Dudgeon and Sheringham Shoal Offshore Wind Farm Extensions

Preliminary Environmental Information Report

Volume 1

Chapter 6 - EIA Methodology

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Appendix 6.1 List of DCO Documents

Glossary of Acronyms

CIA	Cumulative Impact Assessment
DCO	Development Consent Order
DEP	Dudgeon Extension Project
EEA	European Economic Area
EIA	Environmental Impact Assessment
EPP	Evidence Plan Process
ES	Environmental Statement
ETG	Expert Topic Group
EU	European Union
HRA	Habitats Regulation Assessment
GW	Gigawatts
ICES	International Council for the Exploration of the Seas
IEMA	Institute of Environmental Management and Assessment
NSIP	Nationally Significant Infrastructure Project
PEIR	Preliminary Environmental Information Report
SEP	Sheringham Shoal Extension Project
SoCC	Statement of Community Consultation
SoCG	Statement of Common Ground
UK	United Kingdom
UN	United Nations
UNECE	United Nations Economic Commission for Europe

Glossary of Terms

The Applicant	Equinor New Energy Limited
Dudgeon Offshore Wind Farm Extension site	The Dudgeon Offshore Wind Farm Extension offshore wind farm boundary.
The Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension site as well as all onshore and offshore infrastructure.
European site	Sites designated for nature conservation under the Habitats Directive and Birds Directive. This includes candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation and Special Protection Areas, and is defined in regulation 8 of the Conservation of Habitats and Species Regulations 2017.
Evidence Plan Process (EPP)	A voluntary consultation process with specialist stakeholders to agree the approach, and information to support, the EIA and HRA for certain topics.
Horizontal directional drilling (HDD) zones	The areas within the onshore cable route which would house HDD entry or exit points.
Sheringham Shoal Offshore Wind Farm Extension site	Sheringham Shoal Offshore Wind Farm Extension offshore wind farm boundary.
The Sheringham Shoal Offshore Wind Farm Extension Project (SEP)	The Sheringham Shoal Offshore Wind Farm Extension site as well as all onshore and offshore infrastructure.

6 EIA METHODOLOGY

6.1 Introduction

1. This chapter describes the methodology and approach applied to the Preliminary Environmental Information Report (PEIR) assessment chapters for the proposed Dudgeon Offshore Wind Farm Extension Project (herein DEP) and Sheringham Shoal Offshore Wind Farm Extension Project (herein SEP). DEP and SEP are being developed in parallel and will be subject to a single development consent order (DCO) application.

2. Whilst DEP and SEP will be the subject of a single DCO application (with a combined Environmental Impact Assessment (EIA) process and associated submissions), each project will be assessed individually so that mitigation is project specific (where appropriate). As such, the assessments will cover the possibility that DEP or SEP are developed in isolation, as well as assessing both DEP and SEP being developed, either concurrently or sequentially.

3. The EIA will consider all relevant topics covered under the following three general areas:

   - Offshore environment;
   - Onshore environment; and
   - Wider environment.

4. The EIA is carried out in accordance with the Planning Act 2008 (as amended by the Localism Act 2011) and the Infrastructure Planning (EIA) Regulations 2017 (the EIA Regulations) (see **Chapter 3 Policy and Legislative Context**).

5. The EIA also gives due regard to the requirements of the Habitats and Species Regulations 2017, the Conservation of Offshore Marine Habitats and Species Regulations 2017 and the Marine and Coastal Access Act 2009.

6.2 Requirement for EIA

6. The EIA framework is set out within European Union (EU) Directive 2011/92/EU (as amended by Directive 2014/52/EU) (the EIA Directive)). The EIA Directive is transposed into English law for Nationally Significant Infrastructure Projects (NSIPs) by the EIA Regulations which set out the requirements for EIA. The EIA process includes collation of data required to identify and assess the potential effects of a development, the identification of any significant adverse impacts and any measures envisaged to avoid, prevent or reduce and, if necessary, offset, such impacts.

7. The primary objective of an EIA, as described in Article 2 of the EIA Directive, is that "*Member States shall adopt all measures necessary to ensure that, before development consent is given, projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects on the environment*".

8. The preliminary findings from the EIA process are reported within this PEIR, which has been produced to support consultation under section 42 of the Planning Act 2008. Feedback from this consultation will be used to inform the final design of DEP and SEP for the purpose of finalising the impact assessment, which will be reported in an Environmental Statement (ES) submitted to the Planning Inspectorate, along with supporting documents as part of the DCO application. **Appendix 6.1** identifies the documents that are anticipated to be submitted.

9. The purpose of the ES (and this PEIR) is to inform the decision-maker, stakeholders and all interested parties of any significant effects that would result from DEP and SEP during their construction, operation and (where relevant) decommissioning.

6.3 Consultation on Approach and Methodology

10. Consultation is a key component of the EIA process, and continues throughout the lifecycle of a project, from its initial stages through to consent and post-consent. Under the Planning Act 2008 consultation relating to an NSIP must be undertaken with statutory or prescribed bodies (under section 42), with local communities (under section 47) and more widely through the general notification of a proposed application (under section 48).

11. The Statement of Community Consultation (SoCC) outlines how Equinor will consult with local communities regarding the plans to develop DEP and SEP and includes:

- Community feedback reports shared with all registered participants, key local and community stakeholders, and on the Equinor project website;
- Phase 1 consultation (2019/2020) with statutory consultees and the public;
- Phase 2 consultation with statutory consultees and the public;
- Parish Council briefings;
- Direct discussions with landowners;
- Newsletters distributed throughout the onshore substation(s) site selection study area;
- Dedicated project e-mail address and freepost address to assist local communities in contacting the Applicant;
- Provision of a dedicated project website; and
- Regular and targeted discussions with regulators and other stakeholder bodies through various means including Expert Topic Group (ETG) meetings as a part of the Evidence Plan Process (EPP), as detailed in **Chapter 7 Technical Consultations**.

12. Full details of the consultation process will be presented in the Consultation Report, which will be submitted as part of the DCO application.

13. Where appropriate, relevant responses from technical consultation with statutory consultees and topic specific consultation responses from stakeholders are presented in each PEIR technical chapter (**Chapters 8 – 30**).

6.3.1 Scoping

14. An EIA Scoping Report for DEP and SEP was submitted to the Planning Inspectorate on 8th October 2019 (Royal HaskoningDHV, 2019). The Scoping Opinion was received on 18th November 2019 (The Planning Inspectorate, 2019) and has informed the development of the PEIR.

15. One topic was scoped out entirely, Offshore Air Quality, and particular impacts within topics have been scoped out as detailed in the Scoping Opinion and summarised within each relevant technical chapter (**Chapters 8 – 30**). Topic specific matters raised in the Scoping Opinion are referenced in the consultation summary tables within each of the topic chapters (**Chapters 8 – 30**).

16. Feedback received through this process has been considered and incorporated into the PEIR where appropriate and this chapter will be updated following the next stage of consultation to produce the final assessment, which will be submitted with the DCO application.

6.4 Requirement for Competent Experts

17. Royal HaskoningDHV is the UK leading EIA consultant working in the offshore wind sector. The company has successfully directed the EIA and consent process for over 12 Gigawatts (GW) of renewable energy projects across ten UK offshore wind farms. Royal HaskoningDHV hold the EIA quality mark from the Institute of Environmental Management and Assessment (IEMA) for EIA activities and Environmental Statements.

18. All of the Royal HaskoningDHV lead authors are senior and chartered professionals with a significant track record in undertaking technical assessment and EIA in their discipline. The team undertaking the EIA for DEP and SEP are predominantly Royal HaskoningDHV professional consultants. The team is comprised of a dedicated core of EIA professionals who take the lead role in the co-ordination and management of the EIA and the preparation of this PEIR and the subsequent ES. The core team is then supported by a wider team of technical specialists taking responsibility of the data collection, data analysis and technical impact assessment.

19. The technical assessments are led by a lead technical author who is a recognised expert in their field, is a chartered member of a relevant professional body and has significant experience in the preparation of impact assessments. The lead author takes responsibility for the quality of the data gathered; the assessment methodology to be undertaken, the impact assessments made and any proposed mitigation measures. The lead author is usually supported by a team of consultants and their work is subject to both technical and consistency review by a Technical Director and the EIA core team.

20. Some of the technical assessments and associated PEIR chapters are undertaken by specialist consultancies outside of Royal HaskoningDHV. These are: Wild Frontier (**Chapter 22 Onshore Ecology and Ornithology**); LDA Design (**Chapter 27 Seascape and Visual Impact Assessment** and **Chapter 28 Landscape and Visual Impact Assessment**); and Hatch Regeneris (**Chapter 29 Socio-Economics and Tourism**).

21. In addition, technical consultation (such as through the EPP) provides additional expert input into the assessment process. This has allowed a consensus to be reached on the scope and approach to the impacts included within the EIA, and the comprehensiveness and suitability of the data used.

6.5 Project Design Envelope

22. The DEP and SEP EIA will be based on a project design envelope approach, also known as the 'Rochdale Envelope' approach. Planning Inspectorate Advice Note Nine (the Planning Inspectorate, 2018a) recognises that, at the time of submitting an application, offshore wind developers may not know the precise nature and arrangement of infrastructure, and any associated infrastructure, that make up the proposed development. This is due to a number of factors such as the evolution of technology, the need for flexibility in key commercial project decisions and the need for further detailed surveys (especially geotechnical surveys), which are required before a final design and layout can be determined. This flexibility is important as it prevents consent being granted for specific infrastructure or a particular layout which is not possible or optimal by the time of construction, which may be several years after the DCO application was made.

23. The general principle of the assessment, under the project design envelope approach, is that for each receptor and potential impact, the impact assessment will be based on assessing project design parameters likely to result in the maximum adverse effect (i.e. the worst-case scenario). If a combination of design parameters leads to a scenario that cannot realistically occur then the worst-case scenario will be reconsidered and a realistic set of worst-case parameters will be assessed. The end result will be an EIA based on clearly defined environmental parameters that will define the range of development possibilities and hence the likely environmental impacts that could result from DEP and SEP.

24. The project design envelope therefore provides the maximum extent of the consent sought. The detailed design of DEP and SEP can then be developed, refined and procured within this consented envelope prior to construction.

25. Using the project design envelope approach means that receptor-specific potential impacts draw on the options from within the wider envelope that represent the most realistic worst-case-scenario. It should also be noted that under this approach the combination of project options constituting the realistic worst-case scenario may differ from one receptor to another and from one impact to another.

26. In accordance with the accepted industry approach, the impact assessment is being undertaken based on a realistic worst-case scenario of predicted impacts, which are set out within each technical chapter. The project design envelope for DEP and SEP is detailed in **Chapter 5 Project Description**.

6.6 Characterisation of the Existing Environment

27. A review of the existing environment has been undertaken in order to determine, and agree, the existing environmental conditions in the study area in question. This characterisation has followed the steps listed below with the details provided in each technical chapter (**Chapters 8 – 30**):

- Study areas defined for each receptor based on the relevant characteristics of the receptor (e.g. mobility/range);
- Review available information;
- Review likely or potential impacts that might be expected to arise from DEP and SEP;
- Determine if sufficient data are available to make the EIA judgements with sufficient confidence;
- If further data is required, ensure data gathered are targeted and directed at answering the key question and filling key data gaps; and
- Review information gathered to ensure the environment can be characterised in sufficient detail and the data are suitable to make the EIA judgements with sufficient confidence.

28. Equinor has collated a significant amount of existing data from a number of sources. These are detailed in each technical chapter.

29. The specific approach to establishing the characteristics of the existing environment (upon which impacts can be assessed) is set out in each technical chapter within this PEIR. This approach is based on feedback in the Scoping Opinion and subsequent consultation with stakeholders. The approach has also evolved and been adapted as new data have been collected and the design of DEP and SEP has advanced.

30. Study areas have been defined for each topic at the relevant scale, and are described within the technical chapters. These have been determined by a number of factors such as the distribution of receptors, footprint of potential impacts, or administrative / management boundaries (e.g. territorial waters, International Council for the Exploration of the Seas (ICES) rectangles) and where possible these have been agreed with regulators or advisors.

6.7 Assessment of Impacts

31. The approach to making balanced assessments for DEP and SEP has been guided by the Royal HaskoningDHV EIA team and technical specialists using available data, newly acquired project-specific data, experience and expert judgement. This chapter sets out the framework methodology for the assessment with each technical chapter providing details of how the methodology has been applied for that topic. For each topic considered in the EIA, the most relevant and latest guidance or best practice has been used and therefore definitions of sensitivity and magnitude of impact are tailored to each topic and receptor. These definitions are detailed fully in each technical chapter. The impact assessment considers the potential for impacts during the construction, operation and maintenance, and decommissioning phases of DEP and SEP.

32. Impacts can be classified as follows:

- Direct impacts: occurring at the same time and place as the action or activity.

- Indirect impacts: experienced by a receptor that is removed (e.g. in space or time) from the direct impact (e.g. noise impacts upon fish which are a prey resource for fish or mammals). These indirect impacts equate to inter-relationships as highlighted by the Planning Inspectorate guidance (Advice Note 17).
- Inter-relationships between impacts (where different impacts interact to affect a single receptor, which may need to be brought together from assessments presented in separate chapters) and interactions between impacts (where impacts assessed in each chapter have the potential to interact with one another).
- Cumulative impacts: these may occur as a result of DEP and SEP in conjunction with other existing or planned projects within the study area for each receptor, including other offshore wind farms.

6.7.1 Scenarios

33. The EIA is undertaken using the following alternative scenarios, with further details presented in **Chapter 5 Project Description**:

- Scenario 1 – Build DEP or build SEP in isolation;
- Scenario 2 – Build DEP and SEP concurrently; and
- Scenario 3 – Build DEP and SEP sequentially.

34. For the onshore assessments (**Chapters 19 – 26**) these different scenarios could give rise to different potential impacts, magnitude of impact and/or different effects on receptors, therefore an assessment of potential impacts is provided against each scenario.

6.7.2 Impact Identification

35. Where appropriate to do so, the assessment has used the conceptual 'source-pathway-receptor' model. The model identifies potential impacts resulting from the proposed activities on the environment and sensitive receptors within it. This process provides an easy to follow assessment route between impact sources and potentially sensitive receptors ensuring a transparent impact assessment. The aspects of this model are defined as follows:

- Source – the origin of a potential impact (i.e. an activity such as earthworks and a resultant effect e.g. contaminated run-off from the site);
- Pathway – the means by which the effect of the activity could impact a receptor (e.g. for the example above, changes to the water quality in the watercourses affected); and
- Receptor – the element of the receiving environment that is impacted (this could either be a component of the physical, ecological or human environment such as water quality or benthic habitat, e.g. for the above example, species living on or in the watercourses affected).

36. Where a different approach has been necessary to reflect the specific assessment requirements of a particular topic, this is described in the corresponding technical chapter.

6.7.3 Significance of the Impact

37. The significance of impacts is evaluated with reference to definitive standards, accepted criteria, technical guidance or legislation where these exist, for each topic. Where it is not possible to quantify impacts, and where a qualitative or semi-qualitative assessment is made, a reasoned framework for the assessment is provided in the technical chapter.

38. Where guidance is available for defining sensitivity and magnitude (whether from professional guidance or UK Government publications or bespoke definitions agreed with stakeholders) this is referred to. If such sources are available but have not been used then a justification for not using these are given.

39. Specific significance definitions for impacts have been developed, giving due regard to both sensitivity of the receptor and magnitude of the effect.

6.7.4 Determining Receptor Value and Sensitivity

40. The characterisation of the existing environment helps to determine the receptor sensitivity in order to assess the potential impacts upon it.

41. Receptor value considers whether, for example, the receptor is rare, has protected or threatened status, has importance at a local, regional, national or international scale and; in the case of biological receptors, whether the receptor has a key role in the ecosystem function.

42. The ability of a receptor to adapt to change, tolerate, and/or recover from potential impacts is key to assessing its sensitivity to the impact under consideration. For ecological receptors, tolerance could relate to short term changes in the physical environment; for human environment receptors, tolerance could relate to impacts upon community or socio-economics. The time required for recovery is an important consideration in determining receptor sensitivity.

43. The overall receptor sensitivity is determined by considering a combination of value, adaptability, tolerance and recoverability. This is achieved through applying known research and information on the status and sensitivity of the feature under consideration coupled with professional judgement and past experience.

44. Expert judgement is particularly important when determining the sensitivity of receptors. For example, an Annex II species (under the Habitats Directive) would have a high inherent value, but may be tolerant to an impact or have high recoverability. In this case, sensitivity should reflect the ecological robustness of the species and not necessarily default to its protected status. Example definitions of the different sensitivity levels for a generic receptor are given in **Table 6.1**.

Table 6.1: Example Definitions of Different Sensitivity Levels for a Generic Receptor.

Sensitivity	Definition
High	Individual receptor has very limited or no capacity to avoid, adapt to, accommodate or recover from the anticipated impact

Sensitivity	Definition
Medium	Individual receptor has limited capacity to avoid, adapt to, accommodate or recover from the anticipated impact
Low	Individual receptor has some capacity to accommodate, adapt or recover from the anticipated impact
Negligible	Individual receptor is generally can accommodate or recover from the anticipated impact

45. The definitions of sensitivity given within each chapter are relevant to that particular EIA topic and are clearly defined by the assessor within the context of that assessment.

46. In addition, for some assessments the value of a receptor may also be an element to add to the assessment where relevant, for instance if a receptor is designated or has economic value.

47. Example definitions of the value levels for a generic receptor are given in **Table 6.2**.

Table 6.2: Example Definitions of the Value Levels for a Generic Receptor.

Value	Definition
High	Internationally / nationally important (for example internationally or nationally protected site)
Medium	Regionally important / regionally protected site
Low	Locally important
Negligible	Not considered to be important (for example common or widespread)

48. The terms ‘high value’ and ‘high sensitivity’ are not necessarily linked within a particular impact and it is important not to inflate impact significance specifically because a feature is ‘valued’. For example, a receptor could be of high value (e.g. an Annex I habitat) but have a low or negligible physical / ecological sensitivity to an effect.

6.7.5 Determining the Magnitude of Effect

49. In order to predict the level and significance of an impact, it is necessary to establish the magnitude of effect, as well as the probability of an impact occurring through consideration of:

- Scale or spatial extent (small scale to large scale or a few individuals to most of the population);
- Duration (short term to long term);

- Likelihood of impact occurring;
- Frequency; and
- Nature of change relative to the pre-impact condition of the existing environment.

6.7.6 Evaluation of Significance

50. Subsequent to establishing the sensitivity of the receptor and the magnitude of effect, the impact significance is predicted by using quantitative or qualitative criteria, as appropriate, to ensure a robust assessment. The matrix presented in **Table 6.3** has been used to provide transparency to the assessment process; however, it should be stressed that the assessments are based on the application of expert judgement.

Table 6.3: Significance of an impact resulting from each combination of receptor sensitivity and the magnitude of the effect

		Negative Magnitude				Beneficial Magnitude			
		High	**Medium**	**Low**	**Negligible**	**Negligible**	**Low**	**Medium**	**High**
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*

51. **Table 6.3** provides an indication of the significance definitions used in the assessment process for the majority of parameters. Any exceptions to these definitions are due to the application of best practice methodologies for a particular topic, as described above. In general, impacts which are of major or moderate significance are considered to be significant with respect to the EIA Regulations. It is also possible that a moderate impact may not be considered significant under the EIA Regulations however, in these cases a justification and rationale is provided in the impact assessment text.

52. Descriptions of the approach to impact assessment and the interpretation of significance levels are provided within the relevant chapters of this PEIR. This approach ensures that the definition of impacts is transparent and specific to each topic under consideration.

53. Example definitions of the significance levels for a generic receptor are given in **Table 6.4**.

Table 6.4: Impact significance definitions.

Value	Definition
Major	Fundamental, permanent / irreversible changes, over the whole receptor, and / or fundamental alteration to key characteristics or features of the particular receptor's character or distinctiveness.
Moderate	Considerable, permanent / irreversible changes, over the majority of the receptor, and / or discernible alteration to key characteristics or features of the particular receptor's character or distinctiveness.
Minor	Discernible, temporary (throughout project duration) change, over a minority of the receptor, and / or limited but discernible alteration to key characteristics or features of the particular receptor's character or distinctiveness.
Negligible	Discernible, temporary (for part of the project duration) change, or barely discernible change for any length of time, over a small area of the receptor, and/or slight alteration to key characteristics or features of the particular receptor's character or distinctiveness.

54. For each topic within the EIA, best practice methodology (based on the latest available guidance) has been followed, which may augment the assessment framework presented above. In all cases the specific approach taken to assess impacts is described within each technical chapter.

6.7.7 Confidence

55. Once an assessment of a potential impact has been made, a confidence value may be assigned to the assessment to assist in the understanding of the judgement. This is undertaken on a simple scale of high-medium-low, where high confidence assessments are made on the basis of robust evidence, medium confidence assessment being based, for example, on academic or scientific studies / papers, and lower confidence assessments being based, for example, on extrapolation and use of proxies.

6.7.8 Mitigation

56. Where the assessment identifies that an aspect of the development is likely to give rise to significant environmental impacts, mitigation measures have been proposed and discussed with the relevant authorities in order to avoid, prevent or reduce impacts to acceptable levels.

57. For the purposes of the EIA, two types of mitigation are defined:

- Embedded mitigation: consisting of mitigation measures that are identified and adopted as part of the evolution of the project design, and are included and assessed in the EIA; and

- Additional mitigation: consisting of mitigation measures that are identified during the EIA process specifically to reduce or eliminate any predicted significant impacts. Additional mitigation is therefore subsequently adopted by DEP and SEP as the EIA process progresses.

58. All mitigation associated with DEP and SEP is identified and described in more detail in the relevant chapters of the PEIR (**Chapters 8 – 30**).

6.7.8.1 DEP and SEP Biodiversity Net Gain Commitment

59. Additionally, biodiversity net gain will be sought through the mitigation hierarchy for onshore elements so that it can be demonstrated that DEP and SEP are improving biodiversity, in line with new governmental mandate (see **Chapter 22 Onshore Ecology and Ornithology** for more information). Net gain discussions for DEP and SEP initially focussed on onshore project elements only but have been expanded voluntarily to consider potential mechanisms in the offshore environment as well. DEP and SEP will follow these discussions and any new guidance in relation to intertidal and offshore net gain.

6.7.9 Assessing Residual Impacts

60. Following initial assessment, if the impact does not require additional mitigation (or none is possible) the residual impact will remain the same. However, if additional mitigation measures are identified, impacts are re-assessed, and all residual impacts clearly described.

6.7.10 Inter-relationships and interactions

61. As described above, the assessment also considers the potential for:

- Inter-relationships between impacts – where different impacts interact to affect a single receptor, which may need to be brought together from assessments presented in separate chapters. The offshore assessments are largely receptor based (e.g. marine mammals, fish ecology etc.) and as such inter-relationships are covered as an integral part of the assessment. In this case, a sign-posting section is provided to demonstrate that relevant inter-relationships have been taken into account. The onshore assessments tend to be topic based (e.g. air quality, noise etc.) and the same receptor may be assessed in multiple chapters, e.g. a residential property may be assessed separately for noise, air quality, traffic and visual impacts. There is the potential for these separate effects to interact, spatially and temporally, to create inter-related effects on a receptor and where this is the case this is identified and assessed.
- Interactions between impacts – where impacts assessed in each chapter have the potential to interact with one another. Impacts are assessed relative to each development phase (a ‘phase assessment’ i.e. construction, operation or decommissioning) to see if (for example) multiple construction impacts affecting the same receptor could increase the level of impact upon that receptor. Following this, a ‘lifetime assessment’ is undertaken which considers the potential for impacts to affect receptors across all development phases.

6.8 Cumulative Impact Assessment

62. The Cumulative Impact Assessment (CIA) is a key component of the overall EIA process. The specific methodology and outcomes are presented within each technical chapter. The scope of the CIA (in terms of relevant issues and projects) has been established with consultees (including other developers) as the EIA has progressed. In addition, Equinor has considered the experience from other projects in the wider North Sea and other UK projects, as well as incorporating continuing work from industry-wide initiatives with regard to cumulative impacts.

63. The Planning Inspectorate Advice Notes Nine and Seventeen provide guidance on plans and projects that should be considered in the CIA including:

- Projects that are under construction;
- Permitted application(s) not yet implemented;
- Submitted application(s) not yet determined;
- All refusals subject to appeal procedures not yet determined;
- Projects on the National Infrastructure Planning programme of projects; and
- Projects identified in the relevant development plan (and emerging development plans – with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited and the resulting degree of uncertainty in the assessment that is possible.

64. The CIA is a two part process in which an initial list of projects with the potential to interact with DEP and SEP is identified. A further assessment is then carried out based on the nature and availability of information to inform a cumulative assessment.

65. In line with the RenewableUK CIA Guidelines for offshore wind farms (RenewableUK 2013), the approach to CIA attempts to incorporate an appropriate level of pragmatism. This is demonstrated in the confidence levels applied to the understanding of other projects (either their design or their likely impacts), particularly those that are known but currently lack detailed design documentation, such as those projects at the scoping stage only. Projects can be considered in the CIA only where there is sufficient detail with which to undertake a meaningful assessment. Where there is a lack of specific information in the public domain, such as how and when (or if) projects will be built, it is not always possible to undertake a meaningful CIA.

66. Other projects which are sufficiently implemented during the characterisation surveys undertaken for DEP and SEP are considered as part of the existing or ‘prevailing’ environment for the EIA in line with Advice Note Seventeen (the Planning Inspectorate 2015). This includes commercial fishing as these are ongoing activities that are accounted for in the baseline conditions, as confirmed in the Scoping Opinion (Planning Inspectorate 2019).

67. Offshore cumulative impacts may arise from interactions with the following activities and industries:

- Other offshore wind farms;
- Marine renewables (wave and tidal);

- Port and harbour developments;
- Marine aggregate extraction and dredging;
- Licensed disposal sites;
- Oil and gas exploration and production;
- Mariculture; and
- Subsea cables and pipelines.

68. Onshore plans or projects to be taken into consideration include (but are not limited to):

- Other energy generation infrastructure;
- Building and / or housing developments;
- Installation or upgrade of roads;
- Installation or upgrade of cables and pipelines; and
- Coastal protection works.

69. Where relevant, the assessment will present relevant cumulative effects of projects based on their stage of development using the tiered approach as devised by Natural England (JNCC and Natural England, 2013).

70. The list of plans or projects included in the CIA is specific to each topic and is detailed in each technical chapter (**Chapters 8 – 30**), having been developed through consultation with stakeholders.

6.9 Transboundary Impact Assessment

71. The United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context (referred to as the Espoo Convention) requires that assessments are extended across borders between Parties of the Convention when a planned activity may cause significant adverse transboundary impacts.

72. Regulation 32 of the EIA Regulations sets procedures to address issues associated with a development that might have significant impacts on the environment in another European Member State.

73. The procedures involve providing information to the Member State and for the Planning Inspectorate to enter into consultation with that State regarding the significant impacts of the development and the associated mitigation measures. Further advice on transboundary issues, in particular with regard to consultation requirements is given in Advice Note Twelve (Planning Inspectorate 2018b).

74. In October 2019, following the request for a Scoping Opinion, the Planning Inspectorate issued a Transboundary Impacts Screening Matrix in accordance with Regulation 32 of the EIA Regulations and published a notification in the London Gazette inviting relevant European Economic Area (EEA) member states to notify the Planning Inspectorate if they wish to be consulted on DEP and SEP.

75. Potential transboundary impacts have been considered as an integral part of the wider EIA process, with a clear audit trail provided to demonstrate why any potential effects on other EEA member states have been screened in or out for assessment. As such, transboundary matters are addressed where relevant in each chapter of the PEIR and **Chapter 31 Transboundary Effects** provides a summary of the transboundary assessment process and outcomes. In accordance with the advice detailed above, relevant EEA member states have been consulted through targeted consultation. Relevant EEA member states were also consulted on the HRA screening report.

6.10 References

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