



# EIAR Volume 5: Onshore Infrastructure Assessment Chapters Chapter 1: Introduction

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# Dublin Array Offshore Wind Farm

## Environmental Impact Assessment Report

Volume 5, Chapter 1: Introduction

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## Glossary

Term	Definition
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.
Onshore Export Cable Corridor	The term used to describe the 7.4 km route of the onshore cables and associated infrastructure between the TJBs and the OSS.
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.
Carrickmines GCP	The existing 220 kV substation at which the Dublin Array project is proposed to connect to the existing national electricity transmission network
Landfall Site	The location for the two underground TJBs at Shanganagh Cliffs where the onshore and offshore ECRs join also including the associated temporary infrastructure to support the Landfall Site TCC.
Lowest Astronomical Tide (LAT)	The Lowest Astronomical Tide (LAT) is the lowest level of tide that can be predicted to occur under normal meteorological and astronomical conditions.
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.
Operation and Maintenance Base (O&M Base)	This is the location from where the daily operations and normal repairs, replacement of parts and structural components, and other activities needed to preserve the offshore assets will be conducted.
Offshore substation platform (OSP)	Offshore substation, which is necessary to connect the WTGs with the Offshore Export Cable.
Onshore substation (OSS)	Part of the OES, the substation is required to facilitate the connection to the existing national electricity transmission system.
Temporary Construction Compounds (TCCs)	Four main TCCs will be utilised for parking, welfare facilities, site office cabins, construction equipment, construction material laydown and storage for the duration of the OES construction phase with an occupation of up to 36 months.  Three locations are identified to temporarily support the installation of the OES: Landfall Site TCC (Shanganagh Cliffs) Clifton Park TCC Leopardstown TCC OSS TCC
Transition Joint Bay (TJB)	The proposed infrastructure at the Landfall location where the offshore and onshore cables connect.

Term	Definition
Wind turbine generators (WTG)	All the components of a wind turbine, including the tower, nacelle and rotor.

## Acronyms

Term	Definition
DLRCC	Dún Laoghaire-Rathdown County Council
ECR	Export Cable Route
EIAR	Environmental Impact Assessment Report
GCP	Grid Connection Point
HWM	High Water Mark
kV	Kilovolt
LAT	Lowest Astronomical Tide
OES	Onshore Electrical System
O&M	Operations and Maintenance Base
OSP	Offshore Substation Platform
OSS	Onshore Substation
TCC	Temporary Construction Compound
TJB	Transition Joint Bay
TSO	Transmission Service Operator
WTG	Wind Turbine Generators

# 1 Introduction

1.1.1 This volume of the EIAR for the proposed Dublin Array Offshore Wind Farm (hereafter referred to as Dublin Array) contains the environmental assessment chapters for the onshore infrastructure. The onshore infrastructure comprises the Onshore Electrical System (OES) (including the Landfall/Transition Joint Bay (TJB), Onshore Substation (OSS), and underground onshore export cables connecting the OSS to the existing EirGrid substation at Carrickmines), and the Operations and Maintenance (O&M) Base (Figure 1).

## 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 (hereafter referred to as the Project Description Chapter) 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): The cumulative term used in the EIAR to describe all of the onshore transmission infrastructure described in Section 1.2.3 that are necessary to facilitate the operation of the wind farm. It also includes the temporary construction compounds (TCCs) required to support the construction of the OES located at the Landfall Site in Shanganagh Cliffs, Cliton Park and Leopardstown. The OES will be located in its entirety within the administrative boundary of Dún Laoghaire Rathdown County Council (DLRCC).
- ▲ 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 DLRCC.

- 1.2.3 The OES comprises all of the onshore electrical transmission infrastructure above the High Water mark (HWM) associated with Dublin Array. This includes the TJBs at the Landfall Site, the onshore export cables and associated infrastructure, the OSS in Jamestown and the grid connection between the OSS and the existing 220 kV substation in Carrickmines, referred to as the Carrickmines grid connection point (GCP). Further detail is included in section 6.8 of the Project Description chapter.
- 1.2.4 In order to service and maintain the offshore infrastructure, a storage and coordination facility is required (referred to in this document as the O&M Base). The O&M Base will act as a storage and loading area for small and medium spare parts for the Wind Turbine Generators (WTGs) and small ancillary equipment such as tools and consumables. The proposed development will provide offices and warehouse space together with berthing facilities for maintenance vessels associated with the ongoing operation and maintenance of Dublin Array. Further detail is included in section 6.16 of the Project Description chapter.
- 1.2.5 Following a proposed eighteen month proving period, the transmission assets will be transferred to EirGrid, the Transmission Service Operator (TSO), in accordance with Offshore Electricity Transmission System Policy. All assets which are included in the OES, from the Landfall Site to the final GCP at Carrickmines, will be transferred to EirGrid, along with offshore export cables running from the TJB back to the OSP.
- 1.2.6 From start of operation until asset transfer (up to 18 months) the Applicant will have responsibility for the operation and maintenance of the transmission assets.
- 1.2.7 On handover, EirGrid will take responsibility for the operation and maintenance of all of the transmission infrastructure from the OSP to the Carrickmines GCP, including the TJBs, onshore export cables, OSS and grid connection and associated control, protection, and telecommunications equipment. All other offshore infrastructure will be operated and maintained by Dublin Array.

## 1.3 Onshore assessment chapters

1.3.1 The following chapters in this volume assess a range of environmental and human health factors, providing a comprehensive assessment of the onshore infrastructure of Dublin Array:

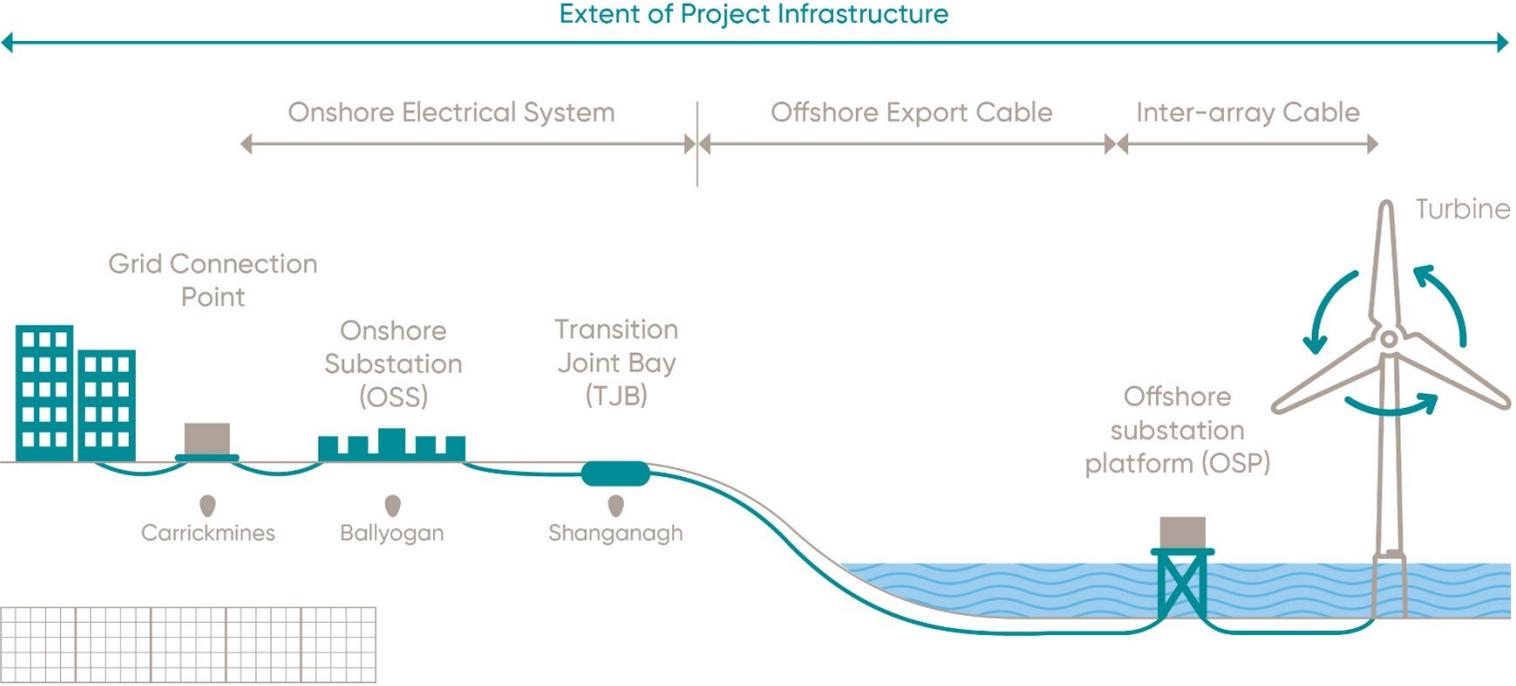
- ▲ Chapter 2: Biodiversity;
- ▲ Chapter 3: Land, Soils and Geology;
- ▲ Chapter 4: Water (Hydrology, Hydrogeology and Flood Risk);
- ▲ Chapter 5: Noise and Vibration;
- ▲ Chapter 6: Traffic and Transport;
- ▲ Chapter 7: Landscape and Visual;

- ▲ Chapter 8: Archaeology and Cultural Heritage;
- ▲ Chapter 9: Human Health;
- ▲ Chapter 10: Air Quality; and
- ▲ Chapter 11: Material Assets.

1.3.2 Each chapter assesses the potential impacts of the Dublin Array during the construction, operation, and decommissioning phases of the onshore infrastructure. Corresponding technical appendices, where relevant, are included in Volume 6. These appendices provide additional data, methodologies, and detailed analyses that support the findings presented in the chapters.

1.3.3 The onshore assessments should be read in conjunction with the offshore chapters in Volume 3, which assess the potential impacts of the offshore infrastructure, including the WTGs and foundations, subsea electrical cables, and OSP.

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





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