

Outer Dowsing Offshore Wind

Outline ORCP Lighting Management Plan

Deadline 4

Date: February 2025

Document Reference: 8.23

Rev: 1.0

Company:		Outer Dowsing Offshore Wind		Asset:		Whole Asset	
Project:		Whole Wind Farm		Sub Project/Package:		Whole Asset	
Document Title or Description:		8.23 Outline ORCP Lighting Management Plan					
Internal Document Number:		PP1-ODOW-DEV-CS-PLA-0051		3 rd Party Doc No (If applicable):		N/A	
Rev No.	Date	Status / Reason for Issue	Author	Checked by	Reviewed by		Approved by
1.0	February 2025	Deadline 4	GoBe	Outer Dowsing	<div> </div> <div> </div>		Outer Dowsing

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Acronyms & Definitions

Abbreviations / Acronyms

Abbreviation / Acronym	Description
ANS	Artificial Nesting Structures
CAA	Civil Aviation Authority
dDCO	Draft Development Consent Order
DCO	Development Consent Order
dML	deemed Marine Licence
ECC	Export Cable Corridor
ES	Environmental Statement
ISH	Issue Specific Hearing
LCA	Landscape Character Assessment
LCC	Lincolnshire County Council
MCA	Maritime and Coastguard Agency
MSL	Mean Sea Level
NM	Nautical Mile
ORCP	Offshore Reactive Compensation Platform
OSS	Offshore Substations
SLVIA	Seascape, Landscape and Visual Impacts Assessment

Terminology

Term	Definition
The Applicant	GTR4 Limited (a joint venture between Corio Generation (and its affiliates), TotalEnergies and Gulf Energy Development), trading as Outer Dowsing Offshore Wind
Array Area	The area offshore within which the generating station (including wind turbine generators (WTG) and inter array cables), offshore accommodation platforms, offshore transformer substations and associated cabling will be positioned, including the ORBA.
Deemed Marine Licence (dML)	A marine licence set out in a Schedule to the Development Consent Order and deemed to have been granted under Part 4 (marine licensing) of the Marine and Coastal Access Act 2009.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP).
Environmental Statement (ES)	The suite of documents that detail the processes and results of the Environmental Impact Assessment (EIA).
Export cables	High voltage cables which transmit power from the Offshore Substations (OSS) to the Onshore Substation (OnSS) via an Offshore Reactive Compensation Platform (ORCP) if required, which may include one or more auxiliary cables (normally fibre optic cables).
Impact	An impact to the receiving environment is defined as any change to its baseline condition, either adverse or beneficial.

Term	Definition
Landfall	The location at the land-sea interface where the offshore export cables and fibre optic cables will come ashore.
Mitigation	Mitigation measures are commitments made by the Project to reduce and/or eliminate the potential for significant effects to arise as a result of the Project. Mitigation measures can be embedded (part of the project design) or secondarily added to reduce impacts in the case of potentially significant effects.
Offshore Export Cable Corridor (ECC)	The Offshore Export Cable Corridor (Offshore ECC) is the area within the Order Limits within which the export cables running from the array to landfall will be situated.
Offshore Reactive Compensation Platform (ORCP)	A structure attached to the seabed by means of a foundation, with one or more decks and a helicopter platform (including bird deterrents) housing electrical reactors and switchgear for the purpose of the efficient transfer of power in the course of HVAC transmission by providing reactive compensation
Offshore Substation (OSS)	A structure attached to the seabed by means of a foundation, with one or more decks and a helicopter platform (including bird deterrents), containing— (a) electrical equipment required to switch, transform, convert electricity generated at the wind turbine generators to a higher voltage and provide reactive power compensation; and (b) housing accommodation, storage, workshop auxiliary equipment, radar and facilities for operating, maintaining and controlling the substation or wind turbine generators
Outer Dowsing Offshore Wind (ODOW)	The Project.
The Project	Outer Dowsing Offshore Wind, an offshore wind generating station together with associated onshore and offshore infrastructure.
Receptor	A distinct part of the environment on which effects could occur and can be the subject of specific assessments. Examples of receptors include species (or groups) of animals or plants, people (often categorised further such as 'residential' or those using areas for amenity or recreation), watercourses etc.

1 Introduction and Document Purpose

1. GT R4 Limited (trading as Outer Dowsing Offshore Wind) hereafter referred to as the 'Applicant', is proposing to develop the Project. The Project array area will be located approximately 54km from the Lincolnshire coastline in the southern North Sea. The Project will include both offshore and onshore infrastructure including an offshore generating station (windfarm), export cables to landfall, Offshore Reactive Compensation Platforms (ORCPs), onshore cables, connection to the electricity transmission network, ancillary and associated development, up to two Artificial Nesting Structures (ANS) and the creation and re-creation of a biogenic reef (if these compensation measures are deemed to be required by the Secretary of State) (see Volume 1, Chapter 3: Project Description (APP-053) for full details).

1.1 Purpose of this Document

The purpose of this Outline ORCP lighting management plan is to present an outline of the information which will be contained in the final ORCP lighting management plan, and which will be secured pursuant to Schedule 11 (Deemed licence under the 2009 Act – offshore transmission assets) condition 13(1)(k) of the dDCO (Document 3.1). This lighting information has previously been set out in ES Chapter 17 SLVIA (AS1-044).

2 ORCP Lighting Design

Table 2-1 Lighting requirements for ORCPs.

Lighting Considered	Requirement
Civil Aviation Authority (CAA) aviation lighting in accordance with Article 222 of CAP 393: The Air Navigation Order 2016 and Regulations (CAA, 2019).	<p>Medium intensity (2000 cd) steady red lights will not be installed on the uppermost location of the ORCPs.</p> <p>Article 222 of CAP 393 states that this lighting is only required for en-route obstacles 150 m or more above Mean Sea Level (MSL), therefore this is not applicable to the ORCP.</p>
Marine Navigation Lighting to conform to Maritime and Coastguard Agency (MCA) requirements and other relevant standards/	<p>Navigational lighting will be installed in accordance with MCA and trinity house requirements and other relevant industry standards including;</p> <p>International Association of Marine Aids to Navigation and Lighthouse Authorities R139 Recommendations on the Marking of Man-made Offshore Structures (IALA, 2021 (a)) and G1162 Guidance on the Marking of Man-made Offshore Structures (IALA, 2021 (b))</p> <p>MCA Marine Guidance Note (MGN) 654 and Annexes – Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response (MCA, 2021).</p> <p>Department for Business, Energy and Industrial Strategy (BEIS). Standard Marking Schedule for Offshore Installations (BEIS, 2011).</p> <p>The navigational lighting will likely be positioned on each of the four corners of the lower deck(s).</p>
Walkway/stairway/task lighting located around the periphery of each deck	<p>Walkway/stairway/task lighting will be required. This has low levels of lighting intensity, which will be triggered in hours of darkness by movement of personnel.</p> <p>This lighting would be on infrequently.</p>

Lighting Considered	Requirement
Signage illumination	Signage illumination is required for some safety / operational signage. This has low levels of lighting intensity.
Measures to reduce lighting	<p>The following measures will be used to minimise lighting where practicable however, this will not be done were it to be at the risk of safety of marine users and aviation.</p> <ul style="list-style-type: none"> ▪ Use of flashing lights and not steady burning lights where possible. ▪ Minimise use of white or green lights where possible. ▪ Reducing the intensity of lights where possible. ▪ Shielding or down-lighting where possible.

3 References

CAA (2016). Standards for offshore helicopter landing areas, CAP 437. Edition 8, Amendment 01/2018 dated September 2018. Available at: [http://publicapps.caa.co.uk/docs/33/CAP437\(SEP2018\)E8_A1.pdf](http://publicapps.caa.co.uk/docs/33/CAP437(SEP2018)E8_A1.pdf) (accessed: June 2020).

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