



FIVE ESTUARIES OFFSHORE WIND FARM

VOLUME 9, REPORT 18.1: WORKING IN
PROXIMITY TO WILDLIFE IN THE MARINE
ENVIRONMENT (TRACKED)

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DEFINITION OF ACRONYMS

Term	Definition
CTV	Crew Transport Vessel
DCO	Development Consent Order
<u>DAS</u>	<u>Digital Aerial Survey</u>
dML	deemed Marine Licence
<u>DWR</u>	<u>Deep Water Route</u>
<u>ECC</u>	<u>Export Cable Corridor</u>
EPS	European Protection Species
ES	Environmental Statement
EU	European Union
ML	Marine Licence
MMMP	Marine Mammal Mitigation Protocol
<u>OTE</u>	<u>Outer Thames Estuary</u>
O&M	Operation and Maintenance
<u>PEMP</u>	<u>Project Environment Management Plan</u>
RAMS	Risk Assessment Method Statement
SAC	Special Area of Conservation
SIP	Site Integrity Plan
SNS	Southern North Sea
<u>SPA</u>	<u>Special Protection Area</u>
UK	United Kingdom
UXO	Unexploded Ordnance
VE	Five Estuaries



Term	Definition
Array Area	The areas where the WTGs will be located.
Development Consent Order	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS) for the Department for Energy Security and Net Zero (DESNZ).
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact in question with the sensitivity of the receptor in question, in accordance with defined significance criteria.
ES	Environmental Statement (the documents that collate the processes and results of the EIA).
Export Cable Corridor (ECC)	The area(s) where the export cables will be located. Refer to either the offshore or onshore ECC.
Impact	An impact to the receiving environment is defined as any change to its baseline condition, either adverse or beneficial, resulting from the activities associated with the construction, operation and maintenance, or decommissioning of the project.
Mitigation	Mitigation measures, or commitments, are commitments made by the project to reduce and/or eliminate the potential for significant effects to arise as a result of the project..
Significant Effects	It is a requirement of the EIA Regulations to determine the likely significant effects of the development on the environment which should relate to the level of an effect and the type of effect. Where possible significant effects should be mitigated.
The Applicant	The company Five Estuaries Offshore Wind Farm Ltd.
The Project	Five Estuaries Offshore Wind Farm (VE) including the proposed offshore and onshore infrastructure.



1 INTRODUCTION

1.1 THE PROJECT

- 1.1.1 The Five Estuaries Offshore Wind Farm (hereafter VE) is a proposed extension to the operational Galloper Offshore Wind Farm, which is located off the coast of Suffolk (England, UK) in the Southern North Sea. At its closest point, VE is located 37 km off the Suffolk coast. VE will consist of both onshore and offshore infrastructure, including two proposed array areas, two offshore substation platforms and subsea cables to transfer electricity onshore (see Volume 6, Part 2, Chapter 1: Offshore Project Description for full details).
- 1.1.2 This Working in Proximity to Wildlife in the Marine Environment document has been produced in accordance with Condition 12 of the Generation Assets deemed Marine License (dML) in Schedule 10 of the draft Development Consent Order (DCO), and Condition 12 of the Transmission Assets dML in Schedule 11 of the draft DCO (see Volume 3).

1.2 PURPOSE OF THIS DOCUMENT

- 1.2.1 In the course of planning, developing, constructing, operating, maintaining and decommissioning offshore wind farms, various activities may take place offshore involving vessels and personnel in sometime close proximity to wildlife in the marine environment, including marine mammals and birds.
- 1.2.2 The objective of this Working in Proximity to Wildlife in the Marine Environment document is to:
- > Minimise the risk of collision with and injury to marine wildlife.
 - > Minimise the risk of disturbance to marine wildlife.
 - > Offer guidance to VE contractors for conducting activities in proximity to wildlife.
 - > Provide VE contractors with procedures for reporting collisions with marine mammals.
- 1.2.3 This document on working in proximity to wildlife in the marine environment shall undergo regular reviews in line with commitments in the Outline Project Environment Management Plan (PEMP) (see Volume 9, Report 18 for more details) to incorporate updated guidance and information. However, individuals must ensure that they reference the latest guidance or legislation before proceeding with any relevant activities.
- 1.2.4 It's essential to note that while this document provides guidance for working in proximity to wildlife, there may be additional requirements within project consents, such as those outlined in the DCO, dML, Marine Licenses (ML) or other permissions. It is the responsibility of the individual to be fully aware of these requirements in relation to any planned or undertaken work.
- 1.2.5 VE employees and contractors are reminded that certain wildlife, including most birds (including their nests and eggs) and marine mammals, are protected by the European Union (EU) Directives, transposed regulations, and other domestic legislation.
- 1.2.6 This report should be read in conjunction with the following Environmental Statement (ES) chapters and reports:
- > Volume 6, Part 2, Chapter 1: Offshore Project Description;



- > Volume 6, Part 2, Chapter 4: Offshore Ornithology;
- > Volume 6, Part 2, Chapter 7: Marine Mammal Ecology;
- > Volume 6, Part 2, Chapter 9: Shipping and Navigation;
- > Volume 9, Report 10: Navigational Risk Assessment
- > Volume 9, Report 14.1: Outline Marine Mammal Mitigation Protocol - Piling;
- > Volume 9, Report 14.2: Outline Marine Mammal Mitigation Protocol - UXO;
- > Volume 9, Report 15: Outline Southern North Sea Special Area of Conservation Site Integrity Plan and
- > Volume 9, Report 18: Outline Project Environmental Management Plan

1.3 SCOPE

- 1.3.1 This document on working in proximity to wildlife in the marine environment is applicable to the development, construction, maintenance, operations, and decommissioning phases of VE.



2 MARINE WILDLIFE

2.1 MARINE MAMMALS

- 2.1.1 A Marine Mammal Mitigation Protocol (MMMP) will delineate proposed mitigation measures aimed at minimising the risk of any physical or permanent auditory injury to marine mammals during piling and UXO clearance operations. This plan will encompass mitigations, including details of soft-start procedures. The outline MMMPs for piling and UXO clearance activities (see Volume 9, Reports 14.1 and 14.2, respectively) have been submitted as part of the DCO application.
- 2.1.2 In addition to the aforementioned MMMPs, a VE Site Integrity Plan (SIP) for the Southern North Sea (SNS) Special Area of Conservation (SAC) has been produced. This document will offer an overview of the mitigation strategies required to prevent adverse impacts on the site's integrity. The outline version of this document is included in this DCO submission (see Volume 9, Report 15), outlining VE's approach to fulfilling the necessary mitigation measures for avoiding significant disturbance to harbour porpoise in relation to the SNS SAC Conservation Objectives.
- 2.1.3 There is a likelihood of incorporating a risk assessment for European Protected Species (EPS), specifically cetaceans, with EPS licence(s) being applied for where applicable.

2.2 OFFSHORE ORNITHOLOGY

- 2.2.1 This document outlines the proposed mitigation measures aimed at minimising vessel disturbance of rafting birds, specifically red-throated divers (*Gavia stellata*).



3 VESSEL OPERATION GUIDELINES AND SAFETY AWARENESS

- 3.1.1 In the marine environment, operators of vessels should be informed about the potential threat their vessels may pose to marine wildlife. Guidance on collision awareness and avoidance protocols must be communicated to vessel crews during mobilisation briefings.
- 3.1.2 Compliance with activity-specific Risk Assessment Method Statement (RAMS) is mandatory, with strict adherence to any specified requirements for vessel movements within the DCO, dML or ML conditions.
- 3.1.3 As a general guide, the following Vessel Code of Conduct should be implemented, to mitigate risks:
- > Incorporate vessel movements to and from ports within existing routes where feasible.
 - > Avoid active and deliberate approaches or pursuits of animals.
 - > Refrain from touching animals.
 - > When animals are alongside vessels, maintain a steady speed and avoid course changes.
 - > Conduct briefings for vessel crew on the purpose and implications of these vessel management practices, such as through toolbox talks.
- 3.1.4 These recommendations are applicable unless they pose a risk to the safety of the vessel, crew, and other sea users. Safety is the foremost priority in all cases.

3.2 VESSEL GOOD PRACTICE AND COLLISION AVOIDANCE

- 3.2.1 Mitigation to minimise the risk of vessel collisions with marine mammals include utilising existing vessel routes, where possible, as marine mammals are accustomed to vessels in those areas thereby reducing collision risks.
- 3.2.2 Measures to avoid marine mammal collisions during transit to and from site include:
- > Avoid deliberately approaching marine mammals when sighted.
 - > Avoid abrupt changes to course or speed should marine mammals approach the vessel or bow-ride.
 - > Maintain a steady speed and direction to allow marine mammals to predict the vessel's path.
 - > Transit vessels at distances of 600 metres (m) or more off the coast, where possible, particularly near known seal haul-out sites during sensitive periods.
- 3.2.3 Details of any collision between a vessel and marine mammal should be reported to the ~~Five Estuaries~~VE Consents and Environmental Manager.

3.3 BEST PRACTICE PROTOCOL FOR MINIMISING DISTURBANCE TO RED-THROATED DIVER

- 3.3.1 This document outlines procedures to minimise disturbance to red-throated diver during construction, operation, and maintenance activities in accordance with Condition 12 of the Generation Assets deemed Marine License (dML) in Schedule 10 of the draft Development Consent Order (DCO), and Condition 12 of the Transmission Assets dML in Schedule 11 of the draft DCO (see Volume 3).



3.3.2 Potential impacts on red-throated diver will be mitigated through the following measures:

- > Export cable installation will not be carried out within the Outer Thames Estuary (OTE) Special Protection Area (SPA) between 1st November to 31st March inclusive to mitigate disturbance impacts on red throated diver.
- > Where vessels transit the OTE SPA between the 1st November to 31st March the following measures will be adopted:
 - > Selecting routes that avoid known aggregations of birds.
 - > Restricting vessel movements to existing navigation routes, where possible.
 - > Implement entry and exit areas (defined post consent) to the relevant SPAs for operation and maintenance (O&M) vessels during the O&M phase to reduce transit time in the SPA
 - > Maintaining direct transit routes to minimise distances through areas used by red-throated divers.
 - > Considering the potential for crew transfer vessels (CTV) to travel in convoy enroute to the wind farm sites.
 - > Avoiding rafting birds either enroute to the array and within the array, where possible, and avoiding disturbance to areas with consistently high diver density.
 - > Vessel operators aware of the importance of this species and the associated mitigation measure through toolbox talks.
 - > Avoidance of over revving of engines.

3.3.3 Figure 3.1 below illustrates the areas where seasonal restrictions will and will not apply for cable installation, while also providing additional context regarding the distribution of red-throated divers in the area. Further explanation is provided in the text below.

3.3.4 Seasonal restrictions to cable laying (1st November to 31st March) will apply to where the Export Cable Corridor (ECC) directly overlaps with the SPA boundary, see purple hatched area in Figure 3.1.

3.3.5 The areas of low red-throated diver densities (where the 2km buffer overlaps with the SPA) to the northeastern and northwestern edges of the SPA boundary (see green and orange hatched areas and associated labels in Figure 3.1), as agreed with Natural England (10.63 Applicant's Comments on Natural England's Deadline 7 submissions) will not impact red-throated divers. Therefore, work can be undertaken in these areas during the restricted season i.e. between 1st November and 31st March.



3.3.6 The main area of concern for Natural England outside of the SPA is the northern central area, highlighted in Box 1 around the Sunk Deep Water Route (DWR) in Figure 3.1. Natural England state "...that work to lay cables within the SPA and its 2km buffer in the stretch west of the Trinity Deep Water Route (DWR) and across the Sunk DWR would be of principal concern and therefore needed the most judicious mitigation possible".

3.3.7 The 2km SPA buffer overlap with the cable corridor in this area (see DWR Route sector and Box 1 in Figure 3.1) that Natural England highlighted in (10.63 Applicant's Comments on Natural England's Deadline 7 submissions) as having high densities of red-throated diver is equivalent to just 0.18% of the SPA. The Digital Aerial Survey (DAS) data from Irwin et al (2019) only recorded one bird in this area and the modelled high densities do not reflect other areas adjacent to the shipping lanes. It should be reiterated that this part of the ECC still sits outside the boundary of the SPA.

3.3.8 Figure 3.1 Further information can be found in 10.48 Red Throated Diver Note [REP6-052].

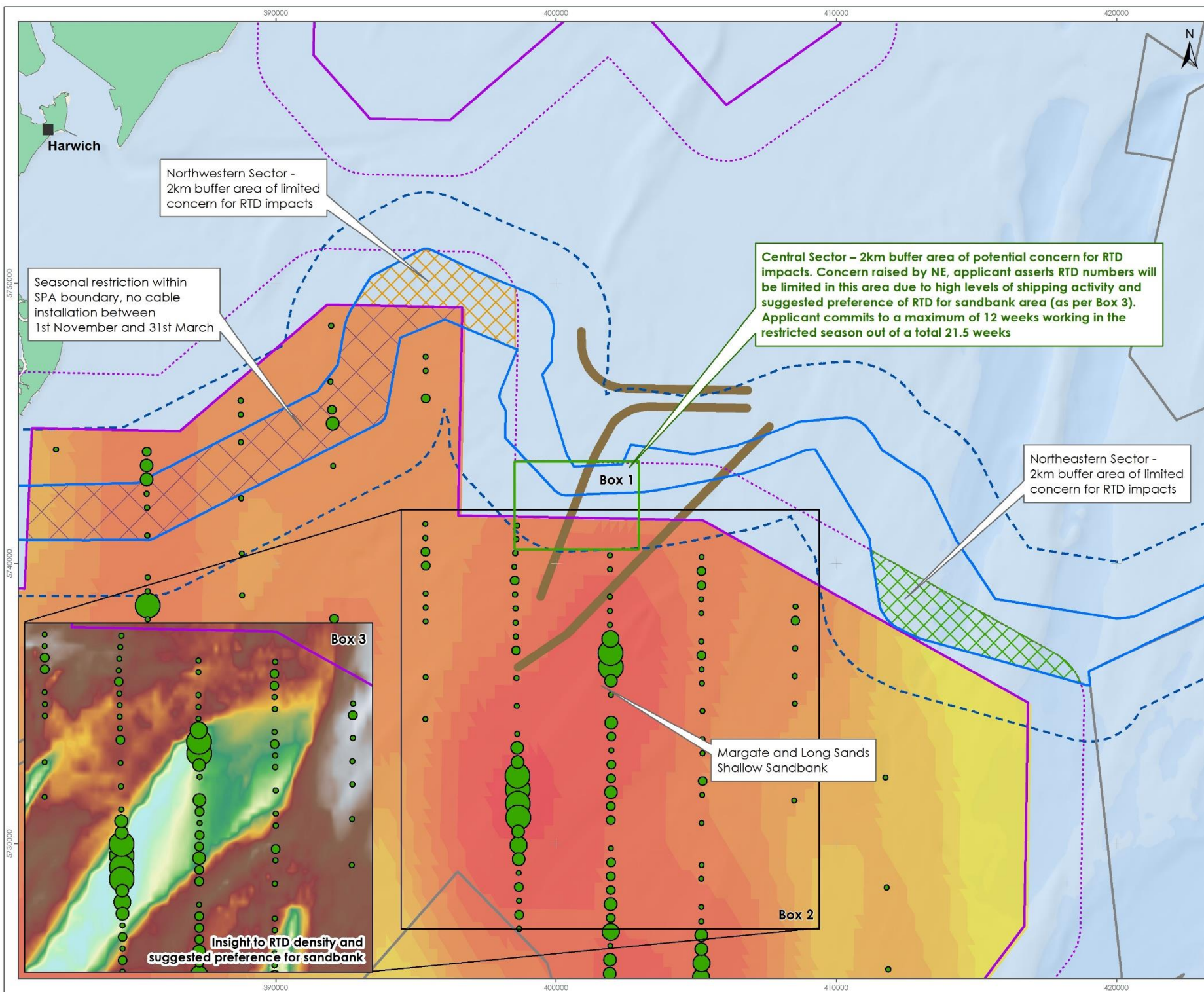
3.3.33.3.9 The Applicant acknowledges that there are some areas of higher red-throated diver density to the south of Box 1 (within Box 2), however, these are outside the 2km buffer and are concentrated over the Margate and Long Sands Sandbank to the south of the main shipping channel. It should be noted that there is minimal shipping in this area due to the shallow bathymetry. Box 2 and Box 3 (which shows bathymetric data), clearly show that the red-throated divers are concentrating on the Margate and Long Sands shallow sandbank (Figure 3.1). North of this sandbank is the deep-water vessel route where there is a clear reduction in red-throated diver density. Therefore, based on the current evidence, the Applicant does not consider a seasonal restriction in this area to be justified or an effective mitigation measure.

3.3.43.3.10 Figure 3.1 presents the mid-northern sector where the Deep Water Routes (DWR) pass through the ECC and 2km buffer and into the SPA. Due to the complexities of working in this area which has high vessel traffic the Applicant cannot rule out works being carried out at these 2km buffer locations during the restricted season. Therefore, and in addition to measures outlined above, the Applicant will limit disturbance of red-throated divers in the area of concern for Natural England (Box 1) by:

- > Working in only one DWR at any time to reduce the area of disturbance at any one time.
- > Carrying out work in vessel clusters (maintaining close proximity where possible).
- > A maximum of 12 weeks working per season between 1st November to 31st March (a total 21.5 weeks) across the Sunk DWR.
- > Carrying out the work outside of the seasonal restrictions where feasible.

3.4 TOOLBOX TALKS

3.4.1 Toolbox talks are an effective means of disseminating information related to work activities. Contractors are obligated to deliver environmental toolbox talks to all on-site personnel when required, and records of attendees must be maintained for potential inspection during environmental audits.



LEGEND

- Offshore Export Cable Corridor
- 2km Buffer from Offshore ECC
- Outer Thames Estuary SPA
- Outer Thames Estuary SPA 2km Buffer
- Offshore Wind Farm Boundary
- Deep Water Routes
- Cable Installation Restriction Area
- Northeastern Sector
- Northwestern Sector

Red Throated Diver Density (M02 S02 D01)

0.01 - 0.1
0.11 - 0.2
0.21 - 0.5
0.51 - 1
1.01 - 2
2.01 - 5
5.01 - 10
10.01 - 20
20.01 - 50
> 50

Red-throated Divers Count (2018)

1 - 2
3 - 5
6 - 10
11 - 15
16 - 20
21 - 84

Depth (m)

0
30

0 1 2 4
Kilometers

Data Source: Eit, Geom, GEBCO, NOAA, NGDC, and other contributors

PROJECT TITLE:
FIVE ESTUARIES OFFSHORE WINDFARM

DRAWING TITLE:
Overview of RTD Density and Counts in the Outer Thames Estuary SPA in relation to proposed cable installation restrictions and bathymetry of Margate and Long Sands

VER	DATE	REMARKS	Drawn	Checked
1	06/06/2025	For Issue	BPHB	RI

DRAWING NUMBER: 1

SCALE: 1:100,000 PLOT EDS: A3 1045M1: WGS84 PROJECTION: UTM31N

FIVE ESTUARIES
OFFSHORE WIND FARM

FIVE
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