FIVE ESTUARIES
OFFSHORE WIND FARM

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ENVIRONMENTAL STATEMENT

VOLUME 6, PART 1, CHAPTER 3: EIA METHODOLOGY

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DEFINITION OF ACRONYMS

Term	Definition
BEIS	Department for Business, Energy and Industrial Strategy
BSI	British Standards Institute
CEA	Cumulative Effects Assessment
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CIEEM	Chartered Institute of Ecology and Environmental Management
COWRIE	Collaborative Offshore Wind Research into the Environment
DCO	Development Consent Order
dDCO	draft Development Consent Order
DESNZ	Department for Energy Security and Net Zero
DMRB	Design Manual for Roads and Bridges
ECC	Export Cable Corridor
EEA	European Economic Area
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
ES	Environmental Statement
HSE	Health and Safety Executive
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
LBBG	Lesser Black Backed Gull
LSE	Likely Significant Effect
MDS	Maximum Design Scenario
NRA	Navigation Risk Assessment
NSIP	Nationally Significant Infrastructure Project
OCSS	Offshore Coordination Support Scheme
OTNR	Offshore Transmission Network Review
OSP	Offshore Substation Platform
PEIR	Preliminary Environmental Information Report
PINS	The Planning Inspectorate
SoS	Secretary of State
UNECE	United Nations Economic Commission for Europe

3 ENVIRONMENTAL IMPACT ASSESSMENT METHODOLOGY

3.1 INTRODUCTION

3.1.1 This chapter, produced by GoBe Consultants, describes the assessment methodology used throughout the Environmental Impact Assessment (EIA) for the Five Estuaries Offshore Wind farm project (hereafter referred to as VE), on behalf of Five Estuaries Offshore Wind Farm Limited (the Applicant), to identify and evaluate the potential impacts associated with the development of VE. It outlines the overall assessment approach for determining the Likely Significant Effects (LSEs) of VE on the receiving environment. Information on topic-specific methodologies, including surveys, is presented within the methodological sections of the relevant chapters and/or supporting documents of this Environmental Statement (ES).

3.1.2 The EIA uses a systematic, evidence-based approach in order to evaluate and interpret the potential impacts and subsequent effects of the proposed development on sensitive physical, biological and human receptors. This document has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017[i] (EIA Regulations 2017), of relevance to Nationally Significant Infrastructure Projects (NSIPs), and the Marine Works (Environmental Impact Assessment) Regulations 2007[ii] (as amended). These regulations are collectively referred to as 'the EIA regulations', which require developers to provide a '*… description of the likely significant effects on the factors specified in regulation 5(2) [which] should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the developments*'[iii].

3.2 STATUTORY AND POLICY CONTEXT

3.2.1 EIA is a widely used tool for identifying the potential impacts of new developments and it is intended to provide decision-makers with an understanding of the probable environmental consequences of a proposed project and thereby facilitate the making of more environmentally sound decisions. Further detail on the need for EIA is set out in Volume 6, Part 1, Chapter 2: Policy and Legislation.

3.2.2 The EIA has been carried out in accordance with the aforementioned legislation and also draws upon a number of additional policy, guidance and best practice documents, which are described below:

- Planning Inspectorate (PINS) Advice Notes:
  - Advice Note Three: EIA Consultation and Notification (PINS, 2017a);

[i] https://www.legislation.gov.uk/uksi/2017/572/contents/made
[ii] https://www.legislation.gov.uk/uksi/2007/1518/contents/made
[iii] Schedule 4, paragraph 5 of the EIA Regulations 2017.

- Advice Note Seven: Environmental Impact Assessment Process, Preliminary Environmental Information and Environmental Statements (PINS, 2020b);
- Advice Note Nine: Rochdale Envelope (PINS, 2018);
- Advice Note Ten: Habitat Regulations Assessment relevant to Nationally Significant Infrastructure Projects (PINS, 2022);
- Advice Note Eleven: Working with public bodies in the infrastructure planning process (PINS, 2017c);
- Advice Note Twelve: Transboundary Impacts and Process (PINS, 2020c);
- Advice Note Seventeen: Cumulative Effects assessment (PINS, 2019); and
- Advice Note Eighteen: The Water Framework Directive (PINS, 2017d).

- National Policy Statements:
  - Overarching National Policy Statement for Energy (EN-1) (Department of Energy Security and Net Zero (DESNZ), 2023a);
  - National Policy Statement for Renewable Energy Infrastructure (EN-3) (DESNZ, 2023b); and
  - National Policy Statement for Electricity Networks Infrastructure (EN-5) (DESNZ, 2023c).
- Industry EIA Guidance Documents:
  - Assessment of the environmental impact of offshore wind farms (OSPAR, 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);
  - Guidelines for data acquisition to support marine environmental assessments of offshore renewable energy projects (Cefas, 2012).
  - Cumulative Impact Assessment Guidelines – Guiding Principles for Cumulative Impact Assessment in Offshore Wind Farms (RenewableUK, 2013);
  - Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards (Natural England, 2022); and

- Nature conservation considerations and environmental best practice for subsea cables for English Inshore and UK offshore waters (Natural England and JNCC, 2022).

- Professional EIA Guidance Documents
  - Guidelines for Environmental Impact Assessment (IEMA, 2004);
  - Guide to Shaping Quality Development (IEMA, 2016);
  - Delivering Proportionate EIA, a Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice (IEMA, 2017);
  - Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2019);
  - Guidelines for Landscape and Visual Impact Assessment 3 (Landscape Institute and IEMA, 2013);
  - Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation (IEMA, 2020a);
  - Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2017)
  - IEMA guide to: Materials and Waste in Environmental Impact Assessment Guidance for a proportionate approach (IEMA, 2020b);
  - Digital Impact Assessment A Primer for Embracing Innovation and Digital Working (IEMA, 2020c);
  - Major Accidents and Disasters in EIA: A Primer (IEMA, 2020d); and
  - Principles of Cultural Heritage Impact Assessment in the UK (IEMA, 2021).

3.2.3 Each technical assessment also refers to a range of specific guidance documents in order to frame and undertake their assessments, which is set out as appropriate within the topic-specific onshore and offshore ES chapters (Volume 6, Parts 2 and 3, respectively).

3.3 CONSULTATION

3.3.1 A draft EIA methodology was provided within the VE Scoping Report (VE OWFL, 2021). The feedback received within the Scoping Opinion (PINS, 2021) on the EIA methodology is provided in Table 3.1 together with how those comments have been addressed.

3.3.2 On receipt of the Scoping Opinion (PINS, 2021), agreement was sought with stakeholders on the scope of each of the technical topic assessments through consultation, including via the Evidence Plan process (see also Section 1.4).

3.3.3 An Approach to PEIR Position Paper was provided to stakeholders post-scoping for further comment and agreement for use in the PEIR.

3.3.4 A comprehensive account for all consultation undertaken to assist in the development of the project is included in Volume 5, Report 1: The Consultation Report.

Table 3.1: Summary of consultation relating to EIA methodology.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	The Inspectorate has set out in this Opinion where it has/ has not agreed to scope out certain aspects/ matters on the basis of the information available at this time. The Inspectorate is content that the receipt of a Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies to scope such aspects / matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects/ matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.	This is noted by the Applicant and further consultation of the scope of this EIA has been undertaken via the Evidence Plan process and one to one meetings with stakeholders. Where impacts have been scoped out from further consideration, a justification is provided within the relevant ES chapter.
Scoping Opinion (PINS, 2021)	Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured through the draft DCO (dDCO) requirements (or other suitably robust methods) and whether relevant consultation bodies agree on the adequacy of the measures proposed.	Paragraphs 1.4.18 to 1.4.21 present the Applicant's methodology to prevent/ minimise any significant effects throughout the EIA process. The Applicant can confirm that required measures will be secured in the DCO unless they will be separately secured by other legislation, as set out in Volume 9, Report 31: Schedule of Mitigation. In addition, impacts have been avoided and/ or minimised, where possible, through the design and site selection processes.

Scoping Opinion (PINS, 2021)	The Inspectorate recommends that in order to assist the decision-making process, the Applicant uses tables: > to demonstrate how the assessment has taken account of this Opinion; > to identify and collate the residual effects after mitigation for each of the aspect chapters, including the relevant interrelationships and cumulative effects; > to set out the proposed mitigation and/ or monitoring measures including cross-reference to the means of securing such measures (eg a dDCO requirement); > to describe any remedial measures that are identified as being necessary following monitoring; and > to identify where details are contained in the Habitats Regulations Assessment (HRA report) (where relevant), such as descriptions of National Site Network sites and their locations, together with any mitigation or compensation measures, that inform the findings of the ES.	The following sections provide confirmation that the Applicant has adopted the suggested approaches: > Each chapter presents the key matters raised in the Scoping Opinion; > Each chapter includes a summary table which confirms the residual effects for each effect and the mitigation required to determine the residual effect. Inter-related and cumulative effects are presented in each technical aspect chapter. > The proposed mitigation commitments are presented in Volume 9, Report 31: Schedule of Mitigation Route Map and Monitoring commitments, in Volume 9, Report 32: Offshore in Principle Monitoring Plan (IPMP) and Volume 9, Report 22: Outline Landscape and Ecological Management Plan. These measures re secured in the dDCO within the DCO Application. > As described in Section 1.6, the requirement for potential remedial measures will be detailed in the technical aspect chapters where monitoring is proposed; and > Where appropriate, the technical aspect chapters will sign-post to the details provided within the Habitat Regulation

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
		Assessment (Volume 5, Report 5.4: Report to Inform Appropriate Assessment and Report 5.5: Habitats Regulation Derogation).
Scoping Opinion (PINS, 2021)	Sector-specific NPSs are produced by the relevant Government Departments and set out national policy for NSIPs. They provide the framework within which the Examining Authority (ExA) will make their recommendation to the SoS and include the Government's objectives for the development of NSIPs. The NPSs may include environmental requirements for NSIPs, which Applicants should address within their ES. The designated NPSs relevant to the Proposed Development are the: > Overarching NPS For Energy (NPS EN-1); > NPS on Renewable Energy Infrastructure (NPS EN-3); and > NPS for Electricity Networks Infrastructure (NPS EN-5)." The Applicant should ensure that the revised requirements set out in any emerging or updated NPSs for energy infrastructure have been considered in the ES where relevant to the Proposed Development.	Confirmation of the relevant NPSs for VE is welcomed by the Applicant. The Applicant has sought to review all revised requirements in emerging and updated NPSs for energy infrastructure in each of the technical ES chapters. In addition, due regard to the updated NPSs is provided in Volume 6, Part 1, Chapter 2: Policy and Legislation.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	The Inspectorate considers that the Applicant should consider all NSIPs with zones of influence which overlap those of the Proposed Development.	This is noted and agreed by the Applicant. Volume 6, Part 1, Annex 3.1: Cumulative Effects presents the methodology for defining the long- and short lists of plans and projects considered cumulatively with VE and the resulting longlist.
Scoping Opinion (PINS, 2021)	The ES should include a description of the baseline scenario with and without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge. The ES should provide clear justification as to how the study areas reflect the zones of influence of the Proposed Development for each aspect of the environment covered and how receptors have been identified.	This is noted by the Applicant. Each technical aspect chapter presents a robust baseline characterisation of the environment, as described in Section 1.5. Each technical aspect chapter presents a clear justification of the how the study areas have been defined to encapsulate the zone of influence of VE on the relevant aspect receptors.
Scoping Opinion (PINS, 2021)	In light of the number of ongoing developments within the vicinity of the Proposed Development application site, the Applicant should clearly state which developments will be assumed to be under construction or operational as part of the future baseline.	As described in Section 1.7, all projects, plans and activities are allocated into 'tiers', reflecting their current status in the relevant planning process.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	The ES should contain the timescales upon which the surveys which underpin the technical assessments have been based. For clarity, this information should be provided either in the introductory chapters of the ES (with confirmation that these timescales apply to all chapters), or in each aspect chapter.	The details of any relevant project specific surveys are stated in each of the aspect chapters.
Scoping Opinion (PINS, 2021)	The Inspectorate expects the ES to include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters.	As described in in Section 1.6, the significance of an effect, either adverse or beneficial, is determined using a combination of the impact magnitude and receptor sensitivity. A matrix approach is used throughout the EIA to ensure a consistent and comparable approach. Where there is a departure from this methodology, then a detailed justification and methodology is provided within the aspect chapter.
Scoping Opinion (PINS, 2021)	The ES should provide detailed descriptions of the assessment methods used in each aspect chapter and include evidence of agreement with relevant stakeholders wherever possible. Where project specific changes have been made to the proposed methodologies or there are limitations with the approaches taken, these should also be explained in the ES.	As presented in Section 1.4, and each aspect chapter contains a methodology section which provides a detailed description of the assessment undertaken. In addition, each aspect chapter provides a description of main assumptions and limitations and the methodology taken to reduce the uncertainties and associated risks.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	The ES should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	
Scoping Opinion (PINS, 2021)	The Scoping Report refers to mitigation to be provided through various different plans which would be developed in the post-consent phase. These include a Cable Specification and Installation Plan (CSIP) and a Project Environmental Management Plan (PEMP). Where the ES relies on mitigation delivered through these plans to avoid significant effects on the environment, as a minimum an outline or 'in principle' version of the plans should be provided as part of the application documents.	Where there is detail available to identify specific mitigation measures required to minimise environmental risk these will be set out within the relevant chapter(s) and identified as an embedded mitigation measure or as additional mitigation. Where sufficient detail is available and the provision provides additional clarity then outline plans will be provided to support the DCO application. Where information is not available at the current time, suitable plans will be developed at the appropriate time for construction, operation and decommissioning. All specific plans, regardless of the provision of an outline plan, will be noted within the additional mitigation and secured in the DCO.
Scoping Opinion (PINS, 2021)	A reference list detailing the sources used for the descriptions and assessments must be included in the ES.	A reference list is provided within each document submitted in this ES.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	In some circumstances it will be appropriate for information to be kept confidential. For example, this may relate to personal information specifying the names and qualifications of those undertaking the assessments and / or the presence and locations of rare or sensitive species such as badgers, rare birds and plants where disturbance, damage, persecution or commercial exploitation may result from publication of the information. Where documents are intended to remain confidential the Applicant should provide these as separate documents with their confidential nature clearly indicated in the title and watermarked as such on each page.	This is noted and confidential documents have been prepared as recommended.
Scoping Opinion (PINS, 2021)	Definitions for magnitude of change should be provided in the ES and made more specific. The stages of the lifecycle of the project should also be considered.	As described in Section 1.6, each aspect chapter presents a 'magnitude of impact' table within the assessment chapter, which presents how the magnitude of impact is defined based on topic-specific criteria. Additionally, impacts have been considered across all phases of the project lifecycle.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	Having reviewed the Environment Impact Assessment Scoping report, we do not object to the methodology described in the report. We would support the approach via the technology and cable route that minimise the impact on the sensitive and designated features of the site location from turbines, cables and substation.	This is welcomed by the Applicant.
Scoping Opinion (PINS, 2021)	We are aware that a project design Rochdale Envelope approach is being used to provide flexibility in any consent obtained to take account of changes in available electricity generation and transmission technology. We understand that such flexibility should enable the Applicant to use the most up-to-date, efficient and cost-effective technology and techniques in the construction, operation, maintenance and decommissioning of the proposed wind farm. The adoption of a realistic worst-case scenario will enable the Project's stakeholders and the Secretary of State to be confident that the environmental impacts of the Project would be no greater than those identified in the Environmental Statement (ES).	This is welcomed by the Applicant. The Applicant's methodology to apply the Rochdale Envelope is provided in Section 3.4.15.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	The ES should include a description and assessment (where relevant) of the likely significant effects resulting from accidents and disasters applicable to the Proposed Development. The Applicant should make use of appropriate guidance (e.g. that referenced in the Health and Safety Executives (HSE) Annex to the Inspectorate's Advice Note 11) to better understand the likelihood of an occurrence and the Proposed Development's susceptibility to potential major accidents and hazards. The description and assessment should consider the vulnerability of the Proposed Development to a potential accident or disaster and also the Proposed Development's potential to cause an accident or disaster. The assessment should specifically assess significant effects resulting from the risks to human health, cultural heritage or the environment. Any measures that will be employed to prevent and control significant effects should be presented in the ES.	Volume 6, Part 4, Chapter 2: Human Health and Major Disasters includes the Applicant's approach to accidents and disasters.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	Schedule 4 Part 5 of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES. The Scoping Report states at paragraph 4.8.6 that the Proposed Development is unlikely to have significant effects on a European Economic Area (EEA) State but also states that issues (sic) will be taken up and assessed fully in the ES. Regulation 32 of the EIA Regulations inter alia requires the Inspectorate to publicise a DCO application on behalf of the SoS if it is of the view that the proposal is likely to have significant effects on the environment of an EEA state, and where relevant, to consult with the EEA state affected. The Inspectorate considers that where Regulation 32 applies, this is likely to have implications for the examination of a DCO application. It is noted that the Scoping Report proposes further consideration for potential transboundary effects in relation to marine mammals, seabirds, shipping and navigation and marine archaeology. The Inspectorate recommends that the ES should identify whether the Proposed Development has the potential for significant transboundary effects and if so, what these are and which EEA States would be affected	The approach to the assessment of transboundary effects is detailed in Section 1.9. All identified potential transboundary effects in the Transboundary Screening (PINS, 2022) will be assessed in the relevant technical topic chapters.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Scoping Opinion (PINS, 2021)	A reference list detailing the sources used for the descriptions and assessments must be included in the ES.	Reference lists will be included within each document of the ES.
Post Scoping (NE, 2022)	The following summary comment was provided by NE: *"Natural England welcomes the VE OWF Proposed Environmental Impact Assessment (EIA) Methodology. The proposed Environmental Impact Assessment (EIA) methodology is currently very high level, covering the general methodology to be used across all chapters of the EIA, except those where 'topic-specific methodology' is to be used. We do not, therefore, offer any specialist advice with regard to fish ecology or offshore ornithology at this stage, but do offer some advice below on benthic ecology, marine processes, marine mammals, onshore ecology, LVIA and SLVIA. Natural England advise that a topic-specific methodology will be required for the different specialist topic assessments"*	Project specific methodologies are provided in each of the topic chapters to this ES.
Post Scoping (NE, 2022)	In relation to cumulative assessment cut off period before DCO submission: *"A more reasonable cut-off point would be three or four months prior to submission."*	The cut-off point for the final selection of projects to be included within the Cumulative Assessment (see Annex 3.1), was October 2023.

Date And Consultation Phase/ Type	Consultation and Key Issues Raised	Section Where Comment Addressed
Section 42 Response (NE, 2023)	NE recommend that the Statement of Common Ground (SoCG) should be started as early as possible to catalogue any areas of disagreement.	These were started in June 2023, following section 42 consultation (Volume 9, Report 33: Approach to Statements of Common Ground).
Section 42 Response (NE, 2023)	In relation to the EIA matrix used to determine significance of effects, NE raise concerns that the “cut-off” of no significance for negligible or minor significance conclusions could lead to errors in assessing cumulative effects adequately.	As described in section 3.6.3, the EIA guidance for Offshore Renewable Energy Projects – Guide (BSI, 2015) has been followed.

3.4 KEY PRINCIPLES OF THE EIA

THE ENVIRONMENTAL STATEMENT

3.4.1 The ES provides an assessment of the predicted environmental impacts arising from VE, using the most contemporary data available at the time of authoring.

3.4.2 The potential environmental effects of VE have been assessed for each relevant topic as agreed through the EIA Scoping and subsequent consultation, by comparing the baseline environmental conditions with the expected conditions that will prevail when the VE development goes ahead. The baseline environment has been determined through studies and surveys and agreement of the sufficiency has been sought through consultation with the relevant stakeholders. Additional information on the baseline environmental conditions, alongside documents which secure mitigation measures from the ES can be found in Volume 9: Other Documents of the DCO application.

3.4.3 The assessments for each topic form separate chapters within the ES and for each chapter, the following aspects are considered:

- **Statutory and policy context**: Provides a summary of the relevant legislation and policy that has been taken into account in assessing each individual topic;
- **Consultation**: Provides a summary of the consultation responses received to date from statutory and non-statutory consultees through Scoping, the Evidence Plan process and direct industry consultation;
- **Scope and methodology**: Provides detail confirming the extent of the study area, describing the baseline data sources and survey methodologies, and the topic-specific detail on the approach to assessment;
- **Existing environment**: Provides a description of the existing environmental baseline condition, drawing on the relevant data sources, as well as a description of the anticipated evolution of the baseline over the lifetime of the VE Project;
- **Uncertainties and technical difficulties**: Provides a description of main assumptions and limitations and the methodology taken to reduce the uncertainties and associated risks;
- **Key parameters for assessment**: Provides a summary of the potential impacts and the maximum design scenarios assessed for each;
- **Mitigation**: Provides detail on any mitigation measures or commitments that have been identified and adopted as part of the evolution of the project design of relevance to the topic;
- **Environmental assessment**: Presents an assessment of the significance of any identified effects (during construction, operation and decommissioning), taking account of the magnitude of impacts, sensitivity of receptors any embedded mitigation, identification of any further mitigation measures required, and an assessment of the confidence in the conclusions of that assessment;
- **Identification of residual effects**: taking into account further mitigation (where necessary) and/or monitoring requirements;
- **Cumulative effects assessment**: Provides an assessment of any cumulative effects arising from interaction between VE and other plans, projects or activities (discussed in Section 1.7);

- **Climate Change**: Provides an assessment of the impact of climate change and the project on the receiving environment / receptor. This will feed into Volume 6, Part 4, Chapter 4: Climate Change.
- **Inter-related effects**: Provides an assessment of the potential for and significance of any project lifetime effects on the topic throughout multiple phases, and receptor-led effects resulting from several different effects upon the same receptor (discussed in Section 1.8); and
- **Transboundary effects**: Provides an assessment of any impacts arising from VE on the environment of other countries (discussed in Section 1.9).

3.4.4 Compensatory measures are proposed at an onshore location in East Suffolk for Lesser Black Backed Gull (LBBG) to compensate for the predicted worst-case impacts of VE on this species in relation to Habitats Regulation Assessment. Given the physical separation between the LBBG compensation site and the other onshore works in Tendring, Essex, as well as the differences in the type of works to be undertaken and potential impacts, the LBBG compensation works have been assessed in a standalone EIA Chapter and associated annexes (Volume 6, Part 8: LBBG EIA). This assesses the LBBG works both in isolation and in-combination/ cumulatively with the other elements of VE. The onshore chapters of this ES (Volume 6, Part 3) accordingly consider the onshore works necessary to deliver the electrical connection but not the LBBG compensation as the works being assessed.

EVIDENCE BASED APPROACH

3.4.5 The evidence-based approach to EIA involves not only utilising data collected specifically for the purposes of the development but also data and information from other relevant investigations to inform the understanding of the baseline and/ or impact assessments for the development that is the subject of the EIA.

3.4.6 VE will be adjacent to the existing Galloper offshore wind farm (Galloper). Extensive data from the EIA process and baseline and post-construction monitoring for Galloper are available which provide both raw data and also modelling that can be used to help inform the assessments for VE. Where possible, appropriate, and agreed with the relevant stakeholders, the Applicant has used this existing data to:

- Aid in the characterisation of the baseline environment, where data is sufficient and appropriate to do so;
- Scope out impacts where there is a clear evidence base; and
- Provide evidence for assessments where impacts are scoped in.

3.4.7 The use of this existing data is encouraged as part of the offshore wind industry's response to government drivers to reduce the cost of offshore wind energy, such as those outlined in the Offshore wind industrial strategy: business and government action (BEIS, 2013).

3.4.8 Each topic chapter identifies where the data used for the baseline and the assessments is sourced from to inform the EIA.

3.4.9 Adequate data collection has been undertaken for the purposes of the EIA, which has enabled the receiving environment to be robustly characterised. Therefore, further surveys post-consent will only be required to inform detailed design and any monitoring established in ES chapters. The Evidence Plan provides details of datasets agreed with stakeholders for the purposes of characterisation and assessment for each of the technical expert panels.

PROPORTIONATE EIA

3.4.10 Over time, EIA practice has become more complex and has resulted in large volumes of information that consider every conceivable impact, rather than focusing on the impacts that are considered to result in LSEs, which is the ultimate requirement of the EIA Directive and Regulations. As a result, many EIAs have become unfocused, with their key findings becoming diluted or unclear. As noted by the UK's professional body for EIA, the Institute of Environmental Management and Assessment (IEMA) in its 2017 report (IEMA, 2017), the need for delivering proportionate EIA is a key issue for the UK planning and consenting system for regulators and developers alike.

3.4.11 IEMA noted '*… the drive for improved quality in EIA, combined with the UK's evidence-based and precautionary approach, has led to substantial challenges for the future of practice. The increased complexity of multi-faceted decisions and wider range of stakeholders who seek transparency and clear audit trails, has further compounded the problems. The combined impact of the above good intentions has often led to individual EIAs being too broadly scoped and their related Environmental Statements to be overly long and cumbersome*.'

3.4.12 An unwieldly or disproportionate EIA can make understanding the key environmental impacts of a proposed development difficult and can make the findings inaccessible to decision-makers and the public, creating confusion and potentially adding undue delay.

3.4.13 Additionally, PINS Advice Note Six: Preparation and Submission of Application Documents (PINS, 2020a) encourages Applicants to think about the size of documents submitted with duplication and superfluous content discouraged. ESs are welcomed that are proportionate to the scale and complexity of the EIA undertaken, although it is appreciated that for Nationally Significant Infrastructure Projects (NSIPs), such documentation will comprise several parts. The ES for the project comprises seven parts, which separate onshore and offshore assessments, with annexes being located in separate parts to limit individual document sizes. These parts are cross referenced throughout the ES to limit duplication of content.

THE DESIGN ENVELOPE APPROACH

3.4.14 The EIA, in line with PINS Advice Note Nine: Rochdale Envelope (PINS, 2018a), is based on identifying the Maximum Design Scenario (MDS) for each impact assessed. This approach ensures that the scenario that would result in the greatest impact (e.g., largest footprint, longest exposure, or largest dimensions) is considered. Unless otherwise identified it can then be assumed that any other (lesser) scenario for that impact would result in no greater significance than that assessed in the EIA.

3.4.15 The design information is based on the best available information and the parameters outlined in the project description chapters are realistic and considered estimations of future design parameters. Therefore, each chapter will assess the 'realistic worst-case' scenario for each of the identified potential impacts, referred to as the MDS.

3.4.16 This approach is particularly advantageous for large-scale developments involving complex engineering and multi-year development programmes (including offshore wind) where it is not possible to identify the exact components to be used within the final development, as it provides for flexibility in design and construction within maximum extents and ranges assessed within the EIA. Therefore, the consent permits the use of any components so long as they are within the MDS assessed, rather than limiting the development to existing technology at the time of assessment, which may not be economically viable or the most efficient solution at the point of construction. This is of particular relevance to offshore wind development, where the technology is constantly improving, with larger and more efficient turbines being developed.

3.4.17 The MDS for each topic and the assessment of potential impacts are derived from the options for each parameter outlined in the Onshore and Offshore Project Description chapters (Volume 6, Part 2, Chapter 1: Offshore Project Description and Volume 6, Part 3, Chapter 1: Onshore Project Description, respectively). Drawing on this information, each topic-specific chapter contains a tabulated description of the MDS for each of its impacts assessed. For example, the foundation type representing the MDS for loss of habitat in terms of benthic ecology would be the foundation type with the largest physical footprint, whereas for underwater noise effects on marine mammals, monopile foundations installed using pile driving would represent the MDS.

3.4.18 As described in Section 1.4 above, the use of existing data and site-specific survey has enabled an adequate characterisation of the receiving environment to enable a robust assessment to be undertaken against a realistic worst-case 'Rochdale Envelope' approach to project design. Post-consent, further survey work including Site Investigation (SI) will be required to inform the final detailed design pre-construction.

DELIVERY SCENARIOS

OVERVIEW AND BACKGROUND

3.4.19 VE and a neighbouring proposed project (North Falls OWF) have been allocated the same connection point to the national electricity transmission network. Both projects have also considered similar landfall locations for their export cables to come ashore.

3.4.20 Following consultation, and in response to requests for closer coordination (in line with NPS EN-3), the two projects have worked together to develop a shared export cable corridor, landfall location, and single site for both onshore substations.

3.4.21 The shared design keeps the potential impacts from the projects to a single swathe of land and enables coordination during construction, which has the potential to significantly reduce the impacts associated with the construction phase. In order to realise these benefits during construction, the two projects need to reach their decision points on whether to proceed (also known as their Financial Investment Decisions (FIDs)) within three years of each other. The shorter the gap between the projects' FIDs, the greater the level of coordination that may be achieved.

3.4.22 Three scenarios for the construction of the onshore components of VE in coordination with North Falls are foreseen (The timescales included below are indicative to provide context):

- **Scenario 1:** VE proceeds to construction and undertakes the additional onshore cable trenching and ducting works for NF as part of a single programme of works (ducting for four electrical circuits). VE may also carry out some ground works (vegetation clearance, levelling, grading) in the wider substation zone where the North Falls substation will be located. VE would undertake the cable installation and onshore substation (OnSS) build for its project only (two electrical circuits). The two projects would share accesses from the public highway for cable installation and substation construction. The projects would utilise and share the site accesses, haul roads and Temporary Construction Compounds (TCC) with NF for the cable installation works.
- **Scenario 2:** Both VE and NF projects proceed to construction on different but overlapping timescales (between one and three years apart). Civil works would be undertaken independently but opportunities for reuse of enabling infrastructure e.g. haul roads, temporary construction compounds and site accesses are utilised with the other project reinstating
- **Scenario 3:** NF does not proceed to construction; or both VE and NF projects proceed to construction on significantly different programmes (over three years apart). In the latter case the significantly different programmes would mean that haul roads and TCCs are reinstated prior to the second project proceeding. In such case cumulative impacts are for a potential construction period of 6 years+. No reduction in overall impacts for the schemes from sharing of infrastructure.

3.4.23 **Scenario 1** is assumed to be the Maximum Design Scenario for the ES assessment.

3.4.24 Further background information can be found in Volume 6, Part 3, Chapter 1: Onshore Project Description, Volume 9, Report 9.30: Co-ordination Document and Volume 9, Report 29: Offshore Connection Scenario.

APPROACH TO ASSESSMENTS

3.4.25 For the assessments for each environmental topic the following approach has been taken:

- For assessment of the project, each onshore chapter has assessed ducting for four circuits and installation of cabling for two circuits.
- For CEA assessment, each chapter / topic has determined which of the following Cumulative (Maximum Design Scenario) MDS is relevant for each topic:
  - MDS 1 – VE delivers two ducts and two circuits only and North Falls delivers two ducts and two circuits separately with parallel or overlapping construction programmes;

- Example impact: higher numbers of plant and equipment on site.
- MDS 2 – VE delivers two ducts and two circuits only and North Falls delivers two ducts and two circuits separately in succession i.e. one project reinstates and the other then starts works;
- Example impact: longer duration of topsoil being stripped / stored for compounds approx. 4 years.

3.4.26 This means that the extent of the project used in CEA for VE may be lower than for the standard project assessment – as the CEA version of the project in certain circumstances would only consider the impacts associated with the installation of two circuits and associated ducting.

COMMITMENTS AND MITIGATION

3.4.27 EIA is an iterative process and is used to inform the development of the final project design. Where the preliminary assessments identify unacceptable likely significant effects, changes to the design can be made and/ or mitigation measures can be built-in to the proposed development to reduce these effects. The assessment is then repeated for the revised MDS until:

- The effect has been reduced to a level that is not significant in EIA terms; or
- No further changes may reasonably be made to the development parameters in order to reduce the magnitude of the impact, thereby permitting the presentation of an effect that is still significant in EIA terms.

3.4.28 The EIA Regulations 2017, Schedule 4, require that '*a description of the measures envisaged to avoid, prevent, reduce or if possible, offset any identified significant adverse effects on the environment*' should be included within the ES.

3.4.29 Where changes have been made to the design of VE during the iterative EIA process, these measures will be clearly identified within the ES. The clear inclusion of these measures within the ES demonstrates the commitment of VE OWFL to these measures. Where required, these measures will be secured by the DCO. This ensures that the significance of the effect presented for each identified impact may be presumed to be representative of the maximum residual effect that the development will have, should it be approved and constructed.

3.4.30 Mitigation is a measure or commitment that has been identified and adopted as part of the evolution of the project design of relevance to the topic. This includes project design measures, compliance with elements of good practice and use of standard protocols. Where the assessment determines significant effects, accounting for embedded mitigation, further measures may be required which are presented as additional mitigation measures. These have typically been put forward where:

- An effect is significant in EIA terms, even with embedded mitigation, but additional mitigation measures are available to reduce the level of effect; or
- Mitigation has been proposed but has not yet been agreed with regulators/ stakeholders or is unproven.

3.4.31 All mitigation measures will also be clearly identified within the Schedule of Mitigation (Volume 9, Report 31: Schedule of Mitigation Route Map) and will provide a summary of enhancement and mitigation commitments proposed and agreed pre-application (see also Section 3.6.15).

3.5 CHARACTERISATION OF THE EXISTING ENVIRONMENT

3.5.1 Characterisation of the existing environment has been undertaken to determine the baseline conditions in the area covered by the VE proposed Order Limits and relevant, surrounding, topic-specific study areas. This characterisation includes usage of readily available information from desktop studies, consultation and, where it is required, site specific surveys, including existing survey material and data from the adjacent Galloper project. The available data are reviewed to ensure they are robust and can underpin the required level of assessment in order to determine the significance of any potential effect with sufficient confidence.

3.5.2 The specific approach to establishing a robust baseline (upon which impacts can be assessed) is set out within each topic-specific assessment chapter of the ES. Where, through discussion with regulators and technical groups, further data is required, the scope and scale of surveys have been agreed prior to such survey work being carried out (where possible).

3.5.3 Schedule 4, paragraph 3, of the EIA Regulations 2017 requires that an outline of the likely evolution of the baseline, in the absence of the development (as far as this can be assessed 'with reasonable effort' based on available information and scientific knowledge) is provided. Each technical assessment sets out the anticipated evolution of the baseline that is predicted to occur over the time between the point of assessment and the time over which VE will be built and operational. This reflects changes in the baseline that might be expected from natural variation (e.g., natural changes in habitat condition etc.) and other external factors in the absence of VE.

3.5.4 Limitations with the data collected to inform the baseline are described in each technical assessment chapter, setting out clearly where either the data itself, or any subsequent subjective evaluation may introduce error. An explanation on how data limitations were managed or commentary on confidence levels is included. Key data limitations with the baseline data, and their ability to materially influence the outcome of the EIA, are noted and commented on.

3.6 ASSESSMENT OF EFFECTS

3.6.1 Throughout the VE EIA, the term 'impact' is used to define a change to the receiving environment resulting from a project 'action', this can be direct, indirect, secondary, cumulative, inter-related or transboundary. It may also be adverse, beneficial or result in no change at all. Impacts are described in relation to the receiving environment, which is described as the receptor (or series of receptor groups). The result of an impact on a receptor is termed the 'effect'. For example: pile driving during construction (action) may result in a temporary increase in underwater noise levels during construction (impact) and cause fish and marine mammals (receptors) to experience temporary disturbance (effect).

3.6.2 Within the EIA, effects are described in terms of their 'significance', which takes into account the 'magnitude' of an impact, combined with the 'sensitivity' of the relevant receptors to the impact, in line with defined criteria. The following sections describe these steps in more detail, and it should be noted that each topic chapter describes the specific criteria for that topic, as well as where and why there are any deviations from industry assessment guidance.

3.6.3 As set out in various widely used methodologies (e.g., Design Manual for Roads and Bridges (DMRB) (Highways England, 2020) and the British Standards Institute (BSI) PD 6900: 2015 Environmental Impact Assessment for Offshore Renewable Energy Projects – Guide (BSI, 2015)), most technical topics will assess the likely significance of an effect using the methods described in the sections below and using the matrix illustrated in Table 1.2.

3.6.4 For some topics, the significance of an effect is established by comparing the magnitude of an impact with a quantified standard. In this instance, the quantified standard is in turn based on a level at which recognised effects are triggered (e.g., sleep disturbance for airborne noise). Such topic-specific methodologies followed are described in detail within the relevant assessment chapters as carried out by suitably qualified technical experts.

3.6.5 The methodology used broadly across the EIA is overarching guidance to technical authors to enable a consistent approach which outputs comparative results, whilst retaining topic-specific assessment guidelines and allowing a degree of expert judgement.

ASSESSING THE MAGNITUDE OF IMPACT

3.6.6 The magnitude of an impact depends on a range of important factors:

- **Spatial extent** – the geographical extent over which the impact occurs. For example, is the impact spatially limited to the footprint of the project, or are there other factors that extend the impact beyond this?
- **Temporal extent** – the duration over which the impact occurs. For example, is this limited to a brief construction period or will the impact occur over the lifetime of the project?
- **Frequency of occurrence** – is the impact limited to one occurrence or will it occur repeatedly over the duration of the project?
- **Severity** – what is the expected degree of change relative to the baseline?

3.6.7 Based on the criteria above, the magnitude of an impact is assessed as being within one of the groups below, and is also assigned a direction of 'adverse' or 'beneficial':

- Negligible;
- Low;
- Medium; or
- High.

3.6.8 Each topic area presents a 'magnitude of impact' table within the assessment chapter, which presents how the magnitude of impact is defined based on topic-specific criteria.

ASSESSING THE SENSITIVITY OF RECEPTORS

3.6.9 The sensitivity of a receptor, or group of receptors, is dependent on its tolerance to change and its ability to recover from being impacted. The sensitivity of a receptor can therefore be determined by the following factors:

- **Adaptability** – the degree to which a receptor can avoid or adapt to an impact;
- **Tolerance** – the ability of a receptor to accommodate a temporary or permanent change;
- **Reversibility and recoverability** – the extent to which a receptor will recover following an impact; and
- **Value and importance** – a measure of the importance of a receptor in terms of its relative ecological, social or economic value or status.

3.6.10 The sensitivity of a receptor is defined within each topic on the following scale:

- Negligible;
- Low;
- Medium; or
- High.

3.6.11 Each topic area presents a 'sensitivity of receptors' table within its assessment chapter, which contains information on how the sensitivity is determined for its receptors based on topic-specific criteria.

3.6.12 Where topic-specific methodology is used, following industry guidance, this is clearly explained within the methodology section of topic assessment. For example, the Navigation Risk Assessment (NRA) for shipping and navigation, is used to consider the probability of an impact occurring rather than the sensitivity of receptors.

DETERMINING THE SIGNIFICANCE OF EFFECTS

3.6.13 The significance of an effect, either adverse or beneficial, is determined using a combination of the impact magnitude and receptor sensitivity. A matrix approach is used throughout the EIA to ensure a consistent and comparable approach. The terms assigned to categorise the significance of effects are described in Table 3.2 below, which also illustrates the assessment matrix for determining effect significance. The impact magnitude is combined with the receptor sensitivity to determine the significance of effect.

3.6.14 Any effect that is concluded to be of moderate or major significance is deemed to be 'significant' in EIA terms. Effects concluded to be of negligible or minor significance are deemed to be 'not significant' in EIA terms.

Table 3.2: Deriving the level of significance of an effect.

Magnitude		Sensitivity: High	Sensitivity: Medium	Sensitivity: Low	Sensitivity: Negligible
Adverse	High	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Negligible
	Low	Moderate	Minor	Minor	Negligible
Neutral	Negligible	Minor	Minor	Negligible	Negligible
Beneficial	Low	Moderate	Minor	Minor	Negligible
	Medium	Major	Moderate	Minor	Negligible
	High	Major	Major	Moderate	Minor

DETERMINING THE REQUIREMENT FOR ADDITIONAL MITIGATION AND MONITORING

3.6.15 Section 3.4 above describes the process and importance of embedding mitigation measures within the design of the project and how this has been incorporated into the assessment. Where the assessment determines significant effects accounting for embedded mitigation, further measures may be required. Through consultation and agreement with stakeholders, the need for monitoring may also be required to validate the conclusions of the assessment or the effectiveness of mitigation. Where monitoring is proposed, the chapter also considers the requirement for remedial measures following monitoring.

3.6.16 If required, additional mitigation measures will be outlined in the topic chapters. The extra mitigation measures may be deemed necessary where:

- An effect is significant in EIA terms, even with embedded mitigation, but additional mitigation measures are available to reduce the level of effect; or
- Mitigation has been proposed but has not yet been agreed with regulators, stakeholders, etc. or it is unproven.

3.6.17 Where relevant, these additional mitigation measures are outlined in the topic chapters, after the assessment of significance section and are secured through the DCO.

3.7 CUMULATIVE EFFECTS ASSESSMENT

3.7.1 The methodology for the Cumulative Effects Assessment (CEA), including a long-list of projects that are considered within the CEAs for each topic, is described in detail within Volume 6, Part 1, Annex 3.1: Cumulative Effects Assessment.

3.7.2 A CEA is required under the EIA Regulations 2017 (Schedule 4, Paragraph 5(e)). Cumulative effects are defined as those effects on a receptor that may arise when the development is considered together with other existing and/ or approved projects.

3.7.3 The need to consider cumulative effects is also outlined in NPS EN-1 (DECC, 2011a), which states in paragraph 4.2.5:

'When considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence)'.

APPROACH TO CUMULATIVE EFFECTS

3.7.4 PINS Advice Note 17 (PINS, 2019) identifies those other major developments should be taken into consideration in a CEA, including those which are:

- Under construction;
- Permitted applications, but not yet implemented;
- Submitted applications, but not yet determined;
- Identified in development plans (including emerging development plans) with appropriate weight given as those plans move closer to adoption; and
- Identified in other plans and programmes which set the framework for future development consents and approvals, where such development is likely to come forward.

3.7.5 Projects that were built and operational at the time that survey data were collected are, for the most part, classified as part of the existing baseline environment. Projects that are built but have ongoing effects, or projects that are only partially completed at the time of data collection, are included within the CEA.

3.7.6 In order for VE to connect to the National Grid, the proposed National Grid Norwich to Tilbury Reinforcement Project and the associated East Anglia Connection Node (EACN) substation must be operational. National Gird has defined a construction and operational zone within which their EACN substation will be situated. This is adjacent to the VE OnSS zone.

3.7.7 Despite its stage in the planning process, due to VE's reliance on this project for its connection to the National Grid, it has been given detailed consideration and treated with more certainty than other projects at similar stage in the planning process in the CEA. To assist with the assessment, it has been necessary to make assumptions as to the siting, scale, form and construction of the project, particularly the EACN substation. These assumptions have been checked and agreed to the appropriate and reasonable by National Grid. For the purposes of the cumulative assessment of VE and National Grid Norwich to Tilbury Project, the worst case delivery scenario, with limited co-ordination has been assessed for the direct and indirect impacts.

3.7.8 The North Falls DCO application is also being applied for after the VE DCO application. VE and North Falls are pursuing a coordinated approach to construction so far as possible. For the CEA of North Falls in each chapter, the maximum construction scenario has been considered by each respective topic (see Delivery Scenarios Section above).

3.7.9 The CEA consists of a screening exercise of projects, plans and activities followed by the assessment of the combined envelopes of the projects screened in, together with VE. Screening is based upon the potential for cumulative effect, the spatial overlap of impact extents, the temporal overlap of impacts, and data confidence. Specific criteria for each type of project, plan or activity are used to develop a 'long list' of projects to be considered.

3.7.10 Once a long-list is defined, this is further refined using specific criteria for each EIA topic to develop 'short lists' of projects that are carried through to the CEA. Further detail is provided within Volume 6, Part 1, Annex 3.1: Cumulative Effects Assessment.

TIERING OF PROJECTS

3.7.11 In assessing the potential for cumulative effects, it is important to bear in mind that some projects, predominantly those proposed or not yet determined, may not actually be taken forward. The CEA can also only consider the publicly available project information, which may require certain assumptions, or qualitative assessments, to be made where information is not publicly available. Therefore, there is a need to build in a level of confidence with respect to the likely cumulative envelope that may result in cumulative effects.

3.7.12 For this reason, all projects, plans and activities are allocated into 'tiers', reflecting their current status in the planning and developments processes. This allows the CEA to present several future development scenarios, each associated with a different level of certainty and likelihood of eventually being built out. Appropriate weight may therefore be given to each tier when considering the potential for cumulative effects. This process is described in detail within Volume 6, Part 1, Annex 3.1: Cumulative Effects Assessment.

3.8 INTER-RELATED EFFECTS ASSESSMENT

3.8.1 The methodology for the inter-related effects assessment is described in detail within Volume 6, Part 4, Chapter 3: Inter-Relationships. The inter-related effects assessment considers the potential for multiple impacts from the construction, operation or decommissioning of VE on the same receptor to result in a greater effect than each impact when considered in isolation. Broadly, inter-related effects are divided into two categories:

- **Project lifetime effects:** Those arising throughout more than one phase of the project to interact to potentially create an effect of greater significance than for each project phase considered in isolation; and
- **Receptor-led effects:** Potential for the scope of two or more effects to interact to create an effect of greater significance than each effect in isolation. For example: temporary disturbance to marine mammals from underwater noise together with temporary disturbance from increased vessel traffic.

3.8.2 The assessment incorporates the findings of the individual topic assessments to describe the potential additional effects that may be of greater significance than when each is considered in isolation. Where the potential for inter-related effects exists, a qualitative assessment is undertaken drawing on expert judgement, however the approach can be described by the following key steps:

- Identification of relevant receptors from the assessment of significance within each topic chapter;

- Identification of the source-impact-receptor pathways that can affect the receptor in question and identification of the topic chapter where those are described and assessed;
- Identification of potential effects on these receptor groups through a review of assessments; and
- Production of the inter-related effects assessment, using a tabulated approach listing all potential project lifetime and receptor-led effects as described in Volume 6, Part 4, Chapter 3: Inter-Relationships.

3.8.3 It is important to note that although it may not be explicit for some topics consideration of inter-related effects is an inherent part of the assessment. For example, marine mammal and offshore ornithology assessments may consider the secondary impacts of reduced prey availability caused by primary impacts to fish and shellfish receptors. In these cases, the links with other assessment topics are clearly referenced and explained within the relevant assessment chapters.

3.9 TRANSBOUNDARY EFFECTS

3.9.1 Transboundary effects are those effects that may arise in the environment of other states outside of the UK. The need to consider these is enshrined within the United Nations Economic Commission for Europe (UNECE) Convention on EIA in a Transboundary Context, adopted in 1991 in the Finnish city of Espoo (the 'Espoo Convention'). The Espoo Convention has been implemented in the UK for the purposes of NSIPs by the EIA Regulations 2017, Regulation 32 of which sets out a prescribed process of consultation and notification.

3.9.2 The Espoo Convention has been incorporated into the EIA Directive and transposed into UK law through the EIA Regulations. The Secretary of State (SoS) for DESNZ is required to consider the potential for transboundary effects where it is deemed necessary, or where a European Economic Area (EEA) state submits a request for a transboundary assessment.

3.9.3 PINS Advice Note 12: Transboundary Impacts (PINS, 2020c), recommends that developers undertake independent consultation with other EEA states that may be affected. This is suggested to speed up the consultation process and to reduce the risk presented by a lack of time at examination stage for consideration of such effects. It is recommended that the relevant environmental bodies and interested parties within the identified states be consulted as appropriate.

3.9.4 Where consultation is required and undertaken by the developer, they are recommended to collate the names and contact details for the relevant states and share this information with PINS (and the SoS). All consultation will be recorded within the Consultation Report to be submitted as part of the DCO Application.

3.9.5 PINS has undertaken a transboundary screening exercise (Volume 6, Part 1, Annex 3.2: Transboundary Screening) which determined that transboundary issues notification under Regulation 32 of the 2017 EIA Regulations is required. The Planning Inspectorate has notified the required states (The Netherlands, Belgium, Germany, Denmark and France) in May 2022. Reponses were received from Belgium, France and Denmark. Potential transboundary effects are then assessed as relevant within each topic chapter.

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