

Statement of Common Ground between Hornsea Project Three (UK) Ltd. and Natural England

Date: November 2018







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Ørsted

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Front cover picture: Kite surfer near a UK offshore wind farm © Ørsted Hornsea Project Three (UK) Ltd., 2018.





## **Revision History**

Version	Date	Author	Context
1	July 2018	Ørsted	Pre-examination: Initial draft for discussion with Natural England
2	October 2018	Ørsted and Natural England	Updates following Natural England review

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# **Acronyms**

Acronym	Description
CEA	Cumulative Effects Assessment
Cefas	Centre for Environment, Fisheries & Aquaculture Science
CoCP	Code of Construction Practice
DCO	Development Consent Order
cSAC	Candidate Special Area of Conservation
EIA	Environmental Impact Assessment
EMP	Ecological Management Plan
EWG	Expert Working Group
Ex.A	Examining Authority
HRA	Habitats Regulations Assessment
HVAC	High Voltage Alternating Current
HVDC	High Voltage Directional Current
HDD	Horizontal Directional Drilling
LSE	Likely Significant Effects
MCZ	Marine Conservation Zone
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
ММО	Marine Mammal Organisation
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
RSPB	Royal Society for the Protection of Birds
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SCI	Site of Community Importance
SoCG	Statement of Common Ground
TTS	Temporary Threshold Shift
TWT	The Wildlife Trusts





Acronym	Description
UXO	Unexploded Ordinance





#### 1. Introduction

#### Overview

1.1 This Statement of Common Ground (SoCG) has been prepared by Orsted Hornsea Project Three (UK) Ltd. ('the Applicant') and Natural England (together 'the parties') as a means of clearly stating the areas of agreement, and any areas of disagreement, between the two parties in relation to the proposed Development Consent Order (DCO) application for the Hornsea Project Three offshore wind farm (hereafter referred to as 'Hornsea Three'). This SoCG does not deal with or extend to any development other than Hornsea Three.

#### **Approach to SoCG**

- This SoCG has been developed during the pre-application phase of Hornsea Three. In accordance with discussions between the parties, the SoCG is therefore, focused on those issues raised by Natural England within its response to Scoping, Section 42 consultation and as raised through the Evidence Plan process that has underpinned the pre-application consultation between the parties.
- 1.3 The structure of this SoCG is as follows:
  - Section 1: Introduction;
  - Section 2: Consultation;
  - Section 3: Agreements Log (offshore);
  - Section 4: Agreements Log (onshore); and
  - Section 5: Summary.
- 1.4 It is the intention that this document will help facilitate post application discussions between the parties and also give the Examining Authority (Ex.A) an early sight of the level of common ground between both parties from the outset of the examination process.

## Hornsea Three

- 1.5 Hornsea Three is a proposed offshore wind farm located in the southern North Sea, with a total capacity of up to 2,400 MW and will include all associated offshore (including up to 300 turbines) and onshore infrastructure.
- 1.6 The key components of Hornsea Three include:
  - Turbines and associated foundations;
  - Turbine foundations;
  - Array cables;
  - Offshore substation(s), and platform(s) and associated foundations;
  - Offshore accommodation platform/s and associated foundations;
  - Offshore export cable/s;
  - Offshore and/or onshore High Voltage Alternating Current (HVAC) booster station(s) (HVAC transmission option only);
  - Onshore cables; and
  - Onshore High Voltage Direct Current (HVDC) converter/HVAC substation.





- 1.7 The Hornsea Three array area (i.e. the area in which the turbines are located) is approximately 696 km<sup>2</sup> and is located approximately 121 km northeast off the Norfolk coast and 160 km east of the Yorkshire coast.
- 1.8 The Hornsea Three offshore cable corridor extends from the Norfolk coast, offshore in a north-easterly direction to the western and southern boundary of the Hornsea Three array area. The Hornsea Three offshore cable corridor is approximately 163 km in length.
- 1.9 From the Norfolk coast, underground cables will connect the offshore wind farm to an onshore HVDC converter/HVAC substation, which will in turn, connect to an existing National Grid substation. Hornsea Three will connect to the existing Norwich Main National Grid substation, located to the south of Norwich. The Hornsea Three onshore cable corridor is 55 km in length at its fullest extent.





#### 2. Consultation

## <u>Application elements under Natural England's remit</u>

Work Nos. 1 to 5 (offshore works), and 6 to 15 (onshore works) detailed in Part 1 of Schedule 1 of the draft DCO (Document A3.1) describe the elements of Hornsea Three which may affect the interests (fish and shellfish ecology, marine mammals, seascape and visual resources, ecology and nature conservation, and landscape and visual resources) of Natural England.

#### **Consultation summary**

- 2.2 This section briefly summarises the consultation that the Applicant has undertaken with Natural England. Those technical topics of the Development Consent application of relevance to Natural England (and therefore considered within this SoCG) comprise:
  - Fish and Shellfish Ecology;
  - Marine Mammals;
  - Seascape and Visual Resources;
  - Onshore Ecology and Nature Conservation;
  - Landscape and Visual Resources; and
  - The Report to Inform Appropriate Assessment (RIAA).
- 2.3 Due to the nature and complexities of offshore ornithology, a separate SoCG has been developed with Natural England to address this topic (including RIAA related ornithology issues). A separate SoCG has also been developed with Natural England and JNCC to address marine processes and benthic ecology matters.

# **Pre-Application**

- 2.4 The Applicant has engaged with Natural England on Hornsea Three during the pre-application process, both in terms of informal non-statutory engagement and formal consultation carried out pursuant to section 42 of the Planning Act 2008.
- 2.5 Table 2.1 summarises the consultation undertaken between the parties during the pre-application phase, including consultation through scoping, consultation on the Preliminary Environmental Information Report (PEIR), further section 42 consultation undertaken in November 2017 and the focused section 42 consultation in February 2018.
- 2.6 In addition to section 42 consultation, the Applicant held several meetings with Natural England through the Evidence Plan process (further detail of this consultation is presented in Volume 5, Annex 1 Evidence Plan; Document A5.5.1).

# **Post-application**

2.7 Table 2.2 summarises the consultation undertaken between the parties during the post-application phase.



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Table 2.1: Pre-application consultation with Natural England.

Date	Attending	Detail
Overarching		
Re-occurring throughout pre- application phase	Natural England	Regular meetings to discuss project status.
22 March 2016	PINS, Natural England and MMO	Evidence Plan Steering Group
18 July 2016	PINS, Natural England, MMO and Cefas	Evidence Plan Steering Group
08 September 2016	Natural England	Meeting to discuss project outline and update including the scoping area including what data will be presented in the scoping report assessment.
17 October 2016	Natural England	Meeting to discuss project updates and the intended level of detail to be presented within the PEIR.
26 October 2016	N/A	Scoping report published for consultation by the Applicant.
25 November 2016	N/A	Natural England letter response to scoping report.
16 December 2016	Natural England	Meeting to discuss project updates, ornithology matters, MCZ and cable installation lessons learnt.
27 January 2017	PINS, Natural England, MMO and Cefas	Evidence Plan Steering Group
22 May 2017	PINS, Natural England, MMO and Cefas	Evidence Plan Steering Group
26 July 2017	N/A	PEIR published by the Applicant for consultation (section 42).
20 September 2017	N/A	Natural England letter response providing comments on PEIR.
16 November 2017	N/A	Further statutory consultation published by the Applicant.
11 December 2017	N/A	Natural England letter response to further statutory consultation.
31 January 2018	PINS, Natural England, MMO and Cefas	Evidence Plan Steering Group
28 February 2018	N/A	Focused statutory consultation published by the Applicant.





Date	Attending	Detail
3 April 2018	N/A	Natural England letter response to focused statutory consultation.
Offshore		
10 March 2016	Natural England, MMO and PINS	Marine Mammal Expert Working Group (EWG)
13 April 2016	Natural England, TWT and MMO (Marine Mammal EWG)	Marine Mammal EWG
06 June 2016	Natural England, MMO and Cefas	Marine Processes, Benthic Ecology and Fish Ecology EWG
12 July 2016	Natural England, MMO and Cefas	Marine Processes, Benthic Ecology and Fish Ecology EWG
04 August 2016	Natural England and TWT (Marine Mammal EWG)	Marine Mammal EWG
17 November 2016	Natural England, MMO, TWT and Cefas	Marine Processes, Benthic Ecology and Fish Ecology EWG
23 November 2016	Natural England, MMO and TWT	Marine Mammal EWG
01 February 2017	Natural England, MMO, TWT and Cefas	Marine Processes, Benthic Ecology and Fish Ecology EWG Meeting to discuss Marine Processes, Benthic Ecology and Fish and Shellfish Ecology matters, including surveys and evidence base.
28 March 2017	Natural England, TWT, MMO	Marine Mammal EWG
10 July 2017	Natural England, TWT, MMO	Marine Mammal EWG
20 November 2017	Natural England, MMO and TWT	Marine Mammal EWG
04 December 2017	PINS, Natural England, MMO, Cefas and TWT	Marine Processes, Benthic Ecology and Fish Ecology EWG
15 February 2018	Natural England, MMO, Cefas and TWT	Marine Mammal EWG





Date	Attending	Detail
23 February 2018	Natural England, MMO, Cefas and TWT	Marine Processes, Benthic Ecology and Fish Ecology EWG
Onshore		
17 February 2017	TWT, Natural England, Norfolk County Council, Environment Agency, RSPB, North Norfolk District Council	Onshore Ecology EWG
28 April 2017	TWT, Natural England, Norfolk County Council, Environment Agency, RSPB, North Norfolk District Council	Onshore Ecology EWG
25 June 2017	TWT, Natural England, Norfolk County Council, Environment Agency, RSPB	Onshore Ecology EWG
02 November 2017	TWT, Norfolk County Council, Environment Agency, RPSB	Onshore Ecology EWG
23 March 2018	TWT, Norfolk County Council, Environment Agency, North Norfolk District Council, RSPB	Onshore Ecology EWG

Table 2.2: Post application consultation with Natural England.

Date	Detail
25 July 2018	Meeting to discuss Natural England's Relevant Representation.
2 October 2018	Meeting to discuss high level approach to resolving outstanding issues, including updates to SoCG on All Other Matters.



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Date	Detail
25 October 2018	Meeting to discuss updates to SoCG on All Other Matters primarily regarding Marine Mammals.
26 October 2018	Meeting to discuss updates to SoCG on All Other Matters regarding Onshore matters.





# 3. Agreement Log (offshore)

- 3.1 The following section of this SoCG identifies the level of agreement between the parties for each relevant component of the application material (as identified in paragraph 2.1 and 2.2) relevant to fish and shellfish, marine mammal and seascape and visual resources matters. In order to easily identify whether a matter is "agreed", "under discussion" or indeed "not agreed" a colour coding system of green, yellow and orange, respectively, is used in the "final position" column to represent the respective status of discussions. To date, the agreed final positions as outlined in the following sections have been achieved through the evidence plan process during the pre-application phase.
- 3.2 Section 4 of this SoCG identifies the level of agreement between the parties for each relevant component of the application as it relates to ecology and nature conservation landward of MHWS, and landscape and visual resources landward of MLWS.

### Fish and Shellfish Ecology

- 3.3 Hornsea Three has the potential to impact upon fish and shellfish ecology and these interactions are duly considered within Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement (Document A6.2.3).
- 3.4 Table 3.1 identifies the status of discussions relating to this topic area between the parties.

#### **Marine Mammals**

3.5 Hornsea Three has the potential to impact upon marine mammal receptors and these interactions are duly considered within Volume 2, Chapter 4: Marine Mammals of the Environmental Statement (Document A6.2.4).

3.6





3.7 Table 3.2 identifies the status of discussions relating to this topic area between the parties.

## **Seascape and Visual Resources**

- 3.8 Hornsea Three has the potential to impact upon seascape and visual resources and these interactions are duly considered within Volume 2, Chapter 10: Seascape and Visual Resources (Document A6.2.10) of the Environmental Statement.
- 3.9 Table 3.3 identifies the status of discussions relating to this topic area between the parties.





Table 3.1: Fish and shellfish ecology.

Discussion point	Hornsea Three position	Natural England's position	Final position
Environmental Impact Ass	essment		
Policy and planning	Section 3.4 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement has identified all appropriate plans and policies relevant to fish and shellfish ecology and due regard has been given to them within the assessment.  Agreed		Agreed
Baseline environment	Sufficient primary and secondary data, as listed in Section 3.6 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement, has been collated to appropriately characterise the baseline environment (in Section 3.7 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement) to inform the EIA.	Agreed	Agreed
	The existing characterisation of sandeel habitats within the Hornsea Three array area and offshore cable corridor in Section 3.7 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement is sufficient for the purposes of undertaking the EIA. It is not necessary to undertake further surveys to characterise sandeel habitat given that the EIA has adopted a precautionary approach which assumes that sandeel spawning habitat extends across the whole Hornsea Three array area.	Agreed	Agreed
	All data gaps have been highlighted and all appropriate measures for filling any data gaps have been proposed.	Agreed	Agreed



Discussion point	Hornsea Three position	Natural England's position	Final position
	The evidence based approach to the assessment of effects is deemed appropriate for the purposes of predicting potential effects on the receiving environment.	Agreed	Agreed
	The potential impacts identified within Section 3.8 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement represent a comprehensive list of potential impacts on fish and shellfish ecology from Hornsea Three.	Agreed	Agreed
	The definitions used for magnitude and sensitivity, as outlined in Section 3.9 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement are appropriate.	Agreed	Agreed
Assessment methodology	The maximum design scenarios identified for each impact in Table 3.11 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement are appropriate based on the information presented in Volume 1, Chapter 3: Project Description of the Environmental Statement (Document A6.1.3).	Agreed	Agreed
, ideacon on the analysis gy	All the conservation sites relevant to the fish and shellfish ecology topic with the potential to be affected by Hornsea Three have been considered within Section 3.7.5 and Section 3.11 of Volume 2, Chapter 2: Fish and Shellfish Ecology of the Environmental Statement.	Agreed	Agreed
	The list of projects screened into the Cumulative Effect Assessment (CEA) in Section 3.12 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement are appropriate. This includes only those projects within the representative CEA buffers described in Table 3.23 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement and those projects for which sufficient project detail is available. Sufficient project detail to enable a meaningful assessment was not available for Norfolk Boreas and Hornsea Four wind farms. Dogger Bank Teesside A is outside of the representative 100 km buffer from Hornsea Three.	List of other plans and projects: There are some inconsistencies on the projects scoped in/out for cumulative impact assessment. In Vol. Chapter 6 (Commercial Fisheries) the Dogger Bank Teesside A wind farm has been included in the Tier 3 projects, in Vol. 2 Chapter 3 (Fish and Shellfish Ecology) only the	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
	The location of these schemes relative to Hornsea Three, including the 50 km and 100 km buffer zones around Hornsea Three, are shown in Volume 4, Annex 5.3: Location of Cumulative Schemes (APP-098).	neighbouring Dogger Bank Creyke Beck A, Dogger Bank Creyke Beck B and Dogger Bank Teesside B (Sofia offshore wind farm) have been considered. Similarly in Vol. 2 Chapter 6 the Norfolk Boreas and Hornsea Four wind farms have been included in the Tier 3 projects while in Vol. 2 - Ch 3 only Norfolk Vanguard (in close proximity with Norfolk Boreas) was considered in the Tier 3, while only Hornsea Projects One and Two are considered in Tier 1. We request that further clarification is provided to justify if and why the Dogger Bank Teesside A, Norfolk Boreas and Hornsea Four wind farms were scoped out from the assessment.	
Assessment conclusions	With the exception of the assessment of underwater noise associated with unexploded ordinance (UXO) detonation which remains under discussion, the assessment of potential effects on fish and shellfish receptors in Section 3.11 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement is appropriate and no impacts from the construction, operation and maintenance and/or decommissioning of Hornsea Three will be significant in EIA terms given the implementation of the measures adopted as part of Hornsea three (see Section 3.10 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement).		Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
	The underwater noise modelling is appropriate for informing the assessment of effects from piling on fish and the modelling has been based on the most appropriate threshold criteria and metrics. It is appropriate that underwater noise associated with UXO detonation has not been modelled on the basis that i) detonations will represent very short duration occurrences (i.e. seconds) and therefore will have a considerably shorter overall duration than piling operations (see paragraph 3.11.1.72 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement); and ii) the thresholds for potential injury for UXO detonations are higher than for piling and so are within the predicted impact ranges outlined in Table 3.18 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement.	Point to clarify: Paragraph 3.11.1.60 states that 'underwater noise modelling has not been undertaken for underwater noise associated with UXO detonation, however the ASA guidelines (Popper et al., 2014) indicate that the noise levels at which potential injury effects in fish species may occur are higher for explosions than for piling activities. As such, any injury effects associated with UXO detonation would be within the areas presented Table 3.18.'  Table 3.18 refers to the range of distances where recoverable injury from piling can occur in species of fish. However UXOs and piling are different types of noises and it is not necessarily the case that the worst case scenario for piling would include noise from UXO detonation.	Agreed
	No significant cumulative effects are predicted in Section 3.13 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement.	Point to clarify: In section 3.12 for the cumulative impact assessment, two buffer zones of 50 km and 100 km were considered. The only impact for which a cumulative impact	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
		assessment was conducted within the 100 km buffer was for underwater noise, while for all others a 50 km buffer was used. In the cumulative impact assessment of the increase in SSC and associated sediment deposition the buffer is not specified at all. Could the applicant provide reasoning behind using the specific buffer zone for each of the impacts as it is currently not clear what parameters were taken into account?	
		It would be helpful to have the two buffer zones (50 km and 100 km) added to Figure 3.6: Offshore project/plans/activities screened into the Hornsea Three Cumulative Effects Assessment (CEA) for fish and shellfish ecology.	
	No further mitigation to those embedded measures identified in Section 3.10 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement is necessary as a result of the assessment conclusions.	Agreed	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
Report to Inform Appropria	nte Assessment (Document A5.2)		
	All relevant sites for fish and shellfish receptors are identified within the HRA Screening Report (Document A5.2.1).	Agreed	Agreed
Screening	No sites are identified as having potential LSE from Hornsea Three alone or incombination and therefore, no further assessment within the RIAA (Document A5.2) is required.	Agreed	Agreed
Draft Development Conser	nt Order		
Commitments / restrictions	The commitment to producing a Project Environmental Management and Monitoring Plan (Schedule 11, Part 2, Condition 11(1)(d) and Schedule 12, Part 2, Condition 12(1)(d) of the draft DCO (Document 3.1)), that must be submitted to and approved by the MMO prior to the commencement of construction activities, is appropriate to ensure that the potential for release of pollutants from construction, operation and maintenance, and decommissioning plant is minimised.	Agreed	Agreed
	In the event that driven or part-driven pile foundations are proposed to be used, the commitment to soft start procedures (Schedule 11, Part 2, Condition 11(1)(g) and Schedule 12, Part 2, Condition 12(1)(g) of the draft DCO), is appropriate to reduce the risk of injury to fish species in the immediate vicinity of piling operations.	Agreed	Agreed
	The commitment to producing a Cable Specification and Installation Plan (Schedule 11, Part 2, Condition 11(1)(h) and Schedule 12, Part 2, Condition 12(1)(h) of the draft DCO), which will include a desk-based assessment of attenuation of electro-magnetic field (EMF) strengths, shielding and cable burial depth in accordance with industry good practice, that must be submitted to and approved by the MMO prior to the commencement of construction activities, is appropriate to ensure the effect of EMF on fish and shellfish receptors is within	Agreed	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
	the range assessed in Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement.		
	Given the embedded measures identified in Section 3.10 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement and Environmental Statement conclusions (see Section 3.16 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement) no further specific commitments and/or restrictions are required in the DCO for fish and shellfish ecology.	Agreed	Agreed
Monitoring	Given the Environmental Statement conclusions (see Section 3.16 of Volume 2, Chapter 3: Fish and Shellfish Ecology of the Environmental Statement), no site specific monitoring is required for fish and shellfish ecology.	Agreed	Agreed





Table 3.2: Marine mammals.

Discussion point	Hornsea Three position	Natural England's position	Final position		
Environmental Imp	Environmental Impact Assessment				
Policy and planning	Section 4.4 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement has identified all appropriate plans and policies relevant to marine mammals and due regard has been given to them within the assessment.	Agreed	Agreed		
Baseline environment	Sufficient primary and secondary data, as listed in Section 4.6 Volume 2, Chapter 4: Marine Mammals of the Environmental Statement has been collated to appropriately characterise the baseline environment (in Section 4.7 Volume 2, Chapter 4: Marine Mammals of the Environmental Statement) to inform the EIA	Agreed	Agreed		
	The reference populations, densities and study areas for all marine mammals considered within Section 4.7 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement are appropriate.	Agreed	Agreed		
	The potential impacts identified within Section 4.8 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement represent a comprehensive list of potential impacts on marine mammals from Hornsea Three.	Agreed	Agreed		
Assessment methodology	The definitions used for magnitude and sensitivity, as outlined in Section 4.9 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement are appropriate.	Agreed	Agreed		
	The maximum design scenarios identified for each impact in Table 4.15 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement are appropriate based on the	Agreed	Agreed		





Discussion point	Hornsea Three position	Natural England's position	Final position
	information presented in Volume 1, Chapter 3: Project Description of the Environmental Statement (Document A6.1.3).		
	The TTS (Temporary Threshold Shift) threshold is not appropriate for use as the behavioural threshold of 'fleeing' for multiple pulse noise.	Agreed	Agreed
	It is appropriate for TTS ranges to have been presented as a separate impact to disturbance, with the disturbance impacts assessed through the application of dose response curves.	Agreed	Agreed
	The underwater noise modelling and use of INSPIRE is appropriate for informing the assessment of effects from piling on marine mammals and that the modelling has been based on the most appropriate threshold criteria and metrics.	Agreed	Agreed
	Hornsea Three has not included within its application a request for permission for Unexploded Ordinance (UXO) detonation but notwithstanding this the assessment in Section 4.11 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement has considered this potential activity to an appropriate level of detail.	Natural England agrees that Hornsea Three has recognised the potential effect of UXO clearance even though they are not seeking to consent such clearance works within this DCO application.	Agreed
	The Applicant has provided further clarification in response to the CEA comments from Natural England in Appendix A of this SoCG.	Notwithstanding the agreement for the assessment of the project alone, Natural England consider that the CEA should assess UXO (at all wind farms) with piling (at all wind farms) and seismic activities. It should also be noted that larger UXOs from the wind farm alone could potentially injure 200 porpoise per explosion. That is not insignificant and should be reflected as much within the assessment.	Under discussion





Discussion point	Hornsea Three position	Natural England's position	Final position
	It is agreed that given the potential for UXO's anywhere within the Order Limits, it is more appropriate to use SCANS III data over site specific data for just the array area.	Agreed	Agreed
	The assessment of impacts from vessel activity in Section 4.11 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement have addressed the comments raised by Natural England in the Marine Mammal EWG meeting (20 November 2017) and in their S42 consultation response on the PEIR.	Agreed	Agreed
	The list of projects screened into the Cumulative Effect Assessment (CEA) in Section 4.12 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement are appropriate.	Agreed	Agreed
	A qualitative approach to including seismic survey activity within the cumulative assessment in Section 4.13 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement is appropriate.	Natural England is content with how seismic survey activity has been assessed.	Agreed
	The Applicant has provided further clarification in response to the CEA comment from Natural England in Appendix A of this SoCG.	See comment on the UXO above. Notwithstanding the above agreed statement, Natural England considers that the cumulative assessment still needs to assess UXOs (at all wind farms) with piling (at all wind farms) AND seismic.	Under discussion





Discussion point	Hornsea Three position	Natural England's position	Final position
	The assessment of potential effects on marine mammal receptors in Section 4.11 Volume 2, Chapter 4: Marine Mammals of the Environmental Statement, is appropriate and no impacts from the construction, operation and maintenance and/or decommissioning of Hornsea Three alone will be significant in EIA terms given the implementation of the measures adopted as part of Hornsea Three (see Section 4.10 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement).	Agreed	Agreed
Assessment conclusions	It is agreed that moderate cumulative effects are predicted in Section 4.13 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement, as a result of the uncertainty in which other projects may have temporal overlap of the Hornsea Three piling schedules and uncertainty surrounding the population consequences of disturbance over this timescale.  The Applicant has provided further clarification in response to the comment from Natural England in Appendix A of this SoCG.	Whilst Natural England agrees that it is not a realistic for the worst case theoretical combination of projects to occur, they retain concerns with regard to the Applicant's conclusion that "The conclusion for Tier 1 and 2 combined states: moderate for the duration of the piling (~12 yrs) but minor in terms of long term population level effects, therefore not an issue in terms of the EIA". Notwithstanding this, Natural England agrees that in principle (and notwithstanding the concerns cited below) the Site Integrity Plan commitment will ensure that significant levels of overlapping "noisy" activity will not occur without appropriate mitigation in place and therefore, in EIA terms long term population level effects are unlikely.	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
		Whilst Natural England agree that the SIP is the appropriate control measure to manage concerns relating to cumulative disturbance effects on marine mammals, Natural England notes the forthcoming Review of Consents (RoC) regarding the Southern North Sea cSAC, required under regulation 33 of the Conservation of Offshore Marine Habitats and Species Regulations 2017. Natural England has advised that as part of the RoC process the SNCB advice on acceptability of disturbance using the Thresholds Approach needs to be applied (subjected to no other suitable alternative approach/s being presented) for those projects that are already consented.	Under discussion
		The SNCBs are aware from our work with the developers and review of the environmental statements for consented projects that certain Round 3 OWF projects have the ability to exceed the 20% disturbance threshold, especially if piling occurs simultaneously. Therefore, as part of the RoC process a mechanism needs to be identified and implemented to control the number of piling events to ensure that thresholds are not exceeded. It is Natural England advice that until that happens an AEoI cannot be excluded for consented projects.	
	It is agreed that no further mitigation to those embedded measures identified in Section 4.10 of Volume 2, Chapter 4: Marine Mammals of the Environmental Statement is necessary as a result of the assessment conclusions.  The Applicant has provided further clarification in response to the comment from Natural England in Appendix A of this SoCG.	Whilst Natural England agrees that the measures proposed by the Hornsea Three are appropriate, given the regulatory concerns mentioned in the point above, we currently cannot agree with this statement.	Under discussion





Discussion point	Hornsea Three position	Natural England's position	Final position
	The Applicant notes Natural England's response on this point, and is aware that the RoC process has produced draft outputs which point towards the need for projects to commit to a SIP to ensure appropriate control measures is in place for the SNS SCI. As discussed with Natural England, the Applicant has made this commitment and has produced an outline SIP for Deadline I. It is hoped therefore, that this matter can be resolved with Natural England in due course.		
Report to Inform A	ppropriate Assessment (Document A5.2)		
Screening	All relevant sites for marine mammals receptors are identified within the HRA Screening Report (Document A5.2.1) and the only sites which have the potential for LSE from Hornsea Three alone or in-combination is the southern North Sea candidate SAC (cSAC); for harbour porpoise, The Wash and North Norfolk Coast SAC for harbour seal, Doggerbank Site of Community Importance (SCI) for harbour seal and grey seal, Klavernack SCI for harbour porpoise, harbour seal and grey seal, Humber Estuary SAC/Ramsar and Noordzeekustzone SAC for grey seal.	Agreed	Agreed
	The only impacts where LSE has been identified or could not be ruled out for the sites and features identified above are: Underwater noise and Changes in prey availability.	Agreed	Agreed
Assessment methodology	The methodology for assessing effects on marine mammal features within the RIAA (Document A5.2) has been undertaken in accordance with guidance from Natural England and is appropriate.	Agreed	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
	For the disturbance assessment in the RIAA, the standard distance of 26 km has been followed, in line with the recent work around the southern North Sea cSAC.	Agreed	Agreed
	It is agreed that no adverse effect on integrity of Natura 2000 sites are predicted from Hornsea Three alone.	Agreed	Agreed
Assessment conclusions	The magnitude of the in-combination underwater noise impact on harbour porpoise, in relation to behavioural effects, is uncertain as it depends on the timing of works at other projects. There is most certainty about those projects included in Tier 1 and there is no indication that these would lead to an adverse effect on integrity for the Southern North Sea cSAC as their combined effect is below the agreed threshold. There is less certainty in relation to other projects. Although inclusion of all projects in tiers 2 and 3 (in addition to tier 1) could theoretically result in an exceedance of the agreed threshold, it is considered that a scenario where all these projects are taken forward and are constructed concurrently is highly unlikely. On this basis there is no indication of an adverse effect on the integrity of the Southern North Sea cSAC.  Notwithstanding, that the Applicant committed toto a Condition (Schedule 11, Part 2, Condition 11(4, 5 and 6) and Schedule 12, Part 2, Condition 12(4, 5 and 6)) to ensure appropriate	As per Natural England's Relevenat Representations, we agree that the Hornsea Three windfarm alone will not adversely affect the site integrity given the relatively small disturbance spatial footprints within the site. Natural England agree that the theoretical worst case in-combination development scenarios will not realistically occur, we do retain concerns that thresholds could be exceeded under certain scenarios that could realistically occur. However, we recognise that the commitment of Hornsea Three to a SIP would in principle (and notwithstanding the regulatory concerns cited below) ensure that if (at the time of drafting the SIP) risk to site integrity is identified then construction will not be able to commence until appropriate mitigation is put in place to reduce effects to an acceptable level.	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
	mitigation (to reduce effects to acceptable levels) is applied under a scenario where significant projects construction activity does coincide. Following comments from Natural England and the MMO, the Applicant has replaced this Condition, with a commitment to a Site Integrity Plan, which will ensure that appropriate mitigation is applied if required (and approved by the MMO) prior to the commencement of works.	Whilst Natural England agree that the SIP is the appropriate control measure to manage concerns relating to incombination disturbance effects on marine mammals, Natural England cross refer the Applicant to their comment above on this matter.	Under discussion
Draft Development	The commitment to a SIP will provide the appropriate control mechanism within the DCO to ensure that if, in the unlikely incombination scenario, there is a risk of adverse effects on site integrity of the Southern North Sea SCI then appropriate mitigation measures must be agreed and approved by the	Natural England has requested the inclusion of a Site Integrity plan in place of these conditions. Ørsted have agreed to this request, however, the final wording has yet to be agreed. It is anticipated that this wording will be agreed in the near future.	Under Discussion
Commitments / restrictions	MMO before construction can commence.  The commitment to producing a Cable Specification and Installation Plan (Schedule 11, Part 2, Condition 11(1)(h) and Schedule 12, Part 2, Condition 12(1)(h) of the draft DCO), which will include a desk-based assessment of attenuation of electro-magnetic field (EMF) strengths, shielding and cable burial depth in accordance with industry good practice, that must be submitted to and approved by the MMO prior to the commencement of construction activities, is appropriate to	Agreed.	Agreed





Discussion point	Hornsea Three position	Natural England's position	Final position
	ensure the effect of EMF on fish and shellfish receptors is within the range assessed in the ES.		
	In the event that driven or part-driven pile foundations are proposed, the commitment to producing a Marine Mammal Mitigation Protocol (Schedule 11, Part 2, Condition 11(1)(g) and Schedule 12, Part 2, Condition 12(1)(h) of the draft DCO), to include details of soft start procedures, is appropriate to mitigate for the risk of physical or permanent auditory injury to marine mammals within a 'mitigation zone'.	sed, the commitment to producing a Marine Mammal ation Protocol (Schedule 11, Part 2, Condition 11(1)(g) achedule 12, Part 2, Condition 12(1)(h) of the draft DCO), lude details of soft start procedures, is appropriate to attempt to the risk of physical or permanent auditory injury to	Agreed
	Based on comments received from Natural England and the MMO the Applicant has included a Condition within the updated draft DCO to reflect a 5,000kJ hammer energy limit. The wording is as proposed by the MMO within their Relevant Representation:  In the event that driven or part-driven pile foundations are proposed to be used, the hammer energy used to drive or part-drive the pile foundations must not exceed 5,000kJ.	Subject to provision of updated wording in the dMLs to limit to	Agreed
Monitoring	It is agreed that the following monitoring commitments (that relate to marine mammals) are appropriate:	Whilst Natural England agrees in principle, in light of recent cases we would like to consider this further.	Under Discussion





Discussion point	Hornsea Three position	Natural England's position	Final position
	<ul> <li>A plan for marine mammal monitoring that will contribute to reducing key uncertainties within assessments relating to effects on marine mammals from construction activities;</li> <li>Construction phase; underwater noise monitoring of the first four piled foundations to validate the noise model; and</li> <li>Construction phase; provision of piling duration records to enhance the knowledge base on actual durations of piling.</li> </ul>		

Table 3.3: Seascape and visual resources.

Discussion Point	The Applicant's Position	Natural England's Position	Final Position
Environmental Impact Assessment (EIA)			
Policy and planning	Section 10.4 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement. has identified all appropriate plans and policies relevant to seascape and visual resource.	Agreed	Agreed
Baseline environment	Sufficient secondary data, as listed in Section 10.6 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement has been collated to appropriately characterise the baseline environment seaward of Mean Low Water Springs (MLWS) (in Section 10.7 of Volume 2, Chapter 10:	Agreed – the right locations and information has been collected.	Agreed



Discussion Point	The Applicant's Position	Natural England's Position	Final Position
	Seascape and Visual Resources of the Environmental Statement) to inform the EIA.		
	The potential impacts identified within Section 10.8 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement represent a comprehensive list of potential impacts on seascape and visual resource from Hornsea Three.	Agreed	Agreed
	The definitions used for magnitude and sensitivity, as outlined in Section 10.9 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement are appropriate.	Agreed - although effects that are not considered to be significant, i.e. moderate, should not be completely disregarded	Agreed
Assessment methodology	The viewpoints used in the assessment, as described in paragraph 10.9.1.9 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement, are appropriate.	No comment	No Comment from Natural England
	The maximum design scenarios identified for each impact in Table 10.8 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement are appropriate based on the information presented in Volume 1, Chapter 3: Project Description of the Environmental Statement (Document A6.1.3).	No comment - there will be no impact from turbines or offshore substation on seascape as viewed from AONB, so we have not considered this further	No Comment from Natural England
	The list of projects screened into the CEA in Section 10.12 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement are appropriate.	No comment	No Comment from Natural England
Assessment conclusions	The assessment of potential impacts to seascape and visual resources seaward of MLWS in Section 10.11 of Volume 2, Chapter 10: Seascape and	No comment	No Comment





Discussion Point	The Applicant's Position	Natural England's Position	Final Position
	Visual Resources of the Environmental Statement, is appropriate and no impacts from the construction, operation and maintenance and/or decommissioning of Hornsea Three will be significant in EIA terms.		from Natural England
	No significant cumulative effects on seascape and visual resources seaward of MLWS are predicted (see Section 10.13 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement).	Agreed - Photomontage in Vol 6 Annex 4.7 shows offshore substation as a small feature on the horizon and it is stated that it would only be seen on very clear days. There may be a cumulative effect on views from AONB, including at night from lighting of the substation, but not likely to be significant.	Agreed
	No embedded mitigation measures, as identified in Section 10.10 of Volume 2, Chapter 10: Seascape and Visual Resources of the Environmental Statement, are necessary as a result of the assessment conclusions.	No comment	No Comment from Natural England
Draft Development Consen	t Order		
Commitments / restrictions	No specific commitments are required within the DCO to mitigate effects on seascape and visual resources seaward of MLWS.	In principle this is Agreed.	Agreed





# 4. Agreements Log (onshore)

- 4.1 The following section of this SoCG identifies the level of agreement between the parties for each relevant component of the application material (as identified in Section 1) as it relates to ecology and nature conservation, and landscape and visual resources matters. In order to easily identify whether a matter is "agreed", "under discussion" or indeed "not agreed" a colour coding system of green, yellow and orange is used, respectively, in the "final position" column to represent the respective status of discussions.
- 4.2 Section 3 of this SoCG identifies the level of agreement between the parties for each relevant component of the application as it relates to fish and shellfish ecology, and marine mammals seaward of MHWS, and seascape and visual resources seaward of MLWS.

#### **Ecology and Nature Conservation**

- 4.3 Hornsea Three has the potential to impact upon ecology and nature conservation receptors and these interactions are duly considered within Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement (Document A6.3.3). An Outline Ecological Management Plan (EMP) (Document A8.6) and an Outline Code of Construction Practice (CoCP) (Document A8.5) have been prepared that captures all ecological management and mitigation measures associated with this topic.
- 4.4 Table 4.1 identifies the status of discussions relating to this topic area between the parties.

#### **Landscape and Visual Resources**

- 4.5 Hornsea Three has the potential to impact upon landscape and visual resources and these interactions are duly considered within Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement. An Outline Landscape Management Plan (LMP; Document A8.7) and Outline CoCP (Document A8.5) have been prepared that captures all relevant management and mitigation measures associated with this topic.
- 4.6 Table 4.2 identifies the status of discussions relating to this topic area between the parties.





Table 4.1: Ecology and nature conservation.

Discussion point	The Applicant's position	Natural England's position	Final position		
Design, Site Selection ar	Design, Site Selection and Route Refinement				
Site selection of onshore HVAC booster station and HVDC converter/HVAC substation	The sites selected for the onshore HVAC booster station and onshore HVDC converter/HVAC substation are appropriate given the avoidance of sensitive habitats and designated sites.	Agreed	Agreed		
Route of Hornsea Three onshore cable corridor	The route selected for the Hornsea Three onshore cable corridor is appropriate given its avoidance of designated and non-designated sites (including Natura 2000 sites) and where possible, avoidance of sensitive habitats and species. Where the route alignment could not avoid designated and non-designated sites horizontal directional drilling (HDD) was used.	Agreed	Agreed		
Use of HDD	The use of HDD to cross all main rivers, and most ordinary water courses, as well as many hedgerows is appropriate and has reduced the potential for significant impacts on riparian species and reduces fragmentation of the hedgerow and woodland network from Hornsea Three.	Agreed	Agreed		
Environmental Impact A	ssessment				
Policy and planning	Section 3.4 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement has identified all appropriate plans and policies relevant to ecology and nature conservation landward of MHWS and due regard has been given to them within the assessment.	Agreed	Agreed		
Baseline environment	Sufficient primary and secondary data, as listed in Section 3.6 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement has been collated to appropriately characterise the baseline environment landward of MHWS (in Section 3.7 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement) to inform the EIA.	Agreed	Agreed		





Discussion point	The Applicant's position	Natural England's position	Final position
	The scope and methodology of the protected species surveys, as outlined in Volume 6, Annex 3.3: Desmoulin's Whorl Snail Survey (Document A6.6.3.3), Annex 3.4: White Clawed Crayfish Survey (Document A6.6.3.4), Annex 3.5: Great Crested Newt Survey (Document A6.6.3.5), Annex 3.6: Reptile Survey (Document A6.6.3.6), Annex 3.7: Water Vole Survey (Document A6.6.3.7), Annex 3.8: Bat Survey (Document A6.6.3.8), Annex 3.9: Onshore Ornithology – Wintering and Migratory Birds (Document A6.6.3.9), Annex 3.10: Onshore Ornithology – Breeding Birds (Document A6.6.3.10), Annex 3.11: Otter Survey (Document A6.6.3.11) and 3.12: Badger Survey (Document A6.6.3.12) of the Environmental Statement were appropriate and adequate (taking into consideration access limitations) to inform the assessment of potential significant effects. No further protected species surveys were considered necessary to inform the characterisation of the baseline environment for the purposes of the EIA.	Agreed	Agreed
	Surveys for hazel dormouse, red squirrel, fish and freshwater pearl mussel were not deemed necessary to inform the baseline environment for the purposes of the EIA based on the outcomes of the Hazel Dormouse, Red Squirrel and Freshwater Pearl Mussel Desk Study (Volume 6, Annex 3.13 of the Environmental Statement (Document A6.6.3.13)).	Agreed	Agreed
	The future baseline identified in Section 3.7.4 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement is considered appropriate.	Agreed	Agreed
Assessment methodology	The potential impacts identified within Section 3.8 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement represent a comprehensive list of potential impacts on ecology and nature conservation from the construction, operation and maintenance, and decommissioning of Hornsea Three.	Agreed following post-application discussion with the Applicant	Agreed





Discussion point	The Applicant's position	Natural England's position	Final position
	The definitions used for magnitude and sensitivity, as outlined in Section 3.9 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement are appropriate.	Agreed	Agreed
	The maximum design scenarios identified for each impact in Table 3.14 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement are appropriate based on the information presented in Volume 1, Chapter 3: Project Description of the Environmental Statement (Document A6.1.3).	Agreed	Agreed
	The list of projects screened into the CEA in Section 3.12 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement is appropriate.	Agreed	Agreed
	The scope of the Hydrological Characterisation Study (see Volume 6, Annex 2.4 of the Environmental Statement (Document A6.6.2.4)) is considered appropriate to identify the linkages between hydrology and designated nature conservation sites, and to guide appropriate measures adopted as part of Hornsea Three (as outlined in Section 3.10 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement and the Outline CoCP).	Agreed	Agreed
	The site specific crossing method statement for the HDD at Blackwater Drain (at Booton Common) will be developed in consultation with the Environment Agency and Natural England. Paragraphs 3.1.1.1 and 6.4.1.10 of the Outline CoCP [APP-179] have been updated post-application to secure this commitment.		





Assessment conclusions

The assessment of potential effects on ecology and nature conservation landward of MHWS during the construction, operation and maintenance, and decommissioning of Hornsea Three in Section 3.11 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement is appropriate and accurate given the implementation of the measures adopted as part of Hornsea Three (see Section 3.10 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement). The potential impacts and effects on groundwater flows, including around Booton Common SSSI, are considered in Volume 3, Chapter 1: Geology and Ground Conditions of the Environmental Statement, and no significant effects from cabling or HDD were identified. On this basis, the provisions to carry out a hydrogeological risk assessment and prepare a site specific method statement for the nearby HDD crossing (of Blackwater Drain), which will incorporate areas for consideration identified in the Hydrological Characterisation Study (Volume 6, Annex 2.4 of the Environmental Statement) are appropriate control measures for impacts on Booton Common SSSI. The site specific crossing method statement for the HDD of Blackwater Drain (at Booton Common) will be developed in consultation with the Environment Agency and Natural England. Paragraphs 3.1.1.1 and 6.4.1.10 of the CoCP [APP-179] have been updated post-application to secure this commitment.

The potential impacts and effects of runoff are considered in Volume 3, Chapter 2: Hydrology and Flood Risk (see paragraphs 2.11.1.14, 2.11.1.9, 2.11.1.19) and no significant effects were identified.

Appropriate measures to control impacts associated with runoff from construction, including access tracks, are detailed in the Outline CoCP and are in line with best practice (Table 2.17 of Volume 2, Chapter 2: Hydrology and Flood Risk of the Environmental Statement). On this basis, it has been agreed with Norfolk County Council, as Lead Local Flood Authority, that control measures identified in the application documents relating to run-off along the onshore cable corridor are appropriate, and that details on the measures specific to the secondary compounds and storage areas will be provided during detailed design once a contractor has been appointed. These measures will be

The Applicant has sufficiently clarified the approval process associated with crossing method statement for the HDD at BlackWater Drain for Natural England to agree on this issue.

The Applicant has clarified that measures to prevent sediment pollution will be suitable for intense rainfall events associated with climate change, and therefore Natural England agree on this issue.

Agreed





Discussion point	The Applicant's position	Natural England's position	Final position
	captured within the final CoCP which will be agreed with the relevant planning authority.  Following input from Natural England, the following clarification text has been added to paragraph 6.4.1.13 of the outline CoCP: 'Measures to avoid or minimise sediment and potential contaminants from entering surface water will be designed to accommodate 1 in 100 year plus climate change worst case storm events.'.  It is noted that paragraph 6.4.1.17 (last bullet point) of the Outline CoCP includes a provision for ongoing consultation with the Environment Agency and Natural England during the construction period to promote best practice and to implement proposed mitigation measures.		
	With the exception of the impact of open cut trenching, installation of cables, and construction and use of access tracks, to cause temporary habitat loss and disturbance between November and January (inclusive) on Pink-footed Goose, no effects on ecology and nature conservation from the construction, operation and maintenance, and/or decommissioning of Hornsea Three will be significant in EIA terms given the implementation of the measures adopted as part of Hornsea Three (see Section 3.10 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement).  A Pink-footed Goose Management Plan will be prepared and submitted to Natural England for approval in the 12 months preceeding commencement (post-consent). This is likely to include a decision tree process in line with adaptive management principles, which will determine triggers for appropriate levels of mitigation (i.e. ECoW watching brief, toolbox talks for construction teams, restricting more intrusive construction works in certain locations). It is not appropriate to deliver further detail pre-consent as factors such as crop regime, construction timelines and construction processes, all of which determine the mitigation proposed, will be confirmed post-consent.	We note that a mitigation plan for pink-footed geese is in preparation and are happy to comment when available.	Under discussion





Discussion point	The Applicant's position	Natural England's position	Final position
	With the exception of the impact of open cut trenching, installation of cables, and construction and use of access tracks, to cause habitat loss and disturbance between November and January (inclusive) on Pink Footed Geese, no further mitigation to those embedded measures identified in Section 3.10 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement and the Outline CoCP (Document A8.5) are necessary as a result of the assessment conclusions.  A full clarification of the Applicant's management of run off and prevention of sediment pollution has been incorporated into the first point of the 'Assessment conclusions' section of Table 4.1 of this SoCG.	The Applicant has sufficiently clarified their position on runoff for Natural England to agree on this issue.	Agreed
	Hornsea Three has taken an appropriate approach to great crested newt mitigation (i.e. mitigation will be implemented where necessary. It provides sufficient flexibility to allow the implementation of either the translocation method or the innovative landscape scale great crested newt solution, promoted by Natural England during the Onshore Ecology EWG meeting on 25 July 2017, with appropriate local organisations.  As a result of EWG meeting advice (25 July 2017), Hornsea Three has been engaging with the Norfolk Ponds Project with regard to the implementation of the preferred landscape-scale licencing route for GCN. Hornsea Three is preparing a ghost licence application using this method, which will be submitted to Natural England during the course of Examination no later than Deadline 3. If Natural England do not agree that a LONI can be issued with the principles outlined in the ghost licence application, Hornsea Three propose to submit a revised ghost licence application based on the traditional exclusion route.	Natural England agrees that this approach is appropriate, but at this stage it is not possible to comment on the content of the licence as no LONI has been issued.	Agreed
	Hornsea Three has adequately sought to minimise the impact from open cut trenching, installation of cables, and construction and use of access tracks, to cause temporary habitat loss and disturbance between November and January (inclusive) on Pink-footed Goose, via the implementation of a Pink-footed Goose	Agreed	Agreed





Discussion point	The Applicant's position	Natural England's position	Final position
	mitigation plan which will be submitted to Natural England for approval in the 12 months prior to construction.  Hornsea Three will include the Pink-footed Goose mitigitation plan as an appendix to the final CoCP, which is secured in Requirement 17 of the draft DCO [APP-027]. The following text will be added to the outline CoCP, in Section 6.5.1: Wintering birds, "The final version of this document will have, as an appendix, the approved Pink-footed Goose mitigation plan. The Pink-footed-Goose mitigation plan will be submitted to Natural England for approval in the 12 months prior to construction".		
	Pre-construction surveys in-line with Table 3.21 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement are proposed. The surveys are deemed appropriate control measures for managing the potential effects on ecology and nature conservation landward of MHWS.	Agreed.	Agreed
	The assessment of potential cumulative impacts on ecology and nature conservation receptors landward of MHWS in Section 3.13 of Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement is appropriate, and no impacts from the construction, operation and maintenance and/or decommissioning of Hornsea Three, alongside other projects, plans and activities on ecology and nature conservation receptors will be significant in EIA terms.  As Natural England concerns regarding hydrology have been resolved in the first point of the 'Assessment conclusions' section of Table 4.1 of this SoCG, it is agreed that there will be no combined impact with Norfolk Vanguard/Boreas Offshore Wind Farm cable route with regards to surface water run off, sediment pollution and hydrological impacts.  The assessment of potential cumulative impacts on hydrology and flood risk receptors landward of MHWS in Section 2.13 of Volume 3, Chapter 2: Hydrology	Agreed	Agreed





Discussion point	The Applicant's position	Natural England's position	Final position
Report to Inform Approp	priate Assessment (Document A5.2)		
Screening	Those sites identified as having potential LSE from Hornsea Three alone or incombination are appropriate.	Agreed	Agreed
	The RIAA (Document A5.2) has identified all relevant features of the designated sites that may be sensitive to potential effects on ecology.	Agreed	Agreed
Assessment methodology	The methodology to assess features of designated sites that may be sensitive to potential effects on ecology is appropriate.  A full clarification of the Applicant's management of hydrological and hydrogeological impacts, run off management and prevention of sediment pollution has been incorporated into the first point of the 'Assessment conclusions' section of Table 4.1 of this SoCG.	The Applicant has sufficiently clarified the approval process associated with crossing method statement for Booton Common for Natural England to agree on this issue.  The Applicant has clarified that measures to prevent sediment pollution will be suitable for intense rainfall events associated with climate change, and therefore Natural England agree on this issue.	Agreed





Discussion point	The Applicant's position	Natural England's position	Final position
	No significant effects on Natura 2000 sites are predicted either alone or incombination.  A full clarification of the Applicant's management of hydrological and hydrogeological impacts, run off management and prevention of sediment pollution has been incorporated into the first point of the 'Assessment conclusions' section of Table 4.1 of this SoCG.	Agreed following post-application clarification	Agreed
Assessment conclusions	Hornsea Three has adequately sought to minimise the impact from open cut trenching, installation of cables, and construction and use of access tracks, to cause temporary habitat loss and disturbance between November and January (inclusive) on Pink-footed Goose, via the implementation of a Pink-footed Goose mitigation plan which will be submitted to Natural England for approval in the 12 months prior to construction.  A clarification of the Applicant's approach to the Pink-footed Goose mitigation plan is detailed above in Table 4.1 of this SoCG.	Not agreed, until we have had a chance to comment on the mitigation plan	Under discussion
Draft Development Cons	<u> </u>		
Commitments / restrictions	The commitment to produce both an EMP (Schedule 1, Part 3, Requirement 10 of the draft DCO) and a CoCP (Schedule 1, Part 3, Requirement 17 of the draft DCO) that must be approved prior to the commencement of works are appropriate control measures for managing potential effects on ecology and nature conservation landward of MHWS. The EMP and CoCP will include all relevant embedded measures cited within Volume 3, Chapter 3: Ecology and Nature Conservation of the Environmental Statement, as well as the Outline EMP and Outline CoCP.	Agreed	Agreed
Outline Management Pla	ns		
Outline EMP - and Outline CoCP	The management measures identified within the Outline EMP and Outline CoCP, including paragraph 6.4.1.17 of the Outline CoCP and Section 6.4: Protection of the surface water environment, are appropriate for managing	Agreed	Agreed





Discussion point	The Applicant's position	Natural England's position	Final position
	construction and post construction impacts from Hornsea Three on ecology and nature conservation receptors landward of MHWS. It is noted that this includes a provision for ongoing consultation with the Environment Agency and Natural England during the construction period to promote best practice and to implement proposed mitigation measures.		
	As addressed above in Table 4.1 of this SoCG, the Applicant has addressed Natural England's request for clarifications on hydrology, run-off and water pollution risks.		

Table 4.2: Landscape and visual resources.

Discussion Point	The Applicant's Position	Natural England's Position	Final Position
Environmental Impac	t Assessment		
Policy and planning	Section 4.4 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement has identified all appropriate plans and policies relevant to landscape and visual resource landward of MHWS and due regard has been given to them within the assessment.	Agreed	Agreed
Baseline environment	Sufficient primary and secondary data, as listed in Section 4.6 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement has been collated to appropriately characterise the baseline environment landward of MHWS (in Section 4.7 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement) to inform the EIA.	Agreed	Agreed





Discussion Point	The Applicant's Position	Natural England's Position	Final Position
Assessment methodology	The potential impacts identified in Section 4.8 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement chapter represent a comprehensive list of potential impacts on landscape and visual resources from the construction, operation and maintenance, and/or decommissioning of Hornsea Three.  As the cable will be buried underground and there will be no significant changes to landscape character or visual amenity within the AONB, the Secretary of State agreed in their Scoping Opinion that the impacts of the onshore cable route corridor, which includes the area within the AONB, could be scoped out for the operation and maintenance phase. This position remains appropriate.  A clarification of the landscape effects associated with the removal of hedgerows and trees during construction of Hornsea Three, specifically within the AONB, is included in the clarification note on the special qualities of the Norfolk Coast AONB, which will be submitted at Deadline 1. This includes the period during which hedgerow planting will not be mature. The Applicant considers this will address NE concerns.	Table 4.6 We suggest that the operation phase of the onshore cable corridor within the AONB is scoped in for completeness.  Table 4.7 We suggest that the day time impacts of the onshore cable route within the AONB are scoped in.	Under discussion
Volume 3, Chapter 4: Landscape and Vis Statement are appropriate.  The viewpoints selected for Hornsea This characterisation of effects on the receiving with the Norfolk Coast Partnership for the	The definitions used for magnitude and sensitivity, as outlined in Section 4.9 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement are appropriate.	We agree but note that effects that are not considered to be significant, i.e. moderate, should not be completely disregarded	Agreed
	The viewpoints selected for Hornsea Three are appropriate for the characterisation of effects on the receiving environment (including those agreed with the Norfolk Coast Partnership for the assessment of impacts on the Area of Outstanding Natural Beauty (AONB) and of the offshore infrastructure on onshore receptors).	No comment	No comment from Natural England





Discussion Point	The Applicant's Position	Natural England's Position	Final Position
	The methods used to establish the visual effects from Hornsea Three on the receiving environment are appropriate.  Details of interactions with PRoW and linear routes, including management measures to be applied at specific locations will be provided in a Public Rights of Way Management Plan which will form part of the final Code of Construction Practice. This will be developed post-consent once a contractor has been appointed. Initial discussions have however been undertaken with Norfolk County Council, and proposed diversions for the Norfolk Coast Path have been provided to the North Norfolk Trails Partnership, of which Natural England is member, for comment.	The offshore activity associated with the landfall and works in the intertidal zone would be visible from the national trails. We agree that the sensitivity of users is very high and we consider that the effect on them would be significant for the duration of the construction, stated to be 3 months on 2 occasions.  We note that a PRoW management plan is being drafted and we are happy to provide further comment in relation to national trails when available.	Under discussion
	The methods used to establish the visual effects from offshore infrastructure on onshore receptors is appropriate.	Agreed	Agreed
	The maximum design scenarios identified for each impact in Table 4.6 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement are appropriate based on the information presented in Volume 1, Chapter 3: Project Description of the Environmental Statement (Document A6.1.3)  As the cable will be buried underground and there will be no significant changes to landscape character or visual amenity, the Secretary of State agreed in their Scoping Opinion that the impacts of the onshore cable route corridor, which includes the area within the AONB, could be soped out for the operation and maintenance phase. This position remains appropriate.	Table 4.6 We agree with the potential impacts scoped in for assessment for the construction and decommissioning phases. However, we suggest that the operation phase of the onshore cable corridor within the AONB is scoped in for completeness.	Agreed





Discussion Point	The Applicant's Position	Natural England's Position	Final Position
	The list of projects screened into the CEA in Section 4.12 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement are appropriate.	Agreed	Agreed
	The assessment of potential impacts on landscape and visual resource landward of MLWS is appropriate and based on the commitments made (and set out within the Outline LMP and Outline CoCP). The following effects would be significant in EIA terms:		
Assessment conclusions	<ul> <li>Effects on the landscape character of the host landscape character areas of the HVAC booster station (TF3 Hempstead, Bodham, Aylmerton and Wickmere; and, WP5 Plumstead and Barningham)</li> <li>Effects on the landscape character of the host landscape character areas of the HVDC converter/HVAC substation (B1 Tas Tributary Farmland; and, C1 Yare Tributary Farmland with Parkland)</li> <li>Visual effects on local routes between the B1113 and A140, north of Swainsthorpe on completion (effects on this receptor group would reduce as mitigation planting matures and would be not significant in EIA terms).</li> </ul>	We note that a note is being drafted which gives further information about the impacts on the special qualities of the AONB and we are happy to comment when available	Under discussion
	No other impacts from the construction, operation and maintenance, or decommissioning of Hornsea Three will be significant in EIA terms given the implementation of the measures adopted as part of Hornsea Three (see Section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement).		
	A clarification note on the special qualities of the Norfolk Coast AONB will submitted at Deadline 1 and the Applicant considers this will address NE concerns.		





Discussion Point	The Applicant's Position	Natural England's Position	Final Position
	No significant cumulative effects on landscape and visual resources landward of MLWS are predicted (see Section 4.13 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement).  Dudgeon Offshore Wind Farm is operational (see Volume 4, Annex 5.2: Cumulative Effects Screening Matrix) and its inclusion as an 'Under Construction' project in Table 10.24 of Volume 2, Chapter 10: Seascape and Visual Resources is an error. There will be no overlap between construction activities for Hornsea Three and Dudgeon offshore wind farms.	We agree that the following nationally designated landscapes may experience a potentially significant cumulative effect during construction, operation or decommissioning of Hornsea Project Three:  Norfolk Coast AONB (with PF/14/0177, at construction and decommissioning); and Salle Park RPaG (with EN010079, at construction and possibly at decommissioning); Local LCAs and Visual Receptors	Under discussion
	The measures adopted as part of Hornsea Three as set out in Section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement are considered appropriate.  A clarification note on the special qualities of the Norfolk Coast AONB will be submitted at Deadline 1 and the Applicant considers this will address NE concerns.	The Applicant has advised that a clarification note on the AONB will be provided at Deadline 1. Natural England will then be able to conclude whether the measures are appropriate or not.	Under discussion
	No further mitigation to those embedded measures identified in Section 4.10 of Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement is necessary as a result of the assessment conclusions.	See above	Under discussion





Discussion Point	The Applicant's Position	Natural England's Position	Final Position
Draft Development C	Consent Order		
Commitments / restrictions	The commitment to produce both an LMP (Schedule 1, Part 3, Requirement 8 of the draft DCO) and CoCP (Schedule 1, Part 3, Requirement 17 of the draft DCO) that must be approved prior to the commencement of works is appropriate control measures for managing the potential effects on landscape and visual resources. The LMP and CoCP will include all relevant embedded measures cited within Volume 3, Chapter 4: Landscape and Visual Resources of the Environmental Statement, as well as the Outline LMP and Outline CoCP.	Agreed	Agreed
Outline Management	Plans		
Management and mitigation measures	The management measures identified within the Outline LMP and the Outline CoCP are appropriate for controlling any potentially significant effects on landscape and visual resources landward of MLWS and no further measures are required to those stated within this document.	Agreed	Agreed





# 5. Summary

- 5.1 This SoCG has been developed with Natural England to capture those matters agreed, under discussion and not agreed in relation to fish and shellfish ecology, marine mammals, seascape and visual resources, ecology and nature conservation, and landscape and visual resources.
- The agreement logs outline those areas for which agreement has been reached with Natural England to date. The Applicant will seek to reach further agreement with Natural England on those items still under discussion following Deadline 1.





# Appendix A: further comments on Natural England's responses to V1.0 of the SoCG

This Appendix provides further detail in response to specific comments made by Natural England on V1.0 of this SoCG.

# **Topic: Marine Mammals (Table 3.2 of the SOCG)**

## Natural England comment on V1.0 of the SoCG:

Under discussion. The CEA should assess UXO (at all wind farms) with piling (at all wind farms) and seismic activities. It should also be noted that larger UXOs from the wind farm alone could potentially injure 200 porpoise per explosion. That is not insignificant and should be reflected as much within the assessment.

#### Applicant's response:

It must be noted that the 200 per explosion is the figure estimated before any mitigation is applied and is based on baseline levels of density. It is likely that local disturbance resulting from vessel presence would reduce this number. More importantly, a MMMP will be agreed that will reduce this risk to negligible levels. It must also be highlighted that the 'injury' referred to is Permanent Threshold Shift, which is defined as auditory injury and results in a permanent reduction in hearing sensitivity at specific frequencies. This is not the same as physical injury resulting from the blast.

Furthermore, the Applicant's cumulative assessment has sought to present a quantification of all effects where specified within each relevant application document. If a project has not presented quantified information within its application material with regard to UXO clearance and or seismic survey work then it is not appropriate for the Applicant to generate hypothetical numbers on their behalf. Therefore, the Applicant is limited to a qualitative acknowledged that UXO clearance and geophysical surveys may be undertaken by these projects and that such activities if undertaken have the potential to contribute to disturbance effects on marine mammals.

#### Natural England comment on V1.0 of the SoCG:

See comment on the UXO above. While Natural England is content with how seismic survey activity has been assessed, the cumulative assessment still needs to assess UXOs (at all wind farms) with piling (at all wind farms) AND seismic.

## Applicant's response:

The Applicant refers Natural England to the response it provides above. Furthermore, with regard to adding different types of disturbance together, the Applicant notes that there is currently no framework or methodology that would allow this to be done quantitatively with any confidence. The Applicant would argue that this is outside the ability of any one single project proponent to carry out.

#### Natural England comment on V1.0 of the SoCG:

The main concern that Natural England commented on in the Relevant Representation refers to the cumulative conclusions and long term impacts on the harbour porpoise population: "The conclusion for Tier 1 and 2 combined states: moderate for the duration of the piling (~12 yrs) but minor in terms of long term population level effects, therefore not an issue in terms of the EIA. Natural England does not agree with this conclusion."





# **Topic: Marine Mammals (Table 3.2 of the SOCG)**

#### Applicant's response:

We understand that the basis of these concerns relate mainly to the uncertainty in the degree of overlap of projects in the cumulative assessment, as well as uncertainty in our ability to predict how animals will respond to long term disturbance in an area of importance. We would disagree that there is currently 'no understanding' as to how animals will respond in the long term. There are a growing number of studies exploring the potential effect of disturbance on individuals and populations and scientific consensus on this issue is developing. There is a growing body of data that suggests local recovery of harbour porpoise density is rapid after the cessation of a piling event, even over relatively long timescales and in high density areas in the southern North Sea. e.g. within 1-2 days at 7 German OWFs (Brandt et al. 2018), less than 6 hours at the Gemini Wind Park in the Netherlands (Nabe-Nielsen et al. 2018).

There have also been indications that the local response may diminish over the course of construction periods that last several months (data from BOWL monitoring presented at the INPAS symposium). Porpoises are also capable of very high foraging rates and are likely to be able to rapidly compensate for short term reductions in food intake. In addition there were no population level consequences of simulated cumulative levels of repeated disturbance from the construction of 65 OWFs in the North Sea (Nabe-Nielsen et al., 2018). Studies have also shown that porpoises have a varied diet and can exploit a variety of prey species (Santos and Pierce 2003, Leopold 2015, Andreasen et al. 2017), it is therefore unlikely that long term displacement from a particular area, even if it were to occur (but note comments above about rapid local recovery), would result in a significant biological consequence for the individual. The current best scientific approaches to predicting population impacts suggest that population level consequences may be limited, even for the currently envisaged scale of development in the North Sea (Booth et al. 2017, Nabe-Nielsen et al. 2018). Following best practice in EIA, our assessment of the magnitude and overall significance of disturbance at the cumulative level has been based on this available scientific data, interpreted using expert judgement. We accept that there a number of uncertainties in relation to this evidence base and this modelling which is why a site integrity plan will be developed and monitoring proposed to reduce these uncertainties.

It is also important to recognise the large degree of precaution built into the cumulative assessment, resulting from a precautionary envelope at project level (which is additive across all projects when considered cumulatively) as well as precautionary assumptions about the degree of overlap between projects. The Applicant cross refers Natural England to its clarification note "Consideration of precaution within the marine mammal assessment" for further context on this point.

This fact, coupled with the evidence summarised in the paragraphs above, allows, despite uncertainties, a high degree of confidence in the assessment that there will not be a significant long term change in the harbour porpoise population trajectory, as a result of the levels of disturbance from the construction of Hornsea Three acting cumulatively with other offshore wind farms in the North Sea.

With regard to the lack of quantitative assessment of Tier three, and the certainty that this would increase impacts, this is not necessarily true as given the likely timing of these projects, it is entirely likely that these projects will not overlap or abut with the Hornsea Three construction periods and therefore would not be considered in the cumulative assessment. These projects, at the time of the assessment were without sufficient available information on the foundation construction envelope to assess quantitatively with any confidence.

Natural England comment on V1.0 of the SoCG:

Based on the concerns mentioned in the point above, we currently cannot agree with this statement. Given the uncertainty around other projects and their overlap with Hornsea Three, there is still uncertaintly whether other mitigation may be required. This point also related to the HRA.





# Topic: Marine Mammals (Table 3.2 of the SOCG)

#### Applicant's response:

The Applicant cross refers Natural England to its response above. Furthermore, and with specific reference to the HRA this the Applicant made a commitment within the draft DCO submitted at Application to apply mitigation (if required) if (prior to construction) a risk to site integrity (through significant disturbance) was identified at an incombination level. The Applicant has since updated this commitment (on request from Natural England and the MMO) to reflect a commitment to a SIP that serves the same function.

The Applicant considers that with the precaution applied to the assessment (as detailed within the clarification note referenced above) confidence can be held that site integrity will not be risked, and that in the unlikely circumstance that such risk does exist then the SIP control measure will ensure that the project impliments appropriate mitigation. Therefore, Natural England can be certain that Hornsea Project Three will not result in, or materially contribute to any risk to site integrity.

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