



ELAR Volume 5: Onshore Infrastructure Assessment Chapters Chapter 7: Landscape and Visual

Kish Offshore Wind Ltd

RWE  **SLR** **GoBe**
APEM Group

www.dublinarray-marineplanning.ie



Dublin Array Offshore Wind Farm

Environmental Impact Assessment Report

Volume 5, Chapter 7: Landscape and Visual

Contents

7	Landscape and Visual	10
7.1	Introduction	10
7.2	Regulatory background	11
7.3	Consultation	12
7.4	Methodology.....	14
	Study area	14
	Baseline data	18
	Assessment methodology	19
	Categories of effects	19
7.5	Assessment criteria	20
	Sensitivity of receptor criteria	20
	Magnitude of change criteria.....	21
	Defining the significance of effect	22
7.6	Receiving environment	25
	Landscape baseline	26
	Visual baseline	51
7.7	Defining the sensitivity of the baseline.....	60
	Shanganagh Cliffs – residents and recreational users	61
	Ballyogan Road – residents, road users and people at their workplace.....	61
	North-eastern slopes of the Dublin Mountains – residents, recreational users and road users .	62
	Dún Laoghaire Harbour – residents, recreational users and road users	62
7.8	Uncertainties and technical difficulties encountered.....	63
7.9	Scope of the assessment.....	63
	Scoped in.....	63
	Scoped out from further evaluation in this EIAR	63
	Sensitive receptors.....	65
7.10	Key parameters for assessment.....	65
7.11	Project design features and avoidance and preventative measures.....	67
7.12	Environmental assessment: construction phase	74
	Potential construction impacts on visual receptors	75
	Potential whole project construction impacts.....	79
7.13	Environmental assessment: operational phase	79

Potential operational impacts on visual receptors	80
Potential whole project operational impacts	82
7.14 Environmental assessment: decommissioning phase	82
7.15 Environmental assessment: cumulative effects	85
Projects scoped out.....	85
Onshore projects for cumulative assessment.....	86
7.16 Interactions of the environmental factors.....	86
7.17 Summary of effects	88
7.18 References	91

Figures

Figure 1 Landscape and Visual Assessment: Study Area overview.....	16
Figure 2 Landscape and visual assessment: Designations and photograph locations.....	28
Figure 3 DLRCC Landscape Character Areas	39
Figure 4 Extract from the Regional Seascape Character Assessment for Ireland 2020, showing area covered by SCA 14 and example of coastline in this SCA.	42
Figure 5 Extract from the Regional Seascape Character Assessment for Ireland 2020, showing area covered by SCA 15 and example of coastline in this SCA.	43

Tables

Table 1 Summary of consultation relating to LVIA	13
Table 2 Illustrative matrix of significant effects.....	24
Table 3 Local Landscape Units within the study areas and preliminary scoping of potential significant effects	46
Table 4 Visual receptors within the study areas and preliminary scoping of potential significant effects	54
Table 5 Key project design parameters considered for Landscape and Visual assessment	66
Table 6 Project design features and other avoidance and preventable measures relating to landscape and visual	68
Table 7 Project lifetime effects assessment for potential inter-related effects on landscape and visual receptors.....	87
Table 8 Summary of significant landscape/visual effects	90

Photographs

Photograph 1: Location of the Landfall Site at Shanganagh cliffs (December 2020)	29
Photograph 2: Greenspace north of Clifton Park in Sector 1 (December 2020)	30
Photograph 3: Southern end of Shanganagh Road in Sector 1 (December 2020)	30
Photograph 4: Loughlinstown Linear Park looking south towards Sector 2 (December 2020).....	31
Photograph 5: R118/Wyattville Road, at entrance to Cherrywood Park (northbound) in Sector 3 (March 2023).....	31
Photograph 6: R842/Glenamuck Roundabout, facing Golf Lane in Sector 5 (March 2023)	32
Photograph 7: R842/Glenamuck Road, opposite The Crescent (Carrickmines Green), facing Carrickmines Retail Park in Sector 6 (December 2023)	32
Photograph 8: Ballyogan Road (L6034) at junction with Ballyogan Link Road – new road into the Carrickmines Retail Park (January 2023).....	33
Photograph 9: Ballyogan Road (L6034) at junction with Ballyogan Avenue (January 2023).....	33
Photograph 10: Killiney Hill, looking south in the direction of the Landfall Site (August 2021).....	34
Photograph 11: Burrow Road looking east towards the proposed OSS site (January 2023)	35
Photograph 12: Ballyedmonduff Road looking northeast towards the proposed OSS site (January 2023)	35
Photograph 13: Dún Laoghaire Harbour – East Pier, near band stand, looking west towards the site for the proposed O&M Base (December 2023).....	37
Photograph 14: Dún Laoghaire Harbour Entrance/Queen’s Road, looking north towards the site for the proposed O&M Base (December 2023)	37

Annex

Annex A Legislation and Policy	93
--------------------------------------	----

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.
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.
Dublin Area Rapid Transit system (DART)	A rail network serving the Dublin area.
European Landscape Convention (ELC)	A convention promoting the protection, management, and planning of landscapes in Europe.
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.
Grid Connection Point (GCP)	Carrickmines 220kV substation (the national transmission system node)
Grid connection route	The two 220kV circuits connection the OSS to the GCP
Historic Landscape Character Assessments (HLCA)	Assessments that describe the historical development and character of landscapes.
Irish Transverse Mercator (ITM)	A coordinate system used for mapping in Ireland.

Term	Definition
Landfall Site	The location where the Offshore Export Cable Route comes ashore adjacent to the Shanganagh Waste Water Treatment Plant (WWTP).
Landscape Institute (LI)	A professional body for landscape architects.
Landscape Institute Technical Guidance Note (LITGN)	Guidance notes produced by the Landscape Institute on various aspects of landscape architecture.
Landscape and Visual Impact Assessment (LVIA)	An assessment of the potential impacts of a project on the landscape and visual receptors.
National Landscape Strategy (NLS)	A strategy for the protection, management, and planning of landscapes in Ireland.
Natura Impact Statement (NIS)	A document that assesses the potential impacts of a project on Natura 2000 sites, which are protected areas in the EU.
Onshore Export Cable Route	The term used to describe the 7.4 km route of the onshore cables and associated infrastructure between the TJBs and the OSS
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.
Onshore infrastructure	The Onshore Electrical System and the O&M Base.
Onshore substation (OSS)	Part of the OES, the substation is required to facilitate the connection to the existing national electricity transmission system.
Operations & Maintenance (O&M) Base	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.
Planning Acts	Planning and Development Act 2000, as amended, and where the context so admits, including also the Planning Regulations.
Principal Visual Receptor (PVR)	Key viewpoints or locations from which the visual impact of a project is assessed.
Receiving environment	The baseline environment.
Root Protection Area (RPA)	The area around a tree's roots that must be protected during construction to prevent damage.
Seascape Character Areas (SCA)	Distinct areas of seascape that have a consistent character and can be mapped and described.
Seascape, Landscape, and Visual Impact Assessment (SLVIA)	An assessment of the potential impacts of a project on the seascape, landscape, and visual receptors.
Transition Joint Bay (TJB)	Part of the OES, the TJBs are proposed infrastructure at the Landfall Site where the offshore and onshore cables connect.

Term	Definition
Visual receptors	Individuals or groups of people who experience views of the landscape and may be affected by changes to it.
Zone of Theoretical Visibility (ZTV)	A map showing areas from which a development may be visible, based on topography and other factors.

Acronyms

Term	Definition
CEMP	Construction Environmental Management Plan
CoE	Council of Europe
DART	Dublin Area Rapid Transit system
DCC	Dublin City Council
DCCAE	Department of Communications, Climate Action & Environment
DLR	Dún Laoghaire-Rathdown
DLRCC	Dún Laoghaire-Rathdown County Council
DOAHG	Department of Arts, Heritage and the Gaeltacht
ECC	Export Cable Corridor
ECR	Export Cable Route
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EIS	Environmental Impact Statement
ELC	European Landscape Convention
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
GCP	Grid Connection Point
GIS	Geographic Information System
GLVIA3	Guidelines for Landscape and Visual Impact Assessment (Third Edition)
HDD	Horizontal Directional Drilling
HLCA	Historic Landscape Character Assessments
IEMA	Institute of Environmental Management & Assessment
ITM	Irish Transverse Mercator
LCA	Landscape Character Areas
LI	Landscape Institute
LITGN	Landscape Institute Technical Guidance Note
LVIA	Landscape and Visual Impact Assessment
NIS	Natura Impact Statement
NLS	National Landscape Strategy

Term	Definition
NPF	National Planning Framework
NPO	National Policy Objective
NSO	National Strategic Outcome
OD	Ordnance Datum
O&M	Operations and Maintenance
OES	Onshore Electrical System
OSI	Ordnance Survey Ireland
OSS	Onshore Substation
PVR	Principal Visual Receptor
ROI	Republic of Ireland
RPA	Root Protection Area
RPO	Regional Policy Objective
RSES	Regional Spatial and Economic Strategy
SCA	Seascape Character Areas
SDZ	Strategic Development Zone
SEAI	Sustainable Energy Authority of Ireland
SLVIA	Seascape, Landscape, and Visual Impact Assessment
TCC	Temporary Construction Compound
TGN	Technical Guidance Note
TJB	Transition Joint Bay
UK	United Kingdom
WTG	Wind Turbine Generators
WWTP	Waste Water Treatment Plant
ZTV	Zone of Theoretical Visibility

7 Landscape and Visual

7.1 Introduction

- 7.1.1 This chapter of the Applicant's Environmental Impact Assessment Report (EIAR) presents the results of the Environmental Impact Assessment (EIA) for the potential impacts of the construction, operation and maintenance, and decommissioning phases associated with the onshore infrastructure of the proposed Dublin Array Offshore Wind Farm (Dublin Array) upon landscape and visual receptors. The onshore infrastructure includes the proposed Operations and Maintenance (O&M) Base at Dún Laoghaire Harbour and the onshore electrical system (OES) comprising the Landfall Site where the offshore export cables meets the onshore export cables in an underground transition joint bays (TJBs), the onshore underground export cable route (ECR), and onshore substation (OSS) and all associated temporary construction compounds (TCCs). These are all described in full in Volume 2, Chapter 6: Project Description (hereafter referred to as the Project Description chapter).
- 7.1.2 There will be temporary construction compounds (TCCs) at the Landfall Site and at the other two main TCC locations at Clifton Park TCC and Leopardstown TCC, i.e. for the duration of the construction phase. Several smaller localised TCCs will be utilised during the construction phase along the onshore ECR, specifically at trenchless crossing point locations where the onshore ECR will cross under significant transport networks or watercourses. These will include above ground features and will be in place for short periods (up to 40 days) during the construction phase. However, all permanent infrastructure will be located underground at the Landfall Site and other TCC Sites with only inspection manhole covers visible at the surface, once operational (note: there will be no permanent infrastructure at the site of the Leopardstown TCC).
- 7.1.3 At the OSS and O&M Base, above ground features will be present during the construction period and throughout the operational period, as well as during and following the decommissioning period, as both structures will potentially be repurposed and therefore remain in place.
- 7.1.4 For ease of reference and to aid in identifying features within the assessment, the Onshore ECR has been divided into seven sectors, labelled Sector 1 through Sector 7 (Project Description chapter, Figures 55 – 61). Sector 1 begins west of the Landfall Site at Shanganagh Cliffs, and Sector 7 concludes at the proposed OSS in Jamestown.
- 7.1.5 This assessment is based on the Guidelines for Landscape and Visual Impact Assessment, Third Edition (Landscape Institute (LI) & Institute of Environmental Management & Assessment (IEMA), 2013), hereafter referred to as GLVIA3, which are widely accepted as best practice for Landscape and Visual Assessment (LVIA) in Ireland. GLVIA3 emphasises that landscape and visual effects are related but independent issues; landscape effects are changes in the landscape, its character and quality, while visual effects relate to the appearance of these changes and the resulting effect on visual amenity.

7.1.6 This chapter should be read in conjunction with:

- Volume 3, Chapter 15: Seascape, Landscape and Visual Impact Assessment (hereafter referred to as the SLVIA Chapter), due to the interactions between the technical aspects;
- Volume 4, Appendix 4.3.16-5: SLVIA Methodology (hereafter referred to as the SLVIA Methodology Appendix), which details the methodology used to assess the seascape, landscape and visual effects of the offshore elements of Dublin Array and their significance. To ensure consistency with the SLVIA chapter, the same assessment principles were applied here, but with a focus on landscape receptors (i.e. less emphasis on seascape receptors) and adjusted to address the landscape and visual effects of the onshore infrastructure (i.e. the OES and O&M Base). Sections 7.4 and 7.5 provide a summary of the LVIA approach and highlight differences from the SLVIA Methodology Appendix, such as variations in the study area;
- Volume 6, Technical Appendix 6.5.7-2: Tree Survey Report; and
- Volume 5, Chapter 5: Noise and Vibration.

7.1.7 The following photomontages of the proposed OSS and O&M Base are provided in Volume 6, Technical Appendix 6.5.7-1:

- Photomontage Viewpoint 1 (Photograph location P12): Ballyedmonduff Road;
- Photomontage Viewpoint 2 (Photograph location P9): Ballyogan Road/Ballyogan Avenue;
- Photomontage Viewpoint 3 (Photograph location P8): Ballyogan Road/Ballyogan Link Road;
- Photomontage Viewpoint 4 (Photograph location P3): Dún Laoghaire Harbour – East Pier, near band stand;
- Photomontage Viewpoint 5: Dún Laoghaire Harbour – East Pier, near East Pier lighthouse; and
- Photomontage Viewpoint 6 (Photograph location P4): Dún Laoghaire Harbour Entrance/Queen's Road.

7.2 Regulatory background

7.2.1 In addition to legislation, policy and guidance relevant to renewables and protection of the terrestrial environment captured within the Policy Chapter (Volume 2, Chapter 2: Consents, Policy and Legislation), this section outlines guidance and policy specific to the assessment of landscape and visual receptors.

- 7.2.2 There is no specific legislation solely dedicated to LVIA in Ireland. However, this assessment has been informed by broader environmental regulations and guidelines, such as the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, as incorporated within the Planning and Development Regulations 2001 - 2024, the European Landscape Convention (CoE, 2000), and the Planning and Development Act 2000, as amended and noting the provisions of the Planning and development Act 2024, yet to be commenced at the time of submission.
- 7.2.3 Ireland ratified the European Landscape Convention (CoE, 2000), which promotes the protection, management and planning of landscapes. The National Landscape Strategy (NLS) for Ireland 2015-2025 (DOAHG, 2015) was published:
- ‘to ensure compliance with the European Landscape Convention and establish principles for protecting and enhancing the landscape while positively managing its change’.*
- 7.2.4 Article 1a of the European Landscape Convention defines landscape as:
- ‘an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors’.*
- 7.2.5 This definition has been included in the Planning and Development Act, 2000 – Revised (30/2000), as amended (and has been retained within the Planning and Development Act 2024), along with the requirement that objectives relating to the preservation of landscape character, views and prospects shall be included in development plans.
- 7.2.6 The proposed OES and O&M Base are located fully within the boundaries of the Dún Laoghaire-Rathdown County Council (DLRCC) functional area. As such the Dún Laoghaire-Rathdown County Development Plan 2022-2028 (DLRCC, 2022) is the statutory plan detailing the development policies and objectives of the authority. Policies and objectives relevant to this LVIA, including those on landscape and protection, views and prospects are listed in Annex A.
- 7.2.7 In the absence of any Irish standard or guidance for LVIA, GLIVIA3 is the commonly accepted and universally used guidance in Ireland for all projects requiring LVIA, including renewable energy projects. This is supported by the Guidance on EIS and NIS Preparation for Offshore Renewable Energy Projects (DCCA & SEAI, 2017), which lists GLIVIA3 as one of the relevant guidance documents for the seascape, landscape and visual topic. The LVIA methodology, as summarised in sections 7.4 and 7.5, was therefore prepared in accordance with GLVIA3.

7.3 Consultation

- 7.3.1 As part of the EIA for Dublin Array, consultation has been undertaken with various statutory and non-statutory authorities and stakeholders. The Dublin Array EIAR Scoping Report (RWE, 2020) was made publicly available and issued to statutory consultees on 9th October 2020.
- 7.3.2 Table 1 sets out the key consultation responses received that are relevant to LVIA.

Table 1 Summary of consultation relating to LVIA

Date	Consultation type	Consultee	Key issue(s) raised	Response and Section where addressed
Scoping Responses				
5 th August 2019	Scoping Opinion	Dublin City Council (DCC), Fingal County Council (FCC), Dún Laoghaire and Rathdown County Council (DLRCC) and Wicklow County Council (WCC)	There were no landscape and visual items relating to the OES or O&M Base raised.	N/A
19 th December 2020	Scoping Opinion	Dublin City Council	In their letter dated 19 th November 2020, DCC recommend that the visual assessment should take into account the visual impact of substation compounds described as occupying 4-6 acres and which include 2 buildings over 50 m in length (substation and Statcom buildings). These could have significant impacts and should be assessed from appropriate sensitive viewpoints, including several points at Poolbeg SDZ if a decision is made indicating that a substation compound will be located there.	Sections 7.12 to 7.15 of this chapter present a description of the likely significant effects on landscape and visual receptors. The Poolbeg Landfall option was excluded shortly after this response. A single Landfall location is now being progressed at Shanganagh.
Informal Consultation				
2019 to 2024	Regular Consultation Meetings	Dún Laoghaire and Rathdown County Council	There has been consultation undertaken with various Departments of DLRCC throughout the preparation of this EIAR. The incorporation of the	The project design is described in the Project Description chapter

Date	Consultation type	Consultee	Key issue(s) raised	Response and Section where addressed
			feedback has been integrated into the OES and O&M Base project design.	
27 th February 2024	Consultation Meeting	Dublin City Council	DCC requested a viewpoint from within Poolbeg SDZ, with agreement this could be produced as a wireline.	This is included as Figure 3.15.78 in the SLVIA Visualisations Appendix (4.3.15-4).

7.4 Methodology

7.4.1 As detailed in section 7.1.6, the LVIA Methodology builds on the principles established in the SLVIA Methodology Appendix. However, it places greater focus on landscape receptors while giving less emphasis to seascape receptors. The methodology has been adjusted to specifically address the landscape and visual effects associated with the onshore infrastructure of Dublin Array. This section, along with section 7.5, provides an overview of the LVIA Methodology and highlights any differences from the SLVIA Methodology.

Study area

7.4.2 The methodology for baseline characterisation involved a detailed desktop review and fieldwork within the study area, specifically the route from Shanganagh to Carrickmines (referred to as the 'OES LVIA study area') and the area surrounding the O&M Base in Dún Laoghaire Harbour (referred to as the 'O&M Base LVIA study area'). Both study areas are shown on Figure 1. These study areas differ from the larger study area described in the SLVIA Methodology Appendix, reflecting the more limited visibility of the onshore infrastructure which will be visible across a smaller distance compared to the wind turbine generators (WTGs). This approach ensures the study area is proportionate to the potential impacts.

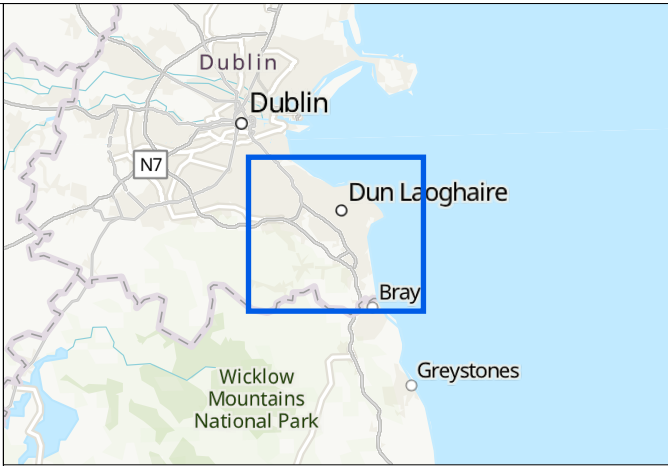
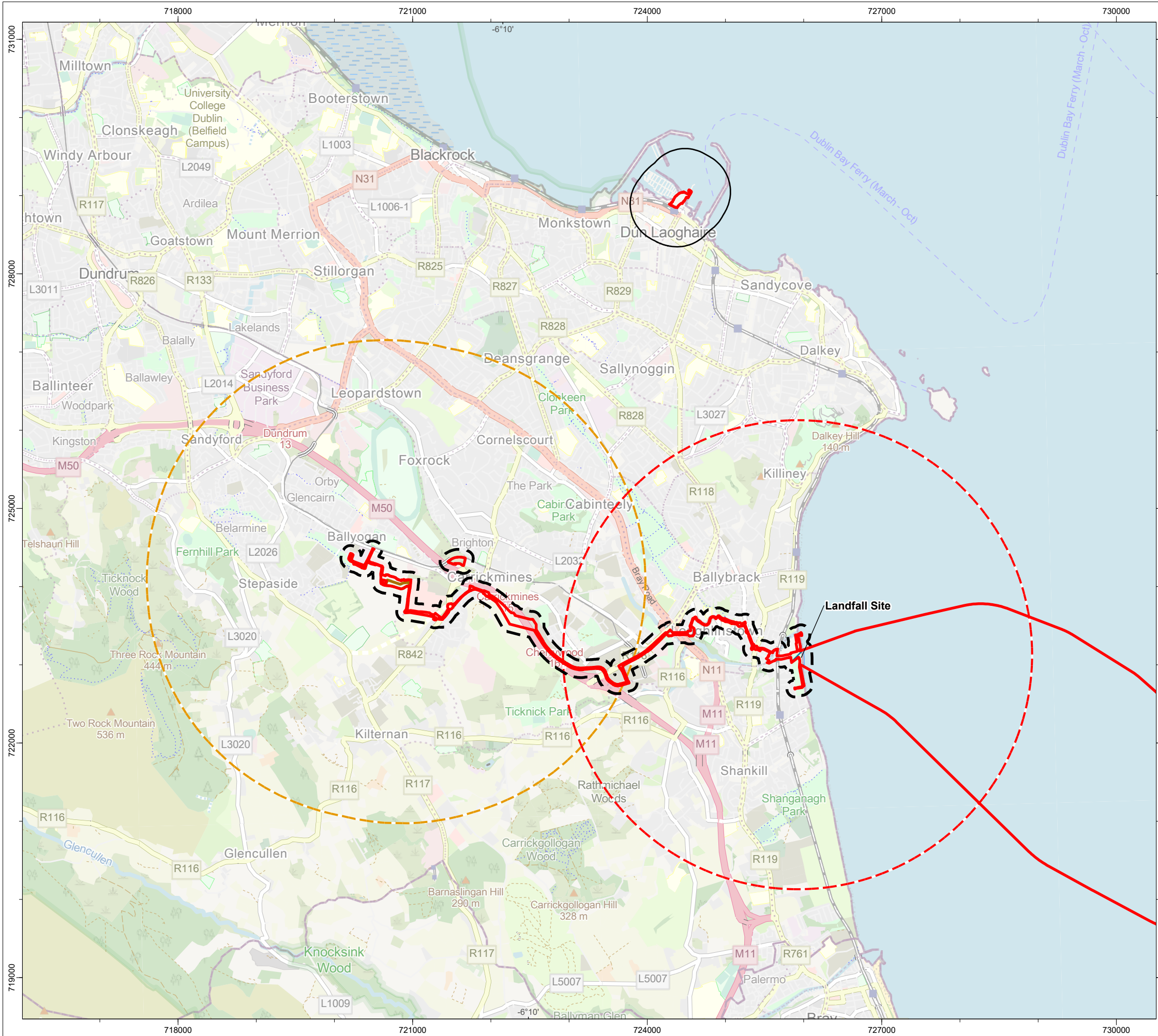
7.4.3 IEMA Guidance (IEMA, 2017) emphasises the importance of a proportionate EIA, focusing on the likely significant effects, and providing clarity in EIA topic chapters. An excessively large LVIA study area may be considered disproportionate, as it could make it more challenging to focus on and evaluate the key impacts associated with the onshore infrastructure of Dublin Array.

7.4.4 This is supported by LVIA Guidance produced by the Landscape Institute (GLVIA3) (Landscape Institute, 2013) (para 3.16) which recommends that

'The level of detail provided should be that which is reasonably required to assess the likely significant effects'.

7.4.5 Para 5.2 at p70 also states that,

‘The study area should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner’.



- Application Site Boundary
- Onshore Electrical System (OES) 100 m Study Area
- Operations and Maintenance (O&M Base) 500 m Study Area
- Onshore Substation (OSS) Boundary
- Onshore Substation (OSS) 3 km Buffer
- Landfall Site
- Landfall Site 3 km Buffer

DRAWING STATUS **PUBLIC**

DISCLAIMER
This is made available "as is" and no warranties are given or liabilities of any kind are assumed with respect to the quality of such information, including, but not limited to, its fitness for a specific purpose, non-infringement of third party rights or its correctness. The reproduction, distribution and utilization of this document as well as the communication of its contents to others without explicit authorisation is prohibited. Copies - digital or printed are not controlled

MAP NOTES / DATA SOURCES:
Esri UK, Esri, TomTom, Garmin, Foursquare, FAO, MET/NASA, USGS, Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri © Ordnance Survey Ireland 2023 © Tailte Éireann. (CYSLS0270365) Not to be used for Navigation.

PROJECT TITLE **Dublin Array**

DRAWING TITLE **Landscape and Visual Assessment:
Study Area Overview**

DRAWING NUMBER: **Figure 1** PAGE NUMBER: **1 of 1**

VER	DATE	REMARKS	DRAW	CHEK	APRD
01	2025-02-14	DRAFT	JK	SW	AE
02	2025-01-16	PUBLIC	JK	SW	AE



OES LVIA study area

- 7.4.7 The OES LVIA study area encompasses all onshore OES infrastructure, including the Landfall Site, the onshore ECR, all TCCs and the OSS site. To ensure all areas potentially affected by the proposed works were included, the study area also incorporates defined buffer zones based on professional judgement and landscape and visual assessment principles.
- 7.4.8 A 100 m buffer on either side of the onshore ECR has been defined to capture the immediate landscape and visual context surrounding the onshore ECR. This buffer takes into account the largely urban setting of the ECR, which limits the potential of landscape and visual effects to extend over a wider area. The frequent presence of built structures in proximity of the ECR restricts the visibility of the proposed construction works and their influence on the local landscape setting. This limitation is also evident in less built-up areas, such as along the M50 corridor, where existing vegetation further reduces the extent of visible effects. Given these considerations, a 100 m buffer along the ECR is deemed sufficient to encompass all potentially affected landscape and visual receptors in both urban and less densely developed sections of the route.
- 7.4.9 A 3 km buffer has been applied around the proposed Landfall Site and OSS. This buffer accounts for the potentially greater landscape and visual effects of these components of the OES, due to their height, mass, and/or more open visibility (i.e. along the coastline and from the elevated ground, associated with the eastern slopes of the Dublin Mountains, to the west). the TCCs at Clifton Park and Leopardstown are visually enclosed by existing vegetation and unlikely to contain above ground elements taller than 5.5 m in height (for the duration of the construction phase). Therefore, the 100 m buffer on either site of the onshore ECR is considered sufficient in addressing potential landscape and visual effects at these locations.
- 7.4.10 Following further desk-based and site survey analysis, the study area was refined to include only those areas within the 3 km buffers where the Landfall site and the proposed OSS are visible and are likely to be influenced by these components of Dublin Array OES in landscape and visual terms. This includes Killiney Hill and the surrounding elevated land, where the Landfall site is intermittently visible, and parts of the north-eastern slopes of the Dublin Mountains, where the proposed OSS is intermittently visible. Areas within the 3 km buffers where visibility of Dublin Array OES is obstructed by topography, buildings, structures or vegetation, were excluded from the final OES LVIA study area.
- 7.4.11 In summary, the final OES LVIA study area, comprises:
- All components of the OES, i.e. Landfall Site, the ECR, all TCCs and the OSS site;
 - A 100 m buffer on either side of the ECR from Shanganagh to Carrickmines;
 - Killiney Hill and the elevated sections of land adjoining it to the south and east, facing the Irish Sea; and

- ▲ Parts of the north-eastern slopes of the Dublin Mountains, i.e. the elevated land to the west and southwest of the proposed OSS, including Stepside, Ballyedmonduff Road and the slopes up to the highpoint of Three Rock Mountain.

O&M Base LVIA study area

7.4.12 The O&M Base LVIA study area includes the base, as well as a 500 m buffer surrounding the application site boundary at this location. The 500 m buffer takes account of the relatively open visibility within Dún Laoghaire Harbour. A wider study area covering Dún Laoghaire town is not considered necessary, as the urban environment reduces the potential of significant landscape and visual effects from locations beyond the seafront. Similarly, the east and west pier of Dún Laoghaire Harbour reduces views, and therefore the potential of landscape and visual effects, from locations to the east and west along the coast.

Baseline data

7.4.13 This LVIA was informed by desk-based studies and field survey work undertaken within the LVIA study areas. The baseline data sources used as part of the desk-based study are as follows:

- ▲ Dún Laoghaire Rathdown County Development Plan 2022-2028 (DLRCC, 2022);
- ▲ Ordnance Survey of Ireland (2021). GeoHive Map Viewer. Available at: [GeoHive Hub](#)
- ▲ Google (2024). Google Maps and Street View. Available at: <https://www.google.com/maps;>
- ▲ The Marine Institute (2020). Regional Seascape Character Assessment for Ireland 2020 Final Report. Available at: https://emff.marine.ie/sites/default/files/bluegrowth/PDFs/final_seascape_character_assessment_report_with_annexes.pdf; and
- ▲ Cherrywood SDZ Planning Scheme. Available at: [Cherrywood SDZ Planning Scheme | Dún Laoghaire-Rathdown County Council](#).

7.4.14 An initial site survey of the OES LVIA study area was carried out in December 2020. Further site surveys to assess the onshore ECR and OSS location, as well as the O&M Base location, were carried out in August 2021, October 2021, January 2023, March 2023 and December 2023. On all occasions, viewpoints selected during the desk-based studies were visited and viewpoint photography carried out. The viewpoint list was self-determined by the author, based on professional experience, as no consultation feedback regarding viewpoints was received. The photos taken were used to inform the descriptions of the receiving environment, with some of these viewpoints also used in the visual impact assessment process.

Assessment methodology

- 7.4.15 Volume 2, Chapter 3: EIA Methodology (hereafter referred to as the EIA Methodology Chapter) describes the generic methodology applied throughout the EIA. While the LVIA methodology broadly aligns with this overarching approach, it has been specifically tailored to address the specific requirements of assessing landscape and visual receptors. This approach ensures the methodology is more directly applicable to the topic of landscape and visual impact.
- 7.4.16 A summary of the key LVIA approach is presented here. As noted in section 7.1.4, the LVIA methodology is based on the principles outlined in the SLVIA Methodology Appendix, ensuring consistency and alignment between the two chapters.
- 7.4.17 The assessment has been undertaken in accordance with GLVIA3 and other best practice guidance (Annex A). The LVIA assesses the potential impacts of the project on landscape and visual receptors within the study area. This includes the likely impacts of the OES, the O&M Base and other associated infrastructure including the plant required during construction and decommissioning.

Categories of effects

- 7.4.18 The potential impacts of the OES and O&M Base of Dublin Array on landscape and visual receptors are grouped into three categories: effects on landscape character, effects on views, and cumulative effects.
- 7.4.19 Effects on landscape character arise either through the introduction of new elements that physically alter the pattern of elements that make up landscape character, or through visibility of the project, which may alter the way in which the pattern of elements of that landscape is perceived. The receptors in this case are landscape character receptors, which are landscape character types and designated landscapes.
- 7.4.20 The assessment of effects on views is an assessment of how the introduction of the project, in this case the proposed OES and O&M Base of Dublin Array, would affect the views experienced by people throughout the LVIA study areas, for example, residents, walkers and road-users.
- 7.4.21 Cumulative effects arise where the study areas for two or more developments overlap such that multiple developments are experienced at proximity where they may have an incremental effect, or where developments may combine to have a sequential effect, irrespective of any overlap in visibility. Cumulative assessments typically include existing developments that make up the baseline of the receiving environment, other developments that are under construction and consented, and those for which planning applications or development consent applications have been submitted. The cumulative assessment is made against a baseline comprising all existing built development.

7.5 Assessment criteria

- 7.5.1 Essentially, the landscape and visual effects, and their significance, is determined by an assessment of the sensitivity of each receptor or group of receptors and the magnitude of change that would arise owing to the introduction of the OES and O&M Base of Dublin Array. The evaluation of sensitivity takes account of the value and susceptibility of the receptor to the OES and O&M Base of Dublin Array. This is combined with an assessment of the magnitude of change which takes account of the size and scale of the proposed change, the geographical extent of that change, and the duration of that change. By combining assessments of sensitivity and magnitude of change, a level of landscape or visual effect can be evaluated and determined. The resulting effect is described in terms of whether it is significant or not significant, and the level of effect described as major, major-moderate, moderate, moderate-minor or minor. There will be no effect where there is no change. The type of effect is described as either direct or indirect; temporary or permanent (reversible); cumulative; and beneficial, neutral or adverse.

Sensitivity of receptor criteria

Sensitivity of landscape receptors

- 7.5.2 The sensitivity of a landscape character receptor is an expression of the combination of the judgements made about the susceptibility of the receptor to the specific type of change or the development proposed, and the value attributed to that receptor.
- 7.5.3 The value of a landscape character receptor is a reflection of the value that society attaches to that landscape. The assessment of the landscape value is classified as high, medium-high, medium, medium-low or low, and the basis for this assessment is made clear using evidence and professional judgement, based on the range of factors set out in Table 15.2 of the SLVIA Methodology Appendix.
- 7.5.4 The susceptibility of a landscape character receptor to change is a reflection of its ability to accommodate the changes that will occur as a result of the addition of the Dublin Array OES and O&M Base. This is without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies. Some landscape receptors are better able to accommodate development than others due to certain characteristics that are indicative of capacity to accommodate change. For example, landscapes with a high degree of enclosure from landform or tree cover may be characterised more strongly by the immediate surroundings and with weaker associations with the wider landscape where the development is proposed to be located. These characteristics may or may not also be special landscape qualities that underpin designated landscapes.

- 7.5.5 An overall sensitivity assessment of the landscape receptor is made by combining the assessment of the value of the landscape character receptor and its susceptibility to change. The evaluation of landscape sensitivity is applied for each landscape receptor - high, medium-high, medium, medium-low and low - by combining individual assessments of the value of the receptor and its susceptibility to change. The basis for the assessments is made clear using evidence and professional judgement in the evaluation of sensitivity for each receptor. Criteria that tend towards higher or lower sensitivity are set out in Table 15.2 of the SLVIA Methodology Appendix.

Sensitivity of visual receptors

- 7.5.6 In accordance with paragraphs 6.31-6.37 of GLVIA3, the sensitivity of visual receptors is determined by a combination of the value of the view and the susceptibility of the visual receptors to the change likely to result from the OES and O&M Base of Dublin Array on the view and visual amenity.
- 7.5.7 The value of a view or series of views reflects the recognition and importance attached either formally through identification on mapping or being subject to planning designations, or informally through the value which society attaches to the view(s).
- 7.5.8 Susceptibility relates to the nature of the viewer experiencing the view and how susceptible the viewer is to the potential effects arising from the presence of the Dublin Array OES and O&M Base. An expert opinion to determine the level of susceptibility, therefore, relates to the nature of the viewer, whether they be resident, road-user or walker, and their experience from that particular viewpoint or series of viewpoints, classified as high, medium-high, medium, medium-low or low.
- 7.5.9 An overall level of sensitivity is applied for each visual receptor or view – high, medium-high, medium, medium-low or low – by combining individual assessments of the value of the view and the susceptibility of the visual receptor to change. Each visual receptor, meaning the particular person or group of people likely to be affected at a specific viewpoint, is assessed in terms of their sensitivity. The basis for the assessments is made clear using evidence and professional opinion in the evaluation of each receptor. Criteria that tend towards higher or lower sensitivity are set out in Table 15.4 of the SLVIA Methodology Appendix.

Magnitude of change criteria

- 7.5.10 The magnitude of change is an expression of the scale of the change that will result from the OES and O&M Base of Dublin Array and is dependent on a number of variables regarding the size or scale of the change and the geographical extent over which the change will be experienced. A separate assessment is also made of the duration and reversibility of landscape and visual effects.

Magnitude of change – landscape receptors

7.5.11 The magnitude or degree of change resulting from the onshore infrastructure of Dublin Array is described as High, High-medium, Medium, Medium-low, Low, or Negligible. In assessing magnitude of change, the assessment focusses on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short, medium or long-term and temporary or permanent). The basis for the assessment of magnitude for each receptor is made clear using evidence and professional judgement. The levels of magnitude of change that can occur are defined in Table 15.3 of the SLVIA Methodology Appendix.

Magnitude of change – visual receptors

7.5.12 The visual magnitude of change is an expression of the scale of the change that will result from the OES and O&M Base of Dublin Array. It is dependent on a number of variables regarding the size or scale of the change and the geographical extent over which the change will be experienced. A separate assessment is also be made of the duration and reversibility of visual effects.

7.5.13 The geographic extent over which the visual effects will be experienced is also assessed, which is distinct from the size or scale of effect and is described in terms of the physical area or location over which it would be experienced (described as a linear or area measurement). The extent of the effects will vary along the OES and at the O&M Base of Dublin Array and is principally assessed through field survey and viewpoint analysis of the extent of visibility likely to be experienced by visual receptors.

7.5.14 The magnitude or degree of change resulting from the OES and O&M Base of Dublin Array is described as High, High-medium, Medium, Medium-low, Low, or Negligible as defined in Table 15.5 of the SLVIA Methodology Appendix. In assessing the magnitude of change the assessment has focused on the size or scale of change and its geographical extent. The duration and reversibility are stated separately in relation to the assessed effects (i.e. as short/medium/long-term and temporary/permanent). The basis for the assessment of magnitude for each receptor is made clear using evidence and professional judgement. Examples of criteria that tend towards higher or lower magnitude of change that can occur on views and visual receptors are set out in Table 15.5 of the SLVIA Methodology Appendix.

Defining the significance of effect

7.5.15 The matrix presented in Table 2 is used as a guide to illustrate the LVIA process. In line with GLVIA3 and its emphasis upon the application of professional judgement, reliance upon a matrix is avoided through the presentation of clear and accessible narrative, describing the rational assessment made for each landscape and visual receptor. Such narrative assessments provide a level of detail over and above the outline assessment provided by use of the matrix alone.

- 7.5.16 The landscape and visual assessment involves a combination of quantitative and qualitative assessment and, where relevant cross references are made to objective evidence, baseline figures and viewpoint photography to support the assessment conclusions. Often a consensus of professional opinion has been sought through consultation, internal peer review, and the adoption of a systematic, impartial, and professional approach. Importantly each effect results from its own unique set of circumstances and each has been assessed on a case-by-case basis. The matrix, as presented in Table 2 should be considered as a guide and any deviation from this guide will be clearly explained in the assessment.
- 7.5.17 Significant landscape and visual effects highlighted in Table 2 relate to all those effects that result in a significant effect at either a Major or Major-moderate level. The boxes with an asterisk, effects are at a Moderate level and can be either significant or not significant, with this decision relying on reasoned assessment and the professional judgement of the assessor. White or un-shaded boxes in Table 2 indicate a not significant effect at a Moderate-minor, Minor, Minor-negligible, or Negligible level. In those instances where there would be no effect, the magnitude is recorded as 'no change' and the level of effect as 'no effect'.
- 7.5.18 The terminology presented in Table 3 and applied in the LVIA differs from the terminology used in the other EIAR Chapters. This is because GLVIA3 is used as standard industry practice for the production of all SLVIA and LVIA in the ROI and the UK and the terminology used, therefore, aligns with the terminology presented in GLVIA3.

Table 2 Illustrative matrix of significant effects

Magnitude Sensitivity	High	Medium-high	Medium	Medium-low	Low	Negligible
High	Major (significant)	Major (significant)	Major-moderate (significant)	Moderate (Significant or Not Significant)*	Moderate-Minor (Not Significant)	Minor (Not significant)
Medium-high	Major (Significant)	Major-moderate (Significant)	Moderate (Significant or Not Significant)*	Moderate (Significant or Not Significant)*	Moderate-minor (Not significant)	Minor (Not significant)
Medium	Major-moderate (Significant)	Moderate (Significant or Not Significant)*	Moderate (Significant or Not Significant)*	Moderate-minor (Not significant)	Minor (Not significant)	Minor-negligible (Not significant)
Medium-low	Moderate (Significant or Not Significant)*	Moderate (Significant or Not Significant)*	Moderate-minor (Not significant)	Minor (Not significant)	Minor-negligible (Not significant)	Negligible (Not significant)
Low	Moderate-minor (Not significant)	Moderate-minor (Not significant)	Minor (Not significant)	Minor-negligible (Not significant)	Negligible (Not significant)	Negligible (Not significant)

*Moderate levels of effect have the potential, subject to the assessor's professional judgement, to be significant. Moderate 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.

Significance and non-significance of landscape effects

7.5.19 The level of landscape effect is evaluated through the combination of landscape sensitivity and magnitude of change. Once the level of effect has been assessed, a professional opinion and expert judgement is then made as to whether the level of effect is significant or not significant. This process is assisted by the matrix in Table 2 which is used to guide the assessment. The factors considered in the evaluation of the sensitivity and the magnitude of the change resulting from the OES and O&M Base Dublin Array and their conclusion will be presented in a comprehensive, clear and transparent manner. Further information is also provided about the nature of the effects and whether these would be direct or indirect; temporary, permanent or reversible; beneficial, neutral or adverse, or cumulative.

- 7.5.20 A significant effect would occur where the combination of the sensitivity and magnitude of change results in the OES or O&M Base of Dublin Array becoming a defining feature on the character of the landscape receptor, or where changes of a lower magnitude affect a landscape receptor that is of particularly high sensitivity. A major loss or irreversible effect over an extensive area of landscape character, affecting landscape elements, characteristics and/or perceptual aspects that are key to a nationally valued landscape, are likely to be significant.
- 7.5.21 A not significant effect would occur where the effect of the OES or O&M Base of Dublin Array is not defining, and the landscape character of the receptor continues to be characterised principally by its baseline characteristics. Equally a small-scale change experienced by a receptor of high sensitivity may not significantly affect the special landscape quality or integrity of a designation. Reversible effects, on elements, characteristics and character that are of small-scale or affecting lower value receptors are unlikely to be significant.

Significance and non-significance of visual effects

- 7.5.22 The level of visual effect is evaluated through the combination of visual sensitivity and magnitude of change. Once the level of effect has been assessed, a judgement is then made as to whether the level of effect is significant or not significant. This process is assisted by the matrix in Table 2 which is used to guide the assessment. The factors considered in the evaluation of the sensitivity, the magnitude of the change resulting from the OES and O&M Base of Dublin Array, and the determination of the significant or not significant effect, will be presented in a comprehensive, clear and transparent manner. Further information is also provided about the nature of the effects, whether these would be direct or indirect; temporary, permanent or reversible; beneficial, neutral or adverse, or cumulative.
- 7.5.23 A significant effect is more likely to occur where a combination of the variables results in the OES or O&M Base of Dublin Array having a defining effect on the view or visual amenity, or where changes affect a visual receptor that is of high sensitivity.
- 7.5.24 A not significant effect is more likely to occur where a combination of the variables results in the OES or O&M Base having a non-defining effect on the view or visual amenity, or where changes affect a visual receptor that is of low sensitivity.

7.6 Receiving environment

- 7.6.1 This section provides a description of the landscape and visual receiving environment, (i.e. the baseline), within the LVIA study areas. In accordance with guidance set out in the GLVIA3, the description is set out in two parts: firstly, a description of the landscape baseline; and followed by a description of the visual baseline.

Landscape baseline

- 7.6.2 The landscape within the LVIA study areas (refer to section 7.4) comprises the mostly urban environment between Shanganagh and Carrickmines and surrounding Dún Laoghaire Harbour. It further comprises the increasingly rural and upland areas to the west and southwest of Carrickmines, i.e. the north-eastern slopes of the Dublin Mountains.
- 7.6.3 There are no defined large coherent areas of similar landscape or townscape character areas defined within the LVIA study areas. As a result, the study area has been subdivided into smaller, self-defined 'local landscape units' for the purposes of the assessment. This approach enables a finer-grained understanding of the varying landscape and townscape character across the study area. Each local landscape unit represents a distinct area with unique characteristics, providing a basis for identifying and assessing the potential effects of the proposed development on the landscape receptors.
- 7.6.4 The following sections provide a general description of the landscape within the LVIA study areas. This is then followed by information from existing landscape/seascape character assessments covering the areas, as well as a description of the local landscape units (as defined in the next paragraph) present in each sector of the LVIA study areas. Also provided is a preliminary assessment of the likelihood of these local landscape units being significantly affected by the OES and O&M Base of Dublin Array. This is followed by the identification of the landscape receptors to be brought forward to the impact assessment, as well as an assessment of the landscape receptor sensitivity (if applicable).

General landscape description

- 7.6.5 Each local landscape unit has its own unique character, and there are few links between neighbouring units. For example, variations in residential styles (e.g. detached, semi-detached, or terraced housing) and boundary treatments (e.g. walls, fences, or hedgerows) are common, as is the diversity of tree cover across residential estates.
- 7.6.6 Photographs illustrating the landscape baseline are provided below (refer to Figure 2, for photograph locations).
- 7.6.7 The varied mix of local landscape units includes:
- Residential estates: Comprising detached, semi-detached, terraced housing, and some apartment blocks;
 - Local greenspaces and public parks;
 - Major road corridors;
 - Sections of the Dublin coastline, including Dún Laoghaire Harbour;
 - Remnants of natural grassland, woodlands and hedgerows;

- ▲ Parts of the Cherrywood Strategic Development Zone (SDZ), a formerly rural, agricultural area, currently undergoing significant changes, as it is developed as a new Dublin suburb; and
- ▲ Industrial and commercial developments, e.g. along Ballyogan Road and facing Dún Laoghaire Harbour.

OES LVIA study area

Urban area between Shanganagh and Carrickmines

- 7.6.8 There is one townscape designation present within the OES LVIA study area. This is Killiney Architectural Conservation Area, which is defined as an area of special character/interest in the current DLR County Development Plan. This suggests a locally increased landscape/townscape value. No other parts of the study area are covered by designated and/or historic designed landscapes or townscapes.
- 7.6.9 Killiney Hill Park has a highly scenic presence within the OES LVIA study area through its elevated position with a highpoint at 153 m Ordnance Datum (OD), which is marked with an obelisk and surrounded by mature tree cover. None of the other parks within the study area have a similar scenic quality, due to less prominent topographies and a lack of mature tree cover.
- 7.6.10 The topography of the area to the east of the M50, from Shanganagh to Carrickmines, is generally flat, with levels ranging from 0 m OD along the coast to 70 m OD along the M50. There are some local undulations, for instance along the section of the Shanganagh River parallel to the N11, where the river is located in a distinct valley. However, these undulations do not influence the wider landscape in the same way as Killiney Hill or the Dublin Mountains, which are highly visible from some locations within the study area.

Photograph 1: Location of the Landfall Site at Shanganagh cliffs (December 2020)



Note: Shanganagh-Bray Wastewater Treatment Plant dominating foreground of view; Killiney Hill & Killiney Bay in the distance to the right in this view (north of the viewing location).

Grid reference (ITM): 725923:723129

Photograph 2: Greenspace north of Clifton Park in Sector 1 (December 2020)



Note: Clifton Park TCC will be located in the green space to the front and the onshore ECR would cross by HDD under the Shanganagh River, located behind the treeline to the left in the image.

Grid reference (ITM): 725605:723034

Photograph 3: Southern end of Shanganagh Road in Sector 1 (December 2020)



Note: onshore ECR will travel along greenspace to west of road. A description of the Shanganagh Dolmen which is located in Sector 1 is included in Volume 6, Annex 6.5.8.1 – Archaeology Cultural Heritage Technical Baseline Report.

Grid reference (ITM): 725370:723232

Photograph 4: Loughlinstown Linear Park looking south towards Sector 2 (December 2020)



Note: onshore ECR would pass to the back of the trees to the right in the photograph

Grid reference (ITM): 724941:723780

Photograph 5: R118/Wyattville Road, at entrance to Cherrywood Park (northbound) in Sector 3 (March 2023)



Note: The temporary HDD compound on the western side of the N11 crossing (TX-06) will be located within Cherrywood Park in greenspace to left in the image, with the onshore ECR continuing south-west along the R118.

Grid reference (ITM): 724242:723400

Photograph 6: R842/Glenamuck Roundabout, facing Golf Lane in Sector 5 (March 2023)



Note: onshore ECR will travel along Golf Lane

Grid reference (ITM): 721510:723738

Photograph 7: R842/Glenamuck Road, opposite The Crescent (Carrickmines Green), facing Carrickmines Retail Park in Sector 6 (December 2023)



Note: onshore ECR will travel along the R842 and turn west (right in the image) to the back of the line of trees at the centre of the view; Dublin Mountains visible in the background

Grid reference (ITM): 721412:723645

Photograph 8: Ballyogan Road (L6034) at junction with Ballyogan Link Road – new road into the Carrickmines Retail Park (January 2023)



Note: the proposed OSS Location is at the back of the trees/shrubs visible behind the hoarding at the centre of the view; Dublin Mountains visible in the background; refer to Photomontage Viewpoint 3 in Technical Appendix 6.5.7-1.

Grid reference (ITM): 721293:724229

Photograph 9: Ballyogan Road (L6034) at junction with Ballyogan Avenue (January 2023)



Note: the proposed OSS Location is at the back of the trees/shrubs visible behind the fence; Dublin Mountains visible in the background; refer to Photomontage Viewpoint 2 in Technical Appendix 6.5.7-1.

Grid reference (ITM): 720801:724392

Photograph 10: Killiney Hill, looking south in the direction of the Landfall Site (August 2021)



Note: proposed Landfall Site at Shanganagh Cliffs identified by arrow

Grid reference (ITM): 725947:725458

Northeastern slopes of the Dublin Mountains

- 7.6.11 To the southwest of the M50 the land is noticeably less urban and becomes more and more rural the further southwest one travels, i.e. the proportion of agricultural land/forestry increases. The topography rises gently from the c. 70 m OD along the M50, to c. 130 m OD along the R117/Enniskerry Road between Stepside and Kilternan. There are some local highpoints between the M50 and the R117, the topography of which locally enclose the landscape. One of these highpoints is the domed shape of the former Ballyogan landfill to the immediate south of the proposed OSS. While the area between the M50 and R117 contains larger areas of agricultural grassland and some golf/pitch & putt courses (e.g. The Carrickmines Golf Club and Stepside Golf Course), there are also frequent housing estates and dense ribbon development along the R117, including Stepside, and the R842/Glenamuck Road.
- 7.6.12 To the southwest of the R117 the land continues to rise to the highpoints of Two Rock Mountain (536 m OD) and Three Rock Mountain (444 m OD). Approximately along the 300 m contour line the land cover changes from predominantly agricultural grassland to conifer plantations and upland heathland/scrub. Mostly detached residential properties with large gardens are spread out along Ballyedmonduff Road, Burrow Road and associated short side roads.

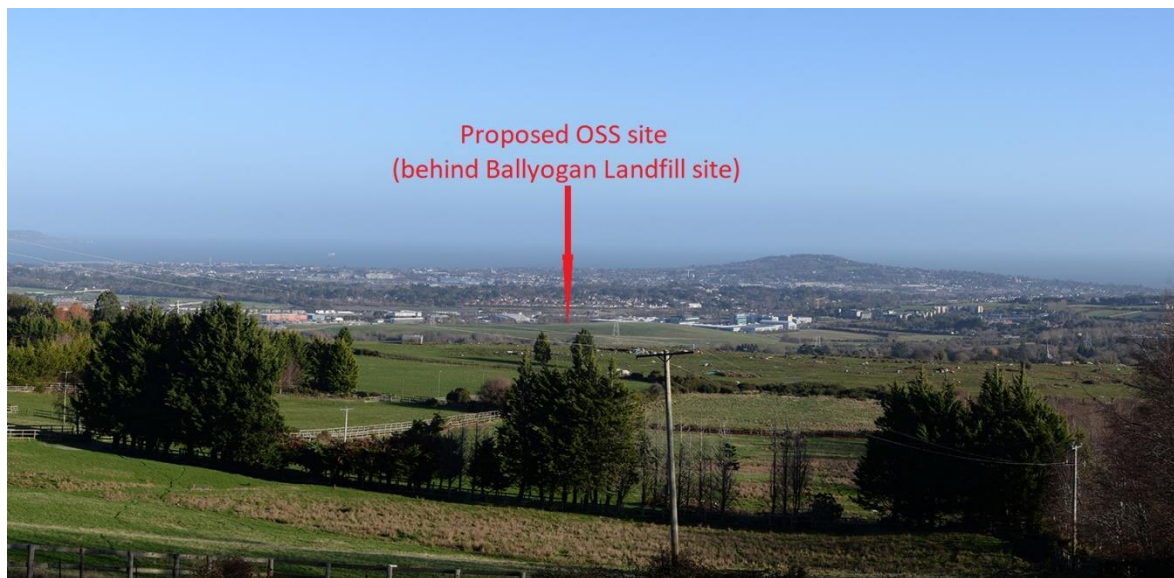
Photograph 11: Burrow Road looking east towards the proposed OSS site (January 2023)



Note: the proposed OSS site is screened by the former Ballyogan Landfill Facility; Irish Sea visible in the distance

Grid reference (ITM): 718841:723891

Photograph 12: Ballyedmonduff Road looking northeast towards the proposed OSS site (January 2023)



Note: the proposed OSS site is screened by the Ballyogan Landfill site; Irish Sea visible in the distance); refer to Photomontage Viewpoint 1 in Technical Appendix 6.5.7-1.

Grid reference (ITM): 718682:722658

O&M Base LVIA study area

- 7.6.13 The Dún Laoghaire Harbour and Seafront are designated as candidate Architectural Conservation Areas, in the current DLR County Development Plan i.e. areas of special character/interest. This suggests a locally increased landscape/townscape value.
- 7.6.14 The main features of the harbour are the East and the West Pier, which are in high demand as a recreational feature, by both locals and tourists. The piers enclose several other harbour features, including the Marina Pier, the former ferry terminal, boat storage areas and car parking areas. Owing to the harbour setting, the topography is flat, with very little vegetation present, resulting in a large open scale landscape/seascape. Away from the harbour, inland, the topography rises gently within the urban environment of Dún Laoghaire town centre, which provides enclosure.
- 7.6.15 The built environment along the seafront is made up from a mix of Victorian, other historic and modern buildings. Most of these buildings are a minimum of three storeys tall and form a screen to the urban environment further inland. This is with the exception of a number of buildings, further inland which are taller than those along the seafront and are therefore widely visible. The most prominent features along the Dún Laoghaire skyline, as viewed from the harbour area, are the towers of the Mariner's Church (now housing Ireland's National Maritime Museum) and of St. Michael's Church, the Lexicon Library and Cultural Centre building, as well as the Royal Marine Hotel and the Dún Laoghaire-Rathdown County Council Townhall building with smaller towers.
- 7.6.16 The DART line and associated 'the Metals' permeability routes, as well as the tree-lined coastal roads form a linear barrier between the harbour and the seafront/Dún Laoghaire town centre.

Photograph 13: Dún Laoghaire Harbour – East Pier, near band stand, looking west towards the site for the proposed O&M Base (December 2023)



Note: the pier on which the O&M Base is proposed, i.e. Saint Michael's Pier, is openly visible; the proposed O&M building will be of a similar height as the adjoining former ferry terminal and will form a continuation of the existing elongated building; refer to Photomontage Viewpoint 4 in Technical Appendix 6.5.7-1.

Grid reference (ITM): 724884:728927

Photograph 14: Dún Laoghaire Harbour Entrance/Queen's Road, looking north towards the site for the proposed O&M Base (December 2023)



Note: trees and structures typically screen views towards the site for the O&M Base from the seafront; refer to Photomontage Viewpoint 6 in Technical Appendix 6.5.7-1.

Grid reference (ITM): 724438:728760

Existing relevant Landscape/Seascape Character Assessments

DLR Landscape Assessment

- 7.6.17 Appendix 8 of the DLR County Development Plan 2022-2028 contains a Landscape Assessment Study and Landscape/Seascape Character Areas. There were 14 Landscape Character Areas (LCAs) identified, covering the rural areas of the county, the majority of which are located to the south/west of the M50 motorway (refer to Figure 3). The vast majority of the urban areas of DLR are not included in the Landscape Character Assessment and a separate townscape character assessment or similar is not available. Also, Seascape Character Areas have not yet been defined, despite its title.
- 7.6.18 The OES will traverse LCA 6 – Ballycorus, LCA 13 – Carrickmines & LCA 14 – Cherrywood/Rathmichael. The part of the study area to the west/southwest of the site of the proposed OSS is located within LCA 5 – Kilternan Plain.

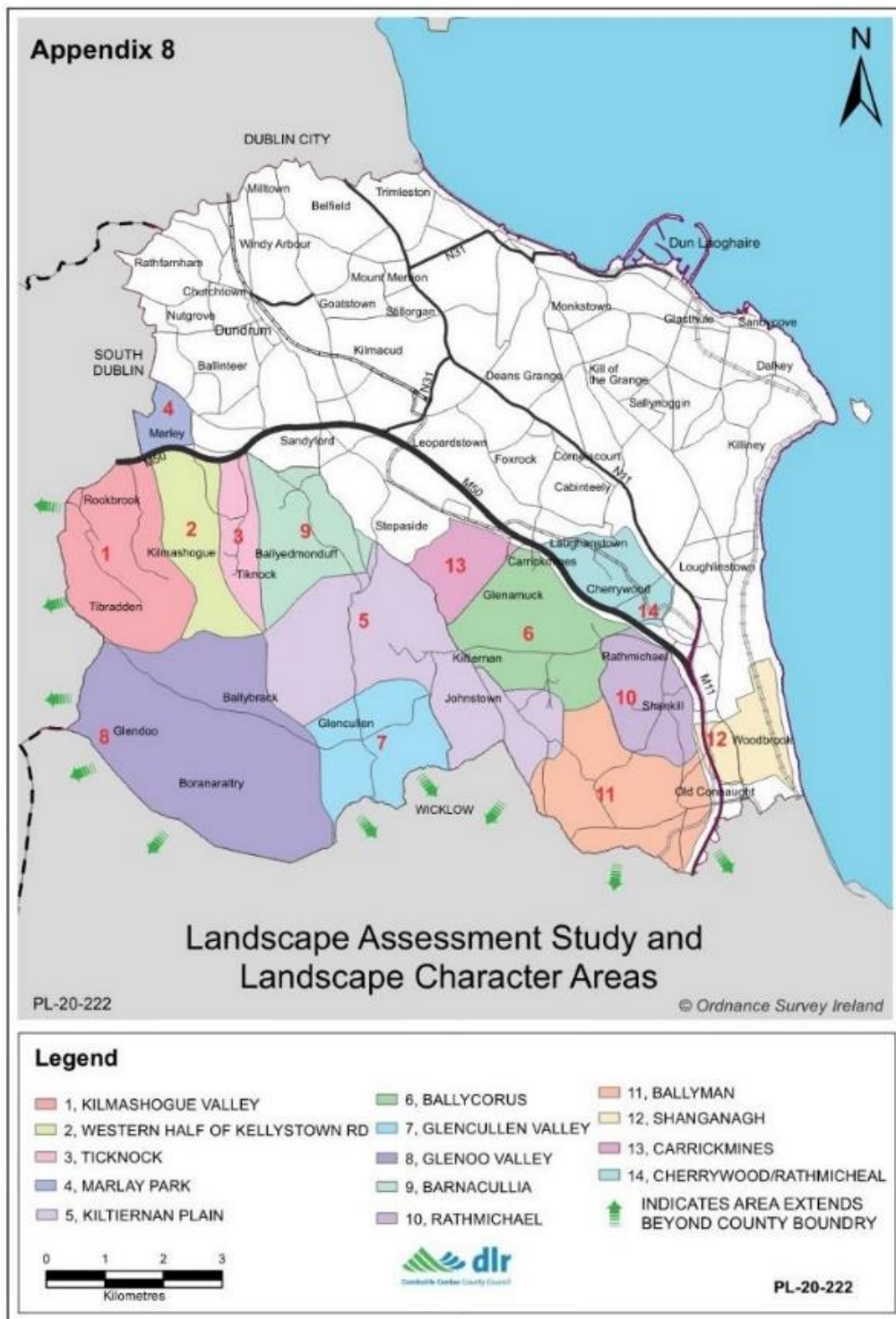


Figure 3 DLRCC Landscape Character Areas

Source: Dún Laoghaire-Rathdown County Council. (2022). Appendix 8: Landscape Character Areas. In Dún Laoghaire-Rathdown County Development Plan 2022–2028. Dún Laoghaire-Rathdown County Council. Retrieved from <https://www.dlrccco.ie>

LCA 6 – Ballycorus

7.6.19 The description of LCA 6 – Ballycorus includes:

‘This enclosure encompasses the valley along which runs the Ballycorus Road and is bounded by the disused lead mines to the south and Ticknick and the Glenamuck Road to the north, Barnaslingan to the west with Three Rock in the background. This enclosure displays past and also present industrial/extractive works. The past is in the form of the old leadworks especially the lead mine’s chimney. Quarrying/extraction has continued into the present with the activities of Cement Roadstone in the valley. The north western portion of this enclosure has altered considerably since the original Landscape Character Assessment. Considerable development has occurred along the Glenamuck Road in accordance with the Kiltiernan/Glenamuck Local Area Plan 2013.’

7.6.20 The sensitivity/strategy information for LCA 6 – Ballycorus includes:

‘... Maintenance and restoration of field patterns and boundaries. ...

Protect existing hedgerows particularly those identified as priority hedgerows in the Dún Laoghaire-Rathdown hedgerow survey.’

LCA 13 – Carrickmines

7.6.21 The description of LCA 13 – Carrickmines includes:

‘This enclosure encompasses the area east of the Stepside Action Area and is bounded by the motorway to the north, the Glenamuck Road to the South and the Enniskerry Road to the west. The most dominant visual feature of this enclosure is the new 50-acre Retail Park at Carrickmines intersection of the M50. The former Ballyogan landfill which is ear marked for future development as a park is located at the edge of the built-up area of Dún Laoghaire-Rathdown and functions as a buffer between the more densely built-up area of Leopardstown/Stepside and the lower density suburban generated housing area of Kiltiernan. ...

The impact of the multitude of urban uses – the tiphead, retail park, pylons and houses on the landscape is evident.’

7.6.22 The sensitivity/strategy information for LCA 13 – Carrickmines includes:

‘This enclosure sits between the urban and the rural landscapes and is capable of accommodating development.

The future vision for this area offers an opportunity to enhance and restore a portion of the landscape as a public park (former Ballyogan tiphead). ...

LCA 14 – Cherrywood/Rathmicheal

7.6.23 The description of LCA 14 – Cherrywood/Rathmicheal states that:

'This area was originally outlined in the Landscape Character Assessment Study as it was an area undergoing significant change with the introduction of the Luas B1 line and the development of the Cherrywood Science and Technology Park. This area is now subject to the Cherrywood Strategic Development Zone (SDZ) Planning Scheme which was adopted by An Bord Pleanála in April 2014.'

7.6.24 The Cherrywood SDZ site is described as follows in the Cherrywood Planning Scheme:

'The Strategic Development Zone lands, of approx. 360 hectares which are located in the administrative area of Dún Laoghaire-Rathdown, ... are the largest undeveloped land bank in the County and one of the most sizable undeveloped areas within the Dublin Metropolitan Area. The lands are located approximately 16 km south east from Dublin City Centre, 8 km south of Dún Laoghaire, 3 km from the coastline, and 4 km from the Dublin Mountains. There is an historical connection to the Dublin Mountains, with Cherrywood originally being part of their hinterland, which has been severed somewhat by the completion of the South Eastern Motorway (M50) The lands have a varied landscape and topography, flanked by three valleys; Druid's Glen, Bride's Glen and the Cherrywood/Loughlinstown River Valley, and the historical ruins of Tully Church identifying the high point of the Plan Area. ...

The boundaries of the area are characterised by housing along Cherrywood Road, the N11 and Brennanstown Road. The majority of the Plan Area is undeveloped and rural in context with dispersed housing along Lehaunstown Lane. There is some recent residential development in the form of housing and apartments and an emerging business park. ...'

LCA 5 – Kiltiernan Plain

7.6.25 The description of LCA 5 – Kiltiernan Plain includes:

'This is a large enclosure which comprises the hilly plain lying between Three Rock to the west, Newtown, Barnaslingan (The Scalp) and Carrickgollogan to the south, the disused lead mines and chimney to the east. The enclosure is curtailed to the north by the coniferous plantation on Three Rock. The edge of Stepside Area Action Plan and Ticknick also forms a boundary to the north east.

This enclosure is characterised by a series of smaller hillocks within a plain. Roads run between the undulations most notably the main Enniskerry Road running north south from Stepside and disappearing into the Scalp.

This large hilly plain which is part of the foothills of the Dublin Mountains accommodates much of the rural development in the County (Kiltiernan and Stepside). Given its terrain and the number of routeways traversing this plain, it is likely to be subject to the most pressure for long-term development which would significantly alter the existing landscape.

The area has accommodated much change generated by the pressures of being adjacent to a large urban area. ...'

Regional Seascape Character Assessment for Ireland 2020

7.6.26 The Regional Seascape Character Assessment for Ireland 2020 was published in December 2020 (Marine Institute, 2020). In it 17 Regional Seascape Character Areas (SCA) are classified, including two Border SCAs. SCA 14 – Irish Sea, Sandbanks and broad bays; and SCA 15 – Dublin Bay cover those parts of the study area surrounding the proposed Landfall Site at Shanganagh and the O&M Base in Dún Laoghaire Harbour.

SCA 14 – Irish Sea, sandbanks and broad bays

7.6.27 The area covered by SCA 14 – Irish Sea, Sandbanks and broad bays is presented in Figure 4 Figure 4.



Figure 4 Extract from the Regional Seascape Character Assessment for Ireland 2020, showing area covered by SCA 14 and example of coastline in this SCA.

7.6.28 The summary description of SCA 14 includes the following sections, relevant to the landscape baseline within the study area:

'This SCA differentiates from its neighbours due to the changing geology, increased elevation and ever greater influence of the Dublin region as seen through a greater urbanisation and modification of the coast. It includes well known seaside resorts and well represented bays such as Killiney Bay and Bray Head. ...

Coastal and inland topography is generally low in elevation in this SCA, ...

The Wicklow Mountains provide a montane backdrop, whilst Great Sugarloaf Mountain (501 m OD) is a commanding feature along the northern section of the SCA. The hinterland

comprises towns and suburbs including Wicklow, Greystones and Bray, the main transport corridors of the N11 and railway and DART plus agriculture and forestry further inland. ...

Panoramic views prevail with the elevated headlands; the views of Killiney bay and Dalkey Island are well known and Killiney Hill takes full advantage of this sweeping view. The popular coastal walk from Bray Head to Greystones allows for long views across the sea and views over to Killiney Hill and Bray Head heading north. ...'

SCA 15 Dublin Bay

7.6.29 The area covered by SCA 15 Dublin Bay is presented in Figure 5Figure 5.

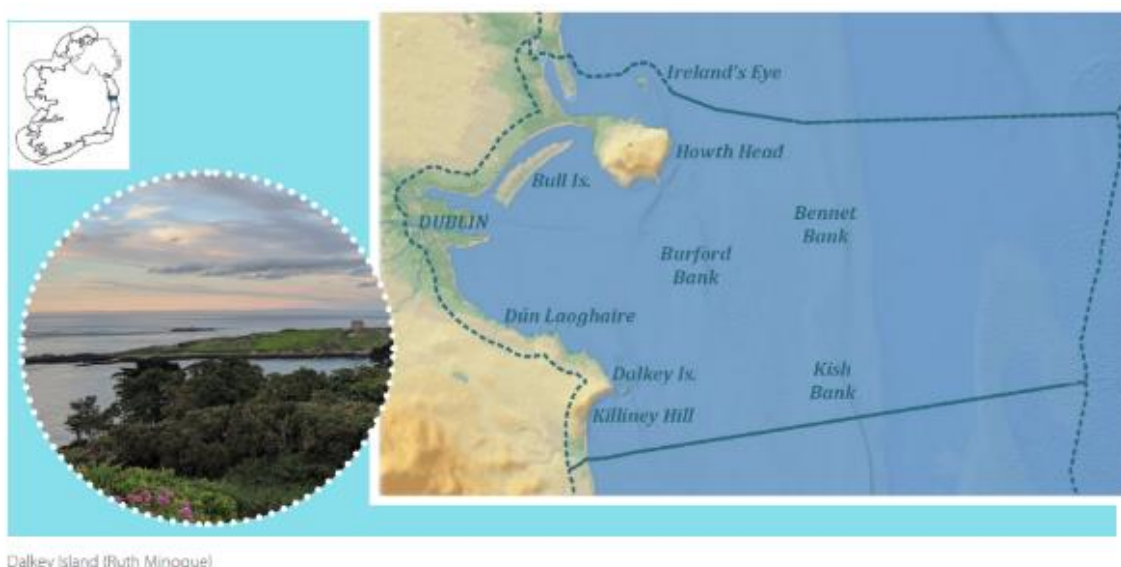


Figure 5 Extract from the Regional Seascape Character Assessment for Ireland 2020, showing area covered by SCA 15 and example of coastline in this SCA.

7.6.30 The summary description of SCA 15 – Dublin Bay includes the following sections, relevant to the landscape baseline within the study area:

'This area comprises the distinctive horseshoe bay of Dublin, framed by the elevated quartzite headland of Howth Head, to the north, and Killiney Hill, an elevated granite head to the south. These hard rocks have withstood erosive processes that have otherwise laid low the softer Carboniferous limestone and shales that floor the centre of the bay and underlie Dublin City. ...

The coast of this area is largely urban in character and has been extensively modified to accommodate the growing city. The shifting sandbars and the ongoing silting of the bay and the sandbars have ensured regular interventions to keep the port open. The hinterland is primarily urban in character; however, the Dublin Bay Biosphere designation reflects the importance of the Bay for biodiversity. ...

Whilst heavily urbanised, the bay itself is a popular recreational area for pleasure boats, and for activities such as kayaking and windsurfing. Popular areas for walking include Howth Head, Bull Island, South Wall, Dun Laoghaire Piers and Killiney Hill. Popular bathing areas include the Forty Foot, the recently reopening Clontarf Baths and the south wall. ...

The presence of the sea on the land varies within the SCA; however, the sight and sound of seagulls indicates the proximity to the sea throughout the area. Sea views are possible along the suburban coastal roads particularly from Clontarf to Howth, and from Ringsend, Dollymount to Laoghaire. The view from Howth Head in particular allows for a full panoramic view of 360 degrees that provides a fascinating overview not only of the Bay but further north towards the mountains of Mourne. ...'

Local Landscape Units within the study areas

7.6.31 Table 3 outlines the local landscape units (e.g. housing estates, public green spaces, road corridors) contained in each section of the LVIA study areas, including:

- ▲ the Landfall Site, including wider study area surrounding it (refer to section 7.4);
- ▲ the sectors along the Onshore ECR, including the 100 m buffer on either side of the route;
- ▲ the OSS site, including the wider study area surrounding it (refer to section 7.4); and
- ▲ the O&M Base, including the 500 m buffer surrounding it.

7.6.32 In addition to the descriptions in Table 3, the existing character of some of these local landscape units is illustrated by the photographs provided above (referenced in Table 3; also refer to Figure 2 for the photo locations).

7.6.33 Table 3 provides not only a description of these landscape units but also serves as a preliminary scoping tool, indicating whether the units are potentially significantly affected by the proposed OES and O&M Base. For each part of the study area/each ECR sector, a judgement is made, whether there are likely to be significant landscape effects during the construction and/or operation phase. This is followed by a brief summary of the main reasons for this judgement. This initial scoping helps to determine which local landscape units should be brought forward for further assessment in the identification of landscape receptors and their sensitivity evaluation.

7.6.34 For example, areas where the onshore export cables will be laid within existing roads, with little or no effect on roadside vegetation, or areas where cables will be laid in amenity grassland that will be fully reinstated, are considered unlikely to experience significant landscape effects. In these cases, no characteristic landscape elements will be permanently removed, and the affected ground will be fully reinstated within a short time frame, resulting in no permanent change to the local landscape character.

7.6.35 Additionally, temporary and localised roadworks or construction works are commonplace in urban environments and do not constitute alien elements. In cases where joint bays along the onshore ECR require ground disturbance for a longer period, the duration is unlikely to exceed 12 months.

Table 3 Local Landscape Units within the study areas and preliminary scoping of potential significant effects

Study area/sector	Local landscape units present	Potential to be significantly affected?
Landfall Site	<p>Refer to Photograph 1:</p> <ul style="list-style-type: none"> Public green spaces (amenity grassland, footpaths, remnant of shelterbelt); Shanganagh-Bray WWTP; Shanganagh Community Garden; Housing estates (richly vegetated, many street trees); and Tree-lined Railway line. 	<p>Construction and operation: No</p> <p>The onshore export cables will be installed underground and will use trenchless techniques at the Landfall Site and railway crossing. The Landfall will have a temporary construction compound (TCC) erected to facilitate the cable installation at Shanganagh.</p> <p>The TJBs at the Landfall Site will be installed below ground followed by the reinstatement of the surface to grassland, except for manhole covers retained for access to the TJB.</p> <p>The local landscape character is influenced by the presence of the adjoining WWTP, which lowers its sensitivity. Also, no distinctive landscape elements (e.g. hedgerows/trees) will be affected.</p>
Sector 1	<p>Refer to Photograph 2 & Photograph 3:</p> <ul style="list-style-type: none"> Public green space (amenity grassland, Shanganagh River, mature trees); Road corridor (Shanganagh Road) bound by walls or hedgerows with some mature trees; Linear green space along road (amenity grassland, footpaths); and Housing estates (sparse vegetation/few street trees to the W; richly vegetated, many street trees to the E). 	<p>Construction and operation: No</p> <p>The Landfall will have a temporary construction compound (TCC) erected to facilitate the cable installation at Clifton Park.</p> <p>Cables and associated infrastructure will be buried in road and amenity grassland, which will be reinstated; no major tree losses anticipated; some potential losses can be accommodated with replacement planting, without affecting the local landscape character (note: number of trees affected to be minimised through the implementation of suitable mitigation procedures; refer to Section 7.11 Project Design Features and avoidance and preventative measures).</p>
Sector 2	<p>Refer to Photograph 4:</p> <ul style="list-style-type: none"> Loughlinstown Linear Park (amenity grassland, footpaths, river, mix of young and over-mature trees). 	<p>Construction and operation: No</p> <p>Cables and associated infrastructure will be buried in roads and/or amenity grassland, which will be reinstated. Some tree losses in</p>

Study area/sector	Local landscape units present	Potential to be significantly affected?
	<ul style="list-style-type: none"> Housing estates (sparse vegetation/few street trees to the E; richly vegetated, many street trees to the W). Road corridor (Loughlinstown Drive) with regular row of street trees on one side; bound by walls/fencing/hedgerows and with some mature trees nearby at W end. DLR Parks Depot (glasshouses, planting beds and mature trees along boundaries). Private parkland (Eurofound) with grassland and mature trees. 	Loughlinstown Linear Park and some potential losses along the roads and at the DLR Parks Depot, as well as specific mitigation measures required at the Eurofound site; overall any losses can be accommodated with replacement planting, without significantly affecting the local landscape character (note: number of trees affected to be minimised through the implementation of suitable mitigation procedures; refer to Section 7.11 Project Design Features and avoidance and preventative measures).
Sector 3	<p>Refer to Photograph 5:</p> <ul style="list-style-type: none"> Cherrywood Park – public green space west of N11 (amenity grassland, some mature trees). R118 – dual carriageway (mostly young, some more mature street trees). 	<p>Construction and operation: No</p> <p>Cables and associated infrastructure will be buried in the road and amenity grassland, which will be reinstated. Some potential tree losses in the public green space can be accommodated with replacement planting, without affecting the local landscape character (note: number of trees affected to be minimised through the implementation of suitable mitigation procedures; refer Section 7.11 Project Design Features and avoidance and preventative measures).</p>
Sector 4	<ul style="list-style-type: none"> Road Corridor (south of R118) with no street trees. Disturbed ground/development land, north and south of the R118 and east of the M50, with some scrub vegetation. Agricultural land, along and parallel to the M50, crossing several existing boundary hedgerows. 	<p>Construction and operation: No</p> <p>Cables will be buried in future road corridor (i.e. Beckett Road), currently disturbed ground and agricultural land, which will be reinstated and no trees likely to be affected were identified. Also, area already undergoing substantial changes, as part of Cherrywood SDZ, including the proposed Beckett Road.</p>
Sector 5	Refer to Photograph 6:	Construction and operation: No

Study area/sector	Local landscape units present	Potential to be significantly affected?
	<ul style="list-style-type: none"> Road corridor (Golf Lane) framed by mature trees in hedgerows and on adjoining private land. Some younger tree stock along Blackberry Hill residential estate. 	<p>Cables and associated infrastructure will be buried in road, which will be reinstated. Some potential tree losses along Golf Lane can be accommodated with replacement planting, without affecting the local landscape character (note: number of trees affected to be minimised through the implementation of suitable mitigation procedures; refer to Section 7.11 Project Design Features and avoidance and preventative measures).</p>
Sectors 6 & 7	<p>Refer to Photograph 7:</p> <ul style="list-style-type: none"> Agricultural land, northwest of R842/Glenamuck Road, crossing some existing boundary hedgerows. High voltage overhead powerline with tall lattice steel towers and double wooden posts. Carrickmines Park Retail Park. 	<p>Construction and operation: No</p> <p>Cables to be buried in agricultural land and in Ballyogan landfill facility and recycling park, which will be reinstated. Some tree losses at hedge crossings can be accommodated with replacement planting, without affecting the local landscape character (note: number of trees affected to be minimised through the implementation of suitable mitigation procedures; refer to Section 7.11 Project Design Features and avoidance and preventative measures).</p> <p>Also, area already undergoing substantial changes, as part of the construction of the Glenamuck District Distributor Road.</p>
OSS	<p>Refer to Photograph 8 & Photograph 9:</p> <ul style="list-style-type: none"> Ballyogan Road (L6034) and associated individual residential properties and gardens, as well as commercial/industrial sites. Grass covered domed landform of former Ballyogan Landfill Facility and flat section of grassland immediately north. Two high voltage overhead powerlines with tall lattice steel towers. 	<p>Construction and operation: No</p> <p>Cables and associated infrastructure will be buried in existing roads and agricultural land, which will be reinstated and trees unlikely to be affected (i.e. no hedgerow crossings).</p> <p>At the OSS site, despite change from open ground to industrial site, the local character is already heavily influenced by the surrounding commercial/industrial developments, and no distinctive landscape elements will be affected.</p>

Study area/sector	Local landscape units present	Potential to be significantly affected?
	<ul style="list-style-type: none"> ▪ Carrickmines Retail Park. 	
Leopardstown TCC	<ul style="list-style-type: none"> ▪ Previously disturbed ground, currently covered in a mix of scrub, grassland and bare patches. ▪ Road corridor (access to Leopardstown Racecourse and M50). ▪ LUAS line. 	<p>Construction and operation: No</p> <p>TCC for storage of plant/equipment needed for the Onshore ECR construction. Ground to be reinstated on completion of construction works (and left for natural recolonisation).</p> <p>The local landscape character is influenced by the presence of the adjoining road corridor and LUAS line. No distinctive landscape elements (e.g. hedgerows/trees) will be affected.</p>
Killiney Bay and Killiney Hill	<p>Refer to Photograph 10:</p> <ul style="list-style-type: none"> ▪ Stoney, narrow beach, bordered by low cliffs. ▪ Largely wooded slopes, facing the Irish Sea, interspersed with individual residential properties at the northern and southern end, undeveloped with rocky highpoints (i.e. Killiney Hill and Dalkey Hill) at the centre. 	<p>Construction and operation: No</p> <p>Works at proposed Landfall Site visually separated from Killiney Bay and Hill by the Shanganagh WWTP and cliffs along shore. The setting and character of Killiney Bay and Hill will not be affected.</p>
North-eastern slopes of Dublin Mountains (LCA 5 – Kiltiernan Plain)	<p>Refer to Photograph 11 & Photograph 12:</p> <ul style="list-style-type: none"> ▪ Road corridor along the R117: Flat to gently sloping ground comprising mix of housing estates, individual properties, golf courses, agricultural land and small wooded areas. ▪ Land between approximately the 150 m and 300 m contour: Gently to steeply sloping ground comprising mix of agricultural land with associated hedgerows, scrub and woodland areas, as well as ribbon development of individual properties along local roads. 	<p>Construction and operation: No</p> <p>Construction works and operational OSS, will be of similar character and seen in context with the surrounding industrial/commercial development.</p> <p>No new landscape elements will be introduced (considering the existing Carrickmines substation and nearby large retail/industrial buildings).</p> <p>The setting and character of the north-eastern slopes of the Dublin Mountains will not be affected.</p>

Study area/sector	Local landscape units present	Potential to be significantly affected?
	<ul style="list-style-type: none"> Above 300 m contour: Steeply sloping ground comprising mix of conifer plantations, upland heathland and scrub. 	
O&M Base and environs	<p>Refer to Photograph 13 & Photograph 14:</p> <ul style="list-style-type: none"> Harbour environment, including piers, buildings, marinas, boat storage and car parking areas. DART/Road corridor along coastline, with many mature street trees. Seafront, made up from a mix of 3-7 storey historic and modern buildings. 	<p>Construction and operation: No</p> <p>The O&M Base building will be constructed immediately adjoining the former ferry terminal within Dún Laoghaire Harbour. It will be of a similar height and width and will therefore form a continuation of the existing building. The building is intended to resemble the shape of a ship (i.e. reminiscent of the ferries formerly docking in this area) and will be in character with the harbour setting.</p>

Selected landscape receptors

7.6.36 Following the preliminary assessment of the potential of the local landscape units to be significantly affected by the proposed onshore infrastructure of Dublin Array, there were no landscape receptors identified. Therefore, no landscape receptors will be brought forward to the detailed impact assessment.

Visual baseline

7.6.37 The following section describes the general visual environment within the LVIA study areas, followed by details on any protected views and prospects within the areas. It also includes a description of the visual receptors present in each section. A preliminary assessment is provided on the likelihood of these visual receptors being significantly affected by the proposed OES and O&M Base. Based on this assessment, visual receptors to be included in the impact assessment are identified, along with an assessment of their sensitivity (if applicable).

General visibility

7.6.38 Visibility within the LVIA study area ranges from short distance enclosed views, to long-distance panoramic views, as described in more detail below. Please refer to the photographs 1-12 provided in the Landscape Baseline Section in section 7.6, which also illustrate the visual baseline within the study areas (refer Figure 2 for photograph locations).

OES LVIA study area

Urban area between Shanganagh and Carrickmines

7.6.39 Views within the urban section of the OES LVIA study area between Shanganagh and Carrickmines are generally very restricted and of low scenic quality. This is due to a combination of the built-up environment, existing trees and hedgerows and the mostly flat topography. In the vicinity of public greenspaces and parks, more open views are available. However, these are still typically restricted to the nearest treeline or building line (refer to Photographs P2-P6 in section 7.6). The ground where the proposed onshore ECR will be located is generally visible only from locations in close proximity to the route corridor, with each location offering views of only short sections of the route.

7.6.40 There are areas within the OES LVIA study that offer longer-distance, scenic views towards Killiney Hill, the Dublin and Wicklow Mountains and/or the Irish Sea. From certain locations, portions of the proposed onshore infrastructure are also visible, as listed below:

- ▲ Proposed Landfall Site at Shanganagh Cliffs distantly visible from Killiney Hill, as well as views of the Irish Sea and Dublin and Wicklow Mountains (refer to Photograph P10);

- ▲ Proposed Landfall Site at Shanganagh Cliffs visible from adjoining coastal path, as well as views of the Irish Sea and Killiney Hill (refer to Photograph P1);
- ▲ Onshore ECR visible from the southwestern end of the R118/M50-N11 link road, as well as views towards Killiney Hill and/or the Dublin Mountains; and
- ▲ Parts of onshore ECR/OSS visible along Glenamuck Road and Ballyogan Road, as well as views towards the Dublin Mountains (refer to Photographs P7-09).

Northeastern slopes of the Dublin Mountains

7.6.41 Roadside vegetation, high ditches, walls or fencing restrict views from many locations along the roads on the northeastern slopes of the Dublin Mountains. However, there are intermittent locations along these roads where views open up – uphill towards Three Rock Mountain or downhill over southeast Dublin, towards Killiney Hill, and, in some places over Dublin Bay, as follows:

- ▲ Intermittent uphill and downhill views along Ballyedmonduff Road (refer to Photograph P12);
- ▲ Intermittent downhill views along Burrow Road (refer to Photograph P11); and
- ▲ Intermittent uphill views along the R117 – Enniskerry Road.

7.6.42 While these intermittent views are publicly accessible, since they are located along public roads, there are no formal viewing points established. In addition to the intermittent publicly available views, many of the residential properties along these roads enjoy similar panoramic views uphill and/or downhill. Furthermore, there will be many views from within the agricultural fields in this area. However, none of these are publicly accessible and therefore only a limited number of receptors will be able to experience these views.

7.6.43 There are many public footpaths leading up to and across the upland area surrounding Three Rock Mountain, both formal and informal ones. The Dublin Mountains Way long distance walking route is one of the formal ones. While some sections of these footpaths pass through conifer plantations, there are many locations where vastly panoramic views over Dublin Bay and towards the Wicklow Mountains are available.

7.6.44 The Carrickmines Retail Park and the former Ballyogan Landfill Facility, which adjoin the site for the proposed OSS can be identified in most of the available views from uphill locations. These elements typically occupy a small portion of the wide panoramic views only.

O&M Base LVIA study area

7.6.45 The site of the proposed O&M Base (adjoining the former ferry terminal building) is openly visible from within Dún Laoghaire Harbour, i.e. from the surrounding piers and from the water within the harbour (refer to Photograph P13).

- 7.6.46 While there are a number of glimpsed views from the seafront and roads leading into the Dún Laoghaire town centre, such as Queen's Road, Crofton Road and Marine Road, the former ferry terminal building is screened in most locations, by intervening buildings/structures, the existing harbour walls/piers and/or the many mature trees along the coast road (refer to Photograph P14).
- 7.6.47 The East and West Pier of Dún Laoghaire Harbour screen much of the former ferry terminal building in views from locations further along the coast, such as the Forty Foot to the southeast and Sandymount to the northwest. Only the top of the building can be distantly seen in views from these areas.

Designated views and prospects

- 7.6.48 'Views to be preserved' are shown on the maps associated with the Dún Laoghaire Rathdown County Development Plan 2022-2028 and Table 8.1 of the Development Plan lists all the 'prospects to be preserved'. Below, we have included only those located within the LVIA study area and oriented approximately towards the location of the proposed onshore infrastructure. For clarification, views directed away from all parts of the proposed onshore infrastructure are excluded. The relevant 'Views to be preserved' are:
- ▲ Views north from the northern end of the Shanganagh Cliffs towards Killiney Hill;
 - ▲ Views east along Ballyedmonduff Road;
 - ▲ Views towards the Dún Laoghaire seafront from the tips of the East Pier and the West Pier in Dún Laoghaire harbour; and
 - ▲ Views from several locations along the coast road along Dún Laoghaire harbour, i.e. sections of Queen's Road, Crofton Road and Old Dunleary Road, towards the harbour area.
- 7.6.49 None of the 'Prospects to be preserved' listed in Table 8.1 of the Dún Laoghaire Rathdown County Development Plan 2022-2028 will be affected by the proposed OES or O&M Base, as none of the components are located in between any of the listed viewing locations and landscape features to be viewed.
- 7.6.50 The following scenic viewpoint is located within the LVIA study area, as indicated on the Ordnance Survey Ireland (OSi) Discovery Series Map No. 50:
- ▲ Panoramic view south from the top of Killiney Hill.

Visual receptors within the study areas

- 7.6.51 Table 4 below provides a list of the types of visual receptors (e.g. residents, recreational users, road users) present in each section of the LVIA study areas, i.e.

- ▲ The Landfall Site, including wider 3km study area surrounding it;
- ▲ The 7 sectors along the onshore ECR, including the 100 m buffer on either side of the route;
- ▲ The OSS site, including the wider 3km study area surrounding it; and
- ▲ The O&M Base, including the 500 m buffer surrounding it.

7.6.52 Only visual receptor types with potential views of parts of the OES or O&M Base are included in the assessment. Photographs illustrating the existing visual environment in selected sections of the study area is provided in section 7.6 (as referenced in Table 4 also refer to Figure 2 for the photo locations).

7.6.53 Table 4 provides a preliminary assessment of whether the visual receptors in each section are likely to be significantly affected by the proposed onshore infrastructure of Dublin Array OES or O&M Base. Only those visual receptors identified as potentially significantly affected are taken forward to the subsequent identification of visual receptors selected for further assessment, as well as the evaluation of visual receptor sensitivity.

7.6.54 For example, visual receptors in areas where onshore cables will be temporarily visible during installation (e.g. within existing roads or within amenity grassland areas) are unlikely to be significantly affected. These areas will experience little or no permanent changes to the existing views, as the affected ground will be fully reinstated. Additionally, the temporary works will resemble other temporary, localised roadworks and construction activities typical of an urban environment.

Table 4 Visual receptors within the study areas and preliminary scoping of potential significant effects

Study area sector	Visual receptors present	Potential to be significantly affected?
Landfall Site	<p>Refer to Photograph P1:</p> <ul style="list-style-type: none"> ■ Recreational users of coastal path (views likely to be focused on the sea and Killiney Hill); ■ Residents; and ■ Train passengers. 	<p>Construction: Yes, views from users of the coastal path and residents are potentially significantly affected during the construction period. This is due to the temporary presence of fencing/hoarding and acoustic barriers (noise mitigation measures).</p> <p>No, for views experienced by train passengers, as views from railway line are blocked by dense vegetation.</p> <p>Operation</p> <p>No, views from all visual receptors are not expected to be significantly affected during the operational period, as amenity grassland will be fully reinstated.</p>

Study area sector	Visual receptors present	Potential to be significantly affected?
		Note: there is a potential for whole project cumulative impact for views, where both onshore and offshore components of Dublin Array are visible. Please note that whole project cumulative effects are being assessed, as part of the SLVIA report, Volume 3, Chapter 15 and are therefore not covered within this chapter.
Sector 1	Refer to Photographs P2 & P3: <ul style="list-style-type: none"> ▪ Residents; and ▪ Road users (Shanganagh Road). 	Construction and operation No , views from residents and road users are not expected to be significantly affected by construction works located along roads and within amenity grassland, which will be reinstated. TCC location at Clifton Park is visually enclosed and no views into the wider landscape will be affected. No major tree losses are anticipated; any potential losses can be accommodated with replacement planting, resulting in minor changes to views (note: the number of trees affected will be minimised through suitable mitigation procedures; for more details, refer to the Tree Survey Report in Appendix 6.5.7-2).
Sector 2	Refer to Photograph P4: <ul style="list-style-type: none"> ▪ Recreational users of Ballybrack Park (views unlikely to be focused on surroundings); ▪ Residents; ▪ People at work (DLR Parks Depot and Eurofound site); and ▪ Road users (Loughlinstown Drive). 	Construction and operation No , views from recreational users of the park, residents, people at work and road users are not expected to be significantly affected. Construction works will be confined to tracks, roads, and amenity grassland, which will be reinstated. Some tree losses are anticipated in Loughlinstown Linear Park and along the roads and at the DLR Parks Depot. Specific mitigation measures will be required at the Eurofound site, to reduce the impact on trees (refer to the Section 7.11 Project Design Features and avoidance and preventative measures) and thereby retain the visual amenity of existing views on completion of the works. Overall, any tree losses can be accommodated with replacement planting, resulting in only minor changes to views (note: the number of trees affected will be

Study area sector	Visual receptors present	Potential to be significantly affected?
		minimised through suitable mitigation procedures; for more details, refer to the Section 7.11 Project Design Features and avoidance and preventative measures).
Sector 3	<p>Refer to Photograph P5:</p> <ul style="list-style-type: none"> Recreational users of public green space west of N11 (views unlikely to be focused on surroundings); Residents; People at work (in office buildings); and Road users (R118). 	<p>Construction and operation</p> <p>No, views from users of the green space, residents, people at work, and road users are not expected to be significantly affected. Construction works will be confined to amenity grassland and along road, which will be reinstated. Some potential tree losses in the public green space can be accommodated with replacement planting, resulting in only minor changes to views (note: the number of trees affected will be minimised through suitable mitigation procedures; for more details refer to Section 7.11 Project Design Features and avoidance and preventative measures).</p>
Sector 4	<ul style="list-style-type: none"> Recreational users of Lehaunstown Lane, views likely to be focused on surroundings); Residents (Mercer Residential Estate); and Road users (R118 and south of it). 	<p>Construction and operation</p> <p>No, views from recreational users, residents, and road users are not expected to be significantly affected. Construction works will be confined to agricultural grassland and along the road, which will be reinstated. No trees are likely to be affected.</p> <p>Note: existing views are already undergoing substantial changes as part of Cherrywood SDZ, including the proposed Beckett Road.</p>
Sector 5	<p>Refer to Photograph P6:</p> <ul style="list-style-type: none"> Residents; and Road users (Golf Lane). 	<p>Construction and operation</p> <p>No, views from residents and road users are not expected to be significantly affected. Construction works will be confined to the existing road, which will be reinstated. Some potential tree losses along Golf Lane can be accommodated with replacement planting, resulting in only minor changes to views (note: the number of trees affected will be minimised through the suitable mitigation procedures; refer to Section 7.11 Project Design Features and avoidance and preventative measures).</p>

Study area sector	Visual receptors present	Potential to be significantly affected?
Sectors 6 & 7	<p>Refer to Photograph P7:</p> <ul style="list-style-type: none"> Residents; Road users (R842/Glenamuck Road); Future road users of Glenamuck District Distributor Road; and Future recreational users of Ballyogan former landfill (should there be advancement of a park which is opened to the public for recreational use). 	<p>Construction and operation</p> <p>No, views from all receptors are not expected to be significantly affected by the construction works associated with the underground cable. Construction works will be confined to agricultural grassland, which will be reinstated. Some tree losses at hedge crossings can be accommodated with replacement planting, resulting in only minor changes to views (note: the number of trees affected to be minimised through mitigation procedures; for more details refer to Section 7.11 Project Design Features and avoidance and preventative measures).</p> <p>Also, existing views are already undergoing substantial changes due to the construction of the Glenamuck Distributor Road.</p>
OSS	<p>Refer to Photographs P8 & P9</p> <ul style="list-style-type: none"> Residents; Road users (Ballyogan Road, L6034); People at work at commercial/industrial premises along Ballyogan Road; and Future recreational users of 'Jamestown Park' at the former Ballyogan Landfill Facility (note: development has not commenced on Jamestown Park, but is planned to be opened in the future.). 	<p>Construction and operation</p> <p>Yes, views from residents, road users and people at work at the commercial/industrial premises nearby may be significantly affected by the construction works associated with and the operational OSS, due to the size of the OSS and its tall elements.</p> <p>No, future recreational users of the Ballyogan former landfill site will not be significantly affected. By the time the public park opens, construction works will likely be completed, and the screen planting proposed as part of the OSS construction will be in place (as indicated on the OSS Landscaping Plan, Drawing 229100714-MMD-00-XX-DR-C-0250), to be agreed with DLRCC). Where visible, the OSS will be seen in the context of the industrial/commercial buildings/structures nearby (including the existing Ballyogan substation).</p> <p>(note: existing trees are unlikely to be affected, as there are no hedgerow crossings).</p>

Study area sector	Visual receptors present	Potential to be significantly affected?
Leopardstown TCC	<ul style="list-style-type: none"> Residents along Brighton Ave (upstairs windows only); Road users (along access road to Leopardstown Race course); and LUAS passengers. 	<p>Construction and operation</p> <p>No, views from all receptors are not expected to be significantly affected.</p> <p>Small number of receptors temporarily affected during the construction phase, with ground to be reinstated on completion of works. No trees are likely to be affected.</p> <p>Further to that the views from residential properties largely screened by vegetation and road users and rail passengers, experience glimpsed views when passing.</p>
Killiney Bay and Killiney Hill	<p>Refer to Photograph P10:</p> <ul style="list-style-type: none"> Recreational users of Killiney Hill Park (views likely to be focused on surroundings); and Residents in elevated locations south of Killiney Hill. 	<p>Construction and operation</p> <p>No, views from visitors to Killiney Park and residents are not expected to be significantly affected. Construction works at the Landfall Site will only be visible temporarily as a very small element in the available wide panoramic views, seen in the context of the Shanganagh WWTP and will not obstruct views of the Wicklow Mountains. There will be no visible elements during the operational stage.</p> <p>Note: there is a potential for whole project cumulative impact for views, where both onshore and offshore components of Dublin Array are visible. Please note that whole project cumulative effects are being assessed, as part of the SLVIA report, Volume 3, Chapter 15 and are therefore not covered within this chapter.</p>
North-eastern slopes of Dublin Mountains	<p>Refer to Photographs P11 & P12:</p> <ul style="list-style-type: none"> Residents; Recreational users of the northeastern edge of the Dublin Mountains (views likely to be focused on surroundings); and Road users (Burrow Road, Ballyedmonduff Road and associated side roads) – note: views from some 	<p>Construction and operation</p> <p>Yes, views from all receptors may be significantly affected by the construction works associated with and the operation of the OSS, due to the size of the OSS including some tall elements.</p> <p>Note: there is a potential for whole project cumulative impact for views, where both onshore and offshore components of Dublin Array are visible. Please note that whole project cumulative effects are being assessed, as part of the SLVIA report, Part 1, Volume 3,</p>

Study area sector	Visual receptors present	Potential to be significantly affected?
	sections of road are protected.	Chapter 15 and are therefore not covered within this chapter.
O&M Base and environs	Refer to Photographs P13 & P14: <ul style="list-style-type: none"> Residents; Recreational users of Dún Laoghaire Harbour; and Road users (harbour and coastal roads). 	Construction and operation Yes , views from all receptors may be significantly affected by the construction works associated with and the operation of the O&M Base due to the size of the building. Note: there is a potential for whole project cumulative impact for views, where both onshore and offshore components of Dublin Array are visible. Please note that whole project cumulative effects are being assessed, as part of the SLVIA report, Part 1, Volume 3, Chapter 15 and are therefore not covered within this chapter.

Selected visual receptors

7.6.55 Following the preliminary assessment of the potential of the visual receptors to be significantly affected by the proposed OES of Dublin Array, the visual receptors identified and carried forward to the detailed impact assessment are as follows:

- ▲ Landfall Site
 - Recreational users of the coastal path and residents at Shanganagh Cliffs – refer to Photograph P1 in section 7.6;
- ▲ OSS
 - Residents, road users and people at work along Ballyogan Road – refer to Photographs P8 and P9 in section 7.6;
- ▲ North-eastern slopes of Dublin Mountains
 - Residents, recreational users, and road users in several locations on the north-eastern slopes of the Dublin Mountains – refer to Photographs P11 and P12 in section 7.6; and
- ▲ O&M Base and environs
 - Residents, recreational users of Dún Laoghaire Harbour, and road users of the harbour and coastal roads – refer to Photographs P13 and P14 in section 7.6.

7.6.56 In addition, the following visual receptors within the LVIA study area will experience visibility of parts of the onshore infrastructure and parts or all of the offshore array, principally the presence of 39 to 50 wind turbine generators (WTG), either in the same viewshed or from the same viewpoint, but in a different viewing direction:

- Residents at Shanganagh Cliffs and recreational users of adjoining coastal path – refer to Photograph P1 in section 7.6, as well as Viewpoint 9: Shankill Beach and PVR 11: Shankill/Ballybrack in the SLVIA;
- Recreational users of Killiney Hill Park, residents and road users in elevated locations south of Killiney Hill – refer to Photograph P10 in section 7.6, as well as Viewpoint 10: Killiney Hill Obelisk, Viewpoint 11: Vico Road and PVR 12: Killiney in the SLVIA;
- Recreational users of the north-eastern edge of the Dublin Mountains, residents and road users along Burrow Road, Ballyedmonduff Road and associated side roads – refer to Photographs P11 & P12 in section 7.6, as well as Viewpoint 25: Ballyedmonduff Road in the SLVIA; and
- Recreational users of Dún Laoghaire Harbour, residents and road users along the seafront – refer to Photographs P13 & P14 in section 7.6, as well as Viewpoint 13: Dún Laoghaire Harbour East Pier and PVR14: Dún Laoghaire in the SLVIA.

7.6.57 These visual receptors are assessed for whole project impacts in the SLVIA.

7.7 Defining the sensitivity of the baseline

7.7.1 No landscape receptors were identified as having the potential to experience significant effects due to the Dublin Array OES or O&M Base. Therefore, no landscape receptors have been carried forward to the detailed impact assessment, and no assessment of the sensitivity of landscape receptors was conducted.

7.7.2 The following visual receptors, with a potential to experience significant effects due to the Dublin Array OES and O&M Base, either during the construction phase and/or during the operational phase, were identified:

- Recreational users of the coastal path and residents at Shanganagh Cliffs – refer to Photograph P1 in section 7.6, as well as Viewpoint 9: Shankill Beach and Principal Visual Receptor (PVR) 11: Shankill/Ballybrack in the SLVIA.
- Residents, road users and people at work along Ballyogan Road – refer to Photographs P8 and P9 in section 7.6;
- Residents, recreational users, and road users in several locations on the north-eastern slopes of the Dublin Mountains – refer to Photographs P11 and P12 in section 7.6, as well as Viewpoint 25: Ballyedmonduff Road in the SLVIA; and

- ▲ Residents, recreational users of Dún Laoghaire Harbour, and road users of the harbour and coastal roads – refer to Photographs P13 and P14 in section 7.6, as well as Viewpoint 13: Dún Laoghaire Harbour East Pier and PVR14: Dún Laoghaire in the SLVIA.

7.7.3 The sensitivity of these identified visual receptors is set out below. Where there is an overlap with the SLVIA, the sensitivity assessment is made with reference to the corresponding Viewpoints/PVR identified in the SLVIA (Volume 3, Chapter 15), to ensure alignment between the LVIA and SLVIA.

Shanganagh Cliffs – residents and recreational users

7.7.4 Recreational users of the coastal path and residents at Shanganagh Cliffs: **Medium-high** sensitivity. This is based on the sensitivity assessment of SLVIA PVR 11: Shankill/Ballybrack, refer to the quoted text below.

“The Medium-high sensitivity is derived from the combination of the medium value of the views and medium-high susceptibility of viewers. There are no formal viewpoints, and the area is not covered by any landscape designations which would otherwise denote a special scenic value. The medium-high susceptibility of residents relates to the openness of their coastal views and the long period over which they will be experienced. Walkers will also experience a medium-high susceptibility, especially in the Shankill area where the open space allows expansive views.”

Ballyogan Road – residents, road users and people at their workplace

7.7.5 Residents along Ballyogan Road: **Medium-high** sensitivity; People working in offices or at commercial/industrial sites and road users along Ballyogan Road: **Medium** sensitivity. The SLVIA does not contain any corresponding Viewpoints or PVRs, as there is no visibility towards the Irish Sea from this road. The sensitivity assessment is therefore based on the Photographs P8 and P9 in section 7.6, which represent two viewpoints along Ballyogan Road.

7.7.6 Photograph 08 is taken near the eastern end of Ballyogan Road at the junction with Ballyogan Link Road, looking west. Photograph 09 is taken at the junction of Ballyogan Road with Ballyogan Avenue, looking south. Both views illustrate the urban environment along the road, with enclosure from existing buildings and associated boundary walls/fencing/vegetation. Also present along the road are many other elements, such as public lighting poles, traffic lights and the electricity lines/poles associated with the adjoining LUAS line. At the same time, the elevated peaks of Two Rock Mountain and Three Rock Mountain at the north-eastern edge of the Dublin Mountains are visible above the building line along the southern side of the road. This provides some scenic interest, to the otherwise visually cluttered road corridor.

7.7.7 The Medium-high sensitivity of the residents along this road is derived from the combination of the medium value of the views and medium-high susceptibility of viewers. There are no formal viewpoints, and the area is not covered by any landscape designations which would

otherwise denote a special scenic value. The susceptibility of residents in the properties along this road is medium-high, as they are orientated towards the Dublin Mountains and residents experience these views for potentially longer periods of time, although with an existing influence from the urban development along Ballyogan Road. In contrast, the views of road-users are shorter in duration and their views are more transitory, and typically channelled either east or west by the alignment of the road, rather than south-west towards the mountains. Similarly, the people at work in buildings along this road are likely to be focused on their work and will therefore experience views for shorter durations. The susceptibility and sensitivity of road-users and people at work is Medium.

North-eastern slopes of the Dublin Mountains – residents, recreational users and road users

- 7.7.8 Residents along Burrow Road, Ballyedmonduff Road and local side roads, as well as recreational user of north-eastern edge of Dublin Mountains (note: these are considered to have the same sensitivity as residents): **Medium-high** sensitivity; Road users: **Medium** sensitivity. Both are based on the sensitivity assessment of SLVIA Viewpoint 25: Ballyedmonduff Road, refer to the quoted text below.

“The Medium-high sensitivity is derived from the combination of the medium value of the viewpoint and medium-high susceptibility of residents and medium susceptibility of road-users. The viewpoint and is not covered by a scenic landscape designation, either of which would have otherwise raised its sensitivity. The susceptibility of residents in these properties is medium-high as they are orientated seawards and residents experience an open outlook for potentially longer periods of time, although with an existing influence from onshore development in these views. In contrast, the views of road-users are shorter in duration and their views are more transitory, and typically channelled either north or south by the alignment of the road, rather than east towards the array area. The susceptibility and sensitivity of road-users is Medium.”

Dún Laoghaire Harbour – residents, recreational users and road users

- 7.7.9 Residents along the seafront and recreational users along the seafront and on the harbour piers: **Medium-high** sensitivity; Road users: **Medium** sensitivity. Both are based on the sensitivity assessment of SLVIA Viewpoint 13: Dún Laoghaire Harbour East Pier, refer to the quoted text below.

“The Medium-high sensitivity is derived from the combination of the medium-high value of the viewpoint and medium-high susceptibility of viewers. Although the viewpoint is not a formal viewpoint, its location adjacent to the east pier adds to its value, as it presents a local attraction and an open outlook seawards. The susceptibility of residents and walkers on the seafront and ferry passengers in onshore waters is medium-high owing to the baseline

influence of coastal development. Many of the properties are orientated seawards and residents experience an open outlook for potentially longer periods of time, although with an influence from existing coastal development in these views. Ferry passengers when looking out of portholes or from the deck will be appreciating the sea views. While the views of walkers are shorter in duration, their exposure to the coast means they also have a heightened awareness of the surroundings. The susceptibility and sensitivity of road-users will be Medium as their views are more transitory with often the focus remaining on the urban streets they are navigating.”

7.8 Uncertainties and technical difficulties encountered

- 7.8.1 No technical difficulties were encountered in the preparation of this landscape and visual chapter.
- 7.8.2 The assessment has been carried out from publicly accessible areas only. In instances where land was not publicly accessible, other sources of information have been used, such as aerial photography, and professional judgement has been applied in the interpretation of these sources.

7.9 Scope of the assessment

Scoped in

- 7.9.1 The following visual effects have been assessed:

- ▲ Construction:

- Impact 1: Construction impacts associated with the Landfall Site;
 - Impact 2: Construction activity and emerging presence of OSS;
 - Impact 3: Construction activity and emerging presence of O&M Base;

- ▲ Operation:

- Impact 4: Presence of OSS;
 - Impact 5: Presence of O&M Base

Scoped out from further evaluation in this EIAR

- 7.9.2 To further support the conclusion that no landscape receptors and not all of the visual receptors are likely to be significantly affected by the proposed OES and O&M Base of Dublin Array, justifications for scoping out the following landscape or visual effects due to the OES are provided:

▲ Construction Phase:

- Onshore ECR – The effects of the works associated with the onshore ECR during the construction phase have been scoped out of this assessment, as they will be carried out in short sections, each of which will be of a short duration, with the ground being reinstated on completion of the works. The TCCs associated with the onshore ECR, including Clifton Park and Leopardstown TCCs, will be present for the duration of the construction phase. However, the effects will be localised. The number of trees impacted along the Onshore ECR will be kept to a minimum through mitigation measures and any tree loss will be reinstated with replacement planning, refer to the Section 7.11 Project Design Features and avoidance and preventative measures. Due to the mostly urban environment, characteristic landscape elements will not be affected. Visibility of the cable installation will be localised only and will have the appearance of road works, which are a common occurrence in an urban environment. The effect of the onshore ECR construction works on landscape and visual receptors will be minimal. While an up to 3 m high acoustic barrier (i.e. close boarded fence/plywood hoarding) will be located around the perimeter of the drilling rig compounds at the trenchless crossings, these measures will be temporary (15 – 40 days) and are not considered to cause significant landscape and visual effects due to the short duration of the construction works at these locations.

▲ Operation and Maintenance Phase:

- Landfall Site – The effects of the Landfall Site during the operational phase have been scoped out of this assessment as the infrastructure will be located underground with only manhole covers visible at the surface adjacent to the TJBs. The Landfall Site will therefore not have a presence that would not affect landscape and visual receptors.
- Onshore ECR – The effects of the onshore ECR during the operational phase have been scoped out of this assessment as the infrastructure will be located underground, with surfaces fully reinstated. The onshore ECR will therefore not have a presence that would affect landscape and visual receptors.

▲ Decommissioning Phase:

- Landfall Site – It is proposed that the onshore export cables will be removed, while the residual associated transmission infrastructure will remain in place, when the offshore infrastructure of Dublin Array is decommissioned. The associated works would be of a short-term duration with little change to views and landscape receptors, resulting in negligible effects.

- Onshore ECR – It is proposed that the onshore export cables will be removed, while the residual associated infrastructure will remain in place. The associated works would be of a short-term duration with little change to views and landscape receptors, resulting in negligible effects.
- OSS – The OSS may remain in place and repurposed, even when no longer in use, when the offshore infrastructure of Dublin Array is decommissioned. However, should a decision be made that the OSS is removed, the decommissioning works would essentially be a reverse of the construction and therefore the same effects, as assessed for the construction phase (see Section 7.12) would apply, refer to Section 7.14.
- O&M Base – The O&M Base building is likely to remain in place and to be reused for another purpose when the offshore infrastructure of Dublin Array is decommissioned. A Decommissioning and Restoration Plan has been included in Volume 7 Appendix 7.2 of the EIAR.

Sensitive receptors

7.9.3 The landscape and visual receptors present within the LVIA study areas are outlined in section 7.6, which provides a baseline description. This is followed by the assignment of sensitivity ratings to those receptors identified as potentially experiencing significant effects, in section 7.7. These receptors have been carried forward for detailed assessment in sections 7.12, 7.13 and 7.15.

7.10 Key parameters for assessment

- 7.10.1 The onshore infrastructure design parameters used in the EIA are set out in Project Description chapter.
- 7.10.2 For each of the impacts ‘Scoped-in’ to the assessment (and as described in the preceding Section 7.9) the relevant key design parameters used in assessing the impact are set out below.
- 7.10.3 The key design parameters have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. Following this, the likely significant effects on receptors from the key design parameters have been described and assessed. Table 5 Table 5 Key project design parameters considered for Landscape and Visual assessment presents the construction methodology for each of the Impacts.
- 7.10.4 As the key design parameters are the parameters with the greatest potential for change to the relevant receptor or receptor group, confidence can be held that development of any construction methodology options will give rise to no worse effects than assessed in this impact assessment.

Table 5 Key project design parameters considered for Landscape and Visual assessment

Potential impact	Design parameter assessed	Justification
Construction		
Impact 1: Construction phase impacts associated with Landfall Site	<p>A 9,500 m² Landfall Site TCC, surrounded by 3.5 m tall acoustic noise barrier, finished in a light grey colour for the duration of the Onshore ECR and TJB construction phase.</p> <p>The tallest elements within the compound will be the proposed noise attenuation measures, which are likely to consist of 2 shipping containers on top of each other (5.2 m total height). The finish of these containers will be in a light grey colour (e.g. BS 4800:2011 - 10 A 03 Dawn Grey or similar) to reduce their contrast with the sky.</p> <p>Refer to Volume 5, Chapter 5: Noise and Vibration for further detail on noise attenuation measures.</p>	These parameters represent the maximum potential effects on landscape and visual receptors.
Impact 2: Construction activity and emerging presence of OSS	<p>The proposed OSS will be situated within a 2-hectare (ha) site, with 1.7 ha dedicated to the OSS itself and the remaining area used for enabling works, temporary storage, and laydown areas during construction.</p> <p>It will include a temporary construction compound, surrounded by a 4 m high wall which will be constructed around the full boundary of the OSS, with a 4 m high timber gate at the access points, finished in a light grey colour for the 39 month construction period for OSS construction.</p> <p>Additionally, an 8m high fire wall will be installed around the transformers.</p> <p>The tallest elements within the site will be by mobile cranes), the 15 m tall GIS building and associated electrical equipment (including 18 m tall lightning masts).</p>	These parameters represent the maximum potential effects on landscape and visual receptors.
Impact 3: Construction activity and emerging presence of O&M Base	<p>Construction compound, surrounded by 2.4 m tall hoarding finished in a light grey colour (to be agreed with the local authority) for the 31 months maximum period for onshore construction.</p> <p>Tallest elements within the site will be a (mobile) crane and the emerging O&M Base</p>	These parameters represent the maximum potential effects on landscape and visual receptors.

Potential impact	Design parameter assessed	Justification
	building, which will be a similar height as the adjoining former ferry terminal.	
Operation and maintenance		
Impact 4: Presence of OSS	<p>The Dublin Array OSS operational lifespan is expected to be 35 years . The OSS finished surface level will have a maximum height of +89 m OD Malin. The maximum overall height will be no more than +107 m. OD Malin.</p> <p>The OSS will also include the provision of landscaping, internal hardstanding, access roads, 6 car parking spaces, site drainage with an attenuation tank and other associated ancillary works.</p> <p>The buildings within the site will be finished in a light grey colour (e.g. BS 4800:2011 - 10 A 03 Dawn Grey or similar. This colour is similar to other nearby large buildings (e.g. the Carrickmines Retail Park) and will therefore be in harmony with the local environment. The building will have a green roof, which will further reduce its conspicuousness.</p>	These parameters represent the maximum potential effects on landscape and visual receptors over the predicted lifespan of the project.
Impact 5: Presence of O&M Base	The O&M Base building will be a three-storey, 12 m high, building adjoining the former ferry terminal to the north. This will be a similar height to the ferry terminal. The building is designed to resemble a ship and will therefore slightly contrast with the adjoining ferry terminal but will be fitting to the harbour setting. It will be operational for 35 years.	These parameters represent the maximum potential effects on landscape and visual receptors over the predicted lifespan of the project.

7.11 Project design features and avoidance and preventative measures

7.11.1 As outlined within Volume 2, Chapter 3: EIA Methodology and in accordance with the EPA Guidelines (2022), this EIAR describes the following:

- Project Design Features: These are features of the Dublin Array project that were selected as part of the iterative design process, which are demonstrated to avoid and prevent potential adverse effects on the environment in relation to physical processes. These are presented within Table 6.

- Other Avoidance and Preventative Measures: These are measures that were identified throughout the early development phase of the Dublin Array project, also to avoid and prevent likely significant effects, which go beyond design features. These measures were incorporated in as constituent elements of the project, they are referenced in the Project Description chapter of this EIAR, and they form part of the project for which development consent is being sought. These measures are distinct from design features and are found within our suite of management plans. These are also presented within Table 6.
- Additional Mitigation: These are measures that were introduced to the Dublin Array project after a likely significant effect was identified during the EIA assessment process. These measures either mitigate against the identified significant adverse effect or reduce the significance of the residual effect on the environment.

Table 6 Project design features and other avoidance and preventable measures relating to landscape and visual

Project design feature/other avoidance and preventative measure	Where secured
Project design features	
<p>Landfall Site: The Landfall Site was strategically chosen due to its advantageous topography and accessibility. Located in grassland adjoining the Shanganagh WWTP, this site ensures that no characteristic landscape elements are affected. The Landfall Site will be seen in the context of the existing industrial plant.</p> <p>The temporary acoustic barrier securing the Landfall Site TCC and other noise attenuation measures will be finished in a light grey (e.g. BS 4800:2011 - 10 A 03 Dawn Grey or similar) to reduce the contrast with the surrounding built elements and the sky.</p>	<p>Outlined within the Project Description Chapter.</p>
<p>Project design – onshore ECR: onshore ECR: Priority location within road corridors, followed by public green spaces; avoidance of private land, as well as trees/mature vegetation, as far as is practicable.</p>	<p>Outlined within the Project Description Chapter.</p>
<p>Project design – OSS location: Located in grassland, adjoining existing commercial/industrial buildings and therefore no characteristic landscape elements affected and seen in the context of the existing buildings; also making use of screening from existing topography, structures and vegetation.</p> <p>The OSS buildings will have an exterior colour in a light grey colour (e.g. BS 4800:2011 – 10 A 03 Dawn Grey or similar). This colour is similar to other nearby large buildings (e.g. the Carrickmines Retail Park) and will therefore be in harmony with the local environment.</p>	<p>Outlined within the Project Description Chapter.</p>

Project design feature/other avoidance and preventative measure	Where secured
The building will have a green roof, which will further reduce its visibility.	
<p>Project design – O&M Base: Located adjoining the existing former ferry terminal, effectively forming an extension to this building and, therefore, seen in the context of the existing buildings within the harbour.</p> <p>The proposed building design has been developed with the appearance of a ship, fitting to the local setting. Also, its modern design is in keeping with other local designs, such as the LexIcon Library and Cultural Centre.</p>	Outlined within the Project Description Chapter.
Other avoidance and preventative measures	
Arboricultural works to be undertaken in accordance with BS3998: 2010 Tree work – Recommendations (BS3998) by suitably qualified and insured contractors.	Volume 7, CEMP
The services of a suitably qualified arboriculturist will be retained for the duration of construction works where there is potential for trees to be affected, to support the implementation of all recommendations made.	
Prior to the commencement of construction works that could affect trees within a particular location along the ECR, an Arboricultural Method Statement (AMS) will be developed for that location in accordance with BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations.	
<p>The objective of the AMS will be to inform the construction/ development process and protect retained trees during the construction phase. The AMS will be informed by detailed design and produced by a suitably qualified arboriculturist in liaison with the contractor undertaking the works. The AMS will consider the following key elements as a minimum:</p> <ul style="list-style-type: none">▪ Protective Fencing<ul style="list-style-type: none">▪ Location and specification of Tree Protection Fencing (in line with BS 5837:2012)▪ Location and specification of alternative protective fencing, if required▪ Details of appropriate signage demarcating tree protection areas	

Project design feature/other avoidance and preventative measure	Where secured
<ul style="list-style-type: none"> ▪ Construction Exclusion Zones (CEZ) <ul style="list-style-type: none"> ▪ Location of CEZ including detail of suitable demarcation and restrictions that will be in place within these areas during construction ▪ Temporary Ground Protection <ul style="list-style-type: none"> ▪ Location and detail of temporary ground protection measures to prevent soil compaction around tree roots ▪ New Permanent Surfacing within RPAs <ul style="list-style-type: none"> ▪ Location and detail of any new surfacing within RPAs ▪ Canopy Protection <ul style="list-style-type: none"> ▪ Details of measures to avoid damage to tree canopies including staff awareness and pruning to facilitate access for plant and equipment is required. ▪ Use of Hazardous Materials <ul style="list-style-type: none"> ▪ Measures to prevent accidental release of materials hazardous to tree roots within RPAs 	
<p>Key persons and contractors who will be working along the onshore ECR in areas where there is potential for impact on trees to occur, will receive training by the appointed arboriculturist (e.g. via a tool box talk) on commencement of the construction works. This training, as a minimum, will cover how trees are potentially damaged (above ground and below ground) and the specific protection measures confirmed within the AMS.</p>	
<p>Regular planning by the construction team and the Arboriculturist will be undertaken in advance of scheduled works to review the programme of work and to ensure damage by machinery is avoided to the RPAs the stems and branches of trees to be retained along the ECR.</p>	
<p>The appointed arboriculturist will be present and monitor any excavation works where roots within the precautionary zone/RPA of trees could be affected along the ECR. The monitoring will seek to determine the amount and size of tree roots present and the extent of severance within the area excavated.</p> <p>An assessment will be made of the future viability of any trees that would incur damage to roots. Tree health, viability and stability will be dependent on the volume of root that would be removed, tree species and local context.</p>	

Project design feature/other avoidance and preventative measure	Where secured
<p>Depending on the findings the following approaches will be taken:</p> <ul style="list-style-type: none"> ▪ Trees considered unviable in the future: Where a tree's health/vitality is considered to be severely impacted arising from tree root damage and/or the tree is likely to become a health and safety hazard, due to reduced anchorage, it will be recorded and removed within 4 – 6 weeks of the excavation works taking place. The number of trees requiring removal will be reported to the local authority, prior to the works taking place. Replacement planting will be undertaken, in accordance with the DLRCC Tree Strategy 2024-2030. The number, species and location for replacement trees will be agreed with DLRCC. ▪ Trees considered viable in the future: The trees that are considered to be able to withstand the amount of tree roots lost, without significant impact on their health/vitality and/or stability will be retained. A monitoring and management plan for each retained tree will be prepared appropriate to the amount of tree roots lost. Measures included in the plan may include soil improvement to foster regrowth of roots, tree pruning to counter balance the loss of roots and long-term monitoring for signs of declining health or stability. 	
<p>Under supervision from the arboriculturist, any severed roots will be pruned back with a clean cut and any exposed roots will be wrapped to prevent them from drying out. The wrapping will stay in place whilst the roots are exposed. Suitable material will be placed around the roots when the trench is back-filled. These works will be undertaken in line with section 7.2 of BS 5837:2012 (Avoiding physical damage to the roots during demolition or construction).</p>	
<p>The layout of the Clifton Park TCC, and the trenchless crossing compounds will be designed in liaison with the appointed arboriculturist. Where feasible, the layout of the TCC will aim to avoid the precautionary zones/RPAs and canopy spread of adjoining trees. The following measures will be applied, as appropriate:</p> <ul style="list-style-type: none"> ▪ Tree Protection Fencing: Where TCCs are located adjacent or in very close proximity to precautionary zones/RPAs, the TCC fencing (including noise barrier fencing), can be used in-lieu of tree protection fencing (as specified in BS5837:2012). Where this is used, appropriate signage identifying an exclusion zone for tree protection purposes will be displayed. Additional fencing may be required, as directed by the appointed arboriculturist. 	

Project design feature/other avoidance and preventative measure	Where secured
<ul style="list-style-type: none"> Ground Protection Measures: Where encroachment into the precautionary zones/RPAs is unavoidable, alternative protection arrangements such as ground protection (sufficient to protect the structure of the soil from compaction) may be required. This will be designed in accordance with the requirements of section 6.2.3 of BS5837:2012. Canopy Protection Measures: Above ground equipment (such as containers, drill rigs and noise attenuation fencing), will be arranged to avoid damage to the canopies of existing trees. Where this is not possible, pruning to facilitate access for plant and equipment may be required as advised by the appointed arboriculturist. 	
<p>Clifton Park TCC (Sector 1): The following potential considerations will be addressed by measures in the AMS which will be informed by detailed design:</p> <ul style="list-style-type: none"> The eastern boundary of the Clifton Park TCC is in close proximity to an established tree line which is located along the DART railway line. The current plan indicates that part of the TCC is likely to be within the precautionary zone/RPA of the trees. The AMS will specify suitable ground protection measures prior to any plant or machinery operating in this area. Any variation in the TCC location will require consideration of the precautionary zone/RPA of the trees along Shanganagh River. 	

Project design feature/other avoidance and preventative measure	Where secured
<p>The TCC surrounding the trenchless crossing entry pit within Eurofound grounds: The TCC at Eurofound which will facilitate the trenchless crossing to undertake the N11 crossing is located in proximity to several large high-quality trees. The following potential considerations will be addressed by measures in the AMS which will be informed by detailed design:</p> <ul style="list-style-type: none"> ▪ Ground compaction from the operation/storage of plant and machinery within the compound and along the access route into it. The AMS will specify suitable ground protection measures prior to any plant or machinery operating in this area ▪ Encroachment into the precautionary zone/RPA of some trees, due to the excavations at the HDD entry pit. The HDD bore itself is unlikely to impact on tree roots, as it will be buried more than 60 cm below ground within a short distance of the entry pit. The AMS will specify suitable root protection measures, should these be required. ▪ Above ground impact on the tree canopies, in particular due to the proposed noise attenuation fencing along the northern, western and eastern boundary of this TCC. The fencing can function as a protective barrier around the RPAs of trees if sited carefully). Suitable canopy protection measures will be confirmed within the AMS. 	
<p>Replacement planting will be undertaken in line with Table 6-2 of Appendix 6.5.7-2 Tree Survey Report</p>	
<p>Replacement planting will be located in open green space that is under the control of DLRCC and will be agreed with DLRCC in advance of tree removal alongside the quantity, location, tree size and species to be used. The aim will be for replacement planting to be undertaken in the first planting season following the removal of each of the groups of trees upon completion of construction. The same details for tree planting which will be undertaken to replace existing trees at Eurofound and detail of the quantity, location, tree size and species to be used will be agreed with Eurofound in advance of any tree removal.</p> <p>New planting will consider the existing species mix present within the survey area in relation to both arboricultural and ecological considerations. New planting offers an opportunity to increase the species and age class diversity for a given area which can boost the resilience of the local tree stock in relation to pests, disease and</p>	

Project design feature/other avoidance and preventative measure	Where secured
<p>climate change as well as providing a greater range of amenity and other benefits.</p> <p>New trees will be planted in accordance with the minimum distances from new structures, services and surfacing set out in Table A.1 of BS 5837:2012. Tree stock selection, planting methods and planned maintenance will follow guidance as set out in BS 8545:2014 'Trees: from nursery to independence in the landscap'e.</p>	

7.12 Environmental assessment: construction phase

7.12.1 As mentioned above, there are no landscape receptors with a potential to be significantly affected by the proposed OES and O&M Base of Dublin Array and subsequently all potential landscape effects were scoped out. Therefore, an assessment of construction phase impacts on landscape receptors has not been carried out.

7.12.2 The following visual receptors with a potential to be significantly affected by the construction phase of the proposed OES and O&M Base of Dublin Array were identified:

- ▲ Recreational users of the coastal path and residents at Shanganagh Cliffs – refer to Photograph P1 in section 7.6;
- ▲ Residents, road users and people at work along Ballyogan Road – refer to Photographs P8 and P9 in section 7.6 and Photomontage Viewpoints 2 & 3, provided in Volume 6, Technical Appendix 6.5.7-1;
- ▲ Residents, recreational users, and road users in several locations on the north-eastern slopes of the Dublin Mountains – refer to Photographs P11 and P12 in section 7.6 and Photomontage Viewpoint 1, provided in Volume 6, Technical Appendix 6.5.7-1; and
- ▲ Residents, recreational users of Dún Laoghaire Harbour, and road users of the harbour and coastal roads – refer to Photographs P13 and P14 in section 7.6 and Photomontage Viewpoints 4-6, provided in Volume 6, Technical Appendix 6.5.7-1.

Potential construction impacts on visual receptors

Shanganagh Cliffs – residents and recreational visitors

Magnitude of change

- 7.12.3 The construction compound associated with the Landfall Site will be visible from ca. 10 residential properties and a short section of the coastal path at the top of the Shanganagh Cliffs, i.e. a small number of viewpoints in the immediate vicinity of the compound. Views of the Landfall Site TCC from further afield are screened by the WWTP to the north, residential properties to the west, a line of trees to the south and the Shanganagh Cliffs to the east.
- 7.12.4 The Landfall Site TCC, which will be enclosed by a 3.5 m high acoustic noise barrier, will block views over the green space for the adjoining residents, for the duration of the construction phase. In addition, the proposed noise mitigation measures, likely to be shipping containers on top of each other, will be visible above the fencing, partially blocking views towards Killiney Hill, for a period of circa 6 months in duration. Both will be finished in a light grey colour, to reduce the contrast with the surrounding built environment and the sky. The compound will be seen in the context of the existing Shanganagh WWTP (refer to Photograph P1 in section 7.6), which has an industrial character and is larger in scale than the proposed Landfall Site TCC, reducing the overall magnitude of change.
- 7.12.5 While also visible in views from the temporarily diverted coastal path, the users of this path are typically directing their views towards the sea or Killiney Hill, i.e. away from the Landfall Site TCC.
- 7.12.6 While the changes will be prominent in the available views and will be seen at a close distance, the magnitude of change will be moderated by the low number of people experiencing these changes, i.e. the residents of the ca. 10 adjoining properties. The overall magnitude of change is assessed as **Medium**.

Level of effect and significance

- 7.12.7 The previously assessed medium-high sensitivity of the visual receptors, in combination with the medium magnitude of change, is evaluated as having a **moderate level of visual effect**. This effect is judged to be **significant for the local residents immediately adjoining the construction compound**, but **not significant for those residents further away, as well as the users of the coastal path**, with effects being adverse, short-term and reversible.
- 7.12.8 It should be noted that while the Landfall Site TCC will have an effect on the views to be preserved at this location on the Shanganagh Cliffs, as designated in the current DLR County Development Plan, this effect will be temporary, and the designated views will not be permanently blocked or interfered with.

Ballyogan Road – residents, road users and people at work

Magnitude of change

- 7.12.9 The majority of the construction works will not be visible in views from Ballyogan Road, including the adjoining residential properties, due to intervening structures and vegetation. This is illustrated by Photomontage Viewpoints 2 & 3, provided in Volume 6, Technical Appendix 6.5.7-1: Onshore Photomontages, which show that the proposed OSS will be fully screened. Please note that the existing views at the eastern end of Ballyogan Road will be even further screened, when additional permitted buildings at this location are constructed. The only element visible may be a construction crane, if used, as this would reach over the intervening structures and vegetation. Considering the urban environment and common local construction activities (in particular associated with Carrickmines Retail Park) a crane visible in views from Ballyogan Road will result in a **Negligible** magnitude of change.
- 7.12.10 People at work in the commercial buildings adjoining the OSS construction site, including the DLR Operations Centre, will experience slightly more of the construction activities, due to their closer proximity. However, the substantial band of vegetation to the north of the OSS site, in combination with any construction hoarding surrounding the site will still largely block views of the works. Only the works associated with the taller elements within the site, i.e. the GIS building and the lightning masts, as well as potentially a crane will be intermittently visible in the middle ground of views, affecting a small vertical and narrow horizontal field of view. Also considering the low number of receptors (i.e. limited number of workers with views), the overall magnitude of change for people at work is assessed as **Low**.

Level of effect and significance

7.12.11 The previously assessed medium-high sensitivity of the residential visual receptors, in combination with the negligible magnitude of change, is evaluated as having a **Minor level of visual effect**. The previously assessed medium sensitivity of the road users, in combination with the negligible magnitude of change, is evaluated as having a **Minor/negligible level of visual effect**. The previously assessed medium sensitivity of the people at work visual receptors, in combination with the low magnitude of change, is evaluated as having a **Minor level of visual effect**.

7.12.12 These effects are judged to be **not significant for all visual receptors**, with effects being adverse, short-term and reversible.

North-eastern slopes of the Dublin Mountains – residents, recreational users and road users

Magnitude of change

7.12.13 The majority of the construction works will not be visible in views from locations on the north-eastern slopes of the Dublin Mountains, including Burrow Road, Ballyedmonduff Road, local side roads and associated residential properties, as well as public walking routes on the mountain slopes. This is due to intervening vegetation, structures and primarily due to the domed landform of the former Ballyogan Landfill Facility, which provides partial screening, even from elevated viewpoints. This is illustrated by Photomontage Viewpoint 1, provided in Volume 6, Technical Appendix 6.5.7-1: Onshore Photomontages, which shows that the majority of the proposed OSS will be screened. Only the tallest elements, i.e. the GIS building, the lightning masts and some other electrical equipment will be partially visible, which means the construction activities associated with these elements will also be visible. However, the changes would be visible at a minimum distance of 1.5km in the middle to background of views, affecting a small vertical and narrow horizontal field of view.

7.12.14 There are potentially a large number of visual receptors, in particular residential receptors, as they typically take advantage of the panoramic views available from these elevated viewpoints. However, these views are likely to be focused on the sea, rather than the Carrickmines area. Also considering that construction works are a common feature in the Carrickmines area and the small change in views, the overall magnitude of change is moderated to a **Low** level.

Level of effect and significance

- 7.12.15 The previously assessed medium-high sensitivity of the residential and recreational visual receptors, in combination with the low magnitude of change, is evaluated as having a **Moderate-minor level of visual effect**. The previously assessed medium sensitivity of the road users, in combination with the low magnitude of change, is evaluated as having a **Minor level of visual effect**.
- 7.12.16 These effects are judged to be **not significant for all visual receptors**, with effects being adverse, short-term and reversible.
- 7.12.17 Due to the distance from the viewpoints and assessed maximum moderate-minor visual effect, it is considered that the presence of the OSS will not block or interfere with the views to be preserved along Ballyedmonduff Road, as designated in the current DLR County Development Plan.

Dún Laoghaire Harbour – residents, recreational users and road users

Magnitude of change

- 7.12.18 The construction site associated with the O&M Base will be openly visible from the east and west pier and from buildings within Dún Laoghaire Harbour, such as the Royal St. George Yacht Club. The proposed construction hoarding will screen some of the activities at the lower levels within the site. The site is separated from most viewers by water and therefore typically visible in the middle ground of views, affecting a small vertical and narrow horizontal field of view. Views from the coastal roads and buildings south of these roads will be much more restricted, due to screening from trees lining the roads and intervening buildings, in particular the former ferry terminal. This is illustrated by Photomontage Viewpoints 4-6, provided in Volume 6, Technical Appendix 6.5.7-2: Tree Survey Report. The construction works will be most prominent in views from locations in the vicinity of the band stand on the east pier, as this is the closest point to the O&M Base along the pier, and the site is viewed side on at this point (refer to Photomontage Viewpoint 4).
- 7.12.19 There are a large number of visual receptors, in particular the recreational users of the harbour area. However, they are likely to focus their views onto the Dún Laoghaire seafront/skyline or out to sea and will experience the views for a short duration only. Also considering that movement and construction works are a common presence within the harbour environment and along the seafront, as well as the small change in views, the overall magnitude of change for receptors within the harbour area is moderated to a **Medium-low** level. In views from the residential receptors and road users along the seafront, the magnitude of change is **Low**, due to the limited visibility.

Level of effect and significance

- 7.12.20 The previously assessed medium-high sensitivity of the recreational visual receptors, in combination with the medium-low magnitude of change, is evaluated as having a **Moderate level of visual effect**. The previously assessed medium-high sensitivity of the residential visual receptors, in combination with the low magnitude of change, is evaluated as having a **Moderate/minor level of visual effect**. The previously assessed medium sensitivity of the road users, in combination with the low magnitude of change, is evaluated as having a **Minor level of visual effect**.
- 7.12.21 These effects are judged to be **not significant for all visual receptors**, due to the small change in views, with effects being adverse, short-term and reversible.
- 7.12.22 The construction of the proposed O&M Base will not change views of the Dún Laoghaire skyline. Also considering the assessed small change in views and associated maximum moderate visual effect, it is considered that emerging building will not block or interfere with the views to be preserved along sections of the coast road in the vicinity of Dún Laoghaire harbour and at the northern end of the east and west pier, as designated in the current DLR County Development Plan.

Potential whole project construction impacts

- 7.12.23 Please refer to the SLVIA chapter, for the assessment of whole project construction impacts.

7.13 Environmental assessment: operational phase

- 7.13.1 As mentioned above, no landscape receptors potentially significantly affected by the operational phase of the OES and O&M Base of Dublin Array were identified and subsequently all potential landscape effects were scoped out. Therefore, an assessment of operational phase impacts on landscape receptors has not been carried out.
- 7.13.2 The following visual receptors with a potential to be significantly affected by the operational phase of the proposed OES and O&M Base of Dublin Array were identified:
- ▲ Residents, road users and people at work along Ballyogan Road – refer to Photographs P8 and P9 in section 7.6 and Photomontage Viewpoints 2 & 3, provided in Volume 6, Technical Appendix 6.5.7-1;
 - ▲ Residents, recreational users, and road users in several locations on the north-eastern slopes of the Dublin Mountains – refer to Photographs P11 and P12 in section 7.6 and Photomontage Viewpoint 1, provided in Volume 6, Technical Appendix 6.5.7-1; and
 - ▲ Residents, recreational users of Dún Laoghaire Harbour, and road users of the harbour and coastal roads – refer to Photographs P13 and P14 in section 7.6 and Photomontage Viewpoints 4-6, provided in Volume 6, Technical Appendix 6.5.7-2.

Potential operational impacts on visual receptors

Ballyogan Road – residents, road users and people at work

Magnitude of change

- 7.13.3 The completed OSS will not be visible in views from Ballyogan Road, including the adjoining residential properties, due to intervening structures and vegetation. This is illustrated by Photomontage Viewpoints 2 & 3, provided in Volume 6, Technical Appendix 6.5.7-1, which show that the proposed OSS will be fully screened, and there will therefore be **No change** in views for residential receptors and road users.
- 7.13.4 People at work in the commercial buildings adjoining the OSS construction site, including the DLR Operations Centre, will partially see the taller elements within the site, i.e. the GIS building and the lightning masts above intervening vegetation in the middle ground of views, affecting a small vertical and narrow horizontal field of view. The proposed light grey colour of the buildings within the site will be in keeping with other buildings in the local area. Also considering the low number of receptors (i.e. limited number of workers with views), the overall magnitude of change for people at work is assessed as **Low**.

Level of effect and significance

- 7.13.5 As there will be no change in views for residents and road users, there will be **no visual impact** on these receptors, along Ballyogan Road. The previously assessed medium sensitivity of the people at work visual receptors, in combination with the low magnitude of change, is evaluated as having a **Minor level of visual effect**.
- 7.13.6 These effects on people at work are judged to be **not significant for all visual receptors**, with effects being adverse, long-term and theoretically reversible.

North-eastern slopes of the Dublin Mountains – residents, recreational users and road users

Magnitude of change

- 7.13.7 The majority of the completed OSS will not be visible in views from locations on the north-eastern slopes of the Dublin Mountains, including Burrow Road, Ballyedmonduff Road, local side roads and associated residential properties, as well as public walking routes on the mountain slopes. This is due to intervening vegetation, structures and primarily due to the domed landform of the former Ballyogan landfill, which provides partial screening, even from elevated viewpoints. This is illustrated by Photomontage Viewpoint 1, provided in Volume 6, Technical Appendix 6.5.7-1, which shows that the majority of the proposed OSS will be screened. Only the top parts of the tallest elements, i.e. the GIS building, the lightning masts and some other electrical equipment will be visible. The proposed light grey colour of the

buildings within the site will be in keeping with other buildings in the local area. Also, the OSS would be visible at a minimum distance of 1.5km in the middle to background of views, affecting a small vertical and narrow horizontal field of view.

- 7.13.8 There are potentially a large number of visual receptors, in particular residential receptors, as they typically take advantage of the panoramic views available from these elevated viewpoints. However, these views are likely to be focused on the sea, rather than the Carrickmines area. Also considering that the OSS will be similar other commercial/industrial developments in the area, such as the existing Carrickmines substation, and the small change in views, the overall magnitude of change is moderated to a **Low** level.

Level of effect and significance

- 7.13.9 The previously assessed medium-high sensitivity of the residential and recreational visual receptors, in combination with the low magnitude of change, is evaluated as having a **Moderate-minor level of visual effect**. The previously assessed medium sensitivity of the road users, in combination with the low magnitude of change, is evaluated as having a **Minor level of visual effect**.
- 7.13.10 These effects are judged to be **not significant for all visual receptors**, with effects being adverse, long-term and theoretically reversible.
- 7.13.11 Due to the distance from the viewpoints and assessed maximum moderate-minor visual effect, it is considered that the presence of the OSS will not block or interfere with the views to be preserved along Ballyedmonduff Road, as designated in the current DLR County Development Plan.

Dun Laoghaire Harbour – residents, recreational users and road users

Magnitude of change

- 7.13.12 The appearance of the proposed O&M Base is illustrated by Photomontage Viewpoints 4-6, provided in Volume 6, Technical Appendix 6.5.7-2. The completed building will be openly visible from the east and west pier and from buildings within Dún Laoghaire harbour, such as the Royal St. George Yacht Club. Views from the coastal roads and buildings south of these roads will be much more restricted, due to screening from trees lining the roads and intervening buildings, in particular the former ferry terminal. The O&M Base will be of a similar height as the adjoining ferry terminal and effectively appear as an extension to it. It has been designed to resemble a ship moored beside the ferry terminal, with a rusted copper finish which will contrast with the white cladding of the ferry terminal (refer to Photomontage Viewpoint 4). The modern design is in keeping with other recent developments along the seafront, e.g. the Lexicon Library and Cultural Centre. The O&M building will be separated from most viewers by water and therefore typically visible in the middle ground of views, affecting a small vertical and narrow horizontal field of view. The photomontages provided illustrate that the proposed building will not change views of the Dún Laoghaire

seafront/skyline, as it is either seen against the water or in front of the former ferry terminal and therefore not blocking views of any other buildings.

7.13.13 There are a large number of visual receptors, in particular the recreational users of the harbour area. However, they are likely to focus their views onto the Dún Laoghaire seafront/skyline or out to sea and will experience the views for a short duration only. Also considering the modern/appropriate design, as well as the small change in views, the overall magnitude of change for receptors within the harbour area is moderated to a **Medium-low** level. In views from the residential receptors and road users along the seafront, the magnitude of change is **low**, due to the limited visibility.

Level of effect and significance

7.13.14 The previously assessed medium-high sensitivity of the recreational visual receptors, in combination with the medium-low magnitude of change, is evaluated as having a **Moderate level of visual effect**. The previously assessed medium-high sensitivity of the residential visual receptors, in combination with the low magnitude of change, is evaluated as having a **Moderate/minor level of visual effect**. The previously assessed medium sensitivity of the road users, in combination with the low magnitude of change, is evaluated as having a **Minor level of visual effect**.

7.13.15 These effects are judged to be **not significant for all visual receptors**, due to the small change in views, with effects being long-term, theoretically reversible and for the most part neutral, as once the building is in place, it will become part of the Dún Laoghaire seafront/skyline.

7.13.16 The operational O&M Base will not change views of the Dún Laoghaire skyline. Also considering the assessed small change in views and associated maximum moderate visual effect, it is considered that the building will not block or interfere with the views to be preserved along sections of the coast road in the vicinity of Dún Laoghaire harbour and at the northern end of the east and west pier, as designated in the current DLR County Development Plan.

Potential whole project operational impacts

7.13.17 Please refer to the SLVIA in Volume 3, Chapter 15, for the assessment of whole project operational impacts.

7.14 Environmental assessment: decommissioning phase

7.14.1 As stated above, the construction, operation and maintenance works associated with the OES will be managed by the Applicant until the end of the proving period and handover of ownership to EirGrid. As the enduring asset owner, EirGrid will become responsible for decommissioning of the transferring assets at the end of their deemed lifetime.

7.14.2 Accordingly, this planning application does not seek permission for decommissioning of the OES. However, for the purpose of enabling a comprehensive environmental impact assessment, we have set out below our recommended approach to decommissioning, should EirGrid choose to decommission any aspect of the OES, and this approach is what has been assessed as part of the EIAR. This approach is informed by the Applicant's experience of decommissioning onshore substations and onshore export cables on other projects, and knowledge of how EirGrid typically do this.

7.14.3 In addition, we have set out below the factors which should inform any decision by EirGrid to decommissioning:

- The baseline environment at the time decommissioning works are carried out;
- Technological developments relating to decommissioning of onshore transmission infrastructure;
- Changes in what is accepted as best practice relating to decommissioning of onshore transmission infrastructure;
- Submissions or recommendations made by interested parties, organisations and other bodies concerned with decommissioning of onshore transmission infrastructure; and
- Any new relevant regulatory requirements.

7.14.4 Further, any decommissioning works must:

- Comply with any decommissioning specific conditions in the Development Consent;
- Ensure that the environmental impacts are consistent or less in scale and magnitude to those predicted in the EIAR associated with the Development Consent or any amendment of the Development Consent or any subsequent consent EirGrid might be granted in respect of decommissioning;
- Comply with the relevant health and safety regulations.

7.14.5 A decommissioning plan, along with an environmental management plan, should be prepared before any decommissioning works begin. If necessary, an application for consent should be made by EirGrid, and submitted to the relevant competent authority, in respect of any decommissioning works which require consent. We would expect any such application to involve further environmental assessment and public participation, and for any decision made by the competent authority to be judicially reviewable.

7.14.6 The decommissioning process for the onshore infrastructure is likely to follow a reverse programme of the construction process. The decommissioning process and techniques will have to adhere to all of the following requirements:

- Any decommissioning specific conditions of the Development Consent;

- ▲ The latest development in technology available for decommissioning work at the time when the work is carried out;
- ▲ Legislative obligations in place at the time of decommissioning regarding method and scope; and
- ▲ Ensuring that the environmental impacts are consistent or less in scale and magnitude to those predicted in the EIAR associated with the Development Consent or subsequent relevant consent.

- 7.14.7 A decommissioning plan and supporting decommissioning environmental management plan will be prepared prior to commencement of decommissioning and will be subject to its own environmental assessment. The environmental management measures specified in the Construction Environmental Management Plan (CEMP), attached in Volume 7, Appendix 8, which are relevant to the decommissioning activities, will be implemented and will reflect the relevant legislation and guidance available at the time of decommissioning.
- 7.14.8 When it becomes appropriate to decommission the onshore ECR, the cables will likely be removed but the residual associated underground infrastructure will remain in place. All above ground structures (i.e. access track, marker posts, link) between the TJBs at the Landfall Site and the OSS will be removed, and the sites will be returned to their previous state. All the remaining underground infrastructure, including the TJBs, should remain in situ.
- 7.14.9 When the OSS reaches the end of its useful life, it may be either refurbished/repurposed and replaced, or it will be decommissioned. The O&M Base will be re-purposed for an alternative use following the decommissioning of the offshore developments of the project. All buildings and above ground structures will be removed.
- 7.14.10 The landscape or visual effects during the decommissioning phase were scoped out from further assessment in section 7.9. This is due to the likely retention/repurposing of most of the elements, as described further above, as well as the limited effects expected due to the decommissioning of the remainder of the elements (e.g. the removal of cables from the ECR cable ducts, will result in little/no landscape/visual change and will be of a short-term duration). Therefore, a detailed assessment of decommissioning phase impacts has not been carried out.
- 7.14.11 Please refer to the SLVIA in Volume 3, Chapter 16, for the assessment of whole project decommissioning impacts.

7.15 Environmental assessment: cumulative effects

7.15.1 In GLVIA3 (Landscape Institute and IEMA, 2013, p120) the guidelines define cumulative landscape and visual effects as those that *‘result from additional changes to the landscape and visual amenity caused by the proposal in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.’*

7.15.2 The ‘other developments’ that have the potential for cumulative landscape or visual effects in combination with the OES of Dublin Array are considered to be those developments from the onshore cumulative long-list (Volume 2, Chapter 4, Annex 2) that are found within the LVIA study area and fulfil both of the following parameters:

- ▲ Developments of a similar type or size, as the individual elements of the OES, i.e.
 - Permitted or submitted applications for groundwork/construction sites of a similar extent as the Landfall Site TCC;
 - Permitted or submitted applications for linear groundworks similar to those along the ECR;
 - Permitted or submitted applications for industrial/commercial developments of a similar size as the OSS or such projects currently under construction and therefore not yet forming part of the landscape/visual baseline; and/or
 - Permitted or such projects currently under construction and therefore not yet forming part of the landscape/visual baseline.
- ▲ Relevant developments, as identified above, with a level of intervisibility with the relevant elements of the OES. This includes:
 - Visibility between the relevant elements of the OES and another development, as this may have an influence on the local landscape/townscape character; and
 - Visibility of the relevant elements of the OES and another development from one of the visual receptors identified, as part of the assessment of visual impacts, as this may have an influence on visual amenity.

Projects scoped out

7.15.3 The long-list of onshore projects for cumulative assessment has been interrogated. It was concluded that none of the projects on this list meet both parameters associated with the potential for cumulative landscape or visual effects, as set out above. Therefore, all projects on the long-list were scoped out from the assessment of cumulative landscape or visual effects.

- 7.15.4 There are a number of viewpoints, where both onshore and offshore components of Dublin Array are visible. Please note that whole project cumulative visual effects are being assessed, as part of the SLVIA report, Part 1, Volume 3, Chapter 15 and are therefore not covered within this chapter.

Onshore projects for cumulative assessment

- 7.15.5 No onshore projects for the assessment of cumulative landscape or visual effects were identified, as set out above.

7.16 Interactions of the environmental factors

- 7.16.1 A matrix illustrating the likely interactions of the foregoing arising from the proposed development on landscape and visual receptors is provided in Volume 8, Chapter 1: Interactions of the Environmental Factors.
- 7.16.2 Interactions of the foregoing are considered to be the effects and associated effects of different aspects of the proposal on the same receptor. These are considered to be:
- ▲ Project lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the project (construction, operation and decommissioning) to interact and potentially create a more significant effect on a receptor than if just assessed in isolation in these three project phases.
 - ▲ Receptor-led effects: Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor. For example, all effects on a visual receptor from the different elements associated with the proposed Dublin Array (e.g. onshore and offshore infrastructure) may interact to produce a different, or greater effect on this receptor than when the effects are considered in isolation. Receptor-led effects might be short-term, temporary or transient effects, or incorporate longer term effects.
- 7.16.3 The potential effects on seascape, landscape and visual receptors during construction, operational and maintenance, and decommissioning phases of the offshore infrastructure have been assessed in the SLVIA chapter. This chapter also assessed whole project cumulative impacts for views, where both onshore and offshore components of Dublin Array are visible. Therefore, these interactions between onshore and offshore infrastructure on landscape during the Project's lifetime on visual receptors have been considered within the EIAR.
- 7.16.4 Table 7 lists the inter-related effects (project lifetime effects) that are predicted to arise during the construction, operation and maintenance phase, and decommissioning of the onshore infrastructure and also the inter-related effects (receptor-led effects) that are predicted to arise for landscape and visual receptors.

Table 7 Project lifetime effects assessment for potential inter-related effects on landscape and visual receptors

Impact Type	Effects (Assessment Alone)			Interaction Assessment Project lifetime effects
	C	O&M	D	
Changes to views experienced by people from specific and representative viewpoints and from principal visual receptors	✓	✓	✓	No greater than individually assessed impacts. Although impacts are broken down into different receptors (viewpoints and principal visual receptors) the actual receptor is the same in each case i.e., the people perceiving the effect. On balance, these people will only perceive the effect one way (visually) at one point in time, and will not experience the construction, operation and decommissioning phases simultaneously, or across multiple pathways.

7.16.5 The potential effects on landscape and visual receptors due to Dublin Array's onshore infrastructure during construction, operation and maintenance, and decommissioning phases have been assessed in Sections 7.12 to 7.15. In turn, changes to the landscape and visual environment due to onshore infrastructure potential to have secondary effects on other receptors and these effects are considered in the following topic-specific chapters and these effects are considered in the following topic-specific chapters:

- ▲ Volume 5, Chapter 8: Archaeology and Cultural Heritage; and
- ▲ Volume 3, Chapter 17: Socio-Economics, Tourism, Recreation and Land Use.

7.16.6 In relation to archaeological and cultural heritage receptors, both this chapter and Chapter 8: Archaeology and Cultural Heritage assess the effects of the addition of above-ground infrastructure, i.e. the OSS and O&M Base. However, the two chapters do not have receptors in common and there is no potential for receptor-led effects.

7.16.7 There is the potential for inter-related effects to arise in respect of onshore tourism and recreational assets which coincide with landscape and/or visual receptors. The emerging presence of the above-ground infrastructure associated with the OES and O&M Base has potential to negatively impact on users of walking and cycling routes, coastal paths, and other tourism receptors during construction, operation and/or decommissioning, such as those using the coastal path at Shanganagh Cliffs. However, these receptors are already assessed within this chapter and no significant effects are predicted. In addition, access to Shanganagh Beach will not be restricted whilst the trenchless operations underneath the beach are ongoing, which reduces potential for significant inter-related effects at the Landfall Site.

7.16.8 Receptor led effects concern the accumulation of impacts on a single receptor between landscape and visual generated during the construction and operation of the onshore infrastructure and other environmental disciplines. It is considered likely that during the construction and operational phases, human receptors impacted by landscape and visual are also likely to be affected by other environmental impacts such as changes in noise, traffic and air quality. It is not anticipated that these inter-relationships will lead to any significant effects greater than the assessments presented for each discipline.

7.17 Summary of effects

7.17.1 The potential effects on the landscape and visual receptors that will arise as a result of the Dublin Array onshore infrastructure were assessed. The process taken involved identifying those receptors with the potential to be significantly affected and assessing the potential effects that the construction and operation of the Dublin Array onshore infrastructure will give rise to. The significance of these effects has been assessed through combining the sensitivity of each receptor with a prediction of the magnitude of change that will occur as a result of the Dublin Array onshore infrastructure. A summary of the findings of the assessment is presented below, with those effects identified as significant presented in Table 8 below.

7.17.2 The Dublin Array onshore infrastructure comprises the following elements:

- ▲ The OES; and
- ▲ The O&M Base in Dún Laoghaire Harbour.

7.17.3 The LVIA study area covers:

- ▲ All components of the OES, i.e. Landfall Site, the Onshore ECR, all TCCs and the OSS site;
- ▲ A 100 m buffer on either side of the ECR from Shanganagh to Carrickmines;
- ▲ Killiney Hill and the elevated sections of land adjoining it to the south and east, facing the Irish Sea (i.e. areas of land with views towards the Landfall site);
- ▲ Parts of the north-eastern slopes of the Dublin Mountains, i.e. the elevated land to the west and southwest of the proposed OSS, including Stepside, Ballyedmonduff Road and the slopes up to the highpoint of Three Rock Mountain (i.e. areas of land with views towards the OSS site); and
- ▲ The O&M Base in Dún Laoghaire Harbour, as well as a 500 m buffer surrounding it.

7.17.4 No landscape receptors likely to be significantly affected by the OES and O&M Base were identified and therefore no detailed assessment of landscape effects was carried out. This is due to a combination of the following factors:

- ▲ The relative lack of landscape designations within the study area, largely urban setting of the OES and the O&M Base and associated generally low sensitivity of landscape receptors;
- ▲ The reinstatement of existing surfaces following the construction works associated with the Landfall Site and Onshore ECR (except for manhole covers at joint bay locations and the permanent access track in Sector 4); and
- ▲ The limited effects on existing trees (through the implementation of mitigation measures, including replacement planting) and associated limited loss of existing landscape elements.

7.17.5 The visual receptors along the ECR were assessed as not likely to be significantly affected as the works along ECR will be carried out in short sections, each of which will be of a short duration, with the ground being reinstated on completion of the works. Also, the number of trees affected along the Onshore ECR will be kept to a minimum through mitigation measures and replacement planting will be carried out for any trees to be removed. The visibility of the Onshore ECR installation will be localised only and will have the appearance of road works, which are a common element in an urban environment.

7.17.6 The following visual receptors were identified as likely to be significantly affected by elements of the OES as well as the O&M Base, during the construction and/or operational stage of the development:

- ▲ Landfall Site: recreational users of the coastal path and residents at Shanganagh Cliffs.
- ▲ OSS:
 - Residents, road users and people at work along Ballyogan Road; and
 - Residents, recreational users, and road users in several locations on the north-eastern slopes of the Dublin Mountains (e.g. along Burrow Road and sections of Ballyedmonduff Road).
- ▲ O&M Base: residents, recreational users of Dún Laoghaire Harbour, and road users of the harbour and coastal roads

7.17.7 A detailed assessment of the effects on these visual receptors, during the construction and operational phases of the development was carried out. It was concluded that for most receptors these effects will not be significant, with the level of effects ranging from moderate to minor-negligible.

7.17.8 Only one group of visual receptors was identified as experiencing significant visual effects, during the construction period, i.e. the residents of ca. 10 properties at Shanganagh Cliffs adjoining the Landfall Site TCC. The Landfall construction compound, which will be enclosed by a 3.5 m high acoustic barrier, will block views over the green space for the adjoining residents, for the duration of the construction phase. In addition, the proposed noise mitigation measures, likely to be shipping containers on top of each other, will be visible above the fence, partially blocking views towards Killiney Hill for a period of circa 6 months in duration. Both will be finished in a light grey colour, to reduce the contrast with the surrounding built environment and the sky. The compound will be seen in the context of the existing Shanganagh WWTP, which has an industrial character and is larger in scale than the proposed Landfall Site TCC, reducing the overall magnitude of change. This is further modified by the small number of visual receptors. The assessment of this effect, possible mitigation measures and the subsequent residual effects are summarised in Table 8.

7.17.9 No potential significant effects during the decommissioning phase of the onshore infrastructure of Dublin Array or the potential for cumulative effects with other permitted/proposed developments or developments under construction, were identified.

Table 8 Summary of significant landscape/visual effects

Receptor	Effect	Possible additional mitigation measures	Residual effect
Construction			
Visual Receptors: Residents at Shanganagh Cliffs immediately adjoining the Landfall Site TCC	Moderate effect based on the medium-high sensitivity of the residential visual receptors combined with the assessed medium magnitude of change.	No additional mitigation identified (further reduction in height of the noise attenuation measures not feasible – refer to Volume 5, Chapter 5: Noise and Vibration).	Same as before, i.e. moderate visual effects, with effects being adverse, short-term and reversible.
Operation and maintenance			
N/A			
Decommissioning			
N/A			
Cumulative effects			
N/A			
Transboundary			
N/A			

7.18 References

- Department of Housing, Local Government and Heritage (October 2020), 'National Landscape Strategy for Ireland 2015-2025'. Available at [gov.ie - National Landscape Strategy](https://gov.ie/national-landscape-strategy) [Accessed: January 2025].
- Department of Housing, Local Government and Heritage (December 2020, Last updated February 2023), 'National Planning Framework – Project Ireland 2040'. Available at: [gov.ie - National Planning Framework - Ireland 2040 Our Plan \(NPF\) \(2018\)](https://gov.ie/national-planning-framework-ireland-2040-our-plan-npf-2018) [Accessed: January 2025].
- Department of Housing, Local Government and Heritage (November 2024), 'Updated Draft Revised National Planning Framework – Project Ireland 2040'. Available at: [Draft of Ireland 2040 - Our Plan - The National Planning Framework](https://gov.ie/draft-ireland-2040-our-plan-the-national-planning-framework) [Accessed: January 2025].
- Department of Housing, Planning and Local Government (2018), 'Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment'. Available at: [gov.ie - Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment \(August 2018\)](https://gov.ie/guidelines-for-planning-authorities-and-an-bord-pleanala-on-carrying-out-environmental-impact-assessment-august-2018). Accessed: January 2025].
- Dún Laoghaire Rathdown County Council (2022), 'County Development Plan 2022-2028: Written Statement'. Available at: [County Development Plan 2022-2028 | Dún Laoghaire-Rathdown County Council \(dlrcoco.ie\)](https://dlrcoco.ie/county-development-plan-2022-2028) [Accessed: January 2024].
- Environmental Protection Agency (2022), 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports'. Available at: [Guidelines on the information to be contained in Environmental Impact Assessment Reports \(EIAR\) \(epa.ie\)](https://epa.ie/guidelines-on-the-information-to-be-contained-in-environmental-impact-assessment-reports-eiar) [Accessed: January 2024].
- Institute of Environmental Management and Assessment (IEMA, 2017), 'Delivering Proportionate EIA. A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice'. Available at: [delivering-proportionate-eia-july-2017.pdf](https://www.iema.net/delivering-proportionate-eia-july-2017.pdf) [Accessed: January 2025].
- The Landscape Institute and the Institute of Environmental Management and Assessment (2013), 'Guidelines for Landscape and Visual Impact Assessment, Third Edition' (Oxon: Routledge).
- The Landscape Institute (September 2019), 'Technical Guidance Note 06/19: Visual Representation of Development Proposals'. Available at: [TGN-06-19-Visual_Representation \(windows.net\)](https://www.landscapeinstitute.org/publication/tgn-06-19-visual-representation) [Accessed: Jan 2024].
- The Landscape Institute (2021). Technical Guidance Note 02/21, 'Assessing the Value of Landscapes outside National Designations'. Available at: <https://www.landscapeinstitute.org/publication/tgn-02-21-assessing-landscape-value-outside-national-designations/> [Accessed: November 2024].
- The Landscape Institute (2024), 'Technical Guidance Note LITGN-2024-01: Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment' Third Edition (GLVIA3). Available at: [Notes and Clarifications on aspects of the 3rd Edition Guidelines on Landscape and Visual Impact Assessment \(GLVIA3\) LITGN-2024-01 - Landscape Institute](https://www.landscapeinstitute.org/publication/litgn-2024-01-notes-and-clarifications-on-aspects-of-guidelines-for-landscape-and-visual-impact-assessment-third-edition-glvia3). [Accessed: January 2025].
- The Marine Institute (2020). 'Regional Seascape Character Assessment for Ireland 2020 Final Report'. Available at:

https://emff.marine.ie/sites/default/files/bluegrowth/PDFs/final_seascape_character_assessment_report_with_annexes.pdf [Accessed: January 2025]

Annex A Legislation and Policy

Policy/legislation	Name/reference/key provisions	What is covered/section where provision is addressed
European Landscape Convention (The Council of Europe 2000)	<p>The European Landscape Convention (ELC) is devoted exclusively to the protection, management and planning of all landscapes in Europe. Landscape is described as <i>'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'</i> (ELC, 2000). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition, it applies to ordinary or even degraded landscape as well as those areas that are of outstanding value or protected. The ELC was ratified by the ROI in 2002 and as a signatory, has undertaken to adopt general policies and measures to protect, manage and plan landscapes. Given the ROI's adoption of the ELC and its aims, the ELC provides an appropriate basis for the importance placed on the Irish landscape. The implementation of the NLS 2015-2025 will ensure compliance with the ELC.</p>	<p>No specific reference to ELC legislation is made in this LVIA due to the over-arching status of this document. This document provides broad principles and frameworks that inform national and local policies, which are then applied in specific assessments like the LVIA. Therefore, the LVIA focuses on the direct application of these derived policies and guidelines rather than reiterating the overarching documents themselves.</p>
National Landscape Strategy for Ireland 2015-2025 (Department of Arts,	<p>One of the aims of the NLS is <i>'to implement the European Landscape Convention by integrating landscape into our approach to sustainable</i></p>	<p>As with the ELC the, no specific reference to NLS legislation is made in this LVIA due to the over-arching status of this document. This document provides broad objectives and actions</p>

Policy/legislation	Name/reference/key provisions	What is covered/section where provision is addressed
Heritage and the Gaeltacht)	<i>development</i> '. One of the Objectives is to <i>'Develop a National Landscape Character Assessment</i> '.	that inform national and local policies, which are then applied in specific assessments like the LVIA. Therefore, the LVIA focuses on the direct application of these derived policies and guidelines rather than reiterating the overarching documents themselves
National Planning Framework – Project Ireland 2040 (Department of Housing, Planning and Local Government 2018)	<i>'National Policy Objective 61: Facilitate landscape protection, management and change through the preparation of a National Landscape Character Map and development of guidance on local landscape character assessments, (including historic landscape characterisation) to ensure a consistent approach to landscape character assessment, particularly across planning and administrative boundaries.'</i>	In the absence of a National Landscape Character Map, local landscape character assessments, produced by Local Planning Authorities, have been used as the basis of the assessment presented in this chapter.
Updated Draft Revised National Planning Framework – Project Ireland 2040 (Department of Housing, Local Government and Heritage, November 2024)	<i>'National Policy Objective 90: Facilitate landscape protection, management and change through the preparation of a National Landscape Character Map and development of guidance on local landscape character assessments, (including historic landscape characterisation and including coastal landscapes and seascapes) to ensure a consistent approach to landscape character assessment, particularly across planning and administrative boundaries.'</i>	National Policy Objective (NPO) 90 in the updated draft National Planning Framework (NPF) restates NPO 61 of the 2018 NPF, with an additional reference to coastal landscapes and seascapes. While the 2018 NPF remains in place, the updated Draft is also being complied with, as the National Landscape Character Map does not yet exist and the available landscape character assessments, produced by Local Planning Authorities have been used as the basis of the assessment presented in this chapter, instead.
The Planning and Development Act 2000 (as amended) (Department of Housing, Local	The Planning and Development Act, as amended, requires that development plans include objectives in relation to landscape and its management.	The Planning Policy and Development Control Section below in this table lists the landscape and visual designations included in the current DLR County

Policy/legislation	Name/reference/key provisions	What is covered/section where provision is addressed
Government and Heritage 2000)	This includes the preservation of views and prospects and the amenities of places/features of natural beauty or interest. The Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022 state that policies and measures should be adopted at county level to protect, manage and plan landscapes.	Development plan and where these are addressed within this chapter.
The Planning and Development Regulations, 2001, as amended (S.I. No. 600/2001)	<i>'A description of the aspects of the environment likely to be significantly affected by the proposed development, including in particular: ...- soil, water, air, climatic factors and the landscape.' Also the interrelationships between these factors must be identified and assessed.'</i>	Sections 7.12 to 7.16 of this chapter present a description of the likely significant effects on landscape and visual receptors, as well as an assessment of the interrelationships with other environmental factors.
Specific Planning Policy and Development Control (Dún Laoghaire-Rathdown County Development Plan 2022-2028)		
Policy Objective CA11: Onshore and Offshore Wind Energy and Wave Energy	It is a Policy Objective to support in conjunction with other relevant agencies, wind energy initiatives, both on-shore and offshore, wave energy, onshore grid connections and reinforcements to facilitate offshore renewable energy development when these are undertaken in an environmentally acceptable manner. (Consistent with NSO 8 and NPO 42 of the NPF and RPO 7.36 and 10.24 of the RSES).	This chapter comprises an assessment of the environmental acceptability of the onshore infrastructure of Dublin Array in landscape and visual terms.
Policy Objective GIB2: Landscape Character Areas	It is a Policy Objective to continue to protect, manage and plan to conserve, maintain or enhance the distinctive characteristics of the County's landscapes, townscapes and	The existing landscapes, townscapes and seascapes were taken into account, as part of the landscape baseline description in section 7.6 which informs the assessment of landscape impacts.

Policy/legislation	Name/reference/key provisions	What is covered/section where provision is addressed
	seascapes in accordance with the recommended strategies as originally outlined in the Landscape Character Assessment (2002 and since updated), in accordance with the 'Draft Guidelines for Landscape and Landscape Assessment' (2000) as issued by the Department of Environment and Local Government, in accordance with the European Landscape Convention (Florence Convention) and in accordance with 'A National Landscape Strategy for Ireland – 2015-2025'. The Council shall implement any relevant recommendations contained in the Department of Arts, Heritage, and the Gaeltacht's National Landscape Strategy for Ireland, 2015 - 2025.	
Policy Objective GIB4: High Amenity Zones	It is a Policy Objective to conserve and enhance existing High Amenity Zones and to seek to manage these and other areas to absorb further recreational uses and activity without damaging their unique character.	The existing high amenity zones were taken into account, as part of the landscape baseline description in section 7.6 which informs the assessment of landscape impacts.
Policy Objective GIB5: Historic Landscape Character Areas	In assessing development proposals and in the preparation of plans, it is a Policy Objective to have regard to the recommendations and findings of the Historic Landscape Character Assessments (HLCA), already undertaken for a number of the urban-rural fringe areas of the County most likely to come under development pressure.	The existing HLCAs were taken into account, as part of the landscape baseline description in section 7.6 which informs the assessment of landscape impacts.

Policy/legislation	Name/reference/key provisions	What is covered/section where provision is addressed
Policy Objective GIB6: Views and Prospects	It is a Policy Objective to preserve, protect and encourage the enjoyment of views and prospects of special amenity value or special interests, and to prevent development, which would block or otherwise interfere with Views and/or Prospects.	The Views and Prospects to be preserved were taken into account, as part of the visual baseline description in section 7.6 and therefore inform the assessment of visual impacts.
Policy Objective EI19: Overhead Cables	It is a Policy Objective to seek the undergrounding of all electricity, telephone and television cables wherever possible, in the interests of visual amenity and public health.	The proposed development comprises an undergrounded electricity cable and therefore in itself addresses the provision of this policy objective.
Guidelines and technical standards		
Guidelines for Landscape and Visual Impact Assessment Third Edition (2013) Landscape Institute and Institute of Environmental Management and Assessment	Detailed guidance on the methodology to be applied in LVIA, covering assessment of effects and cumulative effects on landscape character receptors and visual receptors. Used in LVIA across the ROI and the UK and widely regarded as best practice approach.	LVIA methodology is based on the content of GLVIA 3, as detailed further in the SLVIA Methodology Appendix. The LVIA approach is summarised in sections 7.4 and 7.5 of this chapter. This methodology has been applied in the production of this LVIA.
Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (The Environmental Protection Agency, 2022).	This document outlines the information to be contained in EIARs and as such, presents a broad overview of the process, with no specific guidance for LVIA. The document sets out guidelines on 'Describing the Baseline', 'Assessment of Effects', 'Mitigation and Monitoring' and 'Residual Effects and Conclusions'. Table 3.4 in the EPA Guidelines sets out terminology to describe effects, although it is noted not	The LVIA adheres to the process outlined in the EPA guidelines. Section 15.10 of the SLVIA Methodology Appendix provides an overview of the descriptive terminology used to assess the effects.

Policy/legislation	Name/reference/key provisions	What is covered/section where provision is addressed
	all categories of terms need to be used.	
Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Department of Housing, Planning and Local Government, 2018)	<i>'The starting point for EIA is an assessment of the current state of the environment and how this is likely to evolve without the proposed project but having regard to existing and approved projects and likely significant cumulative effects – in other words the 'do nothing' scenario.'</i>	Section 7.6 of this chapter presents a baseline description of all relevant seascape, landscape and visual receptors with potential to be significantly affected by the Dublin Array offshore infrastructure.
Delivering Proportionate EIA: A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice (IEMA, 2017)	This document emphasises the importance of a proportionate EIA, focusing on the likely significant effects.	The study area for this LVIA was reduced to the area potentially influenced by the proposed development, which is considered to be a proportionate approach. Also, landscape and visual receptors unlikely to be significantly affected were ruled out at the baseline stage, further aligning with the principles of this document.
Technical Guidance Note 06/19: Visual Representation of Development Proposals (Landscape Institute 2019)	Guidance with regard to “the selection, production and presentation of types of visualisation appropriate to the circumstances in which they will be used”.	The photography taken during the field surveys and the presentation of the photomontages provided is based on the principles described in this Technical Guidance Note.
Technical Guidance Note 02/21: Assessing landscape value outside national designations (Landscape Institute 2021)	Guidance with regard to <i>'judgments about the value of a landscape outside national landscape designations'</i> .	This guidance is taken into account in the judgement of the value of any sensitive landscape receptors, which are not covered by national landscape designations.
Technical Guidance Note LITGN-2024-01 Published August 2024: Notes and Clarifications on	This document <i>'provides a compilation of clarifications on the 3rd Edition of the Guidelines on Landscape and Visual Impact Assessment (GLVIA 3)'</i> .	The clarifications provided were taken account of in the application of the LVIA Methodology, i.e. in the production of this LVIA.

Policy/legislation	Name/reference/key provisions	What is covered/section where provision is addressed
Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVLIA3) (Landscape Institute 2024)		



Registered office:
Unit 5,
Desart House,
Lower New Street,
Kilkenny
www.RWE.com