



Hornsea Project Four: Environmental Statement (ES)

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Volume A4, Annex 5.3: Offshore Cumulative Effects

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Glossary

Term	Definition
Cumulative Effects	The combined effect of Hornsea Four in combination with the effects from a number of different projects, on the same single receptor/resource. Cumulative impacts are those that result from changes caused by other past, present or reasonably foreseeable actions together with Hornsea Four.
Design Envelope	A description of the range of possible elements that make up the Hornsea Four design options under consideration, as set out in detail in the project description. This envelope is used to define Hornsea Four for Environmental Impact Assessment (EIA) purposes when the exact engineering parameters are not yet known. This is also often referred to as the “Rochdale Envelope” approach.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Projects (NSIP).
Environmental Impact Assessment	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Statement (ES)
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.
Order Limits	The limits within which Hornsea Four (the ‘authorised project’) may be carried out.
Orsted Hornsea Project Four Ltd.	The Applicant for the proposed Hornsea Project Four Offshore Wind Farm Development Consent Order (DCO).

Acronyms

Acronym	Definition
AfL	Agreement for Lease
BEIS	Department of Business, Enterprise and Industrial Strategy
CCS	Carbon Capture and Storage
CEA	Cumulative Effects Assessment
DCO	Development Consent Order
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
ES	Environmental Statement
GIS	Geographic Information System
HVDC	High Voltage Direct Current
MDS	Maximum Design Scenario
MHWS	Mean High Water Springs
MPS	Marine Policy Statement
NPS	National Policy Statements
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
PINS	The Planning Inspectorate
RIAA	Report to Inform the Appropriate Assessment

Acronym	Definition
SoS	Secretary of State
SSC	Suspended Sediment Concentrations
Zol	Zone of Influence
ZTV	Zone of Theoretical Visibility

Units

Unit	Definition
km	Kilometre

1 Introduction

- 1.1.1.1 Orsted Hornsea Project Four Limited (hereafter the 'Applicant') is proposing to develop the Hornsea Project Four Offshore Wind Farm (hereafter 'Hornsea Four') which will be located approximately 69 km from 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 including an offshore generating station (wind farm), export cables to landfall, and connection to the electricity transmission network (see [Volume A1, Chapter 4: Project Description](#) for full details on the Project Design).
- 1.1.1.2 The Hornsea Four Agreement for Lease (AfL) area was 846 km² at the Scoping phase of project development. In the spirit of keeping with Hornsea Four's approach to Proportionate Environmental Impact Assessment (EIA), the project has due consideration to the size and location (within the existing AfL area) of the final project that is being taken forward to Development Consent Order (DCO) application. This consideration is captured internally as the "Developable Area Process", which includes Physical, Biological and Human constraints in refining the developable area, balancing consenting and commercial considerations with technical feasibility for construction.
- 1.1.1.3 The combination of Hornsea Four's Proportionality in EIA and Developable Area process has resulted in a marked reduction in the array area taken forward at the point of DCO application. Hornsea Four adopted a major site reduction from the array area presented at Scoping (846 km²) to the Preliminary Environmental Information Report (PEIR) boundary (600 km²), with a further reduction adopted for the Environmental Statement (ES) and DCO application (468 km²) due to the results of the PEIR, technical considerations and stakeholder feedback. The evolution of the Hornsea Four Order Limits is detailed in [Volume A1, Chapter 3: Site Selection and Consideration of Alternatives](#) and [Volume A4, Annex 3.2: Selection and Refinement of the Offshore Infrastructure](#).
- 1.1.1.4 A fundamental requirement of undertaking the Cumulative Effects Assessment (CEA) is to identify those projects, plans and activities with which Hornsea Four may interact to produce a cumulative impact. These interactions may arise within the construction, operation and maintenance or decommissioning phases of the project, noting that effects during decommissioning were scoped out of the assessment by the Planning Inspectorate (PINS) at the Scoping stage.
- 1.1.1.5 The objective of this annex is to provide details on the proposed methodology for the Hornsea Four offshore CEA, justification for the approach taken regarding cumulative impacts, and to detail the long list of projects, plans and activities that have been considered within the Hornsea Four offshore CEA. [Annex 5.5: Onshore Cumulative Effects](#) presents the onshore CEA for Hornsea Four. The approach for cumulative impacts is based upon the PINS Advice Note Seventeen: Cumulative Effects Assessment (PINS 2019). The approach to the CEA is intended to be specific to Hornsea Four and takes account of the extensive available knowledge of the environment and other activities around the Hornsea Four Order Limits.

2 Policy and legislative context

- 2.1.1.1 The Planning Act 2008 underpins the consenting regime for certain types of development classed as Nationally Significant Infrastructure Projects (NSIPs). Hornsea Four is classed as an NSIP and will require a development consent order from the Secretary of State (SoS) for the Department of Business, Energy and Industrial Strategy (BEIS) made pursuant to the Planning Act 2008. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) implemented the requirements of the EIA Directive (As codified by Directive 2011/92/EU and subsequently amended by Directive 2014/52/EU) into UK law in respect of NSIP projects.
- 2.1.1.2 The overarching National Policy Statement (NPS) for Energy (EN-1) (DECC 2011a) and the NPS for Renewable Energy Infrastructure (EN-3) (DECC 2011b) both identify the need to address the maximum potential adverse impacts. Matters considered to affect the maximum adverse impact are topic impacts, inter-relationships between topics, and cumulative impacts. The Maximum Design Scenario (MDS), or envelope, is also sometimes referred to as the 'Rochdale Envelope'.
- 2.1.1.3 PINS have produced 'Advice Note Nine: Rochdale Envelope' (2018) setting out the views of PINS regarding how this approach should be used in the context of the Planning Act 2008. The Rochdale Envelope approach is a well understood concept that involves ensuring that any EIA is based on assessing the realistic MDS where flexibility or a range of options is sought as part of the consent application. This guidance confirms that the assessment of MDS(s) should address impacts which may not be significant on their own but could become significant cumulatively with impacts from other development.
- 2.1.1.4 PINS have produced 'Advice Note Seventeen: Cumulative Effects Assessment' (PINS 2019), which provides guidance on a staged process that can be used for cumulative effects assessments for NSIPs. Advice Note Seventeen details a four-step process that can be followed by developers and which has been applied here.
- 2.1.1.5 The Marine Policy Statement (MPS) (HM Government 2011) sets out the need to address cumulative effects, i.e. 'when considering potential benefits and adverse effects, decision-makers should also consider any multiple and cumulative impacts of proposals in the light of other projects and activities'.

3 Consultation

3.1 Scoping and PEIR consultation

- 3.1.1.1 Consultation is a key part of the DCO application process. Consultation regarding cumulative effects has been conducted through the EIA scoping process (Orsted 2018) and formal consultation on the Preliminary Environmental Impact Report (PEIR) under the EIA Regulations and pursuant to section 42 of the 2008 Act. An overview of the project consultation process is presented within [Volume A1, Chapter 6: Consultation](#).
- 3.1.1.2 A summary of notable agreements and consultation responses from PINS and other key stakeholders relevant to the CEA are provided in [Table 1](#) below. The consideration of offshore cumulative effects has been discussed with consultees through the Hornsea Four Evidence Plan process. Agreements made with consultees within the Evidence Plan process are set out in the topic-specific Evidence Plan logs which are appended to the Evidence Plan report ([B1.1.1: Evidence Plan](#)), an annex to the Consultation Report.

Table 1: Consultation relating to the CEA.

Comment	Response to issue raised and/or where considered in this annex
Scoping Opinion – November 2018	
<p><u>Cumulative effects during decommissioning:</u> Decommissioning is not proposed to be addressed in the cumulative assessment on the basis that it is too far in the future for enough information to be available to form a robust assessment. The Inspectorate notes the intention to assess this phase of the Proposed Development and to commit to a decommissioning plan at the relevant time, and is content with this approach. The Inspectorate agrees to scope cumulative effects during decommissioning out of the cumulative assessment; however, the Applicant should take into account comments in Section 3, Paragraph 2.3.11 of this Scoping Opinion.</p>	<p>Noted. Hornsea Four will submit an offshore decommissioning plan for approval prior to the start of offshore construction. Hornsea Four have committed to developing a Decommissioning Plan (Co181) (see Annex 5.2: Commitments Register).</p>
<p><u>Cumulative effects on offshore environment:</u> The proposed cumulative effects assessment does not include any detail of what aspects of the offshore environment will be assessed, however it is noted that the approach set out will examine effects on a receptor basis as part of the refinement of the list of projects/plans to be considered. The ES should explain fully the results of this process and set out what aspects and receptors have been assessed. Specific comments are provided in Tables 4.4, 4.11 and 4.12 above with regard to those environmental aspects. The Inspectorate notes the intention to follow the advice in Advice Note 17.</p>	<p>This annex sets out the approach to the CEA with the long list of projects, plans and activities presented in Appendix A. Topic-specific assessments are included in the relevant ES chapters.</p>
<p><u>Zones of Influence (Zols) for cumulative assessment:</u> The Zols for the cumulative assessment differ from the environmental aspect chapter for some aspects. It is noted that some principles behind the Zol are given in Paragraph 8.4.3.2 and the Inspectorate would expect the ES to clearly explain how the Zol or study area(s) have been determined, based on the likely extent of impacts.</p>	<p>Zols have been defined in Table 3 of this annex which have been derived based upon the extent over which cumulative impacts are likely to occur. Cumulative effect screening ranges specific to each EIA receptor topic are presented in Table 6.</p>
Section 42 Consultation – Natural England September 2019	
<p>Viking Link, Dogger Bank Creyke Beck A and B Export Cables as well as Hornsea Project Two Export Cables have been screened in for Benthic and Intertidal Ecology, however they have not been assessed in the corresponding chapter (PEIR Volume 2 Chapter 2 Benthic and Intertidal Ecology).</p>	<p>The long-list of cumulative schemes has been reviewed and the updated results of cumulative screening have been carried through to relevant ES chapters. The Applicant has ensured that all projects screened in for assessment within Annex 5.3: Offshore Cumulative Effects have been carried through for assessment within the relevant ES chapters.</p>

3.2 Updates to the cumulative long-list following Section 42 and Section 47 Consultation

- 3.2.1.1 Since the publication of the PEIR and the completion of the formal Section 42 and Section 47 consultation process (23 September 2019), a number of projects have come forward with more detailed information in terms of project design envelopes and / or construction timetables. The long-list of projects has therefore been reviewed in light of this updated information to ensure the most up-to-date cumulative design scenarios are carried through to assessment. Updates to the long-list have fed into topic-specific cumulative assessments within individual chapters.
- 3.2.1.2 This process of updating has also identified, through consultation and updates to available data, new projects which may have a cumulative interaction with Hornsea Four. Through consultation with Premier Oil, it has been established that infrastructure associated with the Johnston gas field will be decommissioned in the near future, and that these decommissioning activities may temporally overlap with the construction of Hornsea Four. Premier Oil also submitted an EIA for a gas platform on the Tolmount gas field, which was constructed in 2020/21. This overlaps with the Hornsea Four offshore Export Cable Corridor (ECC). This information has been fed into the relevant topic-specific assessments within the relevant ES chapters.
- 3.2.1.3 In May 2019, Drax Group, Equinor and National Grid Ventures signed a Memorandum of Understanding committing to working together to explore opportunities for creating a zero carbon cluster in the Humber (now known as Zero Carbon Humber), utilising the Endurance reservoir as a potential carbon capture and storage (CCS) site. In parallel, in October 2019, the Applicant was approached by BP on behalf of Net Zero Teesside who are also looking to use the Endurance reservoir for CCS. Since then, consultation has been ongoing between the Applicant and both National Grid Ventures and BP regarding Endurance. At the time of writing, no offshore planning applications have been submitted for the Endurance project and only limited information is available for the purposes of the cumulative assessment.
- 3.2.1.4 In February 2021, the Crown Estate's offshore wind leasing Round 4 tender process concluded and six proposed new offshore wind projects in English and Welsh waters were announced. At the time of writing, no planning applications have been submitted in relation to these projects. All six projects are also in the early stages of development with only high-level information available.
- 3.2.1.5 Additionally, since the publication of the PEIR and the completion of the formal Section 42 and Section 47 consultation process, plans have been announced for the Scotland England Green Link 2 (SEGL2), a subsea HVDC link between Peterhead in Aberdeenshire and Drax in North Yorkshire being developed by National Grid Electricity Transmission (NGET). Offshore planning submission is currently proposed for February 2022 and as such, only high-level information is available at the time of writing.

3.3 Updates to the cumulative long list following refinement of the Hornsea Four Order Limits

- 3.3.1.1 Following consultation with shipping and navigation stakeholders (as detailed in [Volume A2, Chapter 7: Shipping and Navigation](#) and [B1.1: Consultation Report](#)) and with Statutory Nature Conservation Bodies (SNCBs) in relation to ornithological interests (as detailed in [Volume A2, Chapter 5: Offshore and Intertidal Ornithology](#) and [B1.1: Consultation Report](#)), the Hornsea Four Order Limits were refined between PEIR and ES to mitigate shipping and navigation and offshore ornithology impacts (see also [Volume A1, Chapter 3: Site Selection and Alternatives](#), and its annexes).
- 3.3.1.2 The cumulative long-list presented in [Appendix A](#) of this document has subsequently been updated to provide up-to-date and accurate distances between Hornsea Four and the schemes considered as part of the CEA. A final review of the long list against the most recent data sources was made in June 2021 to account for any changes to the status of the projects, plans and activities considered prior to final application (cut-off date for inclusion within the Hornsea Four CEA of 31st May 2021).

4 Definitions of cumulative effects for Hornsea Four

- 4.1.1.1 The ES addresses the cumulative effects for both the onshore and offshore elements of Hornsea Four (with onshore elements dealt with in [Annex 5.5: Onshore Cumulative Effects](#)). For the purposes of the Hornsea Four CEA process, cumulative effects include the impact of other relevant developments that were not present at the time of data collection or survey.
- 4.1.1.2 This definition of cumulative effects is consistent with the definition provided by PINS in Advice Note Seventeen and has been applied throughout the ES.
- 4.1.1.3 In-combination effects are defined as the combined effect of Hornsea Four, with the effects from a number of different plans and projects, on the integrity of European Sites designated for their nature conservation value. In-combination effects are presented separately within [B2.2: Report to Inform the Appropriate Assessment](#) (RIAA).

5 Approach to cumulative effects assessment

5.1 Overview

- 5.1.1.1 The assessment of cumulative effects arising as a result of Hornsea Four is a required part of an impact assessment under the Infrastructure Planning (Environmental Impact Assessment) Regulations (2017). As described in [paragraph 2.1.1.4](#), PINS produced Advice Note Seventeen: Cumulative Effect Assessment, to provide guidance on a staged process that can be used for CEAs for NSIPs. [Table 2](#) summarises the stages and activities involved in the CEA process as described in PINS Advice Note Seventeen (PINS 2019).

Table 2: Stages and activities involved in the CEA process (adapted from PINS Advice Note Seventeen (PINS 2019)).

CEA stage	Activity
Stage 1 – Establish the project’s Zol and establish a long-list of other developments	<p>The Project undertakes a desk study to identify the Zol for the development for the topics that are proposed to be scoped into the EIA. The Zol analysis is documented (i.e. table of topics and Zol), with supporting Geographic Information System (GIS); The long list of other plans and projects/activities is drawn up through a desk study of planning applications, development plan documents, relevant development frameworks and any other available sources to identify ‘other development’ within the Zol;</p> <p>Information on each project (location, development type and timing, etc.) is documented, along with the certainty or tier assigned to the ‘other development’ (i.e. confidence it will take place in the current form and when it will take place in relation to the project); and</p> <p>Advice Note Seventeen notes that the project should then consult with the relevant planning authority/authorities and statutory consultees regarding the long list (and ideally prior to the submission of the Scoping Report)¹.</p>
Stage 2 – Screening of long list: Identify a shortlist of other developments for the CEA	<p>PINS have provided advice on the matters which the inclusion/exclusion threshold criteria should address, against which the potential for other development to give rise to significant cumulative effects by virtue of overlaps in temporal scope, the scale and nature of the ‘other developments’ and/or receiving environment, or any other relevant factors is assessed. From this assessment, a shortlist of ‘other developments’ to be included in the CEA is produced by the Applicant. It is noted that documented information on each of the ‘other development’ is likely to be high level at this stage, outlining the key issues to take forward.</p> <p>Advice Note Seventeen notes that the proposed inclusion/exclusion should ideally be finalised prior to the request for a Scoping Opinion, and the project must consult with the relevant planning authorities and statutory consultees regarding the shortlist¹.</p>
Stage 3 – Information gathering	<p>All available information on the ‘other developments’ within the shortlist generated at Stage 2 is collated to inform the CEA.</p>
Stage 4 – Assessment	<p>The project assesses the impacts of Hornsea Four cumulatively with other plans and projects included within the shortlist and based on the information gathered at Stage 3. The assessment also includes, where relevant, consideration of any mitigation measures where adverse cumulative effects are identified and signposts to the relevant means of securing mitigation (e.g. DCO requirements and associated mitigation plans).</p> <p>The Applicant considers that while not to be used as a means to shift the burden of mitigation, it may be appropriate to ascertain the contribution of each development to the effect (done via professional judgement). However, it may be useful during the consultation with other developers to identify means to jointly address mitigation of significance adverse cumulative effects and means to ensure delivery.</p>

¹ Note: Hornsea Four did not provide a long list for consideration at scoping for offshore cumulative issues, this was prepared for consultation at the PEIR stage and updated for ES and is included here in [Appendix A](#); a long list for onshore issues was provided.

5.1.1.2 The following sections set out the Hornsea Four approach to completing Stages 1 to 3, incorporating the development of the long list, tiering of projects and the development of the topic-specific short lists. These short lists have been considered in detail in each of the topic-specific ES chapters as part of the cumulative assessment process (Stage 4).

5.2 Stage 1 - Establish the Zols and identify long list of 'other development'

5.2.1 Approach to the long list

5.2.1.1 Under the first stage of the offshore CEA, a long-list of relevant projects, plans and activities occurring within a large study area around Hornsea Four has been developed. This has encompassed a large area of the North Sea. The long-list includes the details of the relevant operational or planned projects, plans and activities including those in the UK and adjoining international jurisdictions and has been based on publicly available information available at the time of preparation.

5.2.1.2 The long-list, seaward of Mean High-Water Springs (MHWS) has been produced based on the scale of other projects and the potential for them to produce cumulative effects with Hornsea Four. Any projects or plans that went into planning post 31st May 2021 have not been considered for inclusion in the CEA.

5.2.1.3 **Table 3** defines the search area extents that have been applied in developing the long list of other projects, plans and activities. It should be noted that these initial screening ranges are based on what are considered to be the maximum extents of potential impacts from those activities and are therefore considered to be highly precautionary. Impact-specific screening ranges used for individual topics may use reduced ranges depending on topic-specific criteria.

Table 3: CEA offshore long list search areas extents or Zols.

Project, plan or activity	CEA search area extents	Rationale
Aggregate dredging and disposal	Up to 50 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from aggregate dredging and disposal could occur (e.g. changes to hydrodynamic regime/coastal processes).
CCS	Up to 50 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from CCS activities could occur.
Offshore energy	Up to 500 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from offshore energy (e.g. underwater noise from piling) could occur.
Commercial fisheries	Up to 200 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from commercial fisheries activities could occur.
Oil and gas	Up to 200 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from oil and gas activities could occur.

Project, plan or activity	CEA search area extents	Rationale
Cables and pipelines	Up to 50 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary distance at which effects from cables and pipelines (e.g. increases to Suspended Sediment Concentrations (SSCs) from installation) could occur.
Shipping	Up to 200 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from commercial fisheries activities could occur.
Military, aviation and radar	Up to 200 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from military, aviation and radar effects could occur.
Coastal developments (including ports)	Up to 200 km from the Hornsea Four array area and offshore ECC	This range represents a precautionary maximum distance at which effects from military, aviation and radar effects could occur.

5.2.1.4 All projects, plans and activities within the search areas defined in the table above have been identified through a desktop study using, amongst others, the following data sources:

- PINS National Infrastructure Planning website²;
- The Crown Estate website³;
- European Marine Observation and Data Network (EMODnet) data⁴;
- Oil and Gas UK website⁵; and
- Developer and project proponent websites (numerous sources).

5.2.1.5 Additionally, whilst the National Grid Continental Link project has not been assessed as part of the CEA (as the project is at an early stage of development and the specific location unconfirmed), the Applicant has been in regular engagement with National Grid to explore opportunities for coordination. This engagement will continue post-submission of Hornsea Four.

5.2.1.6 The Hornsea Four cumulative long list is presented in [Appendix A](#). All offshore projects, plans and activities considered within the CEA, based on the search areas set out in [Table 3](#) are presented in [Annex 5.4: Location of Offshore Cumulative Schemes](#).

5.2.2 Tiered approach

5.2.2.1 In assessing the potential for cumulative effects from Hornsea Four, it is important to bear in mind that projects, predominantly those that are currently 'proposed', may or may not be, ultimately, taken forward for development. Therefore, there is a need to build in some consideration of certainty (or uncertainty) with respect to the potential impacts which might arise from such proposals, in line with the approach set out by PINS in Advice Note Seventeen (PINS 2019). For example, projects which are already under construction are more likely to contribute to cumulative effects than those development applications that are not yet submitted.

² <https://infrastructure.planninginspectorate.gov.uk/>

³ <https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/marine-planning/>

⁴ <http://www.emodnet-humanactivities.eu/view-data.php>

⁵ <https://www.ogauthority.co.uk/data-centre/interactive-maps-and-tools/>

- 5.2.2.2 For these reasons, all of the relevant long list plans and projects have been allocated into ‘tiers’, reflecting their current status within the planning and development process. This allows the cumulative impact assessment to present several scenarios, reflecting the varying levels of certainty of an activity proceeding and therefore the potential for impacts to arise that might act cumulatively with the impacts arising from Hornsea Four. Appropriate weight may therefore be given to each scenario (tier) in the decision-making process when considering the potential cumulative impacts associated with Hornsea Four. For example, it may be considered that greater weight should be attributed to tier 1 than tier 2.
- 5.2.2.3 In accordance with PINS Advice Note Seventeen (PINS 2019), the proposed tiering structure is described in [Table 4](#). The tiers are listed in descending order of level of detail likely to be available (and, correspondingly, certainty of effects arising). It is noted in PINS Advice Note Seventeen (PINS 2019) that where other projects are expected to be completed before the construction of the proposed NSIP and the effects of those projects are fully determined, effects arising from them should be considered as part of the baseline and may be considered as part of assessment in the construction and operational phase (noting that the assessment should clearly distinguish between projects forming part of the baseline and those in the CEA).

Table 4: Description of tiers of other developments considered for CEA (adapted from PINS Advice Note Seventeen).

Tier 1	Project under construction.
	Permitted applications, whether under the Planning Act 2008 or other regimes, but not yet implemented.
	Submitted applications, whether under the Planning Act 2008 or other regimes, but not yet determined.
Tier 2	Projects on the Planning Inspectorate’s Programme of Projects where a Scoping Report has been submitted.
Tier 3	Projects on the Planning Inspectorate’s Programme of Projects where a Scoping Report has not been submitted.
	Identified in the relevant Development Plan (and emerging Development Plans with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited.
	Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

- 5.2.2.4 The tiering allocated to each of projects considered within the topic-specific CEAs is presented in the CEA sections of the ES chapters.

5.3 Stage 2 – Screening of long list and identification of shortlist

5.3.1 Screening of long list

- 5.3.1.1 Having developed the Hornsea Four long list, all projects, plans and activities have been screened based on the level of detailed information available and the potential for interaction with Hornsea Four, whether this interaction be temporal, spatial or potential. This screening has produced EIA topic-specific short-lists of projects to be considered further within the CEA as part of each ES chapter. It should be noted that this process may have screened a project in for one EIA topic, but screened it out for another. The screening process has applied the criteria presented in [Table 5](#).

Table 5: CEA long list screening criteria.

Project screened-in	Project screened-out
<ul style="list-style-type: none"> • Project, plan or activity is considered as part of the baseline environment but has ongoing effects; • Potential for impact-receptor pathway exists; • Potential for a spatial effect interaction exists; and/or • Potential for temporal effect interaction exists. 	<ul style="list-style-type: none"> • Project, plan or activity included as part of the baseline environment (therefore not a consideration in the CEA); • Low data confidence (meaningful assessment cannot be undertaken); • No potential impact-receptor pathway exists; • No potential for a spatial effect interaction; and/or • No potential for a temporal effect interaction.

5.3.1.2 During the screening process, the steps above have been followed in the defined order in order to allow a clear justification for screening projects in/out. Further detail on the project screening criteria is given in the following sections:

- **Potential impact-receptor pathway:** There is the potential that a pathway exists whereby an impact could have an effect on a receptor. For example, increases to suspended sediment concentration could have an impact on fish and shellfish receptors, but underwater noise could not have an effect on aviation and radar receptors;
- **Spatial effect interaction:** The impacts on a receptor from Hornsea Four and one or more other plans/projects have a geographical overlap. For example, underwater noise resulting from piling at Hornsea Four could interact with noise arising from the construction of another offshore wind farm project, if it is sufficiently close to Hornsea Four. If there is no spatial interaction, there is considered to be no potential for a cumulative effect; and
- **Temporal effect interaction:** The impacts from Hornsea Four and one or more other plans/projects have the potential to occur at the same time. If there is no temporal interaction, there is considered to be no potential for a cumulative effect.

5.3.1.3 Only where there is the potential for both spatial and temporal interaction between effects at Hornsea Four and one or more other plans/projects, has a cumulative impact been taken forward for consideration in the CEA. The screening of the long list is set out in [Appendix A](#), identifying those projects screened in or out for further consideration on the basis of one or more of the preceding criteria.

5.3.2 Stage 2 – Topic-specific screening of long list (impact ranges)

5.3.2.1 The screened long list identifies all the other plans, projects and activities that might give rise to cumulative effects when considered alongside the potential impacts arising from Hornsea Four but does not identify the differences in impact ranges for different environmental receptors. In order to focus the topic specific CEAs presented in the ES chapters, the screened long list was subject to further topic specific screening to identify those relevant plans, projects and activities within the Zols of Hornsea Four for each topic. The topic-specific screening distances used to refine the screened long list into topic-specific short lists (along with justifications for the distances used) are provided in [Table 6](#).

Table 6: Cumulative effect screening ranges specific to each EIA receptor topic.

EIA topic	Maximum extent of impact and justification
Marine geology, oceanography and physical processes	10 km around the array area and 14 km around the ECC (based on the excursion distance of a spring tidal ellipse for respective locations) for impacts related to suspended sediments. For impacts related to waves, projects have been screened in to examine if they have the potential capacity to interact cumulatively on wave processes, especially for wave directions approaching the adjacent coastline.
Benthic and intertidal ecology	10 km around the array area and 14 km around the ECC (based on physical processes assessment).
Fish and shellfish ecology	10 km around the array area and 14 km around the ECC (for sedimentary impacts, based on physical processes). Greater distance for underwater noise related impacts based on underwater noise modelling (100 km).
Marine mammals	Dependent on the reference population extent (e.g. 'the North Sea' for harbour porpoise).
Offshore and intertidal ornithology	Dependent on the maximum foraging range of the species in question (e.g. 380 km for gannet).
Commercial fisheries	Dependent on the extent of the relevant fishing grounds.
Shipping and navigation	Based on shipping lanes and available sea room around relevant components of Hornsea Four.
Aviation and radar	Distance at which the Hornsea Four array would interact with that of another development (40 km for construction impacts and 100 km for operational impacts).
Marine archaeology	Dependent on the archaeological receptor in question.
Seascape and visual resources	Based on the maximum extent of the Zone of Theoretical Visibility (ZTV).
Infrastructure and other users	Based on the extent of the order limits plus any relevant safety zones.

5.3.2.2 These topic-specific ranges have been applied to the long list, presented in [Appendix A](#), to identify relevant short list plan/projects/activities to be taken forward to the topic-specific CEA presented in each ES chapter (summary short list tables are presented in each of the offshore ES topic chapters).

5.3.2.3 It is important to note that cumulative impacts with commercial fishery activities have not been considered in any topic specific CEAs. The Applicant recognises that fishing can have an impact on certain receptors. This activity is, however, considered to be within the environmental baseline against which the assessments have been carried out. It is not possible to determine what the baseline conditions would be without the impacts that commercial fishing impose on such receptors and therefore it is considered that there is no means by which such an assessment can meaningfully be undertaken.

5.4 Stage 3 (information gathering) and Stage 4 (assessment)

5.4.1.1 Following on from the production of the topic-specific long lists, EIA topics authors have undertaken an information gathering exercise in relation to all plans, projects and activities that have been screened-in for each topic. This information gathering has then been used to inform the CEA assessments presented within each EIA topic chapter.

6 References

DECC (2011a). Overarching National Policy Statement for Energy (EN-1). Available at: <https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure> Accessed May 2019.

DECC (2011b). National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: <https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure> Accessed May 2019.

HM Government (2011). UK Marine Policy Statement. Available at: <https://www.gov.uk/government/publications/uk-marine-policy-statement> Accessed December 2020.

PINS (2018). Advice Note 9: Rochdale Envelope. Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/> Accessed December 2020.

PINS (2019). Advice Note 17: Cumulative Effects Assessment. Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/> Accessed December 2020.

RenewableUK (2013). Cumulative Impact Assessment Guidelines: Guiding Principles for Cumulative Impacts Assessment in Offshore Wind Farms. Available at: <http://www.nerc.ac.uk/innovation/activities/infrastructure/offshore/cumulative-impact-assessment-guidelines/> Accessed December 2020.

Appendix A – Offshore Cumulative Screening Matrices

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Aggregates & Disposal



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users														
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050												
United Kingdom																																											
Humber 4 and 7 (506)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate'	Aggregate Extraction Area operated by DEME Building Materials Ltd	Open																									48.36	55.27	110.79	f	f	f	d	d	a	a	f	f	a	f	
Humber 4 (514/4)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate'	Aggregate Extraction Area operated by CEMEX UK Marine Ltd	Open																										58.03	40.51	46.66	f	f	f	d	d	a	a	f	f	f	f
Humber 2 (514/2)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate'	Aggregate Extraction Area operated by CEMEX UK Marine Ltd	Open																										65.94	44.40	46.59	f	f	f	d	d	a	a	f	f	f	f
Humber 3 (514/3)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate'	Aggregate Extraction Area operated by CEMEX UK Marine Ltd	Open																										66.30	44.01	45.38	f	f	f	d	d	a	a	f	f	f	f
Humber 1 (514/1)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate'	Aggregate Extraction Area operated by CEMEX UK Marine Ltd	Open																										69.84	46.19	47.35	f	f	f	d	d	a	a	f	f	f	f
Hundale Potash Mine	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate'	Offshore Minerals Lease operated by York Potash	Open																									68.09	19.06	30.75	f	f	f	d	d	c	a	g	f	f	f	
Boulby Potash Mine	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate'	Offshore Minerals Lease operated by Cleveland Potash	Open																									97.98	45.23	64.25	f	f	f	d	d	a	a	f	f	f	f	
Bridlington Bay B	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed																									74.23	0.00	30.22	g	g	g	d	g	g	f	f	g	f	e	
Bridlington A (HU015)	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open																									72.14	2.69	28.59	b	b	b	d	d	b	a	g	b	f	f	
Westernmost Rough OWF	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed																									62.84	21.98	26.28	f	f	f	d	d	a	a	g	f	f	f	
Scarborough Rock	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open																									87.61	28.49	49.64	f	f	f	d	d	a	a	g	f	f	f	
Alexandra Dock	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed																									94.49	31.91	53.24	g	g	g	d	g	g	f	f	g	f	e	
Scalby	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed																									90.30	32.75	53.38	g	g	g	d	g	g	f	f	g	f	e	
Hedon Haven	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open																									91.63	32.80	51.26	f	f	f	d	d	a	a	g	f	f	f	
Humber 4B/Hook	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open																									>50	32.34	>50	f	f	f	d	d	a	a	g	f	f	f	
Humber 4	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open																									>50	32.42	>50	f	f	f	d	d	a	a	g	f	f	f	
Humber 4B/Hook Extension	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open																									93.94	33.25	53.20	f	f	f	d	d	a	a	g	f	f	f	
Scarborough	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed																									90.57	33.70	54.00	g	g	g	d	g	g	f	f	g	f	e	

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Aggregates & Disposal



	In Planning/Consenting/Pre-Construction
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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users		
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050
Hull Marina	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Disused														97.58	33.44	56.09	g	g	g	d	g	g	f	f	g	f	e
Hornsea Disposal Area 1	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open														21.80	27.15	54.22	f	f	f	d	d	a	a	g	f	a	f
North Killinghome Cargo Haven	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														95.74	40.32	57.06	g	g	g	d	g	g	f	f	g	f	e
Holme Channel Deep	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open														92.68	41.20	55.62	f	f	f	d	d	a	a	g	f	f	f
Stone Creek	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open														90.72	41.23	54.23	f	f	f	d	d	a	a	g	f	f	f
Foul Holm (Circular)	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														92.20	41.47	55.20	g	g	g	d	g	g	f	f	g	f	e
Foul Holm Deposit	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														92.19	41.78	55.44	g	g	g	d	g	g	f	f	g	f	e
Humber 3A	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open														93.47	42.10	56.43	f	f	f	d	d	a	a	g	f	f	f
Humber 3	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														91.98	42.32	55.53	g	g	g	d	g	g	f	f	g	f	e
Redcliffe	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														110.76	43.36	69.03	g	g	g	d	g	g	f	f	g	f	e
Sunk Dredge Channel A	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Disused														86.95	43.96	53.62	f	f	f	d	d	a	a	g	f	f	f
North Sunk	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														88.70	44.05	54.40	g	g	g	d	g	g	f	f	g	f	e
Humber 1A	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open														86.77	44.98	54.28	f	f	f	d	d	a	a	g	f	f	f
Galahad Pipeline Route	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														49.30	49.39	86.21	g	g	g	d	g	g	f	f	g	f	e
New Sand Hole	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														68.37	46.13	47.79	g	g	g	d	g	g	f	f	g	f	e
Humber 2 Extension B	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														91.34	46.47	57.19	g	g	g	d	g	g	f	f	g	f	e
Humber 2	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open														90.96	46.47	56.96	f	f	f	d	d	a	a	g	f	f	f
Humber 2 Extension A	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														91.37	46.49	57.21	g	g	g	d	g	g	f	f	g	f	e
Spurn Head	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed														62.79	46.50	52.92	g	g	g	d	g	g	f	f	g	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Aggregates & Disposal



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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users	
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030
Humber 2 Extension C	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Closed													91.50	46.74	57.44	g	g	g	d	g	g	f	f	g	f	e
Pyewipe Channel	CEFAS	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open													92.48	47.93	58.64	f	f	f	d	d	a	a	g	f	f	f
Triton Knoll	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Disposal Site	Open													57.40	50.55	62.36	f	f	f	d	d	a	a	g	g	f	f

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Offshore Energy



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	Decommissioning

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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050
Blyth	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														189.08	147.34	165.41	f	f	f	c	f	c	a	f	f	f	f
Scroby Sands	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														150.93	151.09	179.50	f	f	f	g	c	a	a	f	f	f	f
East Anglia Three	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Consented														168.48	169.31	212.86	f	f	f	c	c	c	g	f	g	f	f
East Anglia One North	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	In planning														186.20	186.60	220.74	f	f	f	c	c	c	g	f	f	f	f
East Anglia Two	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	In planning														194.20	194.48	225.13	f	f	f	c	c	c	g	f	f	f	f
East Anglia One	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														201.96	202.40	237.68	f	f	f	c	c	c	g	f	g	f	f
Barrow	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														278.00	199.95	234.82	f	f	f	g	d	a	a	f	f	f	f
Burbo Bank	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														282.32	202.99	237.59	f	f	f	g	d	a	a	f	f	f	f
Burbo Bank Extension	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														284.71	205.39	239.98	f	f	f	g	d	a	a	f	f	f	f
West of Duddon Sands	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														285.98	207.87	242.77	f	f	f	g	d	a	a	f	f	f	f
Ormonde	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														286.26	208.97	243.56	f	f	f	g	d	a	a	f	f	f	f
Walney 1	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														289.54	211.85	246.59	f	f	f	g	d	a	a	f	f	f	f
Walney Extension 4	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														295.06	217.26	252.04	f	f	f	g	d	a	a	f	f	f	f
Walney Extension 3	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														308.61	231.78	266.20	f	f	f	g	d	a	a	f	f	f	f
Walney 2	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														295.01	217.69	252.29	f	f	f	g	d	a	a	f	f	f	f
Cobra & Flotation Energy - Round 4	The Crown Estate	Low - Limited data available in the public domain.	Offshore Wind Farm	Pre-planning Application														295.79	216.95	252.02	f	f	f	g	d	e	f	f	e	f	f
EnBW and BP 1 - Round 4	The Crown Estate	Low - Limited data available in the public domain.	Offshore Wind Farm	Pre-planning Application														312.82	233.52	268.57	f	f	f	g	d	e	f	f	e	f	f
EnBW and BP 2 - Round 4	The Crown Estate	Low - Limited data available in the public domain.	Offshore Wind Farm	Pre-planning Application														312.47	234.63	269.44	f	f	f	g	d	e	f	f	e	f	f
Galloper	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														226.12	226.27	252.03	f	f	f	g	c	a	a	f	f	f	f
Greater Gabbard	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														223.86	223.97	248.38	f	f	f	g	c	a	a	f	f	f	f
North Hoyle	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														298.51	222.11	256.72	f	f	f	f	d	a	a	f	f	f	f
Gwylt y Mor	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														302.88	223.51	258.19	f	f	f	g	d	a	a	f	f	f	f
Rhyl Flats	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active														312.00	235.60	270.18	f	f	f	g	d	a	a	f	f	f	f

Hornsea 4

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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050															
Robin Rigg East	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															307.56	238.92	270.16	f	f	f	g	d	a	a	f	f	f	f
Robin Rigg West	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															308.36	239.43	270.73	f	f	f	g	d	a	a	f	f	f	f
Gunfleet Sands I	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															248.78	248.49	262.38	f	f	f	g	c	a	a	f	f	f	f
Gunfleet Sands II	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															249.26	249.07	263.56	f	f	f	g	c	a	a	f	f	f	f
Gunfleet Sands Demo	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															253.08	252.68	265.94	f	f	f	g	c	a	a	f	f	f	f
London Array	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															254.65	254.58	271.90	f	f	f	g	c	a	a	f	f	f	f
Kentish Flats I	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															279.95	279.35	291.09	f	f	f	g	c	a	a	f	f	f	f
Kentish Flats II	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															280.73	280.01	291.13	f	f	f	g	c	a	a	f	f	f	f
Thanet	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															281.91	281.86	299.64	f	f	f	g	c	a	a	f	f	f	f
Rampion	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Active															379.41	368.92	375.09	f	f	f	g	c	a	a	f	f	f	f
Dudgeon Extension	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application															69.49	69.48	92.80	e	e	c	c	c	c	c	b	e	f	e
Sheringham Shoal Extension	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application															83.60	82.32	100.68	e	e	c	c	c	c	g	b	e	f	e
North Falls	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application															223.86	223.97	248.38	e	e	g	g	e	g	g	f	e	f	e
Five Estuaries Wind Farm	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application															228.57	228.80	256.43	e	e	g	g	e	g	g	f	e	f	e
Awel y Mor	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application															311.49	232.07	266.88	e	e	g	c	d	f	g	f	f	f	e
Rampion II	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application															379.41	368.92	375.09	e	e	g	g	e	g	g	f	f	f	e
Near na Gaoithe	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction															296.10	272.19	285.06	f	f	f	c	c	c	g	f	f	f	
Kincardine	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction															353.00	342.00	350.00	f	f	f	g	c			f	g	f	e
Inch Cape	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															311.84	292.35	303.64	f	f	f	c	c	c	g	f	g	f	f
Seagreen Alpha	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction															314.53	296.10	305.51	f	f	f	c	c	c	g	f	g	f	f
Seagreen Bravo	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction															301.98	289.15	296.25	f	f	f	c	c	c	g	f	g	f	f
Methil (Samsung) Demo	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational															335.34	297.94	315.76	f	f	f	g	c	a	g	f	f	f	f

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Offshore Energy



	In Planning/Consenting/Pre-Construction
	Construction
	Operation and Maintenance
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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users		
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050
Methil Demonstration Project - 2B Energy	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														333.87	296.39	314.28	e	e	g	g	e	g	g	f	e	f	e
EOWDC	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational														381.71	369.94	377.06	f	f	f	g	c	a	g	f	f	f	f
Hywind 2 Demonstration	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational														381.06	379.01	383.20	f	f	f	g	c	a	g	f	f	f	f
Moray West	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Consented														492.64	479.44	487.49	e	f	f	c	c	c	g	f	e	f	f
Beatrice	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational														503.16	490.44	498.32	f	f	f	c	c	c	g	f	g	f	f
Moray East	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction														489.27	479.28	486.11	e	f	f	c	c	c	g	f	e	f	f
Erebus	4cOffshore	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application														532.00	459.82	490.59	f	f	f	g	d	f	f	f	g	f	f
Valorous	4cOffshore	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	Pre-planning Application														539.75	468.79	498.95	f	f	f	g	d	f	f	f	g	f	f
South Pembrokeshire Demonstration Zone	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Wave Energy Lease Area	Pre-planning Application														500.94	430.87	460.66	e	e	g	g	e	g	g	f	e	f	e
Bardsey Sound	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Pre-planning Application														411.92	334.00	367.72	e	e	g	g	e	g	g	f	e	f	e
Fair Head	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Pre-planning Application														470.50	403.47	434.30	e	e	g	g	e	g	g	f	e	f	e
Holyhead Deep (Minesto)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Pre-planning Application														392.52	313.09	347.94	e	e	g	g	e	f	g	f	e	f	e
Holyhead Deep 0.5MW Site (Minesto)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Operational														393.40	313.97	348.80	e	e	g	g	e	f	g	f	e	f	e
Perpetuus Tidal Energy Centre (PTEC)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Consented														420.73	394.11	405.80	e	e	g	g	e	g	g	f	e	f	e
Portland Bill	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Pre-planning Application														463.24	421.52	439.02	e	e	g	g	e	g	g	f	e	f	e
Ramsey Sound	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Active														493.00	419.17	450.75	f	f	f	g	d	a	a	f	f	f	f
SeaGen Strangford Lough	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Active														426.52	351.65	385.43	f	f	f	g	d	a	a	f	f	f	f
Strangford Lough	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Active														426.52	351.65	385.43	f	f	f	g	d	a	a	f	f	f	f
Strangford Lough Array	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Pre-planning Application														426.52	351.65	385.43	e	e	g	g	e	g	g	f	e	f	e
Torr Head	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	Consented														466.57	399.38	430.27	e	e	g	g	e	g	g	f	e	f	e
West Anglesey Demonstration Zone (Morlais)	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Tidal Energy Lease Area	In planning														389.18	309.76	344.57	e	e	g	g	e	f	g	f	f	f	e
Netherlands																															
2019 Tender I	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														224.52	237.63	293.83	e	e	g	g	e	g	g	f	e	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Offshore Energy



	In Planning/Consenting/Pre-Construction
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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)												Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users	
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030															2031-2050
Borssele II	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction														280.89	281.37	316.55	f	f	f	c	e	c	g	f	g	f	f
Buitengaats	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														293.62	308.66	364.44	e	e	g	g	e	g	g	f	e	f	e
Egmond aan Zee	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														248.23	254.54	306.26	f	f	f	g	e	a	g	f	f	f	f
Gemini	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														282.23	297.22	353.07	f	f	f	g	e	a	g	f	f	f	f
Luchterduinen	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational														254.49	259.10	308.28	f	f	f	g	e	a	g	f	f	f	f
Prinses Amalia	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														242.33	248.06	299.01	f	f	f	g	e	a	g	f	f	f	f
Scheveningen Buiten	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														243.55	252.27	300.87	e	e	g	g	e	g	g	f	e	f	e
ZeeEnergie	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														273.20	292.49	352.23	e	e	g	g	e	g	g	f	e	f	e
Denmark																															
Horns Rev 1	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														428.76	447.68	498.84	f	f	f	g	e	a	g	f	f	f	f
Horns Rev 2	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														417.00	435.75	485.84	f	f	f	g	e	a	g	f	f	f	f
Belgium																															
Belwind I	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														273.66	274.06	307.08	f	f	f	f	e	a	f	f	f	f	f
Norther	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														292.91	293.35	327.42	f	f	f	g	e	a	g	f	f	f	f
Northwind	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														283.87	284.30	317.89	f	f	f	g	e	a	g	f	f	f	f
Rentel	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction														286.34	286.77	320.50	f	f	f	g	e	a	g	f	f	f	f
Seastar	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														279.57	279.98	313.34	e	e	g	g	e	g	g	f	e	f	e
Thorntonbank	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														283.56	288.05	323.70	f	f	f	g	e	a	g	f	f	f	f
THV Mermaid	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														268.65	269.03	301.27	f	f	f	c	e	c	g	f	g	f	f
France																															
Cote d'Albatre	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														451.87	448.42	454.52	f	f	g	g	e	g	g	f	e	f	e
Germany																															
Alpha Ventus	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational														333.44	348.37	404.29	f	f	f	g	e	a	g	f	f	f	f
Amrumbank West	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														402.58	418.52	472.51	f	f	f	g	e	a	g	f	f	f	f
Bard Offshore 1	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														290.67	306.35	361.04	f	f	f	g	e	a	g	f	f	f	f

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Offshore Energy



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050															
Borkum Riffgrund I	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production															326.91	341.75	397.77	f	f	f	g	e	a	g	f	f	f	f
Borkum Riffgrund II	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															322.48	337.29	393.34	f	f	f	c	e	c	g	f	g	f	f
Borkum Riffgrund West	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															306.07	321.12	376.89	e	e	g	c	e	g	g	f	e	f	e
Borkum Riffgrund West II	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned															299.76	314.75	370.59	e	e	g	g	e	g	g	f	g	f	e
Butendiek	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production															416.86	433.48	484.82	f	f	f	g	e	a	g	f	f	f	f
DanTysk	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational															383.15	399.91	450.44	f	f	f	g	e	a	g	f	f	f	f
Delta Nordsee 1	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															334.33	353.64	413.25	e	e	g	g	e	g	g	f	e	f	e
Demonstrationsprojekt Albatros 1	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															309.58	329.04	385.79	e	e	g	g	e	g	g	f	e	f	e
Deutsche Bucht Pilot	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned															269.73	289.19	347.44	f	f	f	c	e	c	g	f	g	f	f
EnBW He Dreht	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															295.31	314.77	372.95	e	e	g	g	e	g	g	f	e	f	e
EnBW Hohe See	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															312.93	328.94	382.81	e	e	g	g	e	g	g	f	e	f	e
EnBW He Dreht (complementary application)	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															303.52	319.25	373.82	e	e	g	g	e	g	g	f	e	f	e
GlobalTech I	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															303.52	319.25	373.82	f	f	f	g	e	a	g	f	f	f	f
Gode Wind I	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational															347.12	366.44	426.05	f	f	f	g	e	a	g	f	f	f	f
Gode Wind II	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production															347.00	366.33	425.83	f	f	f	g	e	a	g	f	f	f	f
Gode Wind III	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															352.21	371.50	431.21	f	f	f	g	e	a	g	f	f	f	f
H2-20	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned															238.15	252.96	283.83	e	e	g	g	e	g	g	f	e	f	e
Kaikas	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised															298.12	317.56	374.03	e	e	g	g	e	g	g	f	e	f	e
Kaskasi I	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned															401.62	421.09	478.85	e	e	g	g	e	g	g	f	e	f	e
Kaskasi II	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned															402.39	418.30	472.37	e	e	g	g	e	g	g	f	e	f	e
Meerwind Sued/Ost	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Operational															401.62	417.28	471.96	f	f	f	g	e	a	g	f	f	f	f
Merkur Offshore	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction															327.48	342.42	398.32	e	e	g	g	e	g	g	f	e	f	e

Hornsea 4

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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050														
Noerdlicher Grund	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														358.12	377.32	430.80	e	e	g	g	e	g	g	f	e	f	e
Noerdlicher Grund Teil Sandbank	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														358.80	377.94	430.87	e	e	g	g	e	g	g	f	e	f	e
Nordergrunde	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														437.05	451.68	507.93	f	f	f	g	e	a	g	f	f	f	
Nordpassage	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														375.09	394.07	445.84	e	e	g	g	e	g	g	f	e	f	e
Nordsee One Offshore	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Under Construction														343.71	358.57	414.57	f	f	f	g	e	a	g	f	f	f	f
Nordsee Ost	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														401.80	417.56	472.01	f	f	f	g	e	a	g	f	f	f	f
Nordsee Three	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														339.13	358.47	417.97	e	e	g	g	e	g	g	f	e	f	e
Nordsee Two	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														334.30	353.63	413.14	e	e	g	g	e	g	g	f	e	f	e
Notos	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														301.70	321.16	378.20	e	e	g	g	e	g	g	f	e	f	e
OWP Albatross 1	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														301.46	320.92	377.94	e	e	g	g	e	g	g	f	e	f	e
OWP Delta Nordsee 2	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														334.32	353.64	413.21	e	e	g	g	e	g	g	f	e	f	e
OWP West	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														301.71	316.62	372.56	e	e	g	g	e	g	g	f	e	f	e
Riffgat	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														327.11	341.02	397.80	f	f	f	g	e	a	g	f	f	f	f
Sandbank	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														366.28	383.21	432.34	e	e	g	g	e	g	g	f	e	f	e
Sandbank Extension	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														365.38	382.23	432.06	e	e	g	g	e	g	g	f	e	f	e
Sandbank Plus (Sandbank Phase 2)	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														360.43	379.44	431.41	e	e	g	g	e	g	g	f	e	f	e
Sea Wind I	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														310.16	329.62	386.43	e	e	g	g	e	g	g	f	e	f	e
Sea Wind II	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														302.17	321.63	378.72	e	e	g	g	e	g	g	f	e	f	e
Trianel Borkum II	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														324.20	339.29	394.99	e	e	g	g	e	g	g	f	e	f	e
Trianel Windpark Borkum - Phase 1	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														321.50	336.60	392.29	f	f	f	g	e	a	g	f	f	f	f
Veja Mate	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														283.31	298.94	353.75	f	f	f	g	e	a	g	f	f	f	f
Ireland																															
Dublin Array	EMODnet	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Offshore Wind Farm	In Planning														460.87	384.83	419.84	f	f	f	g	e	a	g	f	f	f	f

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Offshore Energy



	In Planning/Consenting/Pre-Construction
	Construction
	Operation and Maintenance
	Decommissioning

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g	No temporal overlap: Screened out of assessment.

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050														
Arklow Bank	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Production														474.23	397.82	431.50	f	f	f	g	e	a	g	f	f	f	
Codling Bank	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Authorised														455.54	379.18	413.09	e	e	g	g	e	g	g	f	e	f	e
Oriel Wind Farm	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Offshore Wind Farm	Planned														455.98	382.19	416.17	e	e	g	g	e	g	g	f	e	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Carbon Capture Usage and Storage



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users													
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050											
United Kingdom																																										
Endurance Carbon Capture and Storage Area	The Crown Estate	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'.	Carbon Capture and Storage Lease Area for Lease	In planning																									0.00	2.15	18.78	c	c	c	c	e	c	c	e	c	e	c

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Commercial Fisheries



In Planning/Consenting/Pre-Construction
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Decommissioning

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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the onshore construction period for Hornsea 4)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users		
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050
United Kingdom																															
Fishing Rights	Industry information; Cefas	High - Third party details published in the public domain and confirmed as being 'accurate' by Cefas.																N/A	N/A	N/A	d	f	a	a	a	a	a	d	a	f	a
Aquaculture	Industry information; Cefas	High - Third party details published in the public domain and confirmed as being 'accurate' by Cefas.	The majority of UK finfish aquaculture is located in Scotland, but it is increasing in England and Wales. Shellfish culture is more evenly spread around the UK.															>200	>200	>200	d	f	f	a	a	a	a	d	a	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



	In Planning/Consenting/Pre-Construction
	Construction
	Operation and Maintenance
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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users												
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050										
United Kingdom																																									
Viking Link	Viking Link	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Interconnector	Under construction																								1.98	4.04	42.23	f	c	c	c	d	c	c	d	c	d	c
Dogger Bank A Export Cables	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Wind Farm Export	Consented																								28.88	0.00	9.16	c	c	c	c	d	c	d	d	c	d	c
Dogger Bank B Export Cables	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Wind Farm Export	Consented																								28.88	0.00	9.16	c	c	c	c	d	c	d	d	c	d	c
Scotland England Green Link 2 (SEGL2)	National Grid Electricity Transmission (NGET)	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Interconnector	Pre-planning application																								53.53	0.15	16.12	c	c	c	c	d	c	d	d	c	d	c
Hornsea Project Two Export Cables	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Wind Farm Export	Consented																								9.30	13.67	54.14	f	c	c	c	d	c	d	d	c	d	c
Hornsea Project One Export Cables	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Wind Farm Export	Operational																								21.80	27.15	54.22	f	d	d	g	d	c	g	d	f	d	f
Dana Petroleum Platypus	Dana Petroleum	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Oil and Gas Pipeline	In planning																								17.01	0.00	20.56	c	c	c	c	d	c	d	d	c	d	c
Westermost Rough Export Cables	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Wind Farm Export	Active																								68.94	26.72	32.51	a	f	a	g	d	a	g	d	g	d	a
Humber Gateway Export Cables	The Crown Estate	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	Wind Farm Export	Active																								71.25	42.96	44.78	a	f	a	g	d	a	g	d	g	d	a
Langeded	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Pipeline operated by GASSCO AS	In Service																								31.32	0.00	0.00	a	a	a	g	d	a	a	d	g	d	a
TGN Northern Europe	Kis Orca	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Telecommunications Cable	In Service																								43.61	14.36	27.47	a	a	a	g	d	a	a	d	g	d	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2030														
UK Germany 6	Kis Orca	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Telecommunications Cable	In Service														39.07	17.32	32.02	a	f	a	g	d	a	a	d	g	d	a
AMETHYST A2D TO EASINGTON	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														51.11	2.82	51.67	a	f	a	g	d	a	g	d	g	d	a
AMETHYST B1D TO AMETHYST A2D	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														51.04	10.58	64.95	a	f	a	g	d	a	g	d	g	d	a
AMETHYST C1D TO AMETHYST A1D	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														54.67	2.79	51.66	a	f	a	g	d	a	g	d	g	d	a
ANN XM TO LOGGS PR	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														53.78	2.82	57.76	a	f	a	g	d	a	g	d	g	d	a
ANNABEL TO AUDREY A	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														51.40	2.82	57.76	g	g	g	g	g	g	g	d	g	d	e
ANNABEL WELLS 1 & 2 TO ANNABEL MANIFOLD	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														51.37	0.73	44.44	g	g	g	g	g	g	g	d	g	d	e
APOLLO TO MINERVA	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														32.86	0.73	44.44	a	a	a	g	d	a	g	d	g	d	a
AUDREY B TO ANNABEL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														51.41	0.67	44.47	g	g	g	g	g	g	g	d	g	d	e
AUDREY TO ENSIGN METHANOL LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														54.49	0.90	32.32	a	f	a	g	d	a	g	d	g	d	a
AUDREY XW TO ANN XM	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														53.74	0.93	40.23	g	g	g	g	g	g	g	d	g	d	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030															2031-2030
BABBAGE EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														4.46	0.88	20.55	a	a	a	g	d	a	g	d	g	d	a
BARQUE PB TO CLIPPER PT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														44.57	2.66	53.68	a	f	a	g	d	a	g	d	g	d	f
BARQUE PL TO CLIPPER PM	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														51.98	26.09	43.62	a	f	a	g	d	a	g	d	g	d	f
BOULTON H HM TO MURDOCH MD GAS LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														48.15	26.09	43.62	a	f	a	g	d	a	g	d	g	d	f
BOULTON H HM TO MURDOCH MD MEOH LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														48.15	2.15	20.53	a	f	a	g	d	a	g	d	g	d	f
BOULTON H HM TO WATT QM UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														48.13	5.46	31.44	a	f	a	g	d	a	g	d	g	d	f
BREAGH 20INCH GAS PIPELINE - PART 1	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														55.47	25.49	82.43	a	f	a	g	d	a	g	d	g	d	f
BREAGH 3INCHMEG PIPELINE - PART 1	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														55.47	6.46	26.50	a	f	a	g	d	a	g	d	g	d	f
BREAGH FIBRE OPTICE CABLE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														55.52	29.97	64.43	a	f	a	g	d	a	g	d	g	d	f
CAVENDISH EXPORT PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														55.91	29.97	64.43	a	f	a	g	d	a	g	d	g	d	f
CAVENDISH FIBRE OPTIC CABLE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														43.03	29.97	64.44	a	f	a	g	d	a	g	d	g	d	f

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030															2031-2030
CAVENDISH METHANOL SUPPLY LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														43.03	29.97	64.44	a	f	a	g	d	a	g	d	g	d	f
CERES TO MERCURY EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														43.03	29.97	64.45	a	a	a	g	d	a	g	d	g	d	f
CERES UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														40.89	29.97	64.45	a	a	a	g	d	a	g	d	g	d	f
CLEETON CP TO DIMLINGTON	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														40.84	18.02	64.23	a	a	a	g	d	a	g	d	g	d	f
CLEETON CP TO RAVENSPURN A	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														20.53	18.05	64.25	a	a	a	g	d	a	g	d	g	d	f
CLEETON TO MINERVA UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														9.26	0.00	20.66	a	f	a	g	d	a	g	d	g	d	f
CLEETON TO WHITTLE UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														20.46	0.00	16.67	a	f	a	g	d	a	g	d	g	d	f
CLIPPER PM TO BARQUE PL CABLE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														20.46	0.00	16.67	a	f	a	g	d	a	g	d	g	d	f
CLIPPER PM TO BARQUE PL MEG LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														51.95	2.43	9.01	a	f	a	g	d	a	g	d	g	d	f
CYGNUS TO ETS GAS PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	NOT IN USE														51.98	2.43	8.99	g	g	g	g	g	g	g	d	g	d	e
EASINGTON TO ROUGH 47/3B	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	NOT IN USE														55.91	0.00	16.65	g	g	g	g	g	g	g	d	g	d	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



	In Planning/Consenting/Pre-Construction
	Construction
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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2030														
ENSIGN CONTROL & CI UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														27.28	0.00	13.26	g	g	g	g	g	g	g	d	g	d	e
ENSIGN NPAI TO AUDREY WD GAS EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	NOT IN USE														48.03	2.36	25.71	g	g	g	g	g	g	g	d	g	d	e
ENSIGN PRODUCTION PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														52.64	2.38	25.74	a	f	a	g	d	a	g	d	g	d	a
ERIS TO MERCURY EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														54.49	20.32	59.13	a	f	a	g	d	a	g	d	g	d	a
ERIS UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														52.64	20.32	59.12	a	a	a	g	d	a	g	d	g	d	a
ESMOND TO BACTON	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	BHP	ABANDONED														40.89	20.33	48.86	g	g	g	g	g	g	g	d	g	d	e
ESMOND TO FORBES (PL255)	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	BHP	ABANDONED														43.96	42.39	84.67	g	g	g	g	g	g	g	d	g	d	e
ESMOND TO FORBES (PL261)	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	BHP	ABANDONED														11.82	42.39	84.67	g	g	g	g	g	g	g	d	g	d	e
ESMOND TO GORDON	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	BHP	ABANDONED														49.54	42.43	84.73	g	g	g	g	g	g	g	d	g	d	e
ESMOND TO GORDON BHP	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														49.39	26.86	65.14	a	f	a	g	d	a	g	d	g	d	a
GALAHAD TEE TO MALORY	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														12.62	26.87	65.14	a	f	a	g	d	a	g	d	g	d	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2030														
GALAHAD TO LANCELOT TEE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														12.62	43.27	85.89	a	a	a	g	d	a	g	d	g	d	a
GARROW EXPORT SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														6.92	5.14	5.18	a	a	a	g	d	a	g	d	g	d	a
GARROW SERVICE SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														6.92	5.10	5.14	a	a	a	g	d	a	g	d	g	d	a
GARROW TO KILMAR EXPORT SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														57.93	26.26	55.23	a	a	a	g	d	a	g	d	g	d	a
GARROW TO KILMAR SERVICE SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														57.93	29.17	62.30	a	f	a	g	d	a	g	d	g	d	a
HELVELLYN PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														39.31	0.00	0.00	a	f	a	g	d	a	g	d	g	d	a
HELVELLYN SPOOL PIECE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														39.27	26.20	37.81	a	f	a	g	d	a	g	d	g	d	a
HOTON CONTROL UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														21.29	29.65	59.53	a	f	a	g	d	a	g	d	g	d	a
HOTON PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														21.29	26.28	37.95	a	f	a	g	d	a	g	d	g	d	a
HUNTER TO RITA UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														51.57	4.93	12.09	a	f	a	g	d	a	g	d	g	d	a
HYDE TO WEST SOLE BRAVO	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														25.36	5.05	12.22	a	a	a	g	d	a	g	d	g	d	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2030														
JFE PRODUCTION	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														0.00	8.08	16.68	a	a	a	g	d	a	g	d	g	d	a
JFE UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														0.00	8.10	16.68	a	a	a	g	d	a	g	d	g	d	a
JOHNSTON EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														0.00	8.13	16.68	a	a	a	g	d	a	g	d	g	d	a
JOHNSTON J5 EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														0.00	8.13	16.68	a	a	a	g	d	a	g	d	g	d	a
JOHNSTON J5 METHANOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														0.00	37.86	90.86	a	a	a	g	d	a	g	d	g	d	a
JOHNSTON METHANOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE														0.00	37.86	90.86	a	a	a	g	d	a	g	d	g	d	a
JOHNSTON UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														0.00	52.69	108.37	g	g	g	g	g	g	g	d	g	d	e
JULIET TO PICKERILL A GAS PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														50.81	52.80	108.47	g	g	g	g	g	g	g	d	g	d	e
JULIET TO PICKERILL A UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														50.81	52.80	108.47	a	a	a	g	d	a	g	d	g	d	a
KILMAR GAS EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														57.95	52.80	108.48	a	a	a	g	d	a	g	d	g	d	a
KILMAR SERVICE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														12.62	29.39	45.75	a	a	a	g	d	a	g	d	g	d	a

Hornsea 4

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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2030														
KILMAR TO KILMAR GAS EXPORT SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														12.62	29.43	44.77	a	a	a	g	d	a	g	d	g	d	a
KILMAR TO KILMAR SERVICE SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														12.62	23.94	35.38	a	f	a	g	d	a	g	d	g	d	a
KILMAR TO TRENT GAS EXPORT SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														12.62	21.33	28.17	a	f	a	g	d	a	g	d	g	d	a
KILMAR TO TRENT SERVICE SPOOL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														26.37	21.33	28.17	a	f	a	g	d	a	g	d	g	d	a
LANCELOT TO GALAHAD	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	GASSCO	ACTIVE														26.37	59.02	96.98	a	a	a	g	d	a	g	d	g	d	a
LANGELED PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														49.39	59.02	96.98	a	f	a	g	d	a	g	d	g	d	a
LOGGS PR TO SATURN ND	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														31.37	59.02	96.98	a	a	a	g	d	a	g	d	g	d	a
M1 TO MINERVA	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	NOT IN USE														46.41	21.32	28.14	g	g	g	g	g	g	g	d	g	d	e
M5 TO MINERVA	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														32.83	44.94	88.19	a	f	a	g	d	a	g	d	g	d	a
MALORY TO GALAHAD TEE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														32.70	17.43	19.05	a	a	a	g	d	a	g	d	g	d	a
MERCURY TO NEPTUNE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	PRECOMMISSION														49.54	17.43	19.05	g	g	g	g	g	g	g	d	g	d	e

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Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2030														
MIMAS TO SATURN	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														57.93	50.29	104.11	a	a	a	g	d	a	g	d	g	d	a
MINERVA TO APOLLO UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														20.80	50.29	104.11	a	a	a	g	d	a	g	d	g	d	a
MINERVA TO CLEETON GAS EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														36.00	63.73	114.85	a	a	a	g	d	a	g	d	g	d	a
MINERVA TO CLEETON PIGGY	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														32.87	63.73	114.85	a	a	a	g	d	a	g	d	g	d	a
MINERVA TO M1 UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	NOT IN USE														20.21	22.83	24.79	a	a	a	g	d	a	g	d	g	d	a
MINERVA TO M5 UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														20.20	23.52	25.80	a	f	a	g	d	a	g	d	g	d	a
MURDOCH MD TO BOULTON BM GAS LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														32.80	64.82	117.76	a	f	a	g	d	a	g	d	g	d	a
MURDOCH MD TO BOULTON BM MEOH LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														32.68	64.83	117.78	a	a	a	g	d	a	g	d	g	d	a
NEPTUNE TO CLEETON PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														46.70	64.83	117.78	a	a	a	g	d	a	g	d	g	d	a
NEPTUNE TO MERCURY	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														46.70	22.75	24.69	a	f	a	g	d	a	g	d	g	d	a
NEWSHAM TO WEST SOLE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														19.97	49.38	84.22	g	g	g	g	g	g	g	d	g	d	e

Hornsea 4

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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030															2031-2030
PICKERALL A TO THEDDLETHORPE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE													20.77	49.38	84.22	g	g	g	g	g	g	g	d	g	d	e	
PICKERILL A TO PICKERILL B	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE													29.65	49.23	78.95	a	a	a	g	d	a	g	d	g	d	a	
RAVENSPURN B SPUR	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE													50.84	49.23	78.95	a	a	a	g	d	a	g	d	g	d	a	
RAVENSPURN C SPUR	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE													50.71	48.76	71.30	a	a	a	g	d	a	g	d	g	d	a	
RAVENSPURN NORTH EXPORT LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE													9.70	47.16	60.22	a	a	a	g	d	a	g	d	g	d	a	
RAVENSPURN NORTH ST-2 INFIELD	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE													12.33	47.16	60.22	a	a	a	g	d	a	g	d	g	d	a	
RAVENSPURN NORTH ST3 TO RNCP	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PREMIER	ACTIVE													3.14	48.60	68.54	a	f	a	g	d	a	g	d	g	d	a	
RITA TO HUNTER EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ABANDONED													3.13	41.61	54.20	g		g	g	g	g	g	g	d	g	d	e
ROSE CONTROL UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ABANDONED													3.09	37.42	40.24	g		g	g	g	g	g	g	d	g	d	e
ROSE PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE													51.57	54.65	107.61	a	f	a	g	d	a	g	d	g	d	a	
ROUGH 47/3B IMPORT/EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE													48.66	54.64	107.59	a	f	a	g	d	a	g	d	g	d	a	

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



	In Planning/Consenting/Pre-Construction
	Construction
	Operation and Maintenance
	Decommissioning

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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users		
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050
ROUGH 47/8A EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														47.96	54.65	107.61	a	f	a	g	d	a	g	d	g	d	a
SATURN ND TO LOGGS PR	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														46.41	68.65	119.04	a	f	a	g	d	a	g	d	g	d	a
SATURN TO MIMAS	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	PRECOMMISSION														36.00	68.65	119.04	g	g	g	g	g	g	g	d	g	d	e
SCHOONER TO MURDOCH GAS LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	FAROE PETROLEUM	NOT IN USE														37.59	52.44	96.83	g	g	g	g	g	g	g	d	g	d	e
SCHOONER TO MURDOCH METH	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	FAROE PETROLEUM	NOT IN USE														37.59	52.48	96.89	g	g	g	g	g	g	g	d	g	d	e
SEVEN SEAS - NEWSHAM CONTROL UMB	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														26.80	52.48	96.89	a	f	a	g	d	a	g	d	g	d	a
SEVEN SEAS - NEWSHAM GAS EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														26.79	53.35	101.64	a	f	a	g	d	a	g	d	g	d	a
SHEARWATER TO BACTON (SEAL)	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														0.00	53.35	101.64	a	a	a	g	d	a	g	d	g	d	a
THEDDLETHORPE TO MURDOCH MD	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														12.67	59.60	114.28	a	f	a	g	d	a	g	d	g	d	a
THEDDLETHORPE TO MURDOCH MD MEOH LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														12.64	59.65	114.35	a	a	a	g	d	a	g	d	g	d	a
TOPAZ TO SCHOONER GAS EXPORT	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														37.61	55.21	103.26	a	a	a	g	d	a	g	d	g	d	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050															
TOPAZ TO SCHOONER UMB	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														37.50	55.21	103.26	g	g	g	g	g	g	g	d	g	d	e	
TYNE TO TRENT (PL1220/PL1221)	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														26.42	39.57	47.44	g	g	g	g	g	g	g	d	g	d	e	
WEST SOLE E TO WEST SOLE B	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														56.40	57.61	57.61	g	g	g	g	g	g	g	d	g	d	e	
WEST SOLE TO EASINGTON 16IN GAS LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	NOT IN USE														31.97	57.62	57.62	g	g	g	g	g	g	g	d	g	d	e	
WEST SOLE TO EASINGTON 24IN GAS LINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE															31.88	57.62	57.62	a	f	a	g	d	a	g	d	g	d	a
WEST SOLE WB TO WEST SOLE WC	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE															31.98	56.77	104.74	a	f	a	g	d	a	g	d	g	d	a
WHITTLE TO CLEETON	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE															29.47	56.77	104.74	a	f	a	g	d	a	g	d	g	d	a
WHITTLE TO WOLLASTON UMBILICAL	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE															20.36	72.97	126.16	a	a	a	g	d	a	g	d	g	d	a
WOLLASTON TO WHITTLE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE															29.21	74.91	126.14	a	a	a	g	d	a	g	d	g	d	a
YORK METHANOL PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE															29.20	74.91	126.14	a	a	a	g	d	a	g	d	g	d	a
YORK PRODUCTION PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE															45.67	74.91	126.14	a	f	a	g	d	a	g	d	g	d	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Cables and Pipelines



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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029														
YORK PRODUCTION PIPELINE	EAB	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE												45.67	74.92	126.17	a	f	a	g	d	a	g	d	g	d	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



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Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users												
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050																										
United Kingdom																																											
Johnston WHPS	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	HARBOUR ENERGY	OPERATIONAL																									0.00	2.83	57.79	c	c	c	c	d	c	a	d	d	d	c	
Johnston template/manifold	EMODnet	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	HARBOUR ENERGY	OPERATIONAL																										0.00	2.86	51.65	c	c	c	c	d	c	a	d	d	d	c
Tolmount Platform	PREMIER	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	HARBOUR ENERGY	PRECOMMISSION																									35.36	1.46	3.98	c	c	c	c	d	c	a	c	c	a	c	
RAVENSPURN NORTH CCW	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									2.95	0.89	45.02	a	a	a	a	d	g	a	a	a	a	a	
RAVENSPURN NORTH CC	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									3.05	0.92	44.94	a	a	a	a	d	g	a	a	a	a	a	
RAVENSPURN NORTH ST2	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									4.16	5.15	40.29	a	a	a	a	d	g	a	a	a	a	a	
BABBAGE	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEO ENERGY	ACTIVE																									4.31	2.50	53.72	a	a	a	a	d	g	a	a	a	a	a	
GARROW NUI	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE																									6.96	27.17	43.64	a	a	a	a	d	g	a	a	a	a	a	
RAVENSPURN NORTH ST3	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									7.95	7.19	32.39	a	a	a	a	d	g	a	a	a	a	a	
RAVENSPURN SOUTH A	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									9.25	3.19	36.13	a	a	a	a	d	g	a	a	a	a	a	
RAVENSPURN SOUTH B	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									9.69	5.52	31.47	a	a	a	a	d	g	a	a	a	a	a	
RAVENSPURN SOUTH C	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									11.95	6.52	26.53	a	a	a	a	d	g	a	a	a	a	a	
KILMAR NUI	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE																									12.65	30.01	64.45	a	a	a	a	d	g	a	a	a	a	a	
CLEETON CC	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									20.19	2.38	20.60	a	a	a	a	d	g	a	a	a	a	a	
CLEETON WLTR	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									20.20	2.43	20.56	a	a	a	a	d	g	a	a	a	a	a	
CLEETON PQ	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									20.24	2.39	20.55	a	a	a	a	d	g	a	a	a	a	a	
NEPTUNE	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									20.77	2.38	25.81	a	a	a	a	d	g	a	a	a	a	a	
HOTON	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									21.28	20.31	59.11	f	f	a	a	d	g	g	f	f	a	a	
HYDE	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									25.39	20.34	48.85	f	f	a	a	d	g	g	f	f	a	a	
TRENT	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE																									26.36	42.37	84.70	f	f	a	a	d	g	g	f	f	a	a	

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
WEST SOLE C	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														27.02	32.86	89.88	g	g	g	a	e	g	g	f	f	a	e
WEST SOLE B	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														27.02	32.86	89.88	f	f	a	a	d	g	g	f	f	a	a
MINERVA	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														28.97	48.44	107.69	f	f	f	a	f	f	f	f	f	a	e
WEST SOLE PP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														29.47	25.43	54.15	f	f	a	a	d	g	g	f	f	a	a
WEST SOLE A (8 LEG)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														31.97	28.36	58.50	f	f	a	a	d	g	g	f	f	a	a
WEST SOLE A (6 LEG)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														32.70	8.12	16.67	a	a	a	a	d	g	a	a	a	a	a
WEST SOLE SP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														32.78	29.72	61.21	f	f	a	a	d	g	g	f	f	a	a
48/9A MIMAS	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	PRECOMMISSION														32.82	29.75	61.18	f	f	a	a	d	g	g	f	f	a	a
MIMAS MN	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														32.84	29.76	61.17	f	f	a	a	d	g	g	f	f	a	a
BARQUE PB	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														32.87	29.77	61.13	f	f	a	a	d	g	g	f	f	a	a
CAVENDISH	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														35.38	45.15	103.18	g	g	g	a	g	g	g	f	f	a	e
YORK PLATFORM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														37.86	41.41	87.16	f	f	a	a	d	g	g	f	f	a	a
SATURN ND	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														42.52	60.42	113.94	f	f	a	a	d	g	g	f	f	a	a
BOULTON	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														44.30	48.53	95.85	f	f	a	a	d	g	g	f	f	a	a
ROUGH AP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														45.20	47.10	83.15	f	f	a	a	d	g	g	f	f	a	a
ROUGH AD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														45.29	61.70	96.14	f	f	a	a	d	g	g	f	f	a	a
ROUGH CD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														45.38	16.63	18.16	f	f	a	a	d	g	g	f	f	a	a
ROUGH BP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														45.47	50.62	102.34	g	g	g	a	e	g	g	f	f	a	e
ROUGH BD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														45.69	50.81	102.37	g	g	g	a	e	g	g	f	f	a	e
GALAHAD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														47.07	47.23	77.89	f	f	a	a	d	g	g	f	f	a	a
MALORY	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														47.93	58.56	116.08	g	g	g	a	e	g	g	f	f	a	e

Hornsea 4

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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
CLIPPER PH	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														57.27	64.92	119.01	g	g	g	a	d	g	g	f	f	f	e
CLIPPER PT	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														57.70	62.11	108.19	f	f	a	a	d	g	g	f	f	f	a
CLIPPER PC	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														57.78	62.18	108.19	f	f	a	a	d	g	g	f	f	f	a
CLIPPER PM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														57.81	62.21	108.27	f	f	a	a	d	g	g	f	f	f	a
CLIPPER PR	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														57.81	62.22	108.32	f	f	a	a	d	g	g	f	f	f	a
MUNRO MH	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														57.85	62.26	108.36	f	f	a	a	d	g	g	f	f	f	a
FRIGATE EXTENSION	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	PROPOSED														57.90	62.31	108.42	f	f	a	a	d	g	g	f	f	f	a
AUDREY A (WD)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														60.24	62.32	94.77	f	f	a	a	d	g	g	f	f	f	a
44/23A KELVIN TM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	PRECOMMISSION														60.60	61.64	90.07	g	g	g	a	g	g	g	f	f	f	e
WAVENEY	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														62.61	67.81	118.06	f	f	a	a	d	g	g	f	f	f	a
GALLEON PN	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														62.83	67.87	117.08	f	f	a	a	d	g	g	f	f	f	a
SKIFF	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														63.14	75.32	133.25	f	f	a	a	d	g	g	f	f	f	a
CLIPPER SOUTH	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														64.03	80.35	128.00	f	f	a	a	d	g	g	f	f	f	a
ANGLIA A	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ITHACA	ACTIVE														64.72	69.19	114.79	f	f	a	a	d	g	g	f	f	f	a
ANGLIA YD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														65.34	75.65	131.75	g	g	g	a	g	g	g	f	f	f	e
CYGNUS B (BWHP)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														65.56	72.38	124.76	f	f	a	a	d	g	g	f	f	f	a
WENLOCK NUI	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ALPHA PETROLEUM	ACTIVE														65.62	83.87	136.61	g	g	g	a	e	g	g	f	f	f	e
CYGNUS A (AUQ)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														66.16	76.94	133.45	g	g	g	a	g	g	g	f	f	f	e
CYGNUS A (APU)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														66.17	69.91	110.90	f	f	a	a	d	g	g	f	f	f	a
CYGNUS A (AWHP)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														66.17	69.91	110.90	f	f	a	a	d	g	g	f	f	f	a
VAMPIRE	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														67.05	68.55	96.77	f	f	a	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
TYNE	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														70.59	80.12	135.09	g	g	g	a	g	g	g	f	f	f	e
VIKING KILO DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														71.98	79.89	132.96	g	g	g	a	g	g	g	f	f	f	e
VIKING ALPHA RISER	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														71.98	79.89	132.96	g	g	g	a	g	g	g	f	f	f	e
WINGATE PLATFORM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	WINTERSHALL	ACTIVE														72.22	83.11	139.41	g	g	g	a	g	g	g	f	f	f	e
LOGGS RISER	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														72.37	77.61	127.28	g	g	g	a	g	g	g	f	f	f	e
LOGGS COMPRESSION	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														72.42	91.13	145.15	f	f	a	a	d	g	g	f	f	f	a
LOGGS PRODUCTION	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														72.43	77.67	127.35	g	g	g	a	g	g	g	f	f	f	e
NORTH VALIANT 1	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														72.50	77.74	127.41	g	g	g	a	g	g	g	f	f	f	a
LOGGS ACCOMMODATION	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														72.50	77.74	127.44	f	f	a	a	d	g	g	f	f	f	a
VIKING LIMA DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														72.56	77.80	127.47	g	g	g	a	g	g	g	f	f	f	e
CHISWICK PLATFORM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														72.66	91.52	152.47	f	f	a	a	d	g	g	f	f	f	a
VIKING ECHO DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														73.06	89.10	149.70	f	f	a	a	d	g	g	f	f	f	a
VIKING ED	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														73.52	90.67	139.71	g	g	g	a	g	g	g	f	f	f	e
VIKING HOTEL DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														74.00	83.36	137.94	g	g	g	a	g	g	g	f	f	f	e
KATY KT	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	PRECOMMISSION														74.20	88.85	128.61	f	f	a	a	d	g	g	f	f	f	a
CUTTER	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														75.19	90.11	132.60	f	f	a	a	d	g	g	f	f	f	a
VIKING GOLF DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														75.28	90.21	132.70	f	f	a	a	d	g	g	f	f	f	a
NORTH VALIANT 2	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														75.38	90.31	132.80	f	f	a	a	d	g	g	f	f	f	a
VANGUARD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														76.32	82.89	133.95	f	f	a	a	d	g	g	f	f	f	a
VISCOUNT	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														76.51	83.70	135.52	f	f	a	a	d	g	g	f	f	f	a
WINDERMERE PLATFORM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	INEOS UK SNS	ACTIVE														76.53	94.53	155.84	f	f	a	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
VIKING BRAVO ACCOMMODATION	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														76.71	86.89	142.22	g	g	g	a	g	g	g	f	f	f	e
VIKING BRAVO COMPRESSION	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														76.76	82.07	131.45	f	f	a	a	d	g	g	f	f	f	e
VIKING BRAVO PRODUCTION	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														76.81	87.00	142.33	f	f	a	a	d	g	g	f	f	f	a
VIKING BRAVO DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														76.88	87.06	142.39	g	g	g	a	g	g	g	f	f	f	e
VIKING DELTA DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														76.95	87.13	142.44	g	g	g	a	g	g	g	f	f	f	e
SOUTH VALIANT	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														77.81	41.10	45.86	a	a	a	a	d	g	g	f	f	f	a
VIKING CHARLIE DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														79.68	97.86	149.68	g	g	g	a	e	g	g	f	f	f	e
VULCAN 2	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														79.92	90.62	146.36	g	g	g	a	g	g	g	f	f	f	e
ST-1 PLATFORM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														80.77	91.03	146.24	g	g	g	a	g	g	g	f	f	f	e
VULCAN 1	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														82.09	87.72	137.00	f	f	a	a	d	g	g	f	f	f	a
GANYMEDE ZD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														82.40	100.61	161.91	f	f	a	a	d	g	g	f	f	f	a
JUPITER GANYMEDE	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														84.53	89.30	134.84	f	f	a	a	d	g	g	f	f	f	a
GROVE PLATFORM	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														85.32	92.76	144.26	f	f	a	a	d	g	g	f	f	f	a
D15-FA1	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	NEPTUNE	ACTIVE														85.32	92.76	144.26	f	f	a	a	d	g	g	f	f	f	a
J6A / J6A-CT PLATFORMS	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SPIRIT ENERGY	ACTIVE														85.84	102.82	163.84	f	f	a	a	d	g	g	f	f	f	a
VICTOR JULIET DRILLING	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														87.06	91.96	138.25	f	f	a	a	d	g	g	f	f	f	a
CARRACK QA	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														87.76	105.89	167.20	f	f	a	a	d	g	g	f	f	f	a
INDE BP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														89.10	97.94	151.00	g	g	g	a	g	g	g	f	f	f	e
INDE BD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														89.23	104.42	164.27	f	f	a	a	d	g	g	f	f	f	a
48/29C	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENI	ACTIVE														89.62	100.75	156.56	f	f	a	a	d	g	g	f	f	f	a
BRIGANTINE BR	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														89.64	100.75	156.55	f	f	a	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
LEMAN CD (SHELL)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														105.86	110.70	155.30	f	f	a	a	d	g	g	f	f	f	a
LEMAN CP (SHELL)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														105.87	110.70	155.28	f	f	a	a	d	g	g	f	f	f	a
LUCY - SMALLFOOT	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	PROPOSED														105.92	110.74	155.29	f	f	a	a	d	g	g	f	f	f	a
SHAMROCK QS	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														105.92	110.75	155.32	f	f	a	a	d	g	g	f	f	f	a
52/5A	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENI	ACTIVE														105.92	110.76	155.34	f	f	a	a	d	g	g	f	f	f	a
CARAVEL QR	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														106.19	111.11	156.34	f	f	a	a	d	g	g	f	f	f	a
BESSEMER A	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														106.19	111.11	156.37	f	f	a	a	d	g	g	f	f	f	a
LEMAN BT (SHELL)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														106.28	110.01	146.38	f	f	a	a	d	g	g	f	f	f	a
LEMAN BD (SHELL)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														106.28	110.00	146.33	f	f	a	a	d	g	g	f	f	f	a
LEMAN BP (SHELL)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														106.33	110.06	146.36	f	f	a	a	d	g	g	f	f	f	a
CORVETTE	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														107.69	117.63	171.32	f	f	a	a	d	g	g	f	f	f	a
LEMAN EP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														108.28	113.21	158.44	f	f	a	a	d	g	g	f	f	f	a
LEMAN ED	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														108.90	113.83	159.03	f	f	a	a	d	g	g	f	f	f	a
LEMAN E	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														108.91	113.84	159.06	f	f	a	a	d	g	g	f	f	f	a
LEMAN AX	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														109.09	112.96	150.10	f	f	a	a	d	g	g	f	f	f	a
LEMAN AQ	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														111.22	116.18	161.48	f	f	a	a	d	g	g	f	f	f	a
LEMAN AC	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														111.23	116.19	161.47	f	f	a	a	d	g	g	f	f	f	a
LEMAN AP (PERENCO)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														111.36	116.25	161.00	f	f	a	a	d	g	g	f	f	f	a
LEMAN AD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														112.51	117.51	163.05	f	f	a	a	d	g	g	f	f	f	a
LEMAN J	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														112.54	117.54	163.10	f	f	a	a	d	g	g	f	f	f	a
LEMAN BT (PERENCO)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														112.56	117.56	163.10	f	f	a	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
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g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
LEMEN BP (PERENCO)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														112.58	117.57	163.09	f	f	a	a	d	g	g	f	f	f	a
LEMEN BD (PERENCO)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														112.59	117.59	163.09	f	f	a	a	d	g	g	f	f	f	a
LEMEN D	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	SHELL	ACTIVE														114.27	119.20	164.04	f	f	a	a	d	g	g	f	f	f	a
LEMEN CP (PERENCO)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														114.32	119.56	165.82	f	f	a	a	d	g	g	f	f	f	a
LEMEN CD (PERENCO)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														114.35	119.59	165.82	f	f	a	a	d	g	g	f	f	f	a
LEMEN FD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														114.39	119.61	165.83	f	f	a	a	d	g	g	f	f	f	a
LEMEN FP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														115.63	120.43	164.27	f	f	a	a	d	g	g	f	f	f	a
LEMEN H	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														116.00	121.00	166.33	f	f	a	a	d	g	g	f	f	f	a
LEMEN G (PERENCO)	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														116.03	121.03	166.33	f	f	a	a	d	g	g	f	f	f	a
BOOSTER PLATFORM 36/22A NORPIPE A.S	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														116.18	121.63	168.10	f	f	a	a	d	g	g	f	f	f	a
SEAN RD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ONER	ACTIVE														116.20	121.63	168.08	f	f	a	a	d	g	g	f	f	f	a
LEMEN DP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														116.81	128.10	183.26	f	f	a	a	d	g	g	f	f	f	a
LEMEN DD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														116.95	121.81	166.04	f	f	a	a	d	g	g	f	f	f	a
THAMES A	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														118.29	124.32	171.64	f	f	a	a	d	g	g	f	f	f	a
THAMES AR	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														118.67	126.53	176.76	f	f	a	a	d	g	g	f	f	f	a
SEAN PD	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ONER	ACTIVE														118.75	126.62	176.86	f	f	a	a	d	g	g	f	f	f	a
SEAN PP	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ONER	ACTIVE														119.26	124.75	171.13	f	f	a	a	d	g	g	f	f	f	a
DAVY A	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	PERENCO	ACTIVE														119.28	124.77	171.12	f	f	a	a	d	g	g	f	f	f	a
BOOSTER PLATFORM 37/4A NORPIPE A.S	Oil and Gas Authority	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	CONOCOPHILLIPS	ACTIVE														119.94	130.74	185.17	f	f	a	a	d	g	g	f	f	f	a
Netherlands																															
D18a-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														78.53	98.01	155.89	f	f	a	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
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f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
Markham	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Centrica Production Nederland B.V.	producing														83.31	101.78	163.03	g	g	g	a	g	g	g	f	f	f	e
D12-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown														85.69	104.17	156.64	g	g	g	a	e	g	g	f	f	f	e
D12-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														86.17	105.09	159.45	f	f	a	a	d	g	g	f	f	f	a
K01-A Unit	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														87.16	105.80	166.96	f	f	a	a	d	g	g	f	f	f	a
J03-C Unit	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														87.18	105.50	166.80	f	f	a	a	d	g	g	f	f	f	a
D15-A-104	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	production ceased														88.76	107.85	162.93	g	g	g	a	g	g	g	f	f	f	e
D15 Tourmaline	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start expected within 5 years														89.46	108.68	164.51	f	f	e	a	d	g	g	f	f	f	a
D15-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														90.06	109.18	164.05	f	f	a	a	d	g	g	f	f	f	a
K04a-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														91.28	109.33	170.64	f	f	a	a	d	g	g	f	f	f	a
D12 Ilmenite	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown														95.43	113.37	163.63	g	g	g	a	e	g	g	f	f	f	e
K04a-Z	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														95.80	113.40	174.62	f	f	a	a	d	g	g	f	f	f	a
K07-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														97.44	114.05	174.83	f	f	a	a	d	g	g	f	f	f	a
K04a-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														99.46	117.48	178.78	f	f	a	a	d	g	g	f	f	f	a
E13 Epidoot	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'		undeveloped, production start unknown														100.64	119.91	175.74	g	g	a	a	e	g	g	f	f	f	e
K04-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														101.03	119.18	180.49	f	f	a	a	d	g	g	f	f	f	a
K04-E	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														102.15	120.03	181.30	f	f	a	a	d	g	g	f	f	f	a
K04-N	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														107.51	125.30	186.57	f	f	a	a	d	g	g	f	f	f	a
E17a-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														110.73	130.13	189.60	f	f	a	a	d	g	g	f	f	f	a
K05a-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														112.09	130.03	191.32	f	f	a	a	d	g	g	f	f	f	a
K07-FD	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														112.21	128.81	189.53	f	f	a	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



	In Planning/Consenting/Pre-Construction
	Construction
	Operation and Maintenance
	Decommissioning

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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
K05-C North	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														112.94	131.45	192.70	f	f	a	a	d	g	g	f	f	f	a
K07-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														114.31	130.96	191.69	f	f	a	a	d	g	g	f	f	f	a
K05-U	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														115.81	134.43	195.60	f	f	a	a	d	g	g	f	f	f	a
K07-FE	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														116.84	133.11	193.58	f	f	a	a	d	g	g	f	f	f	a
K05a-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														116.87	134.86	196.15	f	f	a	a	d	g	g	f	f	f	a
K05-C Unit	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														118.82	137.27	198.54	f	f	a	a	d	g	g	f	f	f	a
K07-FC	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														121.31	137.50	197.89	f	f	a	a	d	g	g	f	f	f	a
K08-FD	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														122.41	139.72	>200	g	g	g	a	e	g	g	f	f	f	e
K05a-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														123.98	141.75	>200	f	f	a	a	d	g	g	f	f	f	a
K05a-En	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														124.13	142.22	>200	f	f	a	a	d	g	g	f	f	f	a
K08-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														124.81	141.42	>200	f	f	a	a	d	g	g	f	f	f	a
K10-B (gas)	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	abandoned														125.30	140.07	199.00	g	g	g	a	g	g	g	f	f	f	e
K02b-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														125.32	144.53	>200	f	f	a	a	d	g	g	f	f	f	a
K13-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	abandoned														125.81	138.95	196.24	g	g	g	a	g	g	g	f	f	f	e
K10-C	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	abandoned														126.49	141.62	>200	g	g	g	a	g	g	g	f	f	f	e
K10-V	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	abandoned														126.49	141.62	>200	g	g	g	a	g	g	g	f	f	f	e
K11-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	abandoned														126.95	142.65	>200	g	g	g	a	g	g	g	f	f	f	e
K05a-Es	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	production ceased														127.64	145.53	>200	g	g	g	a	g	g	g	f	f	f	e
E11-Vincent	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Tullow Netherlands B.V.	undeveloped, production start unknown														127.80	147.08	>200	g	g	g	a	e	g	g	f	f	f	e
K13-CF	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	abandoned														127.83	141.86	>200	g	g	g	a	g	g	g	f	f	f	e
K10-B (oil)	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown														128.36	142.92	>200	g	g	g	a	e	g	g	f	f	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
K05-G	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	production ceased														128.74	146.60	>200	g	g	g	a	g	g	g	f	f	f	e
K13-DE	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	abandoned														129.43	143.23	>200	g	g	g	a	g	g	g	f	f	f	e
K08-FC	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														129.57	146.10	>200	f	f	f	a	d	g	g	f	f	f	a
K05-F	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														130.97	149.13	>200	f	f	f	a	d	g	g	f	f	f	a
K08-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														132.64	149.83	>200	g	g	g	a	e	g	g	f	f	f	e
K13-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	abandoned														133.66	146.84	>200	g	g	g	a	g	g	g	f	f	f	e
K08-FF	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														133.91	150.89	>200	g	g	g	a	e	g	g	f	f	f	e
K08-FE	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														135.45	153.02	>200	g	g	g	a	e	g	g	f	f	f	e
K16-5	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'		undeveloped, production start unknown														139.07	151.15	>200	g	g	g	a	e	g	g	f	f	f	e
K06-N	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	production ceased														140.24	158.34	>200	g	g	g	a	g	g	g	f	f	f	e
E12 Tulp East	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'		undeveloped, production start unknown														140.58	159.80	>200	g	g	g	a	e	g	g	f	f	f	e
K06-DN	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														141.27	159.50	>200	f	f	f	a	d	g	g	f	f	f	a
K11-FC	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														142.94	159.23	>200	g	g	g	a	g	g	g	f	f	f	e
K11-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														144.32	160.80	>200	a	a	g	a	g	g	g	f	f	f	e
E18-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														145.03	164.47	>200	f	f	f	a	d	g	g	f	f	f	a
K06-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														145.59	163.68	>200	f	f	f	a	d	g	g	f	f	f	a
E12 Lelie	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'		undeveloped, production start unknown														145.81	165.12	>200	g	g	g	a	e	g	g	f	f	f	e
K06-T	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	production ceased														146.71	165.07	>200	g	g	g	a	g	g	g	f	f	f	e
K09ab-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														147.04	164.21	>200	f	f	f	a	d	g	g	f	f	f	a
K06-C	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														147.35	165.51	>200	f	f	f	a	d	g	g	f	f	f	a
K14-FC	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														147.52	162.85	>200	g	g	g	a	e	g	g	f	f	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
K09ab-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														148.60	165.76	>200	f	f	f	a	d	g	g	f	f	f	a
K06-G	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														149.23	167.62	>200	f	f	f	a	d	g	g	f	f	f	a
K09c-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														150.28	168.04	>200	f	f	f	a	d	g	g	f	f	f	a
K09ab-C	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	suspended														150.35	167.66	>200	g	g	g	a	g	g	g	f	f	f	e
F16-E	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														150.52	169.99	>200	f	f	f	a	d	g	g	f	f	f	a
K12-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														150.58	167.36	>200	g	g	g	a	g	g	g	f	f	f	e
K14-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														150.96	166.21	>200	f	f	f	a	d	g	g	f	f	f	a
P01-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	undeveloped, production start unknown														152.07	163.24	>200	g	g	g	a	e	g	g	f	f	f	e
K06-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														152.56	171.26	>200	f	f	f	a	d	g	g	f	f	f	a
K09c-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start expected within 5 years														153.34	170.43	>200	f	f	f	a	d	g	g	f	f	f	a
K6-GT4	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	undeveloped, production start unknown														153.91	172.38	>200	g	g	g	a	e	g	g	f	f	f	e
F16-P	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start expected within 5 years														154.00	173.35	>200	f	f	f	a	d	g	g	f	f	f	a
K14-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														154.33	168.68	>200	f	f	f	a	d	g	g	f	f	f	a
P01-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	undeveloped, production start unknown														155.76	167.50	>200	g	g	g	a	e	g	g	f	f	f	e
K15-FH	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														155.77	171.02	>200	f	f	f	a	d	g	g	f	f	f	a
K12-H (K12-S2 & K12-D5)	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														156.54	172.98	>200	f	f	f	a	d	g	g	f	f	f	a
L01-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														156.98	175.84	>200	f	f	f	a	d	g	g	f	f	f	a
K12-L	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														157.26	174.38	>200	f	f	f	a	d	g	g	f	f	f	a
L04-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	abandoned														157.54	175.72	>200	g	g	g	a	g	g	g	f	f	f	e
K17-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														158.48	171.75	>200	f	f	f	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
K12-M	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														158.73	175.49	>200	f	f	f	a	d	g	g	f	f	f	a
L04-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														158.76	177.12	>200	f	f	f	a	d	g	g	f	f	f	a
L04-I	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														159.53	178.11	>200	f	f	f	a	d	g	g	f	f	f	a
L04-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														160.09	178.58	>200	f	f	f	a	d	g	g	f	f	f	a
K17-Zechstein	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														160.10	173.30	>200	g	g	g	a	e	g	g	f	f	f	e
K12-C	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	production ceased														160.42	177.24	>200	g	g	g	a	g	g	g	f	f	f	e
K12-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														160.57	177.22	>200	f	f	f	a	d	g	g	f	f	f	a
K15-FC	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														160.68	175.92	>200	f	f	f	a	d	g	g	f	f	f	a
K09ab-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														161.87	179.17	>200	f	f	f	a	d	g	g	f	f	f	a
L04-F	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														162.42	181.14	>200	f	f	f	a	d	g	g	f	f	f	a
K17-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														162.59	176.03	>200	g	g	g	a	e	g	g	f	f	f	e
K15-FI	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														162.72	178.24	>200	f	f	f	a	d	g	g	f	f	f	a
K12-S1	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														162.73	179.12	>200	g	g	g	a	g	g	g	f	f	f	e
K12-E	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														163.43	180.54	>200	g	g	g	a	g	g	g	f	f	f	e
K12-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														163.52	179.77	>200	f	f	f	a	d	g	g	f	f	f	a
L07-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	abandoned														164.64	182.40	>200	g	g	g	a	g	g	g	f	f	f	e
K15-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														164.78	180.51	>200	f	f	f	a	d	g	g	f	f	f	a
L07-G	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														165.12	182.47	>200	f	f	f	a	d	g	g	f	f	f	a
K12-K	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	suspended														165.47	182.17	>200	g	g	g	a	g	g	g	f	f	f	e
L04-G	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														165.64	184.39	>200	f	f	f	a	d	g	g	f	f	f	a
L07-H	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	suspended														166.10	184.08	>200	g	g	g	a	g	g	g	f	f	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
K15-FO	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														166.58	182.34	>200	f	f	f	a	d	g	g	f	f	f	a
K12-B9	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														166.89	182.98	>200	f	f	f	a	d	g	g	f	f	f	a
K15-FL	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														166.93	182.99	>200	f	f	f	a	d	g	g	f	f	f	a
P02-NE	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Clyde Petroleum	abandoned														166.95	179.38	>200	g	g	g	a	g	g	g	f	f	f	e
K12-G	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														167.11	183.47	>200	f	f	f	a	d	g	g	f	f	f	f
L10-S3	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														167.41	184.40	>200	g	g	g	a	g	g	g	f	f	f	e
K12-S3	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														168.00	184.20	>200	f	f	f	a	d	g	g	f	f	f	a
P02-E	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	undeveloped, production start unknown														168.26	179.89	>200	g	g	g	a	e	g	g	f	f	f	e
L10-O	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														168.33	185.06	>200	f	f	f	a	d	g	g	f	f	f	a
L07-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	undeveloped, production start unknown														169.49	186.90	>200	g	g	g	a	e	g	g	f	f	f	e
L10-M	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														169.52	186.18	>200	f	f	f	a	d	g	g	f	f	f	a
P02-SE	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Clyde Petroleum	abandoned														169.52	181.17	>200	g	g	g	a	g	g	g	f	f	f	e
L01-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'		undeveloped, production start unknown														169.59	188.49	>200	g	g	g	a	e	g	g	f	f	f	e
L10-S1	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														169.80	186.72	>200	g	g	g	a	g	g	g	f	f	f	e
K15-FG	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														170.18	186.04	>200	f	f	f	a	d	g	g	f	f	f	a
K15-FP	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														170.66	186.20	>200	f	f	f	a	d	g	g	f	f	f	a
K15-FM	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														170.76	186.06	>200	f	f	f	a	d	g	g	f	f	f	a
L07-H South-East	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	production ceased														170.85	188.72	>200	g	g	g	a	g	g	g	f	f	f	e
L07-N	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	production ceased														172.51	190.13	>200	g	g	g	a	g	g	g	f	f	f	e
K15-FE	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														172.52	188.22	>200	f	f	f	a	d	g	g	f	f	f	a
L07-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														172.71	190.67	>200	f	f	f	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
K15-FK	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														173.01	188.27	>200	f	f	f	a	d	g	g	f	f	f	a
K15-FD	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														173.38	188.94	>200	f	f	f	a	d	g	g	f	f	f	a
K15-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														174.22	189.85	>200	f	f	f	a	d	g	g	f	f	f	a
L10-S2	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	production ceased														174.31	191.11	>200	g	g	g	a	g	g	g	f	f	f	e
K15-FJ	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	suspended														174.59	189.96	>200	g	g	g	a	g	g	g	f	f	f	e
K15-FN	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														175.21	190.76	>200	f	f	f	a	d	g	g	f	f	f	a
L10-P	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														175.35	192.30	>200	f	f	f	a	d	g	g	f	f	f	a
L07-C	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	producing														175.86	193.34	>200	f	f	f	a	d	g	g	f	f	f	a
L05a-E	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start expected within 5 years														176.02	194.88	>200	f	f	f	a	d	g	g	f	f	f	a
L10-N	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														176.45	193.35	>200	f	f	f	a	d	g	g	f	f	f	a
L10-6	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start unknown														176.45	193.48	>200	g	g	g	a	e	g	g	f	f	f	e
L05a-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														176.84	195.53	>200	f	f	f	a	d	g	g	f	f	f	a
L10-G	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	production ceased														176.91	194.23	>200	g	g	g	a	g	g	g	f	f	f	e
L02-FC	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														177.09	195.97	>200	g	g	g	a	e	g	g	f	f	f	e
K15-FQ	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	suspended														177.36	192.70	>200	g	g	g	a	g	g	g	f	f	f	e
L13-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														177.54	193.38	>200	g	g	g	a	e	g	g	f	f	f	e
P02-Delta	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	undeveloped, production start unknown														177.77	190.09	>200	g	g	g	a	e	g	g	f	f	f	e
K15-FF	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														177.92	193.34	>200	g	g	g	a	e	g	g	f	f	f	e
L10-CDA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	producing														178.91	195.77	>200	f	f	f	a	d	g	g	f	f	f	a
K18-Golf	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														179.28	194.42	>200	f	f	f	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users	
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050															
L10-K	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned															180.56	197.97	>200	g	g	g	a	g	g	g	f	f	f	e
L07-F	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Total E&P Nederland B.V.	undeveloped, production start expected within 5 years															181.42	198.97	>200	f	f	f	a	d	g	g	f	f	f	a
A18-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	producing															181.72	198.74	>200	f	f	f	a	d	g	g	f	f	f	a
L13-FI	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start expected within 5 years															181.81	197.74	>200	f	f	f	a	d	g	g	f	f	f	a
F17-SW Culmination	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown															182.81	>200	>200	g	g	g	a	e	g	g	f	f	f	e
F17-Brigantijn (F17-FB)	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Sterling Resources Netherlands B.V.	undeveloped, production start unknown															182.83	>200	>200	g	g	g	a	e	g	g	f	f	f	e
Kotter	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	production ceased															183.84	198.47	>200	g	g	g	a	g	g	g	f	f	f	e
F17-Korvet (F17-FA)	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Sterling Resources Netherlands B.V.	undeveloped, production start unknown															183.94	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L13-FH	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	abandoned															184.62	>200	>200	g	g	g	a	g	g	g	f	f	f	e
K18-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown															184.70	199.31	>200	g	g	g	a	e	g	g	f	f	f	e
L13-FE	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing															184.89	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L10-19	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start expected within 5 years															184.97	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L02-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing															185.44	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L13-FC	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing															185.66	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L13-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	production ceased															185.76	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L16-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown															187.00	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L05a-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start expected within 5 years															187.09	>200	>200	f	f	f	a	d	g	g	f	f	f	f
L05b-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown															187.43	>200	>200	g	g	g	a	e	g	g	f	f	f	e
P06-Northwest	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown															187.63	199.53	>200	g	g	g	a	e	g	g	f	f	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
L02-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														187.66	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L11-7	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start expected within 5 years														188.14	>200	>200	f	f	f	a	d	g	g	f	f	f	f
L08-A-West	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														188.36	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L13-FJ	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														188.66	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L13-FG	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	suspended														188.74	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L13-FD	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														189.27	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L10-S4	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	production ceased														189.30	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L08-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	production ceased														189.64	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L16-Bravo	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown														189.66	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L11-1	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start unknown														189.94	>200	>200	g	g	g	a	e	g	g	f	f	f	e
F17-NE (Rembrandt)	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start expected within 5 years														190.00	>200	>200	f	f	f	a	d	g	g	f	f	f	f
F14-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'		undeveloped, production start unknown														190.19	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L16-Alpha	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	undeveloped, production start unknown														190.27	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L08-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Oranje-Nassau Energie B.V.	producing														190.57	>200	>200	f	f	f	a	d	g	g	f	f	f	a
P06-Main	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														191.17	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L13-FF	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	producing														192.38	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L13-FK	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Nederlandse Aardolie Maatschappij B.V.	undeveloped, production start unknown														192.66	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L11-Lark	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														192.71	>200	>200	g	g	g	a	g	g	g	f	f	f	e
Q01-Northwest	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	undeveloped, production start expected within 5 years														192.93	>200	>200	f	f	f	a	d	g	g	f	f	f	f
L08-P	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														192.95	>200	>200	f	f	f	a	d	g	g	f	f	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Oil and Gas



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050	Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals (seismic surveys are considered separately)	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users
L11a-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	abandoned														193.61	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L11b-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Oranje-Nassau Energie B.V.	production ceased														194.45	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L05-B	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														196.74	>200	>200	f	f	f	a	d	g	g	f	f	f	a
B16-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	undeveloped, production start unknown														196.91	>200	>200	g	g	g	a	e	g	g	f	f	f	e
L08-H	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	production ceased														197.34	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L14-FA	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Transcanada International Ltd.	abandoned														197.73	>200	>200	g	g	g	a	g	g	g	f	f	f	e
L11-Gillian	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Oranje-Nassau Energie B.V.	undeveloped, production start expected within 5 years														198.10	>200	>200	f	f	f	a	d	g	g	f	f	f	f
L08-G	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	production ceased														198.10	>200	>200	g	g	g	a	g	g	g	f	f	f	e
A15-A	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	undeveloped, production start expected within 5 years														198.23	>200	>200	f	f	f	a	d	g	g	f	f	f	f
Haven	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Petrogas E&P Netherlands B.V.	producing														198.25	>200	>200	f	f	f	a	d	g	g	f	f	f	a
P06-D	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														198.29	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L05-C	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Wintershall Noordzee B.V.	producing														199.72	>200	>200	f	f	f	a	d	g	g	f	f	f	a
L14-FB	NLOG	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	ENGIE E&P Nederland B.V.	undeveloped, production start unknown														199.98	>200	>200	g	g	g	a	e	g	g	f	f	f	e

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Shipping



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

a	Included as part of the topic baseline and hence not considered within the cumulative impact assessment.
b	Part of the baseline but has an ongoing impact and is therefore considered relevant to the cumulative impact assessment: Screened in to assessment.
c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Port	Data Source(s)	Data Confidence Assessment	Country	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)												Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascope and Visual Resources	Infrastructure and Other Users															
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030															2031-2050														
United Kingdom																																													
BRIDLINGTON	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																										73.00	4.46	32.79	a	a	a	a	a	a	a	a	a	a	f	a	
SCARBOROUGH	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											85.91	30.18	52.10	a	f	a	a	a	a	a	a	a	a	f	a
GRIMSBY	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											92.24	48.61	58.88	a	f	a	a	a	a	a	a	a	a	f	a
KINGSTON UPON HULL	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											93.51	31.35	52.56	a	f	a	a	a	a	a	a	a	a	f	a
IMMINGHAM	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											95.67	43.75	58.56	a	f	a	a	a	a	a	a	a	a	f	a
NEW HOLLAND	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											101.04	37.94	60.37	a	f	a	a	a	a	a	a	a	a	f	a
WHITBY	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											103.92	56.38	75.72	a	f	a	a	a	a	a	a	a	a	f	a
GOOLE	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											127.97	54.77	85.76	a	f	a	a	a	a	a	a	a	a	f	a
HOWDENDYKE	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											129.31	54.95	87.03	a	f	a	a	a	a	a	a	a	a	f	a
TEESPORT	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											141.45	90.91	113.77	a	f	a	a	a	a	a	a	a	a	f	a
BOSTON	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											141.62	117.24	123.78	a	f	a	a	a	a	a	a	a	a	f	a
HARTLEPOOL	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											146.39	97.23	119.57	a	f	a	a	a	a	a	a	a	a	f	a
GREAT YARMOUTH	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											149.88	140.00	145.36	a	f	a	a	a	a	a	a	a	a	f	a
KING'S LYNN	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											155.38	155.51	182.64	a	f	a	a	a	a	a	a	a	a	f	a
SEAHAM	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											160.07	114.12	135.27	a	f	a	a	a	a	a	a	a	a	f	a
LOWESTOFT	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											165.07	151.18	155.55	a	f	a	a	a	a	a	a	a	a	f	a
WISBECH	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											167.02	123.38	143.59	a	f	a	a	a	a	a	a	a	a	f	a
SUNDERLAND	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											170.17	170.29	196.34	a	f	a	a	a	a	a	a	a	a	f	a
TYNEMOUTH	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											173.29	132.09	151.29	a	f	a	a	a	a	a	a	a	a	f	a
BLYTH	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											185.43	146.37	164.81	a	f	a	a	a	a	a	a	a	a	f	a
WARKWORTH HARBOUR	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											203.45	169.42	185.84	a	f	a	a	a	a	a	a	a	a	f	a
MANCHESTER	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active																											224.44	148.44	181.28	a	f	a	a	a	a	a	a	a	a	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Shipping



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

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c	Potential cumulative impact exists: Screened in to assessment.
d	No conceptual effect-receptor pathway: Screened out of assessment.
e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Port	Data Source(s)	Data Confidence Assessment	Country	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascope and Visual Resources	Infrastructure and Other Users		
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050																
LANCASTER	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active														242.34	168.45	202.35	a	f	a	a	a	a	a	a	a	a	a	f	a
HEYSHAM	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active														251.23	177.22	211.17	a	f	a	a	a	a	a	a	a	a	a	f	a
FLEETWOOD	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active														259.44	184.46	218.69	a	f	a	a	a	a	a	a	a	a	a	f	a
GARLSTON	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active														269.09	192.97	225.95	a	f	a	a	a	a	a	a	a	a	a	f	a
BARROW IN FURNESS	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active														271.11	198.01	231.67	a	f	a	a	a	a	a	a	a	a	a	f	a
LIVERPOOL	World Ports Index	High - Third party project details published in the public domain and confirmed as being 'accurate' by TCE.	GB	Active														272.57	196.24	229.60	a	f	a	a	a	a	a	a	a	a	a	f	a

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Military, Aviation and Radar



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

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e	Low data confidence: Screened out of assessment.
f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (Red outline denotes the onshore construction period for Hornsea 4)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users														
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050												
United Kingdom																																											
UK Military Bases	Royal Navy Data	High - Third party project details published in the public domain and confirmed as being 'accurate' by the developer.	The three main Naval Bases are the home to the Royal Navy's surface and submarine fleet of ships. Portsmouth, Devonport and Clyde Naval Bases offer support to their base ships in the areas of personnel, engineering and supplies. Yeovilton air station is base to RN Naval Helicopter Squadrons and other fixed wing aircraft. Culdrose air station supports the Anti-Submarine Warfare and Airborne Early Warning Helicopter Squadrons of the Royal Navy. The principal function of Dartmouth College is the training of young officers for service in the Royal Navy. HMS COLLINGWOOD (FAREHAM), HMS Excellent (Portsmouth), HMS Raleigh (Torpoint), HMS Sultan (Gosport), and HMS Temeraire (Portsmouth) are also important UK naval establishments.	Operational																										N/A	N/A	N/A	a	a	a	a	d	a	f	a	a	d	f

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Coastal



In Planning/Consenting/Pre-Construction
Construction
Operation and Maintenance
Decommissioning

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d	No conceptual effect-receptor pathway: Screened out of assessment.
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f	No physical effect-receptor overlap: Screened out of assessment.
g	No temporal overlap: Screened out of assessment.

Project	Data Source(s)	Data Confidence Assessment	Notes	Status of Development	Construction Period (Red outline denotes the onshore construction period for Hornsea 4)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users											
					2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050									
United Kingdom																																								
Yorkshire Harbour and Marina - Bridlington	East Riding of Yorkshire Council	Medium - Third party project details published in the public domain but not confirmed as being 'accurate'	Project on hold.	In planning																							73.00	4.46	32.79	g	g	g	e	d	g	g	g	g	f	d

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Designated Sites



	In Planning/Consenting/Pre-Construction
	Construction
	Operation and Maintenance
	Decommissioning

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e	Low data confidence: Screened out of assessment.
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g	No temporal overlap: Screened out of assessment.

Project	Data Source(s)	Data Confidence Assessment	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users	
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050															
United Kingdom																															
Aln Estuary MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															212.00	174.80	190.95	d	d	d	d	d	b	d	d	d	d	d
Cumbria Coast MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															283.47	213.00	246.53	d	d	d	d	d	b	d	d	d	d	d
Swallow Sand MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															143.80	158.35	158.35	d	d	d	d	d	b	d	d	d	d	d
Farnes East MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															200.20	173.47	184.90	d	d	d	d	d	b	d	d	d	d	d
North East of Farnes Deep MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															184.40	177.89	181.51	d	d	d	d	d	b	d	d	d	d	d
Holderness Inshore MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															70.71	4.90	29.23	d	d	d	d	d	b	d	d	d	d	d
Cromer Shoal Chalk Beds MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															105.38	104.49	121.91	d	d	d	d	d	b	d	d	d	d	d
Runswick Bay MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															111.40	61.03	80.62	d	d	d	d	d	b	d	d	d	d	d
Coquet to St Mary's MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															176.50	134.50	152.34	d	d	d	d	d	b	d	d	d	d	d
Fylde MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															267.24	191.79	226.87	d	d	d	d	d	b	d	d	d	d	d
West of Walney MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															282.03	208.84	243.41	d	d	d	d	d	b	d	d	d	d	d
Markham's Triangle MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															63.85	77.46	134.24	d	d	d	d	d	b	d	d	d	d	d
Holderness Offshore MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															29.34	1.28	10.41	d	d	d	d	d	b	d	d	d	d	d
Cumbria Coast MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															283.47	213.00	246.53	d	d	d	d	d	b	d	d	d	d	d
Ribble Estuary MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															236.91	160.86	195.89	d	d	d	d	d	b	d	d	d	d	d
Berwick to St Mary's MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															176.50	134.50	152.34	d	d	d	d	d	b	d	d	d	d	d
Wyre-Lune MCZ	Natural England	High - Third party project details published in the public domain and confirmed as being 'accurate' by Natural England.	Active															242.74	168.96	203.64	d	d	d	d	d	b	d	d	d	d	d
Shell Flat and Lune Deep SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															264.09	189.44	224.41	d	d	d	d	d	b	d	d	d	d	d

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Designated Sites



	In Planning/Consenting/Pre-Construction
	Construction
	Operation and Maintenance
	Decommissioning

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Project	Data Source(s)	Data Confidence Assessment	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users			
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050	
Morecambe Bay SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														241.15	168.23	202.61	d	d	d	d	d	b	d	d	d	d	d	d
North Norfolk Coast SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														113.96	111.91	120.09	d	d	d	d	d	b	d	d	d	d	d	d
Drigg Coast SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														279.27	209.01	242.45	d	d	d	d	d	b	d	d	d	d	d	d
Humber Estuary SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														79.76	32.21	49.20	d	d	d	d	d	b	d	d	d	d	d	d
Berwickshire and North Northumberland Coast SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														204.70	171.08	185.79	d	d	d	d	d	b	d	d	d	d	d	d
The Wash and North Norfolk Coast SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														105.38	100.09	104.13	d	d	d	d	d	b	d	d	d	d	d	d
Dee Estuary/ Aber Dyfrdwy SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														273.99	197.63	232.04	d	d	d	d	d	b	d	d	d	d	d	d
Dogger Bank SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														31.17	49.05	72.99	d	d	d	d	d	b	d	d	d	d	d	d
Haisborough, Hammond and Winterton SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														108.62	108.85	138.99	d	d	d	d	d	b	d	d	d	d	d	d
Inner Dowsing, Race Bank and North Ridge SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														72.10	64.97	73.26	d	d	d	d	d	b	d	d	d	d	d	d
North Norfolk Sandbanks and Saturn Reef SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														33.94	34.80	85.71	d	d	d	d	d	b	d	d	d	d	d	d
Southern North Sea SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														0.00	0.00	5.18	d	d	d	d	d	b	d	d	d	d	d	d
Flamborough Head SAC	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														63.90	1.45	20.81	d	d	d	d	d	b	d	d	d	d	d	d
Outer Thames Estuary SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														151.28	151.41	178.93	d	d	d	d	d	b	d	d	d	d	d	d
Liverpool Bay / Bae Lerpwl SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														261.75	187.48	222.38	d	d	d	d	d	b	d	d	d	d	d	d
Morecambe Bay and Duddon Estuary SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														241.15	168.22	202.60	d	d	d	d	d	b	d	d	d	d	d	d
Northumbria Coast SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														156.20	102.64	125.07	d	d	d	d	d	b	d	d	d	d	d	d
The Wash SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active														117.47	103.31	107.12	d	d	d	d	d	b	d	d	d	d	d	d

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Construction
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Project	Data Source(s)	Data Confidence Assessment	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)											Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users					
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029															2030	2031-2050			
Minsmere-Walberswick SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															184.91	184.93	207.41	d	d	d	d	d	b	d	d	d	d	d	d	d
The Dee Estuary SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															281.56	205.66	239.33	d	d	d	d	d	b	d	d	d	d	d	d	d
Breydon Water SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															154.71	154.82	180.22	d	d	d	d	d	b	d	d	d	d	d	d	d
Teesmouth and Cleveland Coast SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															138.80	84.46	106.94	d	d	d	d	d	b	d	d	d	d	d	d	d
Humber Estuary SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															78.00	32.21	48.06	d	d	d	d	d	b	d	d	d	d	d	d	d
Coquet Island SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															204.30	167.75	183.76	d	d	d	d	d	b	d	d	d	d	d	d	d
Farne Islands SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															228.20	198.25	211.74	d	d	d	d	d	b	d	d	d	d	d	d	d
Ribble and Alt Estuaries SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															249.92	173.86	208.89	d	d	d	d	d	b	d	d	d	d	d	d	d
Mersey Narrows and North Wirral Foreshore SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															272.44	196.06	230.55	d	d	d	d	d	b	d	d	d	d	d	d	d
Gibraltar Point SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															114.00	100.09	104.09	d	d	d	d	d	b	d	d	d	d	d	d	d
Mersey Estuary SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															259.38	183.43	217.17	d	d	d	d	d	b	d	d	d	d	d	d	d
North Norfolk Coast SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															113.72	110.81	119.84	d	d	d	d	d	b	d	d	d	d	d	d	d
Northumberland Marine SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															187.30	144.20	162.81	d	d	d	d	d	b	d	d	d	d	d	d	d
Greater Wash SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															63.38	0.35	21.80	d	d	d	d	d	b	d	d	d	d	d	d	d
Flamborough and Filey Coast SPA	Joint Nature Conservation Committee	High - Third party project details published in the public domain and confirmed as being 'accurate' by the JNCC.	Active															66.80	2.50	23.96	d	d	d	d	d	b	d	d	d	d	d	d	d
Europe																																	
Klaverbank SAC/SCI	Natura 2000 - European Environment Agency	High - Third party project details published in the public domain and confirmed as being 'accurate' by European Environment Agency.	Active															86.47	102.35	156.25	d	d	d	d	d	b	d	d	d	d	d	d	d
Friese Front SPA	Natura 2000 - European Environment Agency	High - Third party project details published in the public domain and confirmed as being 'accurate' by European Environment Agency.	Active															180.67	194.15	251.09	d	d	d	d	d	b	d	d	d	d	d	d	d

Hornsea 4

Volume A4, Annex 5.3: Offshore Cumulative Effects: Assessment Matrices - Designated Sites



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Construction Period (red outline denotes the offshore construction period for Hornsea Four)

Project	Data Source(s)	Data Confidence Assessment	Status of Development	Construction Period (red outline denotes the offshore construction period for Hornsea Four)													Distance from the Hornsea Four Array Area (km)	Distance from the Hornsea Four Offshore Export Cable Corridor (km)	Distance from the Hornsea Four offshore HVAC Booster Station Area (km)	Marine Geology, Oceanography and Physical Processes	Benthic and Intertidal Ecology	Fish and Shellfish Ecology	Marine Mammals	Offshore and Intertidal Ornithology	Commercial Fisheries	Shipping and Navigation	Aviation and Radar	Marine Archaeology	Seascape and Visual Resources	Infrastructure and Other Users	
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031-2050															
Doggersbank SAC/SCI	Natura 2000 - European Environment Agency	High - Third party project details published in the public domain and confirmed as being 'accurate' by European Environment Agency.	Active														89.15	106.13	156.59	d	d	d	d	d	b	d	d	d	d	d	d