	As above
		Hazel Comyn	As above	As above
		Matt Royall	As above	As above
Appendix 4.1 – Seabed Mobility Assessment	Deltares	Tom Roetert	BSc Civil Engineering, University of Twente (The Netherlands) MSc in Civil Engineering and Management, University of Twente (The Netherlands)	Senior Advisor/researcher with 10.5 years' experience as project manager in seabed mobility studies for offshore wind farm projects across the globe.
		Femke Bisschop	BSc Civil Engineering, Technical University of Delft (The Netherlands) MSc in Hydraulic Engineering, Technical University of Delft (The Netherlands)	Advisor/researcher with 3 years of experience in offshore wind, specialising in numerical modelling and analysis of seabed mobility and related morphological processes for offshore wind farm projects.

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
		Hans de Vroeg	MSc in Civil Engineering, Technical University of Delft (The Netherlands)	Senior Advisor/researcher with 35 years of experience in QA for seabed mobility and scour studies for offshore wind farm projects across the globe
		Helena van der Vegt	MSc Computational Biomechanics, University of Cape Town (South Africa) PhD, Geology/Earth Science, Technical University of Delft (The Netherlands)	Expert in coastal and offshore morphodynamics, with 15-years senior experience leading and quality- assuring offshore-related studies within Deltares.
Appendix 4.2 – Coastal Processes Modelling	Venterra	Dr Matt Wright	PhD Marine and Coastal Geology/Geomorphology (UK) MSc Recent Environmental Change (UK) BSc (Hons) Geography (UK) Mendenhall Postdoctoral Fellow, United States Geological Survey (USGS) (USA)	Associate Director with over 30 years' experience in marine and coastal physical processes, specialising in sediment transport, seabed mobility, and metocean characterisation to support the development and assessment of offshore infrastructure. Extensive track record in delivering technical and environmental studies for offshore wind farms and subsea cable projects across the UK, Ireland, and wider European waters, combining strong technical leadership with a focus on practical, client-led solutions.
		Dr Long Huynh	PhD Modelling of Nearshore and Coastal Dynamics, University of Nottingham (UK) BEng (Hons) Civil Engineering, University of Nottingham (UK) Postdoctoral Research Associate, University of Nottingham (UK)	Senior Marine and Coastal Consultant with doctoral level expertise in the numerical modelling of hydrodynamics, morphodynamics and sediment transport. Extensive experience providing expert numerical modelling, data analysis, and physical process assessments for major international offshore wind farms (OWF), interconnectors, and marine power cables, including high-profile projects across the UK, Irish Sea, English Channel, and Scottish waters
		Aidan Sewter	MSc Marine Renewable Energy (UK) BSc Marine Environmental Studies (UK)	Marine and Coastal Processes Specialist with experience supporting offshore wind and marine infrastructure projects across the UK, Europe and internationally. Expertise in morphodynamics, seabed mobility and sediment transport, developed through technical studies and environmental impact assessments.
	Ramboll	Kim Bridge	As above	As above
		Matt Royall	As above	As above

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
Appendix 4.3 – Scour Assessment	Deltares	Antine Reddingius	Advisor/researcher	3.5 years' experience in scour studies at Deltares
		Tom Roetert	As above	As above
		Yorick Broekema	Specialist	PhD in scour, 6 years' experience in scour studies at Deltares
		Remon Pot	Department Head	7 years' experience as department head for multiple departments across Deltares
Appendix 4.4 – Sediment Sampling Results	Ramboll	Elena Henning	As above	As above
		Sara Méndez Roldán	As above	As above
Appendix 4.5 – Water Framework Directive (WFD) Assessment	Ramboll	Elena Henning	As above	As above
		Anna van Velsen	As above	As above
		Julia Thompson	As above	As above
		Kim Bridge	As above	As above
		Matt Royall	As above	As above
Appendix 5.1 – Benthic Live Habitat Cable Survey and Observations Log	Ramboll	Melanie Downer	BSc (Hons) Ocean Sciences and Biology MSc Marine Ecosystem Management	Background in offshore consenting support, including geophysical survey licence applications and renewable energy developments. Previous experience evaluating potential effects on marine ecological receptors across diverse marine and coastal projects.
		Jorge N. Rosenvinge	As above	As above
		Sara Méndez Roldán	As above	As above
Appendix 5.2 – Underwater Sound Modelling	Ramboll	Lorenzo Gordigiani	BSc Biological Sciences (Italy) MSc Ecology and Biodiversity (Belgium)	Lorenzo Gordigiani is a Senior Biodiversity Specialist with over eight years of experience in marine bioacoustics, underwater noise modelling and impact assessment for offshore projects. He has applied dBSea modelling to evaluate underwater sound propagation and assess potential effects on marine mammals and fish within EIAs and ESIA's, supporting regulatory submissions and project design. He has extensive experience in passive acoustic monitoring (PAM), acoustic data analysis and marine mammal research, including work as Principal Investigator at Tethys Research Institute and as a Visiting Scholar at the Sea Mammal Research Unit

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
				(University of St Andrews), focusing on cetacean acoustic behaviour and movement ecology.
		Christopher McKenzie Maxon	Bachelor of Engineering (Marine) (USA)	30 years of consulting experience in the acoustics, noise and vibration fields, I have accrued a broad range of technical and project management experience including extensive experience in the underwater acoustics field. Recent noise projects range from offshore wind farms, pipeline construction, harbour constructions, dredging, seismic surveys, underwater blasting, SONAR and much more.
		Jackie Hill	As above	As above
Appendix 5.3 – Marine Mammal Mitigation Protocol	Ramboll	Melanie Downer	As above	As above
		Jackie Hill	As above	As above
		Matt Royall	As above	As above
Appendix 6.1 – Commercial Fisheries and Aquaculture Technical Report	NiMa Consultants Ltd	Fiona Nimmo	As above	As above
	Ramboll	Frank Fortune	As above	As above
		Sara Méndez Roldán	As above	As above
		Matt Royall	As above	As above
Appendix 7.1 – Navigational Risk Assessment	Ramboll	Christian Mathias Faber	As above	As above
		Toke Koldborg Jensen	MSc. PhD. in Engineering (Applied Mathematics)	Senior Chief Project Manager, and 16 years with Ramboll, department of risk and safety working with risk management and quantitative risk assessments including navigational safety assessments. Major projects include risk assessment for offshore construction works for the Fehmarn Belt Fixed Link between Denmark and Germany, ship impact assessments for several innovative bridge crossings in Norway, cable impact assessments, and Formal Safety Assessments for offshore wind farms, including a major study for the Finnish Maritime Authorities on interactions between ship traffic and offshore energy production in the Gulf of Bothnia.
		Sara Méndez Roldán	As above	As above

Chapter/Document	Organisation	Name	Qualifications	Relevant experience
		Carys Lloyd	As above	As above
Appendix 8.1 – Marine Archaeology Technical Report	ADCO	Niall Brady	As above	As above

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