



Hornsea Project Four

Statement of Common Ground between Hornsea Project Four and The Ministry of Defence (MOD)

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Glossary

Term	Definition
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Projects (NSIP).
Hornsea Project Four Offshore Wind Farm	The term covers all elements of the project (i.e. both the offshore and onshore). Hornsea Four infrastructure will include offshore generating stations (wind turbines), electrical export cables to landfall, and connection to the electricity transmission network. Hereafter referred to as Hornsea Four.

Acronyms

Acronym	Definition
DMLs	Deemed Marine Licences
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
LSE	Likely Significant Effect
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
PEIR	Preliminary Environmental Information Report
SoCG	Statement of Common Ground

1 Introduction

1.1 Reason for this document

- 1.1.1.1 This Statement of Common Ground (SoCG) has been prepared between Orsted Hornsea Project Four Limited ('the Applicant') and the Ministry of Defence - Defence Infrastructure Organisation ('MOD') to set out the areas of agreement and disagreement between the two parties in relation to the Development Consent Order (DCO) application for the Hornsea Project Four offshore wind farm (hereafter referred to as 'Hornsea Four').
- 1.1.1.2 This SoCG covers all topics of relevance and interest to the MOD in the marine environment seaward of Mean High Water Springs (MHWS).
- 1.1.1.3 The need for a SoCG between the Applicant and the MOD is set out within the Rule 6 letter issued by the Planning Inspectorate (PINS) on 24 January 2022.
- 1.1.1.4 It is the intention that this document will facilitate further discussions between the Applicant and the MOD and will provide the Examining Authority (ExA) with a clear overview of the level of common ground between parties. This SoCG will be updated as discussions progress during the examination process.

1.2 Approach to SoCG

- 1.2.1.1 The Applicant took the decision at an early stage to adopt a proportionate approach to Environmental Impact Assessment (EIA) for Hornsea Four which is detailed and integrated throughout the application for development consent. The Impacts Register ([Volume A4, Annex 5.1: Impacts Register](#)) is a key tool that details all potential impacts identified for Hornsea Four and sets the scope of the EIA at various stages of the project (Scoping, Preliminary Environmental Information Report (PEIR) and DCO). In line with the Applicant's approach to proportionality, only Likely Significant Effects are included within the individual topic assessments of the Environmental Statement (ES).
- 1.2.1.2 The structure of this SoCG is as follows:
- [Section 1](#): Introduction;
 - [Section 2](#): Consultation;
 - [Section 3](#): Agreement Logs; and
 - [Section 4](#): Summary.

1.3 Application elements under the Ministry of Defence's remit

- 1.3.1.1 The elements of Hornsea Four which may affect the interests of the MOD are Work Numbers 1 to 5, covering the intertidal (seaward of MHWS) and offshore works. These are detailed in Part 1 (Authorised Development) of Schedule 1 (Authorised Project) of the draft DCO ([C1.1: Draft DCO including Draft DML](#)).

1.3.1.2 This SoCG focuses on specific issues relating to aviation and radar which have been raised during consultation undertaken in respect of Hornsea Four by the MOD. In line with the information provided by the MOD in their Relevant Representation (PINS Reference RR-022), key areas of outstanding concern and therefore taken forward for consideration in the SoCG, include:

- Draft DCO and Deemed Marine Licences; and
- Military Aviation & Radar

1.4 Overview of Hornsea Four

1.4.1.1 Hornsea Four is an offshore wind farm which will be located approximately 69 km offshore the East Riding of Yorkshire in the Southern North Sea and will be the fourth project to be developed in the former Hornsea Zone. Hornsea Four will include both offshore and onshore infrastructure and consists of:

- **Hornsea Four array area:** This is where the offshore wind generating station will be located which will include the turbines, array cables, offshore accommodation platforms and a range of offshore substations as well as offshore interconnector cables and export cables;
- **Hornsea Four offshore export cable corridor:** This is where the permanent offshore electrical infrastructure (offshore export cables, as well as the High Voltage Alternating Current (HVAC) booster station (if required), will be located;
- **Hornsea Four intertidal area:** This is the area between MHWS and Mean Low Water Springs (MLWS) through which all of the offshore export cables will be installed;
- **Hornsea Four onshore export cable corridor:** This is where the permanent onshore electrical cable infrastructure will be located; and
- **Hornsea Four onshore substation including energy balancing infrastructure:** This is where the permanent onshore electrical substation infrastructure (onshore High Voltage Direct Current (HVDC) converter/HVAC substation, energy balancing infrastructure and connections to the National Grid) will be located.

2 Consultation

2.1 Summary of consultation with the Ministry of Defence

2.1.1.1 **Table 1** below summarises the consultation that the Applicant has undertaken with the MOD during the pre-application phase for each relevant component of the application (as identified in **paragraph 1.3.1.1**).

Table 1: Summary of pre-application consultation with the Ministry of Defence.

Date	Form of consultation	Statutory/Non Statutory	Summary
15/10/2018	Consultation	Statutory	Hornsea Four Scoping Report
13/11/2018	Scoping opinion	Statutory	<p>Scoping response</p> <p>On behalf of the MOD, the Defence Infrastructure Organisation (DIO) stated that subject to confirmation of the specification of aviation lighting to be used; the obstruction effect to military low flying activities created by Hornsea Four would be appropriately addressed. The onshore cable route as provided at Scoping does not affect MOD statutory safeguarded zones, however any amendment should consider the technical safeguarding zone surrounding the MOD Leconfield radio transmitter and receiver installations. The MOD stated that the Scoping Report identified the ADR sites at RAF Brizlee Wood and RAF Trimmingham as relevant receptors but evaluation also now needed to include the site at RAF Staxton Wold It was identified that the anticipated magnitude of effects of the operation of the windfarm on air defence radars identified in the report should be increased. It was noted that the potential need for mitigation to address the impacts on ADR was recognised. Should this be confirmed as necessary, it will be for the Applicant to provide appropriate technical mitigation(s) in relation to the relevant ADR sites.</p>
07/06/2019	Telephone	Non statutory	Discussion in relation to ADR mitigation.
13/08/2019	Consultation	Statutory	<p>Hornsea Four PEIR</p> <p>Published for statutory Section 42 consultation.</p>
20/09/2019	Section 42 consultation response	Statutory	<p>MOD response to PEIR</p> <p>The MOD stated that it has concerns with the development. The MOD has completed an assessment and has identified that the Hornsea Four wind turbines will be detectable to the Trimmingham and Staxton Wold ADRs, but not detectable by the Brizlee Wood ADR. The MOD stated that the Staxton Wold ADR is a relevant</p>

Date	Form of consultation	Statutory/Non Statutory	Summary
			consideration for assessment, with any modelling using the TPS-77 ADR criteria The MOD stated mitigation to address impacts on the Trimingham and Staxton Wold ADR sites will be required.. The MOD requested Hornsea Four is fitted with MOD accredited aviation safety lighting in accordance with The Air Navigation Order (ANO) 2021 and Regulations.
25/10/2019	Email	Non statutory	The MOD confirmed that Staxton Wold needs to be included in evaluations and any modelling should be based on the TPS 77 ADR.
26/03/2020	Meeting	Non statutory	A discussion was held with the MOD's Defence Equipment and Support (DE&S) team, DIO and the RAF related to ADR mitigation options and related wording of DCO requirements
30/07/2020	Teleconference	Non statutory	The MOD (DIO) gave an update on Staxton Wold, stating that an Indra Lanza Long Range Tactical ADR (LR-25) was due to be deployed during September 2020 on a temporary basis for testing of the ADR's inbuilt capability to mitigate the effects of wind farm generated clutter. The MOD confirmed that the Hornsea Four EIA should proceed based on an assessment of the effect of the project on a theoretical TPS-77 located at Staxton Wold.
21/08/20	Email	Non statutory	MOD reviewed and agreed the provision of aviation lighting proposed by Orsted for the HVAC booster station.
22/01/21	Email	Non statutory	The MOD (DIO) stated that none of the Hornsea Four WTGs will be within radar LOS to the Trimingham ADR and that the MOD have no concerns in respect of Hornsea Four impacting the Trimingham ADR and that, as such, the Trimingham ADR does not need to be mitigated and a DCO requirement is not necessary for the Trimingham ADR.
28/01/21	Teleconference	Non statutory	It was agreed with the MOD (DIO) that the Hornsea Four DCO Application, including this Aviation Chapter and the supporting Technical Report in Volume A5, Annex 8.1: Aviation and Radar Technical Report, would be updated to reflect the absence of an impact on the Trimingham ADR. It was also agreed that this Aviation Chapter would reflect the presence of the Indra LR-25 ADR at Staxton Wold, but that the significance of the impact upon the LR-25 ADR would not be concluded, given that the LR-25 was not yet installed at Staxton Wold. It was noted that input acquired by the MOD

Date	Form of consultation	Statutory/Non Statutory	Summary
			later in 2021 might become available that would facilitate the conclusion of an impact assessment for the LR-25 ADR. Hornsea Four are working with and alongside the MOD to identify, develop and implement an ADR mitigation solution for Staxton Wold, however, it was agreed that it is not necessary to detail the specifics of this work within this Aviation Chapter.
19/03/2021	Email	Non statutory	The MOD (DIO) confirmed that the Indra LR25, ADR has arrived at Staxton Wold and is undergoing initial testing and optimisation work, prior to Site Acceptance Testing (SAT) and wind farm trials. Subject to the completion of trials the aim is for the radar to be in service from November 2021. MOD (DIO) shared the wording for a draft DCO requirement covering the Staxton Wold ADR.
25/06/2021	Email	Non statutory	The MOD (DIO) confirmed that: SAT for the Indra LR-25 ADR is ongoing and with the wind farm testing element due imminently; and that, subject to SAT, the LR-25 will be handed over to the MOD later this year with release into service expected late October 2021; and that, it's unlikely that there will be an update on the results of the wind farm testing of the LR-25 before it's handed over.
February 2020 – August 2021 2 Dec 20 12 Jan 21 14 Jan 21 15 Apr 21 25 Aug 21	Teleconferences and emails	Non statutory	In addition to the above-referenced teleconference on 26/03/2020, a series of five separate teleconferences have been held with the MOD's DE&S team in support of ongoing efforts to identify, trial, develop and implement an ADR mitigation solution for Staxton Wold. In addition to this, Ørsted are a member of the MOD-Offshore Wind Industry Council (OWIC) Joint Task Force which will be leading the evaluation of ADR mitigation concepts in 2021 and delivering an ADR Strategy & Implementation Plan
30/07/2021	Email	Non statutory	Hornsea Four provided the MOD (DIO) amendments to the proposed ADR (Staxton Wold) DCO wording for comment ahead of DCO application
26/08/2021	Email	Non statutory	MOD (DIO) confirmed they had not managed to look at the amendments to the ADR requirement wording ahead of DCO application.

3 Agreement Log

3.1 Overview

3.1.1.1 The following sections of this SoCG set out the level of agreement between the Applicant and the MOD for each relevant component of the Application (as identified in [paragraph 1.3.1.1](#)).

3.1.1.2 In order to easily identify whether a matter is 'agreed', 'not agreed' or an 'ongoing point of discussion', the colour coding system set out in [Table 2](#) below is used within the 'position' column of the following sections of this document.

Table 2: Position Status Key.

Position Status	Position Colour Coding
Agreed The matter is considered to be agreed between the parties	Agreed
Not Agreed – no material impact The matter is not agreed between the parties, however the outcome of the approach taken by either the Applicant or the MOD is not considered to result in a material impact to the assessment conclusions.	Not Agreed – no material impact
Not Agreed – material impact The matter is not agreed between the parties and the outcome of the approach taken by either the Applicant or the MOD is considered to result in a materially different impact to the assessment conclusions.	Not Agreed – material impact
Ongoing point of discussion The matter is neither 'agreed' nor 'not agreed' and is a matter where further discussion is required between the parties (e.g. where documents are yet to be shared with the MOD).	Ongoing point of discussion

3.2 Military Aviation & Radar

Table 3: Agreement Log: Military Aviation & Radar Environmental Impact Assessment.

ID	Hornsea Four Position	MOD Position	Position Summary
Environmental Impact Assessment			
MOD-001	Description of baseline conditions is accurate in terms of military aviation and radar activity undertaken within the Hornsea Four Order Limits and surrounding area.		
MOD-002	The potential impacts identified represent a comprehensive list of potential impacts on military aviation and radar from Hornsea Four.	The windfarm has been identified as being detectable to RRH Staxton Wold using the parameter identified by MOD. However, the significance of the expected affects are not evaluated and potential cumulative impacts of this development in conjunction with other wind farm developments upon RRH Staxton Wold are not evaluated.	
MOD-003	The impact assessment methodologies used for the EIA provide an appropriate approach to assessing potential impacts of Hornsea Four.	The assessment does include radar line of sight assessment. However, it should be recognised that because the performance parameters of ADRs are not publicly available any radar modelling assessment undertaken by the applicant will not be able to fully account for what an ADR will actually be able to detect. The stated methodology does not identify ADR as a 3D radar type as being distinct from air traffic control primary surveillance radar.	Subject to clarifying comment & confirmation.
MOD-004	The Maximum Design Scenario (MDS) presented in the assessment is appropriate.		
MOD-005	Given the impacts of the project, the following proposed Commitments outlined in Volume A4, Annex 5.2: Commitments Register are appropriate: <ul style="list-style-type: none"> • Co93 (aids to navigation); • Co99 (compliance with MGN654); • Co102 (notification of DIO and CAA) • Co181 (offshore decommissioning plan); and • Co200 (HVAC Booster Station Lighting Plan). 	At present Co93 does appropriately account for MOD aviation lighting requirements but only applies to the construction phase and does not account for the operational/maintenance phase. The conditional requirement (10) of schedule 11/12 of the DCO to fit aviation lighting is not referenced. Only the MMO is identified as a relevant determining authority.	

ID	Hornsea Four Position	MOD Position	Position Summary
MOD-006	The assessment is appropriate and has made the correct conclusions that Hornsea Four will not have a significant impact upon Military Aviation and Radar (specifically Trimmingham and Brizlee Wood Air Defence Radar (ADR)) <i>but will be detectable to an ADR operated at Staxton Wold</i>		Subject to amendment & confirmation.
MOD-007	Mitigation options currently in development may be appropriate in relation to Remote Radar Head (RRH) Staxton Wold and might be secured through DCO Requirement 23 and a Radar Mitigation Scheme (RMS).		Subject to amendment & confirmation.
Draft DCO and Deemed Marine Licences			
MOD-008	<p>The wording of the following requirement pertaining to Military Aviation and Radar is appropriate and adequate:</p> <ul style="list-style-type: none"> Condition 10 of Schedules 11 and 12 of C1.1: Draft DCO including Draft DMLs with reference to aviation safety. An updated C1.1: Draft DCO including Draft DMLs has been provided at Deadline 1. 	<p>The MOD does not consider the precise wording of this Requirement satisfactory to address defence safeguarding needs. Wording that the MOD considers suitable to maintain defence requirements is below:</p> <p><i>Aviation safety</i></p> <p><i>10.—(1) The undertaker must exhibit such lights, with such shape, colour and character as are required in writing by Air Navigation Order 2016(a) and determined necessary for aviation safety in consultation with the Defence Infrastructure Organisation Safeguarding and as directed by the Civil Aviation Authority. Lighting installed specifically to meet Ministry of Defence aviation safety requirements must remain operational for the life of the authorised development unless otherwise agreed in writing with the Ministry of Defence.</i></p> <p><i>(2) The undertaker must notify the Defence Infrastructure Organisation Safeguarding, the Civil Aviation Authority and the MMO, at least 14 days prior to the commencement of the licensed activities, in writing of the following information—</i></p> <p><i>(a) the date of the commencement of the licensed activities;</i></p> <p><i>(b) the date any wind turbine generators are to be installed;</i></p> <p><i>(c) the maximum height of any construction equipment or vessels to be used;</i></p> <p><i>(d) the maximum heights of any wind turbine generator, offshore transformer or convertor substations and offshore accommodation platform to be constructed (including any antennae);</i></p>	

ID	Hornsea Four Position	MOD Position	Position Summary
		<p><i>(e) the latitude and longitude of each wind turbine generator, offshore transformer or convertor substation and offshore accommodation platform to be constructed, and the Defence Infrastructure Organisation Safeguarding and the Civil Aviation Authority must be notified of any changes to the information supplied under this paragraph and of the completion of the construction of the authorised project. Copies of notifications must be provided to the MMO.</i></p>	
MOD-009	<p>The wording of the following requirement pertaining to Military Aviation and Radar is appropriate and adequate:</p> <ul style="list-style-type: none"> Requirement 23 of C1.1: Draft DCO including Draft DMLs with reference to Remote Radar Head (RRH) Staxton Wold. It is anticipated an updated C1.1: Draft DCO including Draft DMLs will be provided at a future deadline. 	<p>At this point in time the wording of the Requirement is not agreed. The MOD is currently reviewing a revised form of the wording proposed by the applicant and there is ongoing dialogue between both parties.</p>	To be discussed.