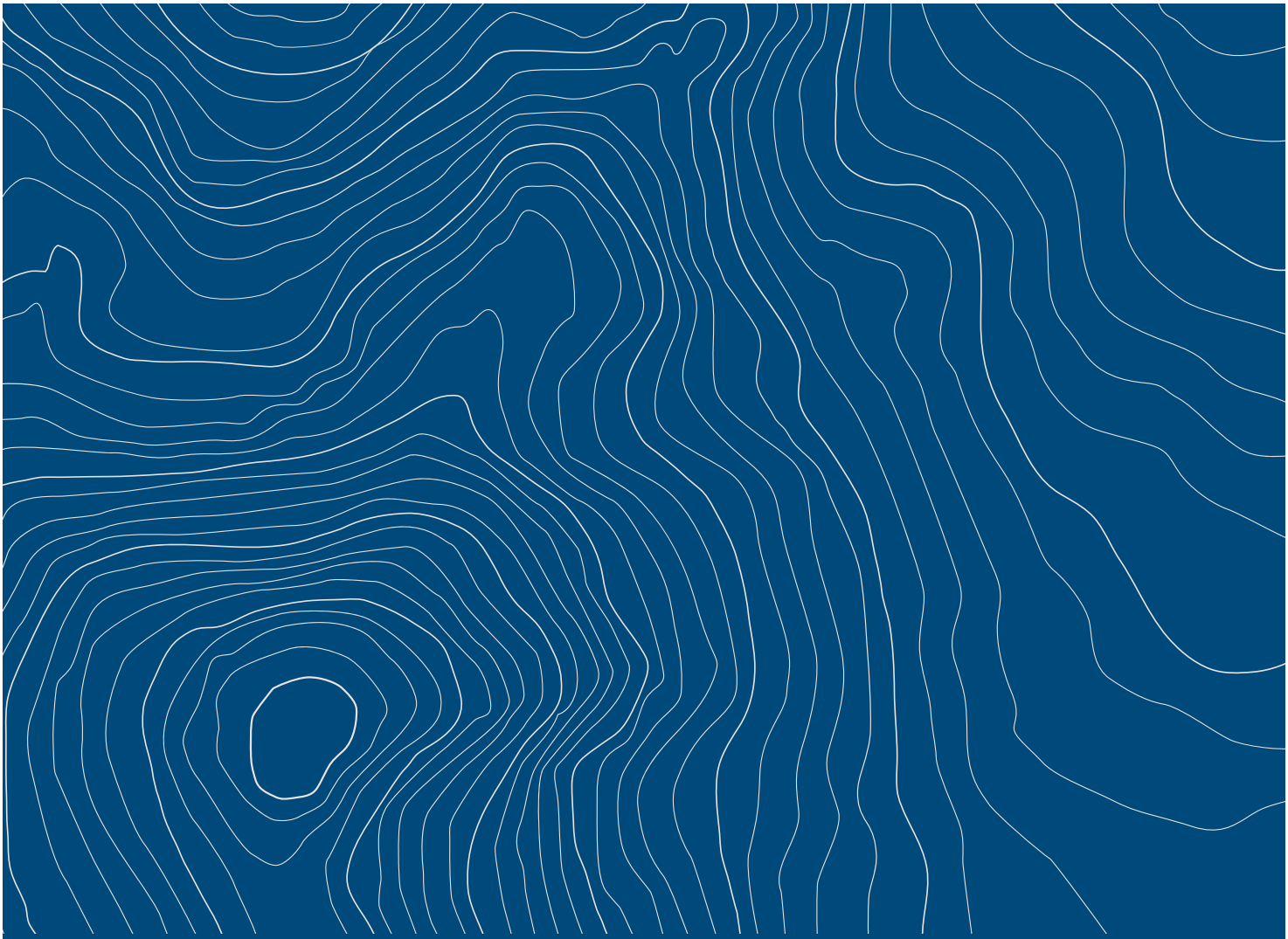

DublinArray
Generation for generations

EIAR Volume 2: Introductory Chapters
Chapter 1: Introduction

Kish Offshore Wind Ltd.

RWE SLR GoBe APEM Group

www.dublinarray-marineplanning.ie

Dublin Array Offshore Wind Farm

Environmental Impact Assessment Report

Volume 2, Chapter 1: Introduction

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Acronyms

Term	Definition
AA	Appropriate Assessment
ABP	An Bord Pleanála
CEMP	Construction Environmental Management Plan
DLRCC	Dún Laoghaire-Rathdown County Council
Dublin Array	Dublin Array Offshore Wind Farm
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EU	European Union
EPA	Environmental Protection Agency
GoBe	GoBe Consultants Ltd
LAT/mLAT	Lowest Astronomical Tide/metres relative to Lowest Astronomical Tide
MAC	Maritime Area Consent
MAP	Maritime Area Planning
MARA	Maritime Area Regulatory Authority
MHWS	Mean High Water Springs
NIS	Natura Impact Statement
NISA	North Irish Sea Array
NMPF	National Marine Planning Framework
NTS	Non-Technical Summary
O&M Base	Operations and Maintenance Base
OES	Onshore Electrical System
OREDP	Offshore Renewable Energy Development Plan
OSP	Offshore Substation Platform
OSS	Onshore Substation
RWE	RWE Renewables Ireland Ltd (a wholly owned subsidiary of RWE AG)
SE	Saorgus Energy Limited
SLR	SLR Consulting Ltd
TJB	Transmission Joint Bay
WTG	Wind Turbine Generators

Glossary

Term	Definition
An Bord Pleanála (ABP)	Competent authority as defined by the Planning Acts to determine the application for development consent for Dublin Array and carry out the EIA and AA of the proposed development.
Applicant	Kish Offshore Wind Limited. Kish Offshore Wind Limited is making the application on behalf of and/or with the consent of the joint holders of the MACs for the maritime area to which the proposed development relates: Kish Offshore Wind Limited, Bray Offshore Wind Limited and DLRCC.
Application for development consent	The planning application to An Bord Pleanála for the construction, operation and decommissioning of Dublin Array under Section 291 of the Planning Act.
Appropriate Assessment (AA)	The statutory process which is set out in Article 6 of the Habitats Directive.
Array area	That part of the maritime area specified by MAC Reference 2022-MAC-003 and 004 within which it is proposed to locate the wind turbine generators (WTGs) and Offshore Substation Platform (OSP).
Cumulative Effects Assessment (CEA)	The assessment of potential cumulative effects that may arise when effects arising from Dublin Array act cumulatively with impacts from other projects considered in the assessment.
Dublin Array	Dublin Array Offshore Wind Farm. Where the context so provides within the EIAR, references to Dublin Array refer to all geographical areas of the proposed development, i.e. both offshore, onshore and including the proposed O&M Base.
Environmental Impact Assessment (EIA)	Assessment of the likely significant effects of a proposed project on the environment. The EIA will be carried out by An Bord Pleanála in this instance.
EIA Report (EIAR)	As defined in the Planning and Development Act 2000, as amended: "environmental impact assessment report" means a report of the effects, if any, which proposed development, if carried out, would have on the environment and shall include the information specified in Annex IV of the Environmental Impact Assessment Directive.
Landfall	The location where the Offshore Export Cable Corridor comes ashore adjacent to the Shanganagh Waste Water Treatment Plant (WWTP).
Maritime Area Consent (MAC)	State consent which grants the holder a right to occupy a specific part of the maritime area for the purposes of proposed maritime usage as set out in the MAC and subject to such conditions (if any) as may be attached.
Mean High Water Springs	Monthly tides are defined as 'Springs' or 'Spring tides' when the tidal range is at its highest and 'Neaps' or 'Neap tides' when the tidal range is at its lowest. The height of MHWS is the average throughout the year, of two successive

Term	Definition
	high waters, during a 24-hour period in each month when the range of the tide is at its greatest (spring tides).
Offshore infrastructure	Wind turbine generators, offshore substation platform, inter array cables, and offshore export cables.
Offshore substation platform (OSP)	Offshore substation, which is necessary to connect the WTGs with the Offshore Export Cable.
Onshore substation	Part of the OES, the substation is required to facilitate the connection to the existing national electricity transmission system.
Onshore Electrical System (OES)	Collective term for all onshore infrastructure from the landfall/TJB to the grid connection point which is likely to be necessary to connect the project to the national grid.
Phase 1 Projects	These are the offshore wind farm projects awarded a MAC in 2022 and include Dublin Array, North Irish Sea Array (NISA), Oriel Offshore Wind Farm, Codling Wind Park (CWP), Arklow Phase 2 and Sceirde Rocks. With the exception of Sceirde Rocks these Projects may also be referred to as the East Coast Phase 1 Projects.
Planning Acts	Planning and Development Act 2000, as amended, and where the context so admits, including also the Planning Regulations.
Planning Regulations	Planning and Development Regulations 2001, as amended.
Prescribed bodies	Authorities likely to have an interest in the project by reason of their specific environmental responsibilities or local and regional competencies. The list of prescribed bodies is set out in the Planning and Development (Maritime Development) Regulations 2023.
Range	The parameters between the upper and lower limits of project design details or groups of details from which the Maximum and Alternative Design Options are identified.
Receiving environment	The baseline environment.
Transition Joint Bay (TJB)	The proposed infrastructure at the Landfall location where the offshore and onshore cables connect.

1 Introduction

1.1.1 This is an Environmental Impact Assessment Report (EIAR) for the proposed Dublin Array Offshore Wind Farm (hereafter referred to as Dublin Array). This EIAR accompanies an application for development consent ('planning application') which has been submitted by Kish Offshore Wind Limited (hereafter referred to as the Applicant) to An Bord Pleanála under Section 291 of the Planning and Development Act 2000 (as amended). The proposed construction, operation and decommissioning of Dublin Array is described in Volume 2, Chapter 6: Project Description.

1.1.2 The application is being made by the Applicant as a joint holder of a maritime area consent ('MAC') for three parts of the maritime area:

- MAC Ref 2022-MAC-003 and 004 (held jointly by Kish Offshore Wind Limited and Bray Offshore Wind Limited);
- MAC Ref MAC20230012 (held jointly by Kish Offshore Wind Limited and Bray Offshore Wind Limited);
- MAC Ref MAC240020 (held jointly by Kish Offshore Wind Limited, Bray Offshore Wind Limited, and Dún Laoghaire Rathdown County Council).

1.1.3 The application is being made by the Applicant with the consent of the joint holders of these MACs.

1.1.4 Dublin Array is a proposed project which is above the threshold for mandatory EIA in Schedule 5 of the Planning and Development Regulations 2001, as amended, Part 2, Class 3(i): *'Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts'.* Accordingly, the application under section 291 of the Planning and Development Act 2000, as amended, must be submitted with an EIAR.

1.1.5 The EIAR presents the likely significant effects arising as a result of the construction, operation and decommissioning of Dublin Array. It systematically identifies and analyses these effects on the receiving environment and, where appropriate, identifies mitigation and monitoring measures to reduce significant effects. Details of the site selection and the alternatives considered are also presented in the Volume 2, Chapter 5: Consideration of Alternatives.

1.1.6 The EIAR has been prepared in accordance with the EPA Guidelines on the information to be contained in EIARs, which sets out that an EIAR is *'a report or statement of the effects, if any, that the proposed development, if carried out would have on the environment' and 'presents the results of a systematic analysis and assessment of the significant effects of a proposed project on the receiving environment'* (EPA, 2022).

1.1.7 Details of relevant policy and guidance is set out in full in Volume 2, Chapter 2: Consents, Legislation, Policy and Guidance and within the relevant technical chapters and appendices in Volumes 3 and 5.

1.1.8 In January 2021, a foreshore site investigations licence (FS007029) was granted to RWE Renewables Ireland Limited and site investigations and surveys were undertaken between 2021-2022 under that licence. Following a decision of the High Court delivered on the 2nd September 2024 in Coastal Concern Alliance v Minister for Housing, Local Government and Heritage & Others and RWE Renewables Ireland Limited [2024] IEHC 524, the Court has set aside the decision made on 12th November 2020 to grant the licence by Order made on 6 December 2024, and has directed that the application be remitted to the Minister for the Environment, Climate and Communications to be reconsidered in accordance with the Court's findings and directions. On remittal the Minister is to seek information from RWE as to the nature, extent and timing of the surveys that were actually carried out, and to undertake an Appropriate Assessment screening based on this scope and the facts and circumstances that were applicable as of 12th November 2020, which was when an error was made by the Minister in the original AA procedure. Only if determined to be necessary, the Minister is to then undertake an Appropriate Assessment (Stage II). Ultimately, the Minister is to reach a determination as to whether a revised licence covering the nature and extent and timing of the actual surveys carried out would have been issued, based on the facts and circumstances as of November 2020. Relevant documentation and determinations are to be published on the Minister's website.

1.1.9 While the invalidated licence no longer exists as a matter of law, the data gathered under it is not invalidated nor is the use of such data in this Application precluded. In the Coastal Concern case, the Court refused an application for leave to amend the proceedings to pursue a claim for declaratory relief that this survey data could not be used in any future development consent application. On a 'de bene esse' or provisional basis, the Court rejected the merits of a claim that the remedial obligation under the Habitats Directive should require the use of such data to be precluded in any future development consent application. The Court's reasoning is set out in paragraphs 55-59 of the judgment, and similar reasoning was given by the High Court in a separate subsequent decision in which the same claim arose and was rejected in Toole & Ors v Minister for Housing, Local Government and Heritage & Others and Codling Wind Park Limited [2024] IEHC 610 (paragraphs 190-191).

1.1.10 Accordingly, all relevant survey and site investigation data gathered by and on behalf of the Applicant under the invalidated licence and included in this Application may be used and relied on.

1.1.11 This chapter provides details of the Applicant together with a high-level summary of the proposed development. It sets out the structure of the EIAR together with details of the competent experts who prepared the EIAR. A detailed methodology for the EIA is set out in Volume 2, Chapter 3.

1.2 Overview

1.2.1 Dublin Array is a proposed offshore wind farm located on the Kish and Bray Banks, approximately 10 km off the coast of counties Dublin and Wicklow in Ireland.

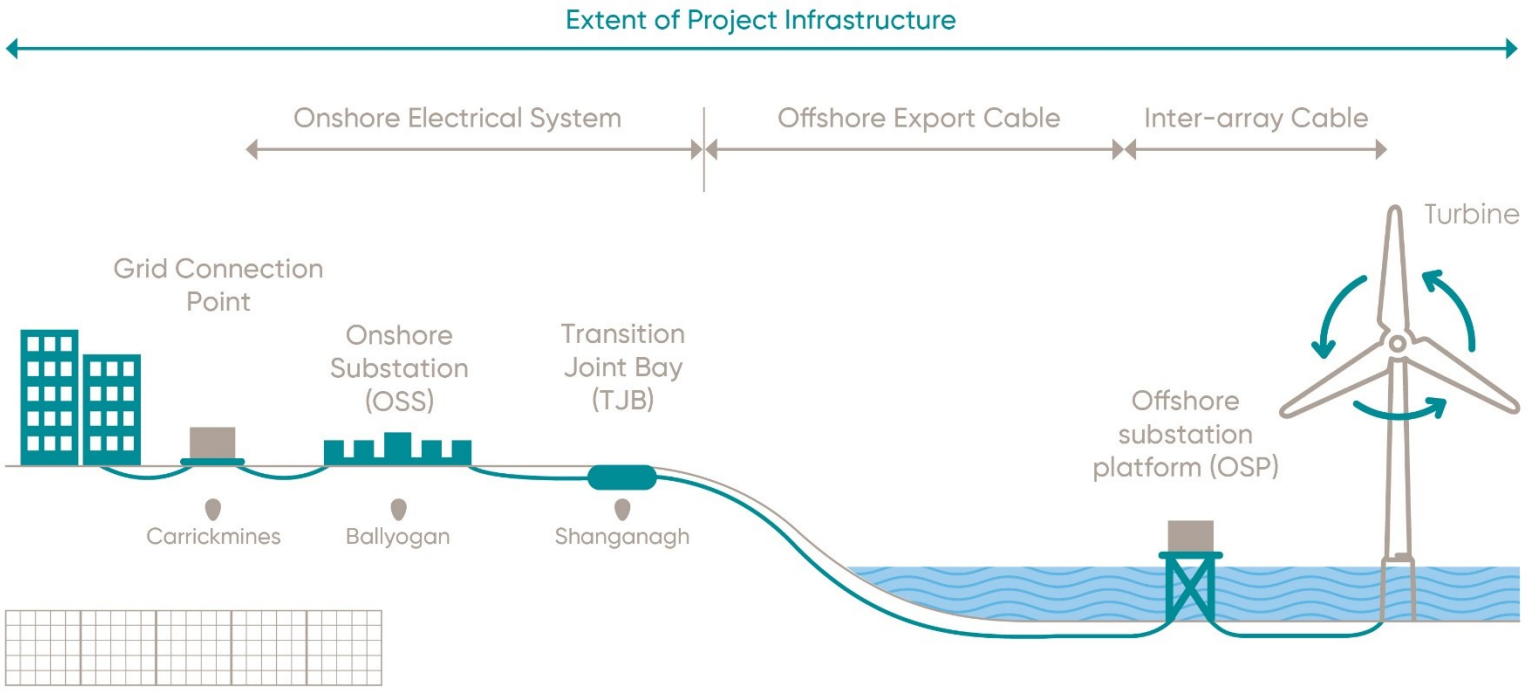
1.2.2 A detailed description of Dublin Array is presented in Volume 2, Chapter 6: Project Description and presented in summary below:

- Offshore Wind Farm Infrastructure: will comprise between 39 and 50 wind turbine generators (WTGs) with a maximum blade tip height (when a rotor blade is in a vertical orientation) of 309.6 m Lowest Astronomical Tide (LAT); and a minimum blade tip height of 31.6 m LAT; associated offshore infrastructure including turbine foundations, subsea inter array electricity cables connecting the WTGs to an offshore substation platform (OSP) and offshore electricity export cables connecting the OSP to the onshore electrical system. The offshore infrastructure will be located off the coast of the counties of Dublin and Wicklow.

- Onshore Electrical System (OES): comprises the onshore works that are necessary to facilitate the operation of the wind farm. This includes a landfall/transition joint bay (TJB) to be located at Shanganagh; underground electricity transmission cables; an onshore substation (OSS); and underground electricity cable circuits connecting the OSS to the existing EirGrid substation at Carrickmines. The OES will be located in its entirety within the administrative boundary of Dún Laoghaire Rathdown County Council.

- The Operations and Maintenance (O&M) Base: will be located at Dún Laoghaire Harbour and will comprise the O&M Base for the proposed wind farm. Once the O&M Base is operational, it will also be used to support the management of the construction of the offshore wind farm. The O&M Base will be located within the administrative boundary of Dún Laoghaire-Rathdown County Council.

Figure 1 Schematic of proposed wind farm site (not to scale)



1.3 The Applicant

1.3.1 As stated in section 1.1, the Applicant is Kish Offshore Wind Limited. The Applicant is a joint holder of a maritime area consent ('MAC') for three parts of the maritime area:

- MAC Ref 2022-MAC-003 and 004 (held jointly by Kish Offshore Wind Limited and Bray Offshore Wind Limited);
- MAC Ref MAC20230012 (held jointly by Kish Offshore Wind Limited and Bray Offshore Wind Limited); and
- MAC Ref MAC240020 (held jointly by Kish Offshore Wind Limited, Bray Offshore Wind Limited, and Dún Laoghaire Rathdown County Council).

1.3.2 The application is being made by the Applicant on behalf of Kish Offshore Wind Limited and Bray Offshore Wind Limited, and with the written consent of DLRCC who is a joint holder of the MACs for those parts of the maritime area in which the O&M Base and related facilities will be developed and used for the purposes specified in the MACs.

1.3.3 The shareholders in Kish Offshore Wind Limited and Bray Offshore Wind Limited are RWE (RWE Renewables Ireland Limited) and Saorgus Energy Limited.

1.3.4 Saorgus Energy Ltd is a privately-owned Irish company specialising in the development of wind projects in Ireland. Dublin Array was initially developed by Saorgus Energy Limited. In March 2018, Saorgus Energy Limited entered into a 50:50 partnership with Innogy Renewables Ireland Ltd (a wholly owned subsidiary of Innogy SE) to progress the development of the Dublin Array project. In July 2020 the global renewable energy portfolios of Innogy SE and EON combined to form a new company called RWE Renewables[1].

1 Headquarters Address: RWE Renewables GmbH, RWE Platz 4, 45141 Essen, Germany

1.3.5 RWE Offshore Wind (RWE) is a part of the RWE Group, which is one of the world's leading renewable energy companies. The company is contributing significantly to the success of the energy transition and the decarbonisation of the energy system, with around 20,000 employees located in almost 30 countries worldwide. RWE has extensive experience in developing, building, and operating offshore wind farms, both independently and with partners. RWE is a global leader in offshore wind, operating 19 offshore wind farms globally, these include Triton Knoll (857 MW), Rhyl Flats (90 MW), Gwynt y Môr (576 MW), Rampion (400 MW) and Galloper (353 MW) in the UK, as well as delivering Thornton Bank (325 MW) in Belgium, Amrumbank West (302 MW) off the island of Heligoland, Kaskasi Offshore Wind Farm (342 MW), Nordsee One (332 MW) and Nordsee Ost (295 MW) in Germany. Alongside its partners RWE is developing extension projects at four of its UK offshore wind farms – Gwynt y Môr (Awel y Môr), Galloper (Five Estuaries), Rampion (Rampion II) and the joint venture Greater Gabbard (North Falls) Wind Farms. RWE is also developing projects off the English coast on the Dogger Bank in the North Sea and in the Norfolk Offshore Wind Zone in addition to projects in the United States and Asia Pacific. RWE's ongoing construction projects include the Sofia wind farm (1.4 GW) off the British coast, the Thor offshore wind farm (1.1 GW) in Denmark, the North Sea cluster (1.6 GW) north of the German island of Juist and the OranjeWind Offshore Wind Farm (JV) (795 MW) in the Netherlands.

1.4 The need for Dublin Array

1.4.1 The need for Dublin Array is underscored by global, European, and national imperatives to transition to a low-carbon economy, driven by international agreements, climate obligations, and national legal and policy frameworks. The origins of this project are rooted in the Kyoto Protocol of 1997, which sought to limit greenhouse gas emissions and marked the beginning of Ireland's journey away from fossil fuels. At the time, Ireland's energy system was heavily reliant on fossil fuels, with renewable energy contributing only 4.9% to gross electricity consumption in 1990. Since then, the need to decarbonise has been continuously reiterated through international agreements, most notably the Paris Agreement of 2015, and reinforced through European and national legislative frameworks aimed at meeting ambitious essential renewable energy and emissions reduction targets.

The global climate imperative

1.4.2 International climate science continues to highlight the urgent need for rapid decarbonisation to avoid catastrophic climate change. The 2015 Paris Agreement aims to limit global temperature rise to well below 2°C and calls for increased global efforts to reduce greenhouse gas emissions. More recently, the COP28 summit emphasised the need to reduce emissions by 43% by 2030 compared to 2019 levels, a reduction necessary to limit global warming to 1.5°C. These global agreements frame the urgency for nations to act and have been instrumental in shaping European and national energy policies, including Ireland's own Climate Action Plans.

1.4.3 Ireland's transition to renewable energy, particularly offshore wind, is essential to its climate strategy and energy security goals. Offshore wind is poised to play a pivotal role in helping Ireland meet its decarbonisation targets while securing its energy supply against the volatility of fossil fuel markets and external geopolitical risks. In this context, the Dublin Array project is a direct response to the need for large-scale, indigenous renewable energy infrastructure that can help the country transition away from fossil fuels while contributing to European Union climate and energy objectives.

European climate and energy targets

1.4.4 At the European level, policies such as the European Green Deal and the Revised Renewable Energy Directive (2023/2413) drive the expansion of renewable energy across member states. The EU has set a binding target of achieving at least 42.5% renewable energy by 2030, with individual national targets contributing to this overarching goal. The European Climate Law further enshrines in legislation the goal of net-zero emissions by 2050, providing a clear timeline and set of objectives for the decarbonisation of the energy sector. Offshore wind energy, due to its scalability and technological maturity, is positioned as a key enabler of these targets.

1.4.5 Ireland, as part of its contribution to the EU's climate and energy ambitions, has committed to generating at least 5 GW of offshore wind capacity by 2030, a goal that is central to the government's Climate Action Plan and other key policy documents such as the Programme for Government: Our Shared Future. The Dublin Array Offshore Wind Farm, which is one of four projects which succeeded in securing contracted capacity in Ireland's first offshore renewable energy support scheme (ORESS 1) is integral to Ireland achieving this target, supporting a capacity of between 2,957 and 3,305 GWh of additional clean energy which is enough to offset between 1,100,000 and 1,230,000 tonnes of carbon emissions annually.

National policy and legislative framework

1.4.6 Dublin Array aligns closely with Ireland's National Marine Planning Framework (NMPF), which is the country's first comprehensive marine spatial plan. Published in 2021, the NMPF sets the policy framework for the sustainable use of Ireland's marine resources and supports the development of offshore renewable energy as a critical component of Ireland's decarbonisation pathway.

1.4.7 Additionally, Dublin Array is consistent with the National Planning Framework, which supports sustainable infrastructure that advances Ireland's climate objectives, specifically emphasising renewable energy and offshore wind as a pathway to achieving net-zero emissions by 2050.

1.4.8 Ireland's Marine Planning Policy Statement (MPPS) provides a structured framework for marine development, emphasising sustainability and regulatory efficiency. It facilitates a coordinated, transparent approach for managing Ireland's marine areas, streamlining approval processes and aligning development with national climate goals.

1.4.9 Furthermore, the Maritime Area Planning (MAP) Act 2021 together with the Planning and Development Act 2000, as amended, provides the legal framework for granting permissions for offshore renewable energy projects, streamlining the development process and ensuring that projects like Dublin Array can proceed efficiently through the consenting process.

1.4.10 National policy frameworks, including the Climate Action and Low Carbon Development (Amendment) Act 2021, set the legislative foundation for Ireland's transition to a net-zero emissions economy by 2050. This Act outlines key sectoral emissions targets and enshrines in law the need to decarbonise Ireland's energy system. The Climate Action Plan 2024 further details how Ireland will achieve 80% renewable electricity by 2030, with offshore wind energy playing a central role.

1.4.11 The Offshore Renewable Energy Development Plan (OREDP), first published in 2014, identifies offshore wind as a key enabler of Ireland's renewable energy and climate objectives. By harnessing the vast wind resources off the Irish coast, Ireland can not only reduce its reliance on imported fossil fuels but also become a leader in renewable energy development within the European context. Dublin Array aligns with the strategic objectives of the OREDP, contributing significantly to the decarbonisation of Ireland's electricity supply and helping the country meet its climate and energy commitments.

1.4.12 Looking forward, Ireland's Future Framework will guide substantial development in this sector, with the preparation of OREDP II providing updated strategies and targets. OREDP II will focus on optimising offshore wind's role in Ireland's renewable energy mix, expanding on the foundation of the original OREDP to meet evolving climate goals and regulatory requirements.

Energy security and economic benefits

1.4.13 Energy security has become an increasingly pressing issue for Ireland, where fossil fuels currently account for 81.6% of total energy consumption. Offshore renewable energy (ORE) projects, such as Dublin Array, offer an opportunity to generate renewable energy at a scale not achievable onshore, significantly reducing Ireland's dependence on imported energy and strengthening the resilience of the national energy system. Offshore wind in particular has the capacity to deliver high volumes of clean energy, supporting Ireland's decarbonisation goals and enabling a stable, large-scale energy source that complements onshore renewables.

1.4.14 In addition to enhancing energy security, the Dublin Array project is expected to deliver significant economic benefits through job creation, investment, and regional development, particularly along Ireland's eastern and southern coasts. While focused on the east, Dublin Array's economic contributions align with the NPF and Ireland's ORE plans, which encourage balanced regional development. Although the NPF emphasises growth opportunities on the West Coast, particularly for offshore wind to support regional rebalancing, Dublin Array supports the broader national objectives of sustainable energy expansion and economic growth across regions. According to Energy Security in Ireland to 2030, investment in renewable energy infrastructure, including offshore wind, will drive local and national economic growth while simultaneously addressing long-term energy security concerns.

1.4.15 Dublin Array will create jobs across construction, operation, and maintenance phases, directly supporting Ireland's green economy. This aligns closely with the strategic objectives outlined in the NPF and the NMPF, which sit at the top of the policy hierarchy for An Bord Pleanála (ABP) decision-making.

1.4.16 Both frameworks prioritise renewable energy expansion to meet the demand created by the electrification of sectors such as heat and transport. The draft review of the NPF emphasises the goals even further, reinforcing the importance of large-scale offshore projects in meeting national climate and energy targets. Additionally, the National Development Plan complements these frameworks by allocating resources for infrastructure that advances Ireland's transition to a low-carbon economy.

Alignment with EirGrid's strategic goals

1.4.17 As part of Ireland's transition to a low-carbon economy, EirGrid's Shaping Our Electricity Future roadmap and the Tomorrow's Energy Scenarios forecast a significant increase in the demand for electricity, driven by electrification across sectors such as transport and heating. Dublin Array will play a critical role in meeting this increased demand. By connecting to the national electricity grid, Dublin Array will contribute to Ireland's long-term energy infrastructure, ensuring that the country has the capacity to meet its growing electricity needs while transitioning to a renewable energy system.

1.4.18 In summary, the Dublin Array project is not only essential for helping Ireland meet its renewable energy and climate targets but also for enhancing energy security and delivering substantial economic benefits. It is a cornerstone of Ireland's energy transition and will play a pivotal role in shaping the future of the country's energy system. The project represents a significant step towards a more sustainable, resilient, and low-carbon future for Ireland.

1.4.19 A comprehensive review of relevant policy is set out in Volume 2, Chapter 2: Legislation, Consents, Policy and Guidance.

1.5 Consultation

1.5.1 During the development of Dublin Array, a comprehensive consultation process has been undertaken as part of the EIA process. The Applicant has actively engaged with prescribed bodies, interested groups and the general public to inform them of the project and obtain feedback on the project proposals. The feedback has been incorporated in the design stage of the project, as appropriate. Consultation has formed a component of the EIA process, and the Applicant is committed to continuing engagement throughout the life cycle of the project.

1.5.2 Throughout the pre-application stage the Applicant has undertaken EIA topic-specific consultation with stakeholders. Details of relevant engagement from technical consultation with prescribed bodies and other stakeholders are presented in each EIAR technical chapter (EIAR Volumes 3 and 5).

1.5.3 In addition to topic-specific consultation the applicant has undertaken two phases of non-statutory public consultation. The public and prescribed bodies and other interested parties were consulted on the EIAR Scoping Report in Autumn 2020 and regarding subsequent developments in project design between January and March 2023.

1.5.4 During 2024 a project information campaign was run to inform prescribed bodies, local elected representatives and local stakeholders of the latest changes made to the project design.

1.5.5 The consultation activities included a variety of engagement methods such as:

- Provision of a dedicated project website (www.dublinarray.com), which serves as a central hub for all information related to the Dublin Array project, ensuring transparency and facilitating stakeholder engagement;
- The appointment of a Community Liaison Officer and a Fisheries Liaison Officer to facilitate communication;
- In-person public consultation events accompanied by a virtual exhibition accessible via the project website, providing 24/7 access to consultation information;
- An online webinar held on 8th February, 2023. The recording of the webinar was made available on the Dublin Array website and YouTube channel;
- Direct interactions with prescribed bodies, public representatives, local communities and other interested groups; and
- Consultation with local fisheries organisations.

1.5.6 A summary of consultation is also presented in the Public Consultation and Engagement Report included in Part 1A, Planning Particulars, Schedule 5 of the planning application.

1.6 EIA project team

1.6.1 The EIA team is led by SLR Consulting Ireland Ltd (SLR) and GoBe Consultants Ltd (GoBe) with assistance from specialist consultants. The Applicant confirms that the specialist organisations that have carried out the EIA and produced the EIAR have the skills and relevant competency, expertise and qualifications to undertake EIA for the proposed development.

1.6.2 Authors for each chapter of the EIAR are listed in Table 1; competencies and experience of each author in included in Table 2.

SLR Consulting Ltd

1.6.3 SLR is a multidisciplinary technical consultancy providing services to public and private sector clients in several sectors including energy, infrastructure and waste. SLR is a registered Environmental Impact Assessor Member of the Institute of Environmental Management and Assessment (IEMA) and holds the IEMA Environmental Impact Assessment Quality Mark. Further information on SLR can be found on its corporate website at www.slrconsulting.com.

GoBe Ltd

1.6.4 GoBe is an independent environment and planning consultancy offering a broad range of expertise and experience with a focus on the offshore wind farm development market. GoBe provides a full range of environmental planning and consultancy services to the offshore wind sector, covering both onshore and offshore infrastructure and throughout the full development lifecycle. GoBe is part of the APEM Group. Further information on GoBe can be found on its corporate website www.gobeconsultants.com.

1.7 Structure of the EIA Report

1.7.1 The EIAR is presented in a series of eight volumes, each one presenting the findings of the EIA process. The findings are presented in a systematic way to make navigation through the document as easy to follow as possible. These volumes are structured by specialist EIA subject, on a topic-by-topic basis. This practice aligns with the guidance presented in:

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EIAR) (EPA, 2022); and
- Guidance on EIS and NIS Preparation for Offshore Renewable Energy Projects (2017), Department of Communications, Climate Action and Environment.

1.7.2 The following section provides a brief summary of the proposed contents of each volume.

Volume 1: Non-Technical Summary

1.7.3 The Non-technical Summary (NTS) of the EIAR is a concise, clear, and accessible overview of the EIA report, designed for the general public and stakeholders who may not have technical expertise. It summarises the key findings, including the potential significant environmental effects of Dublin Array, the mitigation measures to address these, and the overall conclusions of the assessment. The NTS aims to provide a straightforward explanation of Dublin Array's effects on the environment, ensuring transparency and facilitating informed public participation in the decision-making process.

Volume 2: Introductory Chapters

1.7.4 Volume 2 introduces Dublin Array and provides an explanation of the aims and format of the EIAR.

1.7.5 Volume 2 contains a description of the Dublin Array development proposals containing information on the site, design, size and other relevant features. A description of the alternatives studied by the Applicant together with the main reasons for the option chosen are included in this volume.

1.7.6 In addition, this volume contains a detailed methodology of the EIA process for Dublin Array. It includes details of the cumulative and transboundary approaches adopted in the cumulative assessment. This volume also provides an overview of the relevant policy, legislation and guidance and consultation activities undertaken.

Volumes 3 and 4: Offshore Infrastructure Assessment Chapters and Technical Appendices

1.7.7 Each volume focuses on specialist topics relevant to the infrastructure under consideration, and its environmental assessment. The chapters provide summaries of the existing (baseline) receiving environment, along with assessments of the likely direct and indirect significant effects of Dublin Array on the environment. They also outline mitigation and monitoring measures to avoid, prevent, reduce, or offset these effects, as well as any residual impacts following implementation. The Technical Appendices contain detailed baseline information, along with supporting survey and modelling reports that underpin the assessments presented in the chapters.

1.7.8 Whilst the majority of the technical chapters within Volume 3 relate to the offshore infrastructure only, there are chapters in this volume which relate to the whole of the Dublin Array project including the onshore elements also, namely: the OES; and the O&M Base. The following EIAR chapters concern the whole of the Dublin Array project:

- Volume 3, Chapter 17: Socio-economic, Tourism, Recreation and Land Use;

- Volume 3, Chapter 18: Climate Change; and
- Volume 3, Chapter 19: Major Accidents and Disasters.

1.7.9 These chapters address the entire Dublin Array project because the effects on the receiving environment for these specialist areas will arise across the Dublin Array project, both offshore and onshore. Assessing these aspects in spatial isolation would not give a true whole project assessment of the likely significant effects.

1.7.10 For the avoidance of doubt, for the purposes of the EIAR the offshore environment is considered to start at the Mean High Water Springs[2] level and extend outwards in a seaward direction.

Volumes 5 and 6: Onshore Infrastructure Assessment Chapters and Technical Appendices

1.7.11 As per Volumes 3 and 4, Volume 5 contains specialist topics relevant to the onshore infrastructure, including the OES and the O&M Base.

1.7.12 Volume 6 contains the technical appendices for all onshore infrastructure which details the surveys and assessments which support the chapters in Volume 5.

Volume 7: Planning Stage Plans

1.7.13 Volume 7 contains all plans submitted with the application for Dublin Array, covering both the onshore and offshore environment.

Volume 8: Interaction of the Environmental Factors and Schedule of Commitments

1.7.14 Volume 8 contains an assessment of the interactions between the environmental factors and a Schedule of Commitments.

1.7.15 The Interactions of the Environmental Factors section addresses the requirement to consider not only the individual significant effects of a development but also the interrelationships between these factors, as required by the Planning and Development Regulations 2001, as amended, and the EPA guidelines (2022).

2 Mean High Water Springs (MHWS) refers to the average height of high tides occurring during spring tides over a defined period. Spring tides are the highest tides in the tidal cycle, occurring twice each month when the Sun, Moon, and Earth are aligned. This point is commonly used to delineate the boundary between terrestrial and marine environments in environmental assessments.

1.7.16 These include:

- Project lifetime effects: This comprises an assessment of the potential for effects occurring throughout different project phases (construction, operation, decommissioning) to interact and create more significant impacts on receptors than if assessed in isolation.
- Receptor-led effects: This comprises the evaluation of how various effects on a single receptor (e.g. benthic ecology) might interact spatially and temporally to produce different or greater impacts than when considered separately.

1.7.17 The Schedule of Commitments summarises the project design features, other avoidance and preventative measures and additional mitigation measures listed in individual topic chapters that the developer commits to during the project lifecycle. It acts as a concise reference for all agreed actions to minimise environmental impacts and maintain transparency.

1.7.18 Table 1 provides a breakdown of the EIAR volumes, chapters and technical appendices.

Table 1 Volume and document structure of the EIAR

Chapter Number	Chapter Title	Competent expert
Volume 1: Non-Technical Summary		
1	Non-technical Summary	Charlotte Bragg – SLR Consulting
Volume 2: Introductory Chapters		
1	Introduction	Alan Mitchell – SLR Consulting Charlotte Bragg – SLR Consulting
2	Consents, Legislation, Policy and Guidance	Charlotte Bragg – SLR Consulting
3	EIA Methodology	Alan Mitchell – SLR Consulting Sarah Strong – GoBe Consultants
4	Cumulative Effects Assessment Methodology	Sarah Strong – GoBe Charlotte Bragg – SLR Consulting
5	Consideration of Alternatives	Paul Murphy – RWE Ciara Conboy-Fischer - RWE
6	Project Description	Paul Murphy – RWE Gillian Moore – RWE Ciara Conboy-Fischer – RWE
Volume 3: Offshore Infrastructure Assessment Chapters		
1	Marine Geology, Oceanography and Physical Processes	Anna Kalish – GoBe
2	Marine Water and Sediment Quality	Sammy Sheldon – GoBe
3	Benthic Subtidal and Intertidal Ecology	Chris Nikitik – GoBe
4	Fish and Shellfish Ecology	Simone Pfeifer – GoBe
5	Marine Mammals	Rachael Sinclair – SMRU Cormac Booth – SMRU

Chapter Number	Chapter Title	Competent expert
6	Offshore and Intertidal Ornithology	Colin Barton – Cork Ecology
7	Bats in the Offshore Environment	Sinead Clifford – SLR Consulting
8	Nature Conservation	Karen O'Neill – GoBe
9	Commercial Fisheries	Fiona Nimmo – NiMa Consultants
10	Shipping and Navigation	Adam Foster – Anatec Sam Westwood – Anatec
11	Marine Infrastructure and Other Users	Karen O'Neill – GoBe
12	Aviation and Radar	Stewart Heald – Osprey
13	Marine Archaeology	Heather Anderson – Maritime Archaeology Christin Heamagi – Maritime Archaeology
14	Cultural Heritage Settings Assessment (Terrestrial Archaeology and Monuments)	James Evans – SLR Consulting John Trehy – SLR Consulting
15	Seascape, Landscape and Visual Impact Assessment	Jo Phillips – SLR Consulting
16	Noise and Vibration (Terrestrial Receptors)	Richard Carter – BOW Acoustics
17	Socio-economic, Tourism, Recreation and Land Use	Sean Leach – HATCH
18	Climate Change	Simon Gandy – SLR Consulting
19	Major Accidents and Disasters	Charlotte Bragg – SLR Consulting
20	Offshore Assessment – Operations and Maintenance Base	As per individual chapters in Volume 3.
Volume 4: Offshore Infrastructure Technical Appendices		
4.3.1-1	Technical Baseline Report – Physical Processes	Anna Kalish – GoBe
4.3.1-2	Physical Process Modelling for Dublin Array Offshore Wind Farm	Intertek

Chapter Number	Chapter Title	Competent expert
4.3.1-2a	Geophysical and Geotechnical Desk Study for Dublin Array Wind Farm	Intertek
4.3.1-3	Hydrodynamic Calibration and Validation Report	Intertek
4.3.1-4	Spectral Wave Model Calibration and Validation Report	Intertek
4.3.1-5	Physical Processes Data Comparison Report	Anna Kalish – GoBe
4.3.1-6	Physical Processes Modelling and Design Scenarios Comparison Report	Anna Kalish – GoBe
4.3.2-1	Water Framework Directive and Marine Strategy Framework Directive Summary	Sammy Sheldon – GoBe
4.3.3-1	Technical Baseline Report – Benthic Subtidal and Intertidal Ecology	Chris Nikitik – GoBe
4.3.3-2	Marine Intertidal Ecological Survey, Shanganagh & Poolbeg, Co. Dublin	Aquafact
4.3.3-3	Fugro – WPM1, WPM2 & WPM3 – Main Array & ECR – Benthic Ecology Monitoring Report	Fugro
4.3.3-4	Fugro – WPM1, WPM2 & WPM3 – Array Area & ECR – Environmental Features Report (Habitat Analysis Only)	Fugro
4.3.3-5	Underwater Image Analysis	APEM
4.3.4-1	Technical Baseline Report – Fish and Shellfish Ecology	Simone Pfeifer – GoBe
4.3.4-2	A Fisheries survey of the Kish and Bray Banks	Aquafact
4.3.5-1	Technical Baseline Report – Marine Mammals	Rachael Sinclair – SMRU Cormac Booth – SMRU
4.3.5-2	Dublin Array OWF Marine Mammal Abundance Estimates 2019-2021	Centre for Research into Ecological and Environmental Modelling
4.3.5-3	Estimating Harbour Porpoise Abundance Using Spatial and Temporal Modelling – update	Centre for Research into Ecological and Environmental Modelling

Chapter Number	Chapter Title	Competent expert
4.3.5-4	Boat Based Bird and Marine Mammal Survey Report 2019-2020	SLR Consulting
4.3.5-5	Boat Based Bird And Marine Mammal Survey Report 2020-2021	SLR Consulting
4.3.5-6	Phase 1 Irish Offshore Wind Farms: Cumulative iPCoD modelling	SMRU Consulting
4.3.5-7	Dublin Array: Underwater noise assessment	SubAcoustech
4.3.5.8	Assessment of the Likelihood of Risk to Marine Annex IV Species: Dublin Array.	GoBe
4.3.6-1	Offshore Ornithology Technical Baseline	Colin Barton – Cork Ecology
4.3.6-2	Method Statement: Offshore Ornithology Assessment for East Coast Phase 1	GoBe
4.3.6-3	Review of Method Statement: Offshore Ornithology Assessment for East Coast Phase 1	National Parks and Wildlife Service
4.3.6-4	Seabird Collision Risk Modelling	Mark Trinder – MacArthur Green
4.3.6-5	Migratory Collision Risk Modelling	GoBe
4.3.6-6	Displacement Matrices	Colin Barton – Cork Ecology
4.3.6-7	Offshore Ornithology Population Viability Analyses	Mark Trinder – MacArthur Green
4.3.6-8	Intertidal Bird Surveys at Two Potential Grid Connection Cable Landfall Locations – Winter 2019/20 and Autumn 2020	SLR Consulting
4.3.6-9	Intertidal Bird Surveys at Shanganagh WWTP – Winter 2023/24	SLR Consulting
4.3.7-1	Offshore Bats Technical Baseline Report	SLR Consulting
4.3.9-1	Technical Report – Commercial Fisheries	Fiona Nimmo – NiMa Consultants
4.3.10-1	Dublin Array Offshore Wind Farm Navigation Risk Assessment	Adam Foster – Anatec Sam Westwood – Anatec

Chapter Number	Chapter Title	Competent expert
4.3.10-2	Dublin Array Offshore Wind Farm Winter Survey 2019	Adam Foster – Anatec Sam Westwood – Anatec
4.3.10-3	Dublin Array Offshore Wind Farm Marine Traffic Survey Report Summer 2021	Adam Foster – Anatec Sam Westwood – Anatec
4.3.10-4	Dublin Array Offshore Wind Farm Marine Traffic Survey Report Winter 2022	Adam Foster – Anatec Sam Westwood – Anatec
4.3.10-5	Dublin Array Offshore Wind Farm Vessel Traffic Survey Report Summer 2023	Adam Foster – Anatec Sam Westwood – Anatec
4.3.10-6	Dublin Array Offshore Wind Farm Long-Term Data Annex	Anatec
4.3.12-1	Instrument Flight Procedures Assessment	Stewart Heald – Osprey
4.3.12-2	The Potential Impact of the Dublin Array on Helicopter Operations to the Kish Tower – Helicopter One Engine Inoperative Case	Anatec
4.3.12-3	Radar Line of Sight Report	Linda-Jean Worley – Osprey
4.3.13-1	Technical Baseline Report – Marine Archaeology	Heather Anderson – Maritime Archaeology Christin Heamagi – Maritime Archaeology
4.3.13-2	Stage 1 Geoarchaeological Report	Heather Anderson – Maritime Archaeology Christin Heamagi – Maritime Archaeology
4.3.13-3	Geophysical Survey 2021: Archaeological Report to support Detection Device Licence 21R0027	Maritime Archaeology
4.3.13-4	Intertidal Archaeological Survey	Niall Brady – ADCO
4.3.14-1	Archaeology and Cultural Heritage Settings Baseline (Offshore Impacts)	Christopher Morley – SLR Consulting
4.3.15-1	SLVIA Methodology	Jo Phillips – SLR Consulting
4.3.15-2	Visual Assessment of Turbine Lighting	Jo Phillips – SLR Consulting

Chapter Number	Chapter Title	Competent expert
4.3.15-3	SLVIA GIS Figures	Jo Phillips – SLR Consulting
4.3.15-4	SLVIA Visualisations	Jo Phillips – SLR Consulting
4.3.16-1	Construction, Operational & Cumulative Noise Predictions	Richard Carter – BOW Acoustics
4.3.18-1	Greenhouse Gas Assessment	Simon Gandy – SLR Consulting
Volume 5: Onshore Infrastructure Assessment Chapters		
1	Introduction	Charlotte Hughes – SLR Consulting
2	Biodiversity	Jake Mathews – SLR Consulting Jonathan Dunn – SLR Consulting Richard Arnold – SLR Consulting
3	Land, Soils and Geology	Peter Glanville – SLR Consulting
4	Water (Hydrology, Hydrogeology and Flood Risk)	Peter Glanville – SLR Consulting Katy Rainford – SLR Consulting
5	Noise and Vibration	Nick Auckland – SLR Consulting Ronan Murphy – SLR Consulting
6	Traffic and Transport	Matt Russell – SLR Consulting
7	Landscape and Visual	Anne Merkle – SLR Consulting
8	Archaeology Cultural Heritage	James Evans – SLR Consulting John Trehy – SLR Consulting
9	Human Health	Adam Gailitis – SLR Consulting
10	Air Quality	Adam Gailitis – SLR Consulting Alan Mitchell – SLR Consulting
11	Material Assets	Alan Mitchell – SLR Consulting

Chapter Number	Chapter Title	Competent expert
Volume 6: Onshore Infrastructure Technical Appendices		
6.5.1-1	Carrickmines Substation Site Selection Report	Paul Kelly – RWE
6.5.1-2	Onshore Cable Route Selection Report	Ciara Conboy-Fischer- RWE
6.5.2-1	Biodiversity Technical Baseline Report	Jake Mathews – SLR Consulting Jonathan Dunn – SLR Consulting Richard Arnold – SLR Consulting
6.5.2-2	O&M Base Onshore Bird Technical Baseline Report	SLR Consulting
6.5.3-1	Land, Soils and Geology Technical Baseline Report	Peter Glanville – SLR Consulting Derek Luby – SLR Consulting
6.5.3-2	Dublin Array Onshore Site Investigations Report	Causeway Geotech
6.5.3-3	Dublin Array Onshore Ground Investigations Report	Causeway Geotech
6.5.4-1	Water (Hydrology, Hydrogeology and Flood Risk) Technical Baseline Report	Peter Glanville – SLR Consulting
6.5.4-2	Cable Route and OSS Flood Risk Assessment	Peter Glanville – SLR Consulting
6.5.4-3	O&M Base Flood Risk Assessment	Peter Glanville – SLR Consulting
6.5.5-1	Noise and Vibration Technical Baseline Report	Nick Auckland – SLR Consulting
6.5.6-1	Traffic and Transportation Technical Baseline	Joanna Read – SLR Consulting
6.5.7-1	Onshore Photomontages	Anne Merkle – SLR Consulting
6.5.7-2	Tree Survey Report	Anne Merkle – SLR Consulting
6.5.8-1	Archaeology and Cultural Heritage Baseline Report	James Evans – SLR Consulting
Volume 7: Planning Stage Plans		
1	Project Environmental Management Plan, including: ▪ Environmental Vessel Management	Aoife Reynolds – RWE Randal Counihan – RWE

Chapter Number	Chapter Title	Competent expert
	▪ Dropped Objects ▪ Marine Pollution Contingency ▪ Marine Biosecurity ▪ Waste Management and Disposal Arrangements ▪ Airborne Noise Management	
2	Dublin Array Decommissioning & Restoration Plan	Paul Murphy – RWE
3	Fisheries Mitigation and Management Strategy	Randal Counihan – RWE
4	Marine Megafauna Mitigation Plan (MMMP)	GoBe
5	Dublin Array Lighting and Marking Plan	Anatec
6	Dublin Array Offshore Wind Farm Vessel Management Plan	Anatec
7	Marine Archaeology Management Plan	Maritime Archaeology
8	Onshore CEMP	Aoife Reynolds – RWE Randal Counihan – RWE
Volume 8: Interactions of the Environmental Factors and Schedule of Commitments		
1	Interactions of the Environmental Factors	SLR/GoBe
2	Schedule of Commitments	SLR/GoBe

1.8 EIAR expert competency and experience

1.8.1 The list of the EIAR expert contributors outlining their competence and experience, including relevant qualifications is provided in Table 2.

Table 2 Qualifications and relevant experience of EIAR topic authors

Expert	Company	Qualifications	Relevant experience
Adam Foster	Anatec	BSc Mathematics	Adam Foster is a Principal Risk Analyst and Head of Renewables at Anatec Ltd and has over 10 years' experience in shipping and navigation and marine risk assessment. Adam has been involved in numerous Navigation Risk Assessment processes including for Phase One projects in Ireland and multiple successfully consented UK projects and has experience in all associated assessment components including stakeholder liaison, leading hazard workshops, and risk modelling.
Adam Gailitis	SLR Consulting	BSc. Geography	Adam specialises in EIA reporting for socio-economic and health impact assessments for complex, multi-use developments including wind farms and mixed-use developments. He has experience in conducting thorough due diligence, policy research, and census data analysis for residential, tourism, and energy projects, ensuring comprehensive and accurate assessments.
Alan Mitchell	SLR Consulting	MA Town Planning	Alan is a Technical Director and MRTPI qualified Town Planner with SLR Consulting, bringing over twenty years of experience in EIA project management, planning application coordination, and socio-economic assessment. Alan's experience includes leading on number environmental assessments of impacts on population and human health. He primarily works with energy and minerals companies, securing planning permissions for complex developments including onshore and offshore wind farms, power stations, mines, and quarries. Alan has contributed to complex infrastructure assessments, manages cumulative impact assessments, and ensures the integration of best practices in environmental methodology.

Expert	Company	Qualifications	Relevant experience
Anna Kalish	GoBe	BSc. Physical Geography MSc. Oceanography	Anna specialises in marine geology and physical processes for offshore wind farm projects. Anna's expertise includes sediment transport, hydrodynamics, and how these interact with the physical marine environment in large-scale infrastructure projects.
Aoife Reynolds	RWE	BSc. Environmental Science MSc. Sustainable Development, MBA	Aoife is an experienced environmental professional in the energy industry with greater than 20 years of experience in front line/operational and corporate role in Ireland and internationally. Aoife has specialist expertise in environmental management in capital projects and operations. Experienced in leading extensive stakeholder and regulatory engagement and delivery of regulatory requirements.
Charlotte Bragg	SLR Consulting	BSc Hons (First) Earth, Sciences with Geography MIEnvSc CSci	Charlotte has 20 years of experience managing EIAs for onshore and offshore wind farms, as well as other transmission and distribution projects in the UK, Ireland, and Canada. She specialises in project management and coordination of EIAs, particularly for large infrastructure projects. Charlotte has led numerous assessments, ensuring compliance with environmental regulations and contributing to the policy and legislative aspects of EIAs.
Charlotte Hughes	SLR Consulting	MSc. Urban Planning	With extensive EIA and planning application experience, Charlotte has worked on diverse projects, including wind farms, solar farms, and residential developments. Responsibilities have included coordinating EIA submissions, completing cumulative effects assessments, and drafting planning and environmental impact statements. Additionally, her experience spans managing change of use applications, discharge of conditions, and feasibility appraisals, focusing on projects in the built environment, energy, and residential sectors.
Chris Nikitik	GoBe	(BSc MSc)	Chris Nikitik is a Senior Marine Ecology Specialist at GoBe with specific expertise in benthic environments. Chris has over 25 years' experience of delivering projects related to a number of drivers such as power generation, port construction and maintenance, industrial developments and transport infrastructure and has routinely acted as technical lead on all benthic aspects of a project from initial programme design through to reporting. Chris is also

Expert	Company	Qualifications	Relevant experience
			experienced with the requirements of environmental reporting in relation to appropriate assessments/EIAs/HRAs etc. and has authored numerous reports and contributed to EIA chapters.
Christin Heamagi	Maritime Archaeology	BS. Archaeology MS. Maritime Archaeology	Christin Heamagi is a Senior Consultant with Maritime Archaeology Ltd. and has extensive experience working in offshore renewable energy projects within the UK and Ireland. As Project Lead for the Dublin Array Offshore Wind Farm, Christin has facilitated stakeholder engagement and been instrumental in the development of cultural heritage mitigation for the project. During the course of this work, Christin has worked and developed a positive working relationship with the UAU.
Christopher Morley	SLR Consulting	B.A., M.Phil., MCIfA, Principal Heritage Consultant	Chris has over 15 years of expertise in commercial heritage and archaeology, providing invaluable advice on major applications across various sectors, including green energy and national infrastructure, throughout the UK. He has successfully managed hundreds of cultural heritage assessments, with a significant focus on EIAs. Chris specialises in EIA project management, offering insights on site feasibility, opportunities, and constraints. He excels in negotiating proportionate scopes of assessment and investigation with heritage consultees, and in identifying mitigation by design strategies. His expertise extends to heritage setting assessments, particularly in relation to tall structures such as wind turbines. In addition to his technical skills, Chris is well-versed in heritage planning policy and case law, understanding their roles within the broader planning system. He frequently serves as an expert witness at public inquiries, bringing a wealth of knowledge and experience to the table.
Ciara Conboy-Fisher	RWE	Advance Diploma in Environmental and Planning Law MSc Environmental Policy	Ciara has been working in the Irish renewables market since 2017 with a focus on onshore wind farm planning applications. She has an Advanced Dip. in Environmental and Planning Law and holds an MSc in Environmental Policy and a BA in Earth Sciences.

Expert	Company	Qualifications	Relevant experience
Cormac Booth	SMRU	MRes. Marine and Fisheries Science PhD. Marine Mammals	Cormac Booth is a marine biologist specialising in analytics with 15 years of experience studying marine mammals. He combines data analysis with consultation to educate decision-makers and regulators in the marine environment. Cormac has worked across various marine industry sectors, providing strategic tools and solutions to enhance understanding and improve business outcomes.
Colin Barton	Cork Ecology	BSc. Biology	Colin Barton of Cork Ecology is the lead author of this Ornithology Technical Report. Colin graduated from the University of Aberdeen in 1992, with a BSc. Honours degree in Biology (Ecology). Colin has worked on offshore wind projects since 2001, specialising in all aspects of ornithology. He has provided ornithological support for several offshore wind projects in Irish and UK waters, with key inputs including survey design, planning and management, provision of European Seabirds at Sea (ESAS) surveyors and equipment, ESAS training, data input and validation, database management, data analysis, the writing of baseline and impact assessment chapters on birds, input into HRA/NIS documents on birds and post-construction monitoring.
Fiona Nimmo	NiMa Consultants	Chemical Engineering Marine Biology	Fiona Nimmo is a marine environmental consultant with over 15 years of experience, specialising in commercial fisheries across the UK and Europe. She is skilled in conducting Environmental Impact Assessments (EIAs) and producing Technical Reports and Environmental Statement Chapters, particularly for marine renewable projects. Fiona has a strong understanding of fisheries management regulations and policies and is experienced in developing mitigation strategies in collaboration with the commercial fishing industry.
Gillian Moore	RWE	BA (Hons) History MA Conservation, Vernacular and Historical Studies	Gillian Moore has worked in the Offshore Wind industry for over 15 years with experience of working in the development, construction and operational phase of projects in the UK and Ireland.
Heather Anderson	Maritime Archaeology	BA. Archaeology and Anthropology	Heather Anderson is a Junior Consultant with Maritime Archaeology Ltd., and has several years' experience in working on offshore renewable energy projects

Expert	Company	Qualifications	Relevant experience
		MSc. Maritime Archaeology	across the UK and Ireland undertaking geophysical assessment and report writing for several offshore developments at various stages of consent and construction.
James Evans	SLR Consulting	BA (Hons) History MA Archaeology	James has over eight years of experience in archaeology and heritage consultancy, specialising in the production of technical documentation such as Desk-Based Assessments, Heritage Statements, Impact Assessments, and Cultural Heritage EIA chapters. His project work encompasses heritage and EIA assessments for wind farms, quarry developments, and various infrastructure projects. James is proficient in managing LiDAR and geophysical surveys, as well as coordinating archaeological field evaluations. He also has extensive experience in securing Scheduled Monument Consent applications and overseeing mitigation strategies across the UK and Ireland.
Jake Mathews	SLR Consulting	MSc. Ecology & Environmental Management BSc. Wildlife Conservation & Zoo Biology	Jake is a Senior Ecologist with expertise in ornithology, bats, and newts, and has extensive experience supporting major infrastructure, wind farm, quarry, and housing projects. He specializes in ecological surveys and assessments, including Preliminary Ecological Appraisals (PEA), Appropriate Assessments (AA), Biodiversity Net Gain (BNG) assessments, and Ecological Clerk of Works (ECoW). Notable projects include Camross Quarry, where he managed surveys for sensitive species such as hen harriers. Jake is skilled in data management, habitat condition analysis, and developing mitigation strategies to support planning and compliance.
Joanna Read	SLR Consulting	MSc, BSc, MCIHT	Joanna is a Principal Transport Planner and experienced Project Manager with over 20 years of experience. She specialises in managing transport assessments for various development types, including energy projects (wind, solar, battery storage, hydrogen), mixed-use developments, schools, leisure centres, and waste management sites. Joanna provides transportation officer support, including highway development control comments, reviewing transport assessments, and preparing appeal reports. She holds an MSc in Transport

Expert	Company	Qualifications	Relevant experience
			Planning & Engineering and a BSc in Geography & Ecology. Joanna is a member of the Chartered Institution of Highways & Transportation and has extensive project experience, including working on wind farms, battery energy storage systems, and solar farms.
Jo Phillips	SLR Consulting	BA Hons in Landscape Architecture Diploma in Urban Design Certificate in Climate Change Management	Jo is an Associate Director SLR, a member of the Landscape Institute and is based in Edinburgh with live projects across the UK and the RoI. Jo is a qualified landscape architect and urban designer with 28 years of experience working on seascape and landscape and visual impact assessments (SLVIA and LVIA). Jo has worked on over 40 onshore wind farms and seven offshore wind farms, including Norfolk Boreas, Norfolk Vanguard and East Anglia 3. Jo is currently acting as LVIA expert witness in the examinations of Five Estuaries and Outer Dowsing offshore wind farms. Jo has been involved in the Dublin Array Project since 2018, and responsibilities as the SLVIA project lead have included undertaking extensive site work, authoring the SLVIA, co-ordinating production of figures and visualisations, and liaising with the client, EIA management team and other Phase 1 Project consultants.
John Trehy	SLR Consulting	BA Archaeology & Prehistory MCIfA	With over 25 years in archaeology and heritage consultancy, he offers substantial expertise in managing complex heritage assessments and developing effective mitigation strategies. His portfolio includes major residential, mixed-use, and renewable energy projects across the UK and Ireland. He is proficient in early-stage heritage due diligence, EIA contributions, and the management of archaeological surveys. Experienced in stakeholder engagement, he collaborates closely with Historic England, local heritage officers, and other key stakeholders to ensure compliance and best practices in project delivery. regularly acts as an expert heritage witness at local plan examinations and public inquiries and has extensive experience in both invasive and non-invasive heritage project management.
Jonathon Dunn	SLR Consulting	PhD, MSc, MA (Cantab)	Jonathon has almost a decade of experience in the environmental sector, specialising in ecological assessments for wind farm and infrastructure projects.

Expert	Company	Qualifications	Relevant experience
			He holds a PhD in avian ecology and has managed biodiversity inputs for numerous EIAR, focusing on bird, bat, and habitat surveys. His extensive experience in ornithological surveys and impact assessments makes him an expert contributor to Environmental Impact Assessments. Jonathon is proficient in statistical analysis and GIS, having authored diverse ecological reports, including Ecological Impact Assessments and Natura Impact Statements, primarily for projects in Ireland. He has managed biodiversity inputs for EIAR chapters for two wind farms and is currently overseeing bird surveys for 13 wind farm projects. His strong analytical background includes expertise in experimental design, data presentation, statistical analysis, and modelling, including avian collision risk modelling. Jonathon is also an experienced GIS user, having produced multiple maps and species distribution models.
Justine Davies	GoBe	MSc Coastal Zone Management, Bournemouth University BSc Marine Geography, Cardiff University	Justine is a Principle Marine Consultant with 15 years of experience as an EIA practitioner and an additional 9 years in the marine environmental field. Justine has significant experience across a range of sectors, having managed projects for the offshore wind industry, ports, marine aggregates and technical involvement in cables and pipelines. Justine has extensive project management experience through her previous role as Consultancy Manager and her work on various NSIP projects. Justine has worked on Dublin Array Offshore Wind Farm in Ireland since 2019, taking on a project management role and providing technical support across the scoping and EIA phases. Justine has also contributed technical support for delivery of post-construction management plans and marine licence applications, including information to support a marine licence for pre-construction seabed preparation and UXO clearance and technical input into the PEMP and Cable Plan.
Karen O'Neill	GoBe	BA (Hons) Geography &	Karen O'Neill is a Senior Consultant in GoBe's Project Delivery Team, with a background in environmental science and major infrastructure planning. She

Expert	Company	Qualifications	Relevant experience
		Archaeology, University College Dublin (UCD) MSc Environmental Science, Trinity College Dublin	holds an MSc in Environmental Science from Trinity College Dublin and a BSc in Geography and Archaeology from UCD. Karen has extensive consultancy experience as an Environmental Scientist with Jennings O'Donovan & Partners, contributing to numerous renewable energy projects both onshore and offshore. She also has experience in landscape visualisation and project management for renewable energy and large-scale infrastructure projects from her role at Macroworks.
Katy Rainford	SLR Consulting	BSc, Geology and Physical Geography	Katy is a hydrologist with nearly seven years of experience in hydrological, hydrogeological, and geological assessments, specialising in EIAs, Flood Risk Assessments (FRAs), and drainage strategies that incorporate Sustainable Urban Drainage Systems (SuDS). Based in Edinburgh, she has managed projects across various sectors, particularly in energy and infrastructure, contributing to wind farm developments through tasks such as peat probing assessments and watercourse crossing designs. Katy's expertise extends to project management, where she plays a key role in multidisciplinary client discussions, and she is proficient in GIS, Python, and Excel for data analysis. Her educational background includes a BSc in Geology and Physical Geography.
Matt Russell	SLR Consulting	B.Eng Civil Engineering	Matt is a Director with 25 years of experience in highways and transportation, serving both public and private sector clients. A civil engineer by training, he provides specialised transportation advice for energy, commercial, and residential developments, including contentious sites. Notably, he has contributed to onshore wind projects and the Bradwell B Nuclear Power Plant DCO, aiding low-carbon energy solutions. Additionally, he advises retail sector clients and supports major homebuilders with strategic site planning. Matt is a competent expert under the EIA Regulations.
Nick Auckland	SLR Consulting	IOA Diploma in Acoustic and Noise Control.	Nick has extensive experience in noise and vibration assessments across various residential, industrial, infrastructure, energy, and mining sectors. He has successfully managed numerous projects, overseeing noise surveys, modelling, and assessments to inform planning processes and provide mitigation advice.

Expert	Company	Qualifications	Relevant experience
		BSc. In Music Technology	His project highlights include preparing noise assessments for developments such as quarries and battery storage facilities, as well as noise management plans for operational mines. Nick holds an IOA Diploma in Acoustics and Noise Control and a BSc in Music Technology, which supports his ability to conduct detailed noise analyses and modelling in compliance with relevant guidelines.
Paul Kelly	RWE	BSc Environmental Science H Dip Environmental Pollution Control M Sc Environmental Assessment	Paul has more than 25 years of experience in environmental monitoring and impact assessment of large-scale infrastructure projects in Ireland and internationally. Specialising in energy infrastructure (transmission and generation) he has detailed knowledge of development, assessment and consenting processes in the marine and terrestrial environment in Ireland.
Paul Murphy	RWE	Level 6 Certificate in Sustainable Energy BSc Civil Engineering BEng Civil and Transportation Engineering	Expertise in offshore wind energy projects with RWE, having experience in site selection processes and the assessment of alternatives for major wind farm developments.
Peter Glanville	SLR Consulting	Diploma in GIS and Database Management. MSc. GIS and Environment. PhD. Geomorphology,	Peter is a Technical and Project Director in the Water (Hydrology and Hydrogeology) team, bringing over 20 years of experience in environmental consulting. His expertise encompasses hydrology, geomorphology, and geology, with a focus on water assessments and hydrological monitoring. Peter has managed the design and implementation of numerous scientific monitoring programs, leading multidisciplinary teams and ensuring adherence to health and safety protocols. His project management experience spans various

Expert	Company	Qualifications	Relevant experience
		BA Geography.	sectors, including minerals, power, and infrastructure, where he has directed hydrological and flood risk assessments, environmental impact reports, and peat management plans. He holds a PhD in Geomorphology and is a Professional Geologist recognised by the Institute of Geologists of Ireland.
Rachael Sinclair	SMRU	BSc Hons in Marine Biology and an MRes in Marine Mammal Science	Rachael is a Principal Scientist at SMRU Consulting. She has been working in marine mammal science since graduating in 2011 and has been working in consultancy since 2013. Rachael has extensive experience as the lead author of marine mammal baseline characterisation reports and EIA chapters for numerous offshore wind farms in England, Scotland, Wales and Ireland.
Randal Counihan	RWE	BSc (Hons) Environmental Zoology MSc Bioinformatics and Computational Biology	Randal is an Offshore Consents Manager with RWE. He has worked in marine biology and marine science since 2005 with specific focus on marine mammals, turtles and fish. He has been involved in offshore wind projects in Ireland, the UK and the US since 2014 from pre-consent and pre-construction surveys and consultancy, through to installation. Randal is a member of the Institute of Marine Engineering, Science and Technology (IMarEST), a Chartered Scientist and a Chartered Marine Scientist.
Richard Arnold	SLR Consulting	MRes in Environmental Science BSc (Hons) Ecology	Richard Arnold is a Technical Director with over 22 years of experience in ecological consultancy, specializing in ecological impact assessments, Habitats Regulations Assessments, and protected species licensing across sectors such as urban regeneration and renewable energy. He has directed numerous high-profile projects, including High Speed 2 and the Lodge Hill Development, while ensuring compliance with biodiversity legislation.
Richard Carter	BOW Acoustics	C.Eng, B.Eng(Hons) MIOA	Richard Carter, a director of Bow Acoustics, is a Chartered Acoustics Engineer and a full member of the UK Institute of Acoustics with over 18 years' experience in the assessment of environmental noise, 13 years of which specialised in wind turbine noise.
Ronan Murphy	SLR Consulting	BSc (Hons) MIOA	Ronan has over 17 years of consultancy experience. Ronan has extensive experience in the environmental acoustics field working on a variety of projects across infrastructure, industry and energy. This experience includes

Expert	Company	Qualifications	Relevant experience
			comprehensive baseline and investigative noise surveying, detailed predictive noise modelling, preparation of EIARs and provision of expert witness testimony at Oral Hearing.
Sam Westwood	Anatec	NVQ 2&3 Marine Operations BSc Shipping Operation Post Graduate Certificate in Maritime Studies NEBOSH General Certificate in H&S Diploma in Small Craft Surveying	Sam Westwood is a specialist in navigation and risk assessments for offshore renewable energy, with in-depth knowledge of UK consenting requirements and offshore health and safety management. She provides expert advice on marine regulations and risk management for key offshore wind developers, supporting project phases from appraisal to construction. Sam actively participates in RenewableUK working groups, contributing to marine safety and operations guidance, and has practical experience in offshore management, including vessel and contractor oversight, across the UK and Europe
Sammy Sheldon	GoBe	MSci (Hons) Oceanography (2:1 Upper Class), University of Southampton ISO 9001 Internal Auditor IEMA Practitioner	Sammy is a Principal Consultant with thirteen years of commercial experience, including project management, with a background in oceanography. Sammy has practical experience of field work, statistical analysis of data, report writing and mapping in ArcGIS. She has worked extensively across a range of marine sectors include renewables, oil and gas, ports and harbours and marine water quality. She has also contributed to technical chapters and reports for incorporation into Environmental Statements including physical processes, marine water and sediment quality and Water Framework Directive assessments. Furthermore, her experience of the production of post-consent compliance documentation includes drafting of pre-construction documents and environmental appraisals of revised construction methods to gain regulatory approval. In her previous employment she specialised as a numerical modeller in marine and coastal settings. This entailed the construction, calibration and application of hydrodynamic and wave models. These models were used for a range of applications including quantifying changes to physical

Expert	Company	Qualifications	Relevant experience
			process regimes and water quality. In addition, Sammy has undertaken numerous metocean studies for a range of marine sectors, including simple weather downtime assessments through to extreme value analysis of winds and waves.
Sarah Strong	GoBe Consultants	BSc (MSci) Aquatic Bioscience, University of Glasgow MSc Environmental Consultancy, University of Plymouth	Sarah is a specialist in marine environmental impact assessments with GoBe Consultants. Sarah has extensive experience working on multiple offshore wind farm projects, including the Dublin Array Offshore Wind Farm, where she serves as the Project Manager for offshore aspects. Sarah's has extensive experience conducting cumulative impact assessments and developing methodologies tailored to the marine environments. She has a deep understanding of the unique challenges and regulatory requirements associated with offshore wind projects. Her work ensures that environmental impacts are thoroughly assessed and mitigated, contributing to the sustainable development of marine infrastructure. In her role, Sarah coordinates with multidisciplinary teams to deliver comprehensive EIAs, ensuring compliance with environmental regulations and best practices.
Sean Leach	HATCH	BA Geography and Economics MS. Urban Regeneration & Development	Sean joined Hatch in October 2018. Before joining Hatch, Sean obtained a masters degree in MSc Urban Regeneration and Development at the University of Manchester whilst undertaking a 2-year spatial planning internship at the Canal & River Trust. Sean has a strong understanding of the concepts underpinning the analysis of socio-economic impacts. He is skilled in the use of modelling to capture direct, indirect and induced effects as well as assessing wider socio-economic impacts. Sean has strong experience in the assessment of socio-economics, tourism and recreation impacts resulting from the development of wind farm projects and has worked on a variety of projects in different areas of renewable energy and the transition to zero carbon. This has involved Sean undertaking input output modelling techniques, drafting PEIR assessments, mapping, undertaking

Expert	Company	Qualifications	Relevant experience
			consultations with local businesses and stakeholders, baselining impact areas, producing logic models, and reviewing policy.
Simon Gandy	SLR Consulting	MSc. Environmental Technology MA. Meng. Chemical Engineering	Simon is a Technical Director at SLR Consulting with over 20 years of environmental consultancy experience. Simon specialises in EIAs within the energy section, those related to waste management, the circular economy, and sustainability. Simon has directed extensive Life Cycle Assessment (LCA) projects, assisting both public and private clients in reducing environmental impacts and evaluating design options. Known for his expertise in LCA and circular economy policy, Simon is leading SLR's integration of sustainability services, including climate resilience, natural capital, and energy transition, to provide comprehensive sustainability support. In his role, Simon was responsible for the GHG assessment and climate change chapter for the Dublin Array Offshore Wind Farm. His work involved assessing the project's carbon footprint, identifying opportunities for emissions reduction, and ensuring compliance with climate-related regulations.
Simone Pfeifer	GoBe	PhD Deep-Sea Ecology, University of Southampton, UK MSc (Distinction) Marine Environmental Protection, University of Wales, Bangor, UK Diploma in Biology, University of Rostock, Germany	Simone Pfeifer is a Senior Marine Ecology Specialist at GoBe with a strong background providing scientific advice to UK consenting authorities and developers on the impacts of offshore activities on marine habitats and faunal assemblages. Simone has reviewed numerous scoping reports, EIAs, offshore survey specifications, and mitigation plans for offshore development proposals relating to marine aggregates, oil and gas, offshore wind, and sub-sea cabling. Simone has experience in conducting HRA/Appropriate Assessment screening assessments and advising developers on the risk of causing injury or disturbance to marine European Protected Species. She has also been involved in the development of sampling protocols for Annex I habitats and guidelines to assess impacts on features protected in Natura 2000 sites and UK Marine Conservation Zones. Simone is familiar with current EIA and HRA assessment approaches and relevant environmental legislations and policies. Simone has

Expert	Company	Qualifications	Relevant experience
			been involved in the Dublin Array project since August 2023, contributing to the delivery of the Fish and Shellfish EIAR.
Sinead Clifford	SLR Consulting	Certificate in Ecological Consultancy BSc (Hons) Wildlife Biology	Sinéad is an ecological consultant with a BSc in Wildlife Biology and a Certificate in Ecological Consultancy. Since joining SLR Consulting in 2021, she has developed strong field skills, conducting bat, ornithological, botanical, and mammalian surveys, and managing bat surveys for large-scale projects like wind energy developments. Sinéad is proficient in GIS software, creating maps and species distribution models, and has authored various ecological reports, including EIAR and AA. Her project experience spans diverse sectors, including wind, waste, and infrastructure, where she has demonstrated expertise in ecological assessments and mitigation strategies.
Stewart Heald	Osprey	BS. Archaeology MS. Maritime Archaeology	Stewart is a Member of the Royal Aeronautical Society and is a Subject Matter Expert with many years of experience in the independent assessment of potential technical impact of wind turbine developments on aviation stakeholders and equipment including radar, navigation beacons and communication links. Experienced in identification of aviation stakeholders and completing operational impact assessments on potential for developments to affect Air Traffic Control and Air Defence radar systems. Stewart is experienced in all stages of wind energy aviation assessment and planning requirements, including scoping, PEIR, ES preparation, DCO proof of evidence preparation and mitigation of aviation and military impacts. He regularly completes Safety Assessments of proposed renewable energy developments in relation to air traffic service provider operations and he assesses the potential for effects of airfield-safeguarding criteria including obstacle limitation surfaces. Stewart's significant offshore projects to which he has provided aviation expertise include Neart na Gaoithe, Inch Cape, Norfolk Vanguard and Norfolk Boreas and the Hornsea projects. He is competent in stakeholder relationship management and an experienced and facilitator of meetings between developers and receptor organisations. Stewart, as Project Manager, has most recently successfully completed delivery of an Airspace Change Process for the mitigation of two

Expert	Company	Qualifications	Relevant experience
			offshore wind farms against MoD radar systems and is presently working on stakeholder advice and guidance on changes to airspace operations, on and offshore and the airspace change regulatory process.

1.9 References

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