DOGGER BANK D
WIND FARM
Preliminary Environmental Information Report

Volume 1
Chapter 6 Environmental Impact Assessment Methodology

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Glossary

Term	Definition
Additional Mitigation	Measures identified through the EIA process that are required as further action to avoid, prevent, reduce or, if possible, offset likely significant adverse effects to acceptable levels (also known as secondary (foreseeable) mitigation). All additional mitigation measures adopted by the Project are provided in the Commitments Register.
Commitment	Refers to any Embedded Mitigation and Additional Mitigation, enhancement or monitoring measures identified through the EIA process and those identified outside the EIA process such as through stakeholder engagement and design evolution. All commitments adopted by the Project are provided in the Commitments Register.
Design	All of the decisions that shape a development throughout its design and pre-construction, construction / commissioning, operation and, where relevant, decommissioning phases.
Deemed Marine Licence (dML)	A consent required under the Marine and Coastal Access Act 2009 for certain activities undertaken within the UK marine area, which may be granted as part of the Development Consent Order.
Development Consent Order (DCO)	A consent required under Section 37 of the Planning Act 2008 to authorise the development of a Nationally Significant Infrastructure Project, which is granted by the relevant Secretary of State following an application to the Planning Inspectorate.
Effect	An effect is the consequence of an impact when considered in combination with the receptor's sensitivity / value / importance, defined in terms of significance.
Embedded Mitigation	Embedded mitigation includes: • Measures that form an inherent part of the project design evolution such as modifications to the location or design of the development made during the pre-application phase (also known as primary (inherent) mitigation); and • Measures that will occur regardless of the EIA process as they are imposed by other existing legislative requirements or are considered as standard or best practice to manage commonly occurring environmental impacts (also known as tertiary (inexorable) mitigation). All embedded mitigation measures adopted by the Project are provided in the Commitments Register.
Enhancement	Measures committed to by the Project to create or enhance positive benefits to the environment or communities, as a result of the project. All enhancement measures adopted by the Project are provided in the Commitments Register.

Term	Definition
Environmental Impact Assessment (EIA)	A 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 and includes the publication of an Environmental Statement.
Environmental Statement (ES)	A document reporting the findings of the EIA which describes the measures proposed to mitigate any likely significant effects.
Evidence Plan Process (EPP)	A voluntary consultation process with technical stakeholders which includes a Steering Group and Expert Topic Group (ETG) meetings to encourage upfront agreement on the nature, volume and range of supporting evidence required to inform the EIA and HRA process.
Expert Topic Group (ETG)	A forum for targeted technical engagement with relevant stakeholders through the EPP.
Impact	A change resulting from an activity associated with the Project, defined in terms of magnitude.
Mitigation	Any action or process designed to avoid, prevent, reduce or, if possible, offset potentially significant adverse effects of a development. All mitigation measures adopted by the Project are provided in the Commitments Register.
Monitoring	Measures to ensure the systematic and ongoing collection, analysis and evaluation of data related to the implementation and performance of a development. Monitoring can be undertaken to monitor conditions in the future to verify any environmental effects identified by the EIA, the effectiveness of mitigation or enhancement measures or ensure remedial action are taken should adverse effects above a set threshold occur. All monitoring measures adopted by the Project are provided in the Commitments Register.
Project Design Envelope	A range of design parameters defined where appropriate to enable the identification and assessment of likely significant effects arising from a project's worst-case scenario. The Project Design Envelope incorporates flexibility and addresses uncertainty in the DCO application and will be further refined during the EIA process.
Scoping Opinion	A written opinion issued by the Planning Inspectorate on behalf of the Secretary of State regarding the scope and level of detail of the information to be provided in the Applicant's Environmental Statement. The Scoping Opinion for the Project was adopted by the Secretary of State on 02 August 2024.

Term	Definition
Scoping Report	A request by the Applicant made to the Planning Inspectorate for a Scoping Opinion on behalf of the Secretary of State. The Scoping Report for the Project was submitted to the Secretary of State on 24 June 2024.
Study Areas	A geographical area and / or temporal limit defined for each EIA topic to identify sensitive receptors and assess the relevant likely significant effects.
The Applicant	SSE Renewables and Equinor acting through 'Doggerbank Offshore Wind Farm Project 4 Projco Limited'.
The Project	Dogger Bank D (DBD) Offshore Wind Farm Project, also referred to as DBD in this PEIR.

6 Environmental Impact Assessment Methodology

6.1 Introduction

1. This chapter of the Preliminary Environmental Information Report (PEIR) describes the approach and methodology of the Environmental Impact Assessment (EIA) for the proposed Dogger Bank D Offshore Wind Farm (hereafter 'the Project' or 'DBD').

2. The EIA considers topics within the following categories:

   - Offshore topics;
   - Onshore topics; and
   - Project-wide topics.

3. The EIA presented in this PEIR has been carried out in accordance with the Planning Act 2008 and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the EIA Regulations). The approach to EIA and EIA Methodology has been developed with reference to relevant guidance and policy detailed in this chapter.

4. This PEIR has been developed to include the information reasonably required to enable an assessment of the relevant EIA topics identified in the Project's EIA Scoping Report (Royal HaskoningDHV, 2024). It provides a preliminary assessment of the likely significant environmental effects of the Project using information available at the time of drafting. It has been compiled as a draft Environmental Statement (ES) and includes a full impact assessment for each EIA topic as far as possible and where data is sufficient. Information gaps and other limitations and assumptions are clearly documented within the relevant chapters.

6.1.1 Requirement for an Environmental Impact Assessment

5. The requirement for an EIA originates from the European Union (EU) Directive 2014/52/EU as transposed into English law for Nationally Significant Infrastructure Projects (NSIP) by the EIA Regulations.

6. The Project is classed as a NSIP and therefore an EIA is required to assess the likely significant environmental effects of the Project throughout its construction, operation and maintenance, and decommissioning phases. The process also enables the identification of mitigation measures to avoid, prevent and, if possible, offset effects where required.

7. Regulation 5 (2) of the EIA Regulations, requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors shown in **Table 6-1**.

Table 6-1 Regulation 5 (2) of the EIA Regulations and Relevant PEIR Chapter

Regulation 5 (2) Requirement for the EIA to describe and assess in an appropriate manner…	**Where this is Addressed within the PEIR**
(a) population and human health	Chapter 29 Human Health
(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC M1 and Directive 2009/147/EC M2	Chapter 10 Benthic and Intertidal Ecology Chapter 11 Fish and Selfish Ecology Chapter 12 Marine Mammals Chapter 13 Offshore and Intertidal Ornithology Chapter 23 Onshore Ecology and Ornithology
(c) land, soil, water, air and climate;	Chapter 19 Geology and Ground Conditions Chapter 20 Air Quality and Dust Chapter 21 Water Resources and Flood Risk Chapter 22 Soils and Land Use Chapter 31 Climate Change
(d) material assets, cultural heritage and the landscape	Chapter 24 Onshore Archaeology and Cultural Heritage Chapter 27 Landscape and Visual Impact
(e) the interaction between the factors referred to in sub-paragraphs (a) to (d)	Interactions are assessed where relevant within each of the PEIR chapters listed above

8. The primary purpose of this PEIR is to support the statutory consultation activities required for a Development Consent Order (DCO) application under the Planning Act 2008. The feedback from statutory consultation will be used to inform the final project design where appropriate and will be presented in the Environmental Statement (ES), which will be submitted with the DCO application.

9. The EIA process will take into account feedback received from the statutory consultation on this PEIR, as required by Sections 42, 47, 48 and 49 of the Planning Act 2008, and ongoing stakeholder engagement.

10. The ES will be developed with consideration to consultation feedback and incorporate further engineering and environmental information where this becomes available. The ES will be submitted to the Planning Inspectorate in support of the application for development consent to inform decision-makers of likely significant effects associated with the final project design envelope for which consent is being sought.

11. Regulation 14 and Schedule 4 of the EIA Regulations state the required information for inclusion in the ES, which includes a description of the location and characteristics of the development (see **Chapter 4 Project Description**). The ES should also provide a description of reasonable alternatives and the environmental baseline and consideration of the effects on the factors outlined in the Regulations.

12. **Table 6-2** outlines the requirements of Regulation 14 of the EIA Regulations, which sets out the requirements of an ES, and details where these are addressed within the PEIR.

Table 6-2 Regulation 14 of the EIA Regulations Requirements and Where this is Addressed in the PEIR

Regulation 14 Requirement	Where this is Addressed within the PEIR
(2) An environmental statement is a statement which includes at least— (a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development; (b) a description of the likely significant effects of the proposed development on the environment; (c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment; (d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment; (e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); and (f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.	Chapter 4 Project Description Chapter 5 Site Selection and Consideration of Alternatives All technical chapters contain a description of likely significant effects. A non-technical summary will be provided alongside the PEIR.
(3) The environmental statement [referred to in paragraph (1)] must— (a) where a scoping opinion has been adopted, be based on the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion); (b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment; and (c) be prepared, taking into account the results of any relevant UK environmental assessment, which is reasonably available to the applicant with a view to avoiding duplication of assessment.	Chapter 6 Environmental Impact Assessment Methodology Each technical chapter will contain an appendix detailing the Consultation Responses to stakeholder comments related to the chapter. All technical chapters detail the information reasonably required to reach a conclusion and describe the assessment methodology.
(4) In order to ensure the completeness and quality of the environmental statement— (a) the applicant must ensure that the environmental statement is prepared by competent experts; and (b) the environmental statement must be accompanied by a statement from the applicant outlining the relevant expertise or qualifications of such experts.	Chapter 6 Environmental Impact Assessment Methodology

13. **Table 6-3** outlines the requirements of the EIA Regulations (Schedule 4 (5)) to consider the sources of likely significant effects from the Project on the environment and where these are being considered within PEIR.

Table 6-3 Schedule 4 (5) of the EIA Regulations Requirements and Where This is Addressed in the PEIR

Schedule 4 Paragraph	A Description of the Likely Significant Effects of the Development on the Environment Resulting from, inter alia:	Where this is Addressed within the PEIR
5(a)	Construction and existence of the development, including, where relevant, demolition works	Chapter 4 Project Description The project description chapter provides an overview of the key infrastructure components and construction, operation and decommissioning activities. All technical chapters cover the likely significant effects associated with construction, operation and decommissioning activities.

Schedule 4 Paragraph	A Description of the Likely Significant Effects of the Development on the Environment Resulting from, inter alia:	Where this is Addressed within the PEIR
5(b)	Use of natural resources, in particular…	
	Land and soil	Chapter 5 Site Selection and Consideration of Alternatives Chapter 19 Geology and Ground Conditions Chapter 22 Soils and Land Use Chapter 29 Human Health
	Water	Chapter 21 Water Resources and Flood Risk Chapter 23 Onshore Ecology and Ornithology Chapter 29 Human Health
	Biodiversity	Chapter 10 Benthic and Intertidal Ecology Chapter 11 Fish and Shellfish Ecology Chapter 12 Marine Mammals Chapter 13 Intertidal and Offshore Ornithology Chapter 23 Onshore Ecology and Ornithology
5(c)	Emissions of…	
	Pollutants	Chapter 9 Marine Water and Sediment Quality Chapter 10 Benthic and Intertidal Ecology Chapter 11 Fish and Shellfish Ecology Chapter 12 Marine Mammals Chapter 13 Intertidal and Offshore Ornithology Chapter 19 Geology and Ground Conditions Chapter 20 Air Quality and Dust Chapter 21 Water Resources and Flood Risk Chapter 23 Onshore Ecology, Ornithology and Nature Conservation Chapter 29 Human Health

Schedule 4 Paragraph	A Description of the Likely Significant Effects of the Development on the Environment Resulting from, inter alia:	Where this is Addressed within the PEIR
5(d)	Noise and vibration	Chapter 10 Benthic and Intertidal Ecology Chapter 11 Fish and Shellfish Ecology Chapter 12 Marine Mammals Chapter 13 Intertidal and Offshore Ornithology Chapter 23 Onshore Ecology, Ornithology and Nature Conservation Chapter 25 Noise and Vibration Chapter 29 Human Health
	Light	Chapter 23 Onshore Ecology, Ornithology and Nature Conservation Chapter 27 Landscape and Visual Impact
	Heat and radiation	Chapter 10 Benthic and Intertidal Ecology Chapter 11 Fish and Shellfish Ecology Chapter 12 Marine Mammals Chapter 22 Soils and Land Use Chapter 29 Human Health
	Creation of nuisances	Covered through other topics such as air quality and noise and vibration.
	Disposal and recovery of waste	Chapter 19 Geology and Ground Conditions (Volume 2, Appendix 19.3 Waste Assessment)
	Risks to…	
	Human health	Chapter 14 Commercial Fisheries Chapter 15 Shipping and Navigation Chapter 16 Aviation, Radar and Miliary Chapter 18 Other Marine Users Chapter 19 Geology and Ground Conditions Chapter 20 Air Quality and Dust Chapter 21 Water Resources and Flood Risk Chapter 22 Soils and Land Use

Schedule 4 Paragraph	A Description of the Likely Significant Effects of the Development on the Environment Resulting from, inter alia:	Where this is Addressed within the PEIR
		Chapter 25 Noise and Vibration Chapter 26 Traffic and Transport Chapter 28 Major Accidents and Disasters Chapter 29 Human Health Chapter 30 Socio-Economics, Tourism and Recreation Chapter 31 Climate Change
	Cultural heritage	Chapter 17 Offshore Archaeology and Cultural Heritage Chapter 24 Onshore Archaeology and Cultural Heritage
	The environment (for example due to accidents or disasters)	Chapter 9 Marine Water and Sediment Quality Chapter 15 Shipping and Navigation Chapter 19 Geology and Ground Conditions Chapter 21 Water Resources and Flood Risk Chapter 26 Traffic and Transport Chapter 28 Major Accidents and Disasters
5(e)	Cumulation of effects with other existing and / or approved projects	All technical chapters cover cumulative effects where relevant.
5(f)	The impact of the Project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the Project to climate change	Chapter 31 Climate Change
5(g)	The technologies and the substances used	Chapter 4 Project Description

6.1.2 Consultation on the Environmental Impact Assessment Methodology

14. The EIA methodology has been informed by consultation with the Planning Inspectorate and other stakeholders through the preparation and publication of the EIA Scoping Report (Royal HaskoningDHV, 2024), and the responses received in the Scoping Opinion published on 2nd August 2024 (Planning Inspectorate, 2024a). Further details on ongoing technical consultation which informs the EIA methodology are described in **Section 6.2.4.2.1** and **Chapter 7 Consultation**.

15. Details of the comments from consultees and the Applicant's responses, including those from the Scoping Opinion, are included in **Volume 2, Appendix 6.1 Consultation Responses for Environmental Impact Assessment Methodology**.

6.2 Approach to Environmental Impact Assessment

6.2.1 Overview

16. The EIA is being undertaken in accordance the EIA Regulations; the process is summarised in **Plate 6-1**. Engagement with stakeholders is an ongoing process throughout all stages of the EIA. Due to the nature, size and location of the Project, the initial screening to determine the need for an EIA was not undertaken as the requirement for EIA is outlined in the EIA Regulations.

17. Relevant documents, guidance and policy that have been used to inform the approach to EIA and the methodology include:

- The Planning Inspectorate's Advice Notes;
- National Policy Statements (NPS);
- Relevant governmental and non-governmental organisations guidance;
- Topic-specific guidance; and
- Receptor-specific guidance.

18. Specific guidance, policy and best practice documents are listed in **Appendix A.** Details of policy and legislation relevant to the EIA methodology and production of the ES and DCO documents are detailed in **Chapter 3 Policy and Legislative Context**.

19. The technical assessments within the PEIR have been carried out using the general approach set out in this chapter (**Section 6.3**). Where required, this approach has been tailored to appropriately address topic-specific requirements. Topic-specific requirements are detailed in the relevant technical chapter (**Chapter 8 Marine Physical Processes** to **Chapter 31 Climate Change**).

Plate 6-1 Overview of the Stages of the EIA

6.2.2 Competent Experts

20. In accordance with Regulation 14(3) of EIA Regulations, EIAs must be prepared by 'competent experts', with details of the competency to be provided. Confirmation as to the expertise or relevant qualifications of experts will be provided within the associated chapters in order to provide a complete assessment of high quality. The EIA team predominantly consists of Royal HaskoningDHV's professional consultants**.**

21. Royal HaskoningDHV has experience in providing environmental consenting support to over 30 offshore wind projects in the UK, helping the successful consenting of over 18.5GW of renewable energy.

22. Royal HaskoningDHV's EIA activities are accredited under the Institute of Environmental Management and Assessment (IEMA) EIA Quality Mark Scheme, which demonstrates a commitment to delivering high quality EIA in accordance with best practice. Royal HaskoningDHV's lead authors are senior and chartered professionals with significant experience in the EIA process and their respective technical disciplines.

23. Royal HaskoningDHV is supported by specialist consultancies for a number of specific technical disciplines. Other consultancies contributing to the EIA and their competency are detailed in **Table 6-4.**

Table 6-4 Third Party Specialist Technical Chapter Authors in the PEIR

Chapter	Consultancy	Competency
Offshore and Intertidal Ornithology	APEM	APEM is a consultancy with experience in offshore ornithology and EIA across a range of projects, including offshore wind.
Commercial Fisheries	NiMa	NiMa is a marine environmental consultancy providing advice to the offshore renewables and commercial fisheries sectors, with experience of a large number of relevant projects.
Shipping and Navigation	Anatec	Anatec is a leader in risk-based decision making with extensive experience in the offshore wind industry, providing experience to the shipping and navigation topic and Navigation Risk Assessments.
Aviation, Radar and Military	Cyrrus	Cyrrus has extensive experience in the aviation and renewable energy industries, working with airports across Europe and the Middle East, and wind energy developers in the UK and the Republic of Ireland.
Landscape and Visual Impact	LUC	LUC is a planning, impact assessment, landscape design, ecology and geospatial consultancy with expertise across a broad cross-section of environmental disciplines.

Chapter	Consultancy	Competency
Human Health	RPS	RPS is an internationally recognised and leading health impact assessment service provider with a catalogue of project experience encompassing road, rail and airport infrastructure, waste management, grid connections, windfarms, and oil and gas projects.
Socio-Economics, Tourism and Recreation	BiGGAR Economics	BiGGAR Economics is a leading independent economic consultancy providing economic analysis and advice across a range of projects.
NB This is not an exhaustive list of all consultancies contributing to the PEIR but a list of those consultancies with responsibility for authoring PEIR chapters.		

6.2.3 Delivering Proportionate Environmental Impact Assessment

24. IEMA highlights that many EIAs become unfocused due to the consideration of every conceivable impact as opposed to only those that are likely to result in significant effects, making them excessively long and inaccessible (IEMA, 2017). Delivering a proportionate EIA is the ultimate requirement of the EIA Regulations, and enables the Examining Authority and other consultees to reach a reasoned conclusion on the Project's likely significant effects and decisions on the DCO application.

25. The Planning Inspectorate's Advice Note (Planning Inspectorate, 2024b) on the Preparation and Submission of Application Documents states the need for applicants to "*think about the amount of information needed in their documents and data to comply with legislation, policy, case law and guidance*" and that "*duplicative and unnecessary content should be avoided*", highlighting the importance of clarity. The guidance also states the ES should be "*proportionate to the features of the proposed development and the sensitivity of the receiving environment.*"

26. The Planning Inspectorate's Advice Note Seven (Planning Inspectorate, 2020) considers the role of preliminary environmental information and how it informs consultation, noting that it is the choice of the Applicant on how the PEIR is presented: *"There is no prescribed format as to what PEI should comprise and it is not expected to replicate or be a draft of the ES"*. However, *"a good PEI document is one that enables consultees (both specialist and non-specialist) to understand the likely effects of the proposed development and helps to inform their consultation responses on the proposed development during the pre-application stage*."

27. The Annex to the Planning Inspectorate's Advice Note Seven, "Presentation of the Environmental Statement" (Planning Inspectorate, 2017) states that the Planning Inspectorate "*expects that the ES should be balanced, with greater prominence being given to impacts more likely to generate significant effects. Where few or no impacts are identified, the relevant aspect chapter may be more concise in its findings.*"

28. To integrate proportionality into the EIA approach, the Project has developed and adopted the following tools and approaches:

- Effective Scoping and Ongoing Technical Consultation (**Section 6.2.4.2.1**);
- Use of Existing Evidence Base (**Section 6.2.4.2.2**); and
- Implementation of the Impacts Register (**Section 6.2.4.2.3**) and Commitments Register (**Section 6.2.4.3.4**).

6.2.4 Basis of the Assessment

29. This section sets out the underlying approach on how the assessment of likely significant effects has been undertaken within this PEIR (referred to as the "basis of the assessment") and corresponds to the structure provided in each technical chapter. An illustration of how the basis of the assessment feeds into the EIA process (see **Section 6.3)** is shown on **Plate 6-2**.

30. Where the basis of the assessment has been tailored to appropriately address topic-specific requirements, this will be documented within the corresponding technical chapter.

6.2.4.1 Topic-Specific Study Areas

31. Study Areas relevant to each topic have been defined at the relevant spatial and / or temporal scale within each technical chapter and may be provided on an impact-by-impact or receptor-by-receptor basis. This has been determined by factors including the distribution of receptors, the footprint of potential impacts, and various administrative and management boundaries. Where possible, these have been agreed through the technical consultation process with the relevant stakeholders (see **Section 6.2.4.2.1**).

6.2.4.2 Scope of the Assessment and Impacts Register

32. The following section outlines the tools and approaches that the Project have undertaken to ensure the scope of technical assessments in the EIA have been defined in a proportionate manner.

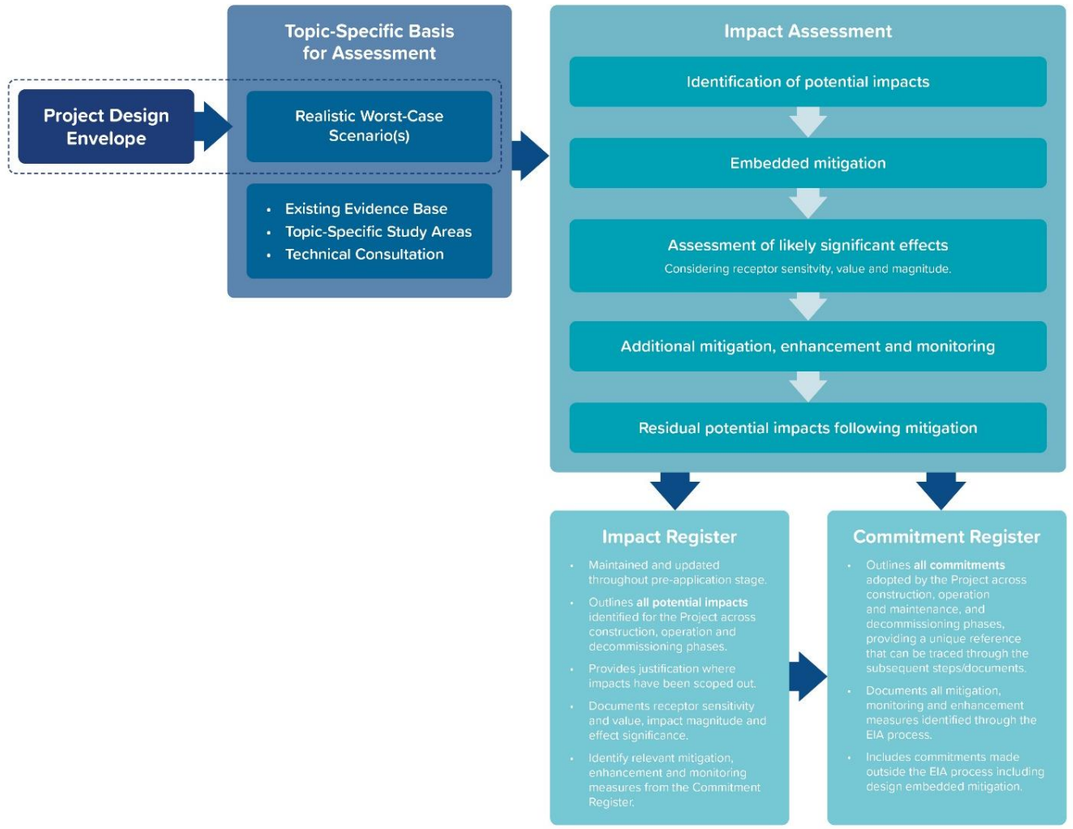

Plate 6-2 Basis of the Assessment and EIA Process

6.2.4.2.1 Technical Consultation

33. Scoping is a preliminary step in the EIA process to identify the relevant topics and associated impacts that require assessment and the level of detail that should be presented in the PEIR and ES. Effective scoping allows for early identification of the key environmental issues in consultation with the Planning Inspectorate and regulatory consultees and to define the EIA scope.

34. On 24th June 2024, the Applicant submitted an EIA Scoping Report to the Planning Inspectorate, which described the proposed scope and methodology of technical assessments to be included in the EIA. The EIA Scoping Report provided justification and evidence to scope out topics and impacts that are unlikely to give rise to significant effects. A Scoping Opinion was provided by the Planning Inspectorate on 2nd August 2024, which has informed the EIA process and technical assessments presented within this PEIR.

35. The Applicant has also adopted the Evidence Plan Process (EPP), a voluntary technical consultation process to discuss and agree with key stakeholders via Expert Topic Groups (ETG) the evidential requirements of the EIA (see **Chapter 7 Consultation** for further details). Through ongoing dialogue with stakeholders, the EPP facilitates wider project understanding and encourages upfront agreement on the scope of the EIA, the information that will be presented in the PEIR and ES. Where the Scoping Opinion notes that there was not a reasonable degree of confidence to scope out a topic and / or impact, further discussions, and provision of evidence via the EPP were undertaken to agree refinements to the EIA scope where appropriate and justifiable.

36. Topic-specific consultation via the EPP has informed the EIA process, including through the circulation of method statements and the provision of feedback and agreement from stakeholders via agreement logs (further details on the EPP process will be submitted as part of the DCO application). The consultation appendices to each technical chapter provide details of comments received via the EPP to date.

37. Further consultation under the EPP will be undertaken throughout the pre-application phase of the Project.

6.2.4.2.2 Existing Evidence Base

38. There is a substantial volume of existing data and knowledge relating to baseline conditions and technical assessments from other offshore wind projects in the area that are currently in the consenting process (e.g. Dogger Bank South) or have passed through the consenting process and are undertaking post-consent monitoring such as Dogger Bank A & B, and Hornsea Project Four.

39. Given the previous development experience within the Dogger Bank Zone, and in the East Riding of Yorkshire a proportionate approach to EIA will be undertaken drawing on existing information and data available.

40. The Project will utilise previous knowledge and data, including that from other projects where feasible (and updated where relevant), alongside data collected specifically for the Project.

41. The Project will draw on data from surveys and desk-based sources including from academic research, government and industry bodies, using the most recent publicly available information at the time of production of the PEIR to:

- Characterise the baseline environment within relevant technical chapters where data is considered to be suitable;
- Scope out specific impacts from detailed assessment where there is a clear evidence base for the absence of likely significant effects; and

- Inform the assessment of effects for impacts that are scoped into the EIA and the approach to mitigation and monitoring.

42. The approach of maximising the use of the existing evidence base increases efficiency in EIA delivery and supports proportionate assessments.

6.2.4.2.3 Impacts Register

43. To facilitate understanding of the technical scope of the EIA and ensure a proportionate approach, the Project has developed **Volume 2, Appendix 6.2 Impacts Register**, which will be maintained and updated throughout the pre-application stage and for the DCO application. The Impacts Register will provide the following functions:

- Outline all potential impacts identified for the Project across the construction, operation and decommissioning phases, providing a unique identification reference that can be traced through the subsequent steps / documents;
- Set the scope of each technical assessment in the EIA at scoping, PEIR and ES with appropriate justification where impacts have been scoped out, including references to agreements reached with stakeholders through the Scoping Opinion and the EPP;
- Document receptor sensitivity and value, impact magnitude and effect significance of each impact scoped in for assessment in the PEIR and ES; and
- Identify mitigation, enhancement and / or monitoring measures from the Commitments Register (see **Section 6.2.4.3.4**) that are relevant to an impact.

6.2.4.3 Mitigation, Enhancement, Monitoring and Commitments Register

6.2.4.3.1 Mitigation

44. The EIA Regulations require a description of the measures envisaged to avoid, prevent, reduce and, if possible, offset any significant adverse effects on the environment. Two types of mitigation have been defined:

- **Embedded Mitigation:** measures that form an inherent part of the project design and measures that would be implemented regardless of the EIA as a result of existing legislative requirements and standard or best practice; and
- **Additional Mitigation:** measures identified through the EIA process that are required as further action to avoid, prevent, reduce or, if possible, offset likely significant adverse effects.

45. As embedded mitigation would be incorporated into the Project design, impacts will be assessed with these measures in place. Where the assessment of effects identifies that an aspect of the development is likely to give rise to a significant adverse effect, additional mitigation measures will be proposed, and further assessment will be undertaken, incorporating all mitigation measures relevant to each identified potential impact.

46. The Implementing the Mitigation Hierarchy from Concept to Construction guidance document (IEMA, 2024) provides detail on the mitigation hierarchy, which includes a series of systematic steps to follow to avoid and minimise impacts. Mitigation should seek to first avoid, prevent, reduce, and finally offset impacts (as shown in **Plate 6-3**). Enhancement is not considered mitigation but rather runs alongside the hierarchy. As part of the EIA process, the approach to mitigation design will consider the mitigation hierarchy.

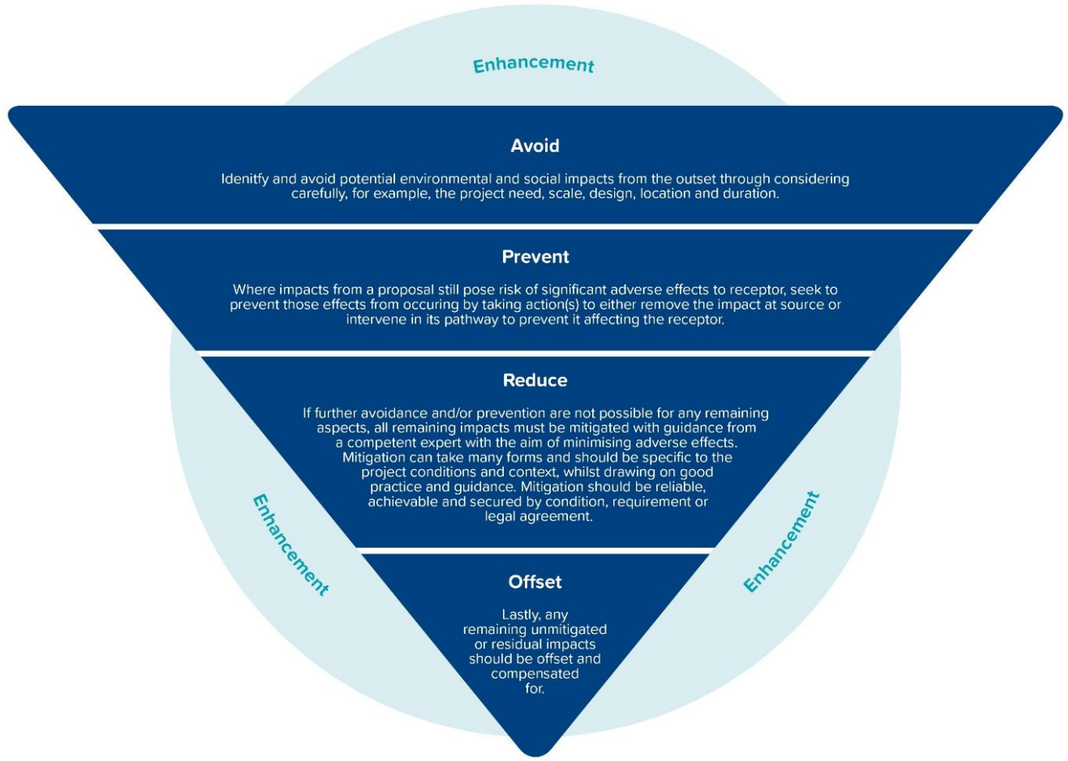

Plate 6-3 Mitigation Hierarchy (IEMA, 2024)

6.2.4.3.2 Enhancement

47. In addition to mitigation measures, the Project will also consider potential enhancement measures, where relevant and possible, to create or enhance positive benefits to the environment or communities. This includes enhancement measures to deliver Biodiversity Net Gain (BNG), noting that the delivery of terrestrial BNG is expected to become mandatory from November 2025 onwards for NSIPs.

6.2.4.3.3 Monitoring

48. In some circumstances, it may be necessary to specify monitoring measures. Monitoring may be required to verify an assumption made in the assessment of effects and the assessment conclusions, address specific assessment limitations, and / or confirm the efficacy of the proposed mitigation measures once implemented. Where the predicted residual effects in the EIA differ significantly from the actual monitored outcomes, remedial measures may be required to control the effect. Monitoring requirements should be proportionate and directly relevant to the findings of the assessment and / or relate to key uncertainties.

6.2.4.3.4 Commitments Register

49. All mitigation, monitoring and enhancement measures identified through EIA process will be documented in the draft Commitments Register (see **Volume 2, Appendix 6.3 Commitments Register**) and outlined in the relevant technical chapters within the PEIR. The Commitments Register will also include commitments outside of the EIA process such as those arising from stakeholder engagement and embedded mitigation.

50. The Commitments Register has been developed in accordance with the Planning Inspectorate's Advice Note on Commitments Registers (Planning Inspectorate, 2024j) and will serve the following purposes:

- Outline all commitments adopted by the Project across the construction, operation and maintenance, and decommissioning phases, providing a unique identification reference that can be traced through the subsequent steps / documents, including:
  - The commitment type and at which stage in the EIA process the commitment was identified (e.g. scoping, PEIR);
  - The project element (e.g. landfall), phase (e.g. pre-construction, construction) and EIA topic the commitment relates to;
  - Requirements for any ongoing monitoring; and
  - Details of how the commitment will be legally secured.
- Document commitments proposed by stakeholders and the Applicant's responses; and
- Track changes to commitments that have been made during the pre-application stage and the reasons for any changes made.

51. Indicative measures proposed to be included in outline management plans are outlined in the relevant technical chapters.

52. The Commitments Register will be maintained and updated through the pre-application stage and during the DCO application in response to ongoing stakeholder engagement and as more environmental and design information becomes available.

6.2.4.4 Project Design Envelope and Realistic Worst-Case Scenarios

53. The use of a design envelope approach (also known as the Rochdale Envelope) involves a range of parameters and methodologies to be defined, where appropriate, to enable the identification and assessment of likely significant environmental effects whilst retaining flexibility for future design decisions and refinements. This approach is commonly used in the consenting of offshore wind farms in the UK and further explained by the Planning Inspectorate in Advice Note Nine: Rochdale Envelope (Planning Inspectorate, 2018) and is referred to as the 'project design envelope' within the PEIR.

54. The EIA for the Project is based on a project design envelope which provides appropriate flexibility for the Applicant to address uncertainties throughout the consenting process, as some details of the Project may not be confirmed at the time of submission of the DCO application and may be dependent on factors to be confirmed post-consent. This flexibility prevents consents from being granted on a specific project design that may not be feasible or optimal by the time of construction.

55. The project design envelope is based on the Project's maximum and, where relevant, minimum design parameters and assumptions on the likely construction, operation and maintenance and decommissioning methodologies. The project design envelope is presented in **Chapter 4 Project Description**.

56. To avoid excessive conservatism, the parameters assessed within the technical chapters are not necessarily a combination of the maximum parameters for each infrastructure component. The technical chapters will draw on the project design envelope to define realistic worst-case scenarios based on the impact or receptor being assessed. If a combination of design parameters leads to a scenario that cannot realistically occur, the worst-case scenario taken forward would be adjusted such that it is practical and deliverable, allowing for a realistic assessment. This approach allows for a robust, meaningful and proportionate environmental assessment and ensures that any other scenarios considered within the project design envelope will have a less significant effect.

6.3 The Environmental Impact Assessment Process

6.3.1 Characterisation of the Baseline Environment

57. The characterisation of the baseline environment is required to understand the likely significant effects of the Project. The specific approach to establishing the characteristics of the baseline environment is set out in each technical chapter of this PEIR.

58. Within each technical chapter and their topic-specific Study Areas, the characterisation of the baseline environment follows the steps set out below:

- Review available information and document data sources;
- Review potential impacts that might be expected to arise from the development;
- Determine if the available data is sufficient and of adequate quality to make EIA judgments with reasonable confidence;
- If further data is required, gather additional data in a targeted manner, directed at answering key questions and filling important information gaps;
- Review all information gathered to ensure the baseline environment can be sufficiently characterised with adequate detail; and
- Identify the presence of relevant receptors within the Study Area.

59. Each technical chapter identifies the relevant receptors within the Study Area which may experience environmental changes resulting from the construction, operation and maintenance or decommissioning of the Project, considering both direct and indirect impacts.

60. Due to the preliminary nature of the PEIR, surveys to inform baseline characterisation may be ongoing, and only partial data may be available to inform technical assessments within the PEIR. Therefore, additional data may be required, and full survey data will be reported and used to inform technical assessments within the ES. Technical consultation will continue between PEIR and DCO application submission through the EPP to discuss final survey results and any updates required to the assessments set out in this PEIR.

6.3.1.1 Future Baseline

61. In addition to the characterisation of the baseline environment, future trends in baseline conditions are identified and incorporated as part of the assessment. Schedule 4 of the EIA Regulations also requires the consideration of the baseline evolution in the absence of the Project (the 'no development' scenario') based on available information.

62. Each technical chapter presents expected trends in baseline conditions over the Project's construction and operational lifespan to reflect natural changes in the baseline environment.

6.3.2 Assessment of Likely Significant Effects

63. The Project has the potential to create a number of impacts and effects on the environment. For the purposes of the PEIR, the definitions are as follows:

- **Impact:** An impact is a change resulting from an activity associated with the Project, defined in terms of magnitude; and
- **Effect:** An effect is the consequence of an impact when considered in combination with the receptor's sensitivity / value / importance, defined in terms of significance.

64. Assessments of effects are made using industry standards and guidance within each technical chapter and applying professional judgement from the extensive experience gained by our technical specialists from other projects.

65. A matrix approach has been adopted to provide consistency across EIA topics and provide a system of common tools and terms, as described in **Section 6.3.2.5**. Example definitions of impact identification, impact pathway, receptor sensitivity and value, impact magnitude and effect significance are provided below. These definitions will be tailored to each EIA topic and / or receptor and detailed fully within the corresponding technical chapter.

6.3.2.1 Impact Identification

66. Impacts are considered throughout all phases of the Project and can be classed as:

- Direct impacts related to the construction, operation and maintenance or decommissioning of the Project;
- Indirect impacts experienced by a receptor that is removed from the direct impact;
- Cumulative impacts occurring as a result of the Project in conjunction with other existing or planned developments (**Section 6.3.3**);
- Transboundary impacts which may occur when impacts from the Project affect the environment of another European Economic Area (EEA) member state (**Section 6.3.4**);
- Inter-relationships of impacts between EIA topics (**Section 6.3.5**); or
- Interactions between impacts within the same EIA topic where receptors are affected by multiple impacts acting together (**Section 6.3.5**).

67. All impacts identified through the EIA process will be documented in the Impacts Register (see **Section 6.2.4.2.3**) and outlined in the relevant technical chapters within the PEIR.

6.3.2.2 Impact Pathway

68. The assessment uses the conceptual 'source-pathway-receptor' model. By applying this model, the assessment identifies how potential impacts resulting from the Project's activities affect receptors within the receiving environment. The 'source-pathway-receptor' model is defined as follows:

- **Source** – the origin of a potential impact (e.g. an activity such as cable installation and the resulting impact such as the re-suspension of sediments);
- **Pathway** – the means by which a receptor is exposed to the impact (e.g. re-suspended sediment could settle and smother the seabed); and
- **Receptor** – the element of the receiving environment that is impacted, which could be an element of the physical, ecological, or human environment (e.g. species living on or in the seabed).

69. Technical assessments will use the 'source-pathway-receptor' model when describing potential impacts. However, for certain EIA topics, it may be appropriate to use other assessment models, which will be detailed within the relevant technical chapter.

6.3.2.3 Receptor Sensitivity and Value

70. The ability of a receptor to adapt to change, tolerate and / or recover from potential impacts is important in assessing its sensitivity to the impact being considered.

71. The overall receptor sensitivity is determined by considering the tolerance, adaptability and recoverability of the receptor. This is achieved through applying known research and collected information, coupled with previous experience and expert judgment.

72. For ecological receptors, tolerance could relate to short term changes in the physical environment. For human environment receptors, tolerance could relate to disruptions and displacement and therefore impacts on safety, quality of life and the economy. The duration required for recovery will also be an important consideration in determining receptor sensitivity.

73. Example definitions of receptor sensitivity are described in **Table 6-5**. Receptor sensitivity definitions vary between EIA topics; therefore, these are defined within each technical chapter with reference to relevant topic- and receptor-specific guidance.

Table 6-5 Example Definitions of Sensitivity

Sensitivity	Definition
High	The receptor has very limited capacity to avoid, adapt to or accommodate or recover from the impact.
Medium	The receptor has limited capacity to avoid, adapt to or accommodate or recover from the impact.
Low	The receptor has some tolerance to accommodate, adapt to or recover from the impact.
Negligible	The receptor is tolerant to and is able to accommodate or recover from the impact.

74. The value of a receptor may also be considered when determining receptor sensitivity. However, it should be noted that a receptor with high value does not necessarily equate to high sensitivity. For example, an Annex II species (under the Habitats Directive) would have a high value, but if it was highly tolerant of changes in its environment or had high recoverability, then its sensitivity should reflect these characteristics.

75. Receptor value considers whether, for example, the receptor is rare, has protected or threatened status or is regarded as locally, regionally, nationally or internationally important. For ecological receptors, value could be determined based on their role within ecosystem function.

76. Example definitions for receptor value are provided in **Table 6-6**. Receptor value definitions vary between EIA topics; therefore, these are defined within each technical chapter with reference to relevant topic- and receptor-specific guidance.

Table 6-6 Example Definitions of Value

Value	Definition
High	Internationally or nationally important.
Medium	Regionally important.
Low	Locally important or rare.
Negligible	Not considered to be important (for example common or widespread)

6.3.2.4 Assessment of Impact Magnitude

77. The magnitude and probability of an impact occurring will be determined through the consideration of the following factors:

- Scale or spatial extent (e.g. small-scale versus large-scale, or most of the population versus a few individuals);
- Duration (e.g. short term versus long term);
- Likelihood (e.g. unlikely versus likely);
- Frequency (e.g. intermittent versus continuous); and
- Nature of change relative to the baseline (e.g. fundamental, irreversible changes versus barely discernible, reversible changes, or adverse versus beneficial).

78. Example definitions for magnitude levels are described in **Table 6-7**. The definitions of magnitude will be clearly defined in each technical chapter within the context of the assessment and will be applicable only to that particular EIA topic. Reference will be made to the relevant topic- and receptor-specific guidance. For certain topics such as air quality and noise, the definitions for impact magnitude may be defined using standard threshold values based on relevant industry guidance or regulatory requirements.

Table 6-7 Example Definitions of Magnitude

Magnitude	Definition
High	Fundamental or irreversible changes to the receptor or to key characteristics of the receptor.
Medium	Considerable changes to most of the receptor and changes to key characteristics of the receptor
Low	Temporary changes to a minority of the receptor and limited changes to the receptor characteristics.
Negligible	Temporary changes over a short time period to a minority of the receptor and a slight alternation to key receptor characteristics.

6.3.2.5 Evaluation of Effect Significance

79. Once the receptor sensitivity and impact magnitude have been determined, the effect significance will be predicted by using quantitative or qualitative criteria, as appropriate, which will integrate information from both dimensions. Wherever possible, matrices such as that presented in **Table 6-8** will be used to support the evaluation of effect significance to maintain consistency throughout the EIA process and transparently illustrate how expert judgment has been applied.

Table 6-8 Example Effect Significance Matrix

		Adverse Effect				Beneficial Effect			
		Impact Magnitude							
		High	Medium	Low	Negligible	Negligible	Low	Medium	High
Receptor Sensitivity	High	Major	Major	Moderate	Minor	Minor	Moderate	Major	Major
	Medium	Major	Moderate	Minor	Minor	Minor	Minor	Moderate	Major
	Low	Moderate	Minor	Minor	Negligible	Negligible	Minor	Minor	Moderate
	Negligible	Minor	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Minor

80. Each technical chapter will consider best practice methodology based on the most current guidance, and may follow this rather than the matrix-based approach when considered more appropriate. In such cases, the topic-specific approach will be fully described and justified within the relevant technical chapter.

81. The effect significance can be considered to be major, moderate, minor or negligible and either of adverse or beneficial effect. It should be noted that 'no change' or 'no resultant effect' may be used where there is no impact or no pathway for an impact to affect a receptor, although in some instances, such impacts would have been scoped out prior to the assessment being undertaken.

82. In general, major and moderate adverse effects are deemed to be significant, and as such, may require additional mitigation. In certain circumstances, a moderate effect may not be considered significant, and in such circumstances, the assessor will clearly state a rationale. Moreover, whilst minor and negligible effects are not significant in their own right, these may still contribute to significant effects cumulatively or in-combination and will be taken forward to the Cumulative Effects Assessment (CEA) and in-combination assessments where appropriate (as described in **Sections 6.3.3** and **6.3.5**).

83. Where potential for significant effects is identified, additional mitigation measures will be proposed to avoid, prevent, reduce or, if possible, offset likely significant adverse effects to acceptable levels. Residual effects following the adoption of additional mitigation will then be assessed to conclude the residual effect significance.

84. Example definitions for effect significance are noted in **Table 6-9**. A description of how effect significance is evaluated, and the interpretation of significance levels will be provided within each technical chapter. This approach will ensure that the definitions of significance are transparent and relevant to each EIA topic under consideration.

Table 6-9 Example Definitions of Significance

Significance	Definition
Major	Large changes to the receptor condition which may be adverse or beneficial. This is likely to be at a national or population level and consideration to national and statutory objectives should be noted.
Moderate	Intermediate changes to the receptor condition which may be regionally important.
Minor	Small changes to the receptor condition which may be locally important.
Negligible	No changes to the receptor condition.

85. Following the evaluation of effect significance, the assessor may assign a confidence level to assist in the understanding of the judgment. This will be undertaken on a scale of high-medium-low whereby high confidence assessments are made on the basis of robust empirical evidence, medium confidence assessments are based on secondary research, and low confidence assessments are based on extrapolation and / or proxy data.

6.3.2.6 Assumptions and Limitations

86. Limitations associated with data used for the characterisation of the baseline environmental are set out within each technical chapter. Where information gaps exist, such as limited design information known at this stage, reasonable conservative assumptions have been made to inform the realistic worst-case scenarios assessed. Assumptions adopted in the assessment and their limitations are highlighted within the respective technical chapter.

87. Where practicable, limitations will continue to be addressed following the PEIR to ensure the ES submitted with the DCO application is as robust and accurate as possible. Addressing such limitations may be achieved through technical consultation with stakeholders through the EPP and / or undertaking data collection and surveys where necessary and proportionate.

6.3.3 Cumulative Effects Assessment Methodology

88. Cumulative effects are the result of the impacts of the Project acting in combination with the impacts of other existing, proposed and reasonably foreseeable plans and projects on receptors. This includes plans and projects that are not inherently considered as part of the baseline environment. A CEA is required under Schedule 4 of the EIA Regulations and is considered within the technical chapters where relevant.

6.3.3.1 Approach to the Assessment of Cumulative Effects

89. The Planning Inspectorate's Nationally Significant Infrastructure Projects – Advice Note Nine: Rochdale Envelope (The Planning Inspectorate, 2018), Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (The Planning Inspectorate, 2024c) and the Annex to Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements provide guidance on the CEA process in which a staged approach is recommended. The stages are as follows:

- Stage 1 Establishing the longlist - Identify proposed and existing developments within a reasonable maximum spatial area over which the Project can exert an influence (i.e. the Zone of Influence), encompassing both offshore and onshore developments.
- Stage 2 Establishing the shortlist - Refine the longlist by screening against a set of inclusion / exclusion criteria, covering temporal scope, the scale and nature of development and any other factors deemed relevant.
- Stage 3 Information gathering - Gather information on shortlisted developments relating to their design, location, programme and environmental assessments.
- Stage 4 Assessment - Undertake the CEA using available information.

90. Offshore technical chapters will also consider the Offshore Wind Marine Environmental Assessments: Best Practice Advance for Evidence and Data Standards within the CEA (Parker *et al.*, 2022). This guidance relates to the offshore wind marine environment and focuses on other DCO projects rather than projects consented via other regimes such as the Town and Country Planning Act 1990 or via Marine Licence under the Marine and Coastal Access Act 2009. For this reason, it is considered that Planning Inspectorate's tiered approach will be used as default for the CEA, and the Natural England guidance will be considered in relation to DCO projects for offshore wind and the marine environment. Therefore, this system has been used for the offshore technical chapters (**Chapter 8 Marine Physical Processes** to **Chapter 18 Other Marine Users**).

91. Further details of the methodology of the offshore and onshore CEA are contained within **Volume 2, Appendix 6.4 Cumulative Effects Screening Report – Offshore** and **Appendix 6.5 Cumulative Effects Screening Report – Onshore**. These appendices detail the long list of developments under consideration in the CEA and their status.

92. The longlist for the onshore and offshore CEA have been developed from a range of sources, with planning applications backdated five years prior to January 2025 considered in the PEIR.

93. Other projects can only be fully considered for CEA where there is sufficient detail to undertake a meaningful assessment. For projects not fully defined, a worst-case scenario may be used, although this may be qualitative and / or very high-level dependent on the information available.

94. The scope of the CEA will be established on a topic-by-topic basis and will correspond with the topic-specific Zone of Influence. Professional judgment will also be applied when deciding whether to include or exclude specific plans and projects from further assessment, which will be clearly recorded by the assessor. Any assumptions or limitations in relation to other plans and projects will also be documented.

95. Each plan or project will be considered on a case-by-case basis. Only plans and projects with potential for significant cumulative effects with the Project are taken forward to a detailed assessment. These plans or projects are screened based on the following criteria:

- There is potential that a pathway exists whereby an impact could have a cumulative effect on a receptor;
- The impact on a receptor from the Project and the plan or project in consideration has a spatial overlap (i.e. occurring over the same area);
- The impact on a receptor from the Project and the plan or project in consideration has a temporal overlap (e.g. occurring at the same time);
- There is sufficient information available on the plan or project in consideration and moderate to high data confidence to undertake a meaningful assessment; and
- There is some likelihood that the residual effect (i.e. after accounting for mitigation measures) of the Project could result in significant cumulative effects with the plan or project in consideration.

96. If significant cumulative effects are considered likely, technical chapters will consider receptor sensitivity, cumulative impact magnitude, cumulative effect significance and additional mitigation and residual cumulative effect. The CEA will be undertaken with the methodology defined in **Volume 2, Appendix 6.4 Cumulative Effects Screening Report – Offshore** and **Appendix 6.5 Cumulative Effects Screening Report – Onshore** which detail the approach to the CEA.

6.3.4 Transboundary Effects

97. The Espoo Convention requires assessments to consider transboundary impacts and that appropriate measures are implemented to prevent, reduce and control significant adverse transboundary environmental effects. As a signatory to the Espoo Convention, the UK has an obligation to engage with other EEA Member States where transboundary impacts may occur.

98. Regulation 32 (Development with significant transboundary effects) of the EIA Regulations sets out procedures to address issues associated with a development that may have a significant effect on the environment in another EEA Member State. The EIA Regulations state that the ES should include a description of transboundary likely significant effects. See **Chapter 3 Policy and Legislative Context** for further details on transboundary considerations.

99. Transboundary effects were considered in the EIA Scoping Report (DBD, 2024) and following this, the Planning Inspectorate provided a transboundary issues notification under Regulation 32, identifying Denmark, Belgium, Sweden, France, The Netherlands, Norway, Germany and Iceland as EEA Member States requiring notification due to potential for transboundary effects. Potential impacts identified include commercial fisheries, offshore ornithology, benthic and intertidal ecology, marine mammals, aviation and radar and existing infrastructure.

100. Transboundary effects are considered on a topic-by-topic basis for offshore and project-wide topics and are not relevant to onshore topics. Where transboundary effects have been screened out for offshore and project-wide topics, this is noted in the relevant technical chapter. Where relevant, a transboundary effect assessment has been included to identify the relevant receptor in the surrounding environment, the relevant EEA Member State(s), the likely impacts to result in transboundary effects and how these will be addressed, including mitigation requirements. Upon publication, the PEIR will be shared with the relevant transboundary consultees.

6.3.5 Inter-relationships and Effect Interactions

101. The assessment of effects will consider the potential for inter-relationships and effect Interactions on individual receptors. The objective is to identify where the accumulation of residual effects on a single receptor, and the relationship between those effects, gives rise to synergistic effects and the need for additional mitigation. When considering the potential for inter-relationships and effect interactions, it is assumed that any residual effect determined as ‘no change’ or ‘no resultant effect’ will not result in a significant in-combination effect. However, where a series of negligible or greater residual effects are identified, they are considered further.

102. For the purposes of this assessment, two types of in-combination effects have been identified:

- **Inter-relationships** are defined as effects arising from residual effects associated with different EIA topics acting together upon a single receptor or receptor group.
- **Interactions** are defined as effects arising from residual effects associated with different aspects of the same EIA topic acting together on a single receptor or receptor group.

103. Each technical chapter summarises potential inter-relationships with other EIA topics, where relevant, and where this is assessed in the PEIR.

104. Within the technical chapters, a screening exercise is undertaken to determine which effects have the potential to interact. An interaction assessment is then undertaken by receptor or receptor group for each potential synergistic effect screened into the assessment. When considering synergistic effects from interactions, it is assumed that the receptor sensitivity remains consistent, while the magnitude of different impacts is additive.

105. Interactions are assessed by development phase ("phase assessment") to see if multiple effects could increase the overall effect significance experienced by a single receptor or receptor group during each phase. Following from this, a lifetime assessment is undertaken which considers the potential for multiple effects to accumulate across the construction, operation and decommissioning phases and result in a greater effect on a single receptor or receptor group.

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List of Acronyms

Acronym	Definition
BNG	Biodiversity Net Gain
CEA	Cumulative Effects Assessment
DBD	Dogger Bank D
DCO	Development Consent Order
EEA	European Economic Area
EIA	Environmental Impact Assessment
EPP	Evidence Plan Process
ES	Environmental Statement
EU	European Union
IEMA	Institute of Environmental Management and Assessment
NPS	National Policy Statements
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report

Appendix A - Documents Used to Inform the EIA Methodology

Document
Planning Inspectorate Advice Notes
Nationally Significant Infrastructure Projects: Advice on the Preparation and Submission of Application Documents (Planning Inspectorate, 2024b)
Nationally Significant Infrastructure Projects: Advice on the Consultation Report (Planning Inspectorate, 2024c)
Nationally Significant Infrastructure Projects: Advice on working with public bodies in the infrastructure planning process (Planning Inspectorate, 2024d)
Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (Planning Inspectorate, 2020)
Nationally Significant Infrastructure Projects – Advice Note Nine: Rochdale Envelope (Planning Inspectorate, 2018a)
Nationally Significant Infrastructure Projects – Advice Note Fifteen: drafting Development Consent Orders (Planning Inspectorate, 2018b)
Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment (Planning Inspectorate, 2024e)
Nationally Significant Infrastructure Projects: Advice on Transboundary Impacts and Process (Planning Inspectorate, 2024f)
Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments (Planning Inspectorate, 2024g)
Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Planning Inspectorate, 2024h)
Nationally Significant Infrastructure Projects: Advice on EIA Notification and Consultation (Planning Inspectorate, 2024i)
Nationally Significant Infrastructure Projects: Commitments Register (Planning Inspectorate, 2024j)

Document
National Policy Statements
Overarching National Policy Statement for Energy (EN-1) (DESNZ, 2023a)
National Policy Statement for Renewable Energy Infrastructure (EN-3) (DESNZ, 2023b)
National Policy Statement for Electricity Networks Infrastructure (EN-5) (DESNZ, 2023c)
Offshore Wind Industry EIA Guidance Documents
Nature Conservation Considerations and Environmental Best Practice for Subsea Cables for English Inshore and UK Offshore Waters (Natural England and Joint Nature Conservation Committee (JNCC), 2022)
Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards. Phase I: Expectations for Pre-Application Baseline Data for Designated Nature Conservation and Landscape Receptors to Support Offshore Wind Applications (Parker *et al.*, 2022a)
Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards Phase II: Expectations for Pre-Application Engagement and Best Practice Advice for the Evidence Plan Process (Parker *et al.*, 2022b)
Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards Phase III: Expectations for Data Analysis and Presentation at Examination for Offshore Wind Applications (Parker *et al.*, 2022c)
Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards Phase IV: Expectations for Monitoring and Environmental Requirements at the Post-Consent Phase (Parker *et al.*, 2022d)
Best Practice Guidance for Developing Compensatory Measures in Relation to Marine Protected Areas (Defra, 2021)
Cumulative Impact Assessment Guidelines - Guiding Principles for Cumulative Impact Assessment in Offshore Wind Farms (RenewableUK, 2013)
Assessment of the Environmental Impact of Offshore Wind-Farms (OSPAR Commission, 2008)
Offshore Wind Farms: Guidance Note for Environmental Impact Assessment in Respect of Food and Environment Protection Act 1985 and Coastal Protection Act 1949 Requirements (Cefas, 2004)

Document
Professional EIA Guidance Documents
Guidelines for Environmental Impact Assessment (IEMA, 2004)
Guide to Shaping Quality Development (IEMA, 2015)
Guide to Delivering Quality Development (IEMA, 2016)
Delivering Proportionate EIA, A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice (IEMA, 2017)
Implementing the Mitigation Hierarchy from Concept to Construction (IEMA, 2024)