Hornsea Project Four

G1.1.4 Applicant Response to Section 51 Advice

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Glossary

Term	Definition
Schedule of Change	A register of all amendments proposed to be made to application documents which is implemented upon request from the Examining Authority (ExA) to do so.

Acronyms

Term	Definition
SoC	Schedule of Change

1 Introduction

1.1.1.1 As part of the Planning Inspectorate's Section 51 advice (PD-003) (Ref: EN010098, dated 26 October 2021) published upon acceptance of the Hornsea Four Development Consent Order (DCO) application, observations were made that require clarification or amended application submission documents. This document sets out the Applicant responses.

2 Proposed approach to schedule of changes

2.1.1.1 The Applicant proposes that a Schedule of Changes (SoC) is developed for all previously submitted application documents that require update and/or modification. The SoC will be maintained for each document subject to change post-application and throughout the pre-examination and examination phases. The purpose of the SoC is to keep a record of all amendments made to submission documents. It is proposed that agreements on such changes are made through this mechanism, and all application documents are subsequently updated upon request from the Examining Authority (ExA). The Applicant hopes to reduce the number of iterations of documents submitted and considers that this approach will be an effective way to streamline the management process.

2.1.1.2 The first iteration of the SoC for documents affected by the Section 51 advice are submitted as part of this response (please see cover letter for detail of the 11 SoC documents).

3 Updated and New documents

3.1.1.1 Any document whereby necessary amendments are significant enough to require a resubmission, such documents have been updated and are resubmitted. This includes documents with formatting errors that caused difficulty to readers (B2.2: Report to Inform Appropriate Assessment Part 3 (APP-169) and B1.1.1: Consultation Report Evidence Plan (APP-130)).

3.1.1.2 Two new documents are submitted in response to clarifications. These are G1.1: Overarching Acronyms List and G1.2: Environmental Risk Assessment of the Onshore Substation and Energy balancing Infrastructure.

4 Applicant responses to Section 51 observations

4.1.1.1 Table 1 outlines the Applicant responses to Section 51 Observations. Responses are either provided in the table itself, in documents appended to this report, or as separate submission documents.

Table 1: Section 51 observation responses.

Section 51 observation	Applicant response
General advice	
Clarification regarding Energy Balancing Infrastructure (EBI) During the acceptance stage, the Inspectorate was provided with a signposting document regarding the proposed EBI which would form part of Work No 7. To ensure clarity and consistency, consideration should be given to updating the application documents in light of the information contained within the signposting document such as deleting the erroneous references to hydrogen electrolysis and the option of the EBI being located offshore. Furthermore, the Applicant may wish to consider submitting a more detailed assessment of the EBI in relation to the potential environmental effects from accidents and disasters.	The Applicant has included A1.4.1: Project Description Schedule of Change which sets out the changes to be implemented to the Project Description as highlighted in the Applicants signposting document. It is noted that Table 5.5 of A1.5: Environmental Impact Assessment Methodology (APP-011) included an appraisal of Major Accidents and Disasters. The Applicant has updated this table and presented a more detailed assessment, which has been submitted as a separate document (G1.2 Environmental Risk Assessment of the Onshore Substation and Energy Balancing Infrastructure).
Ground levels in relation to the proposed Substation and EBI It is noted that the ground levels for the onshore substation and EBI are proposed to be set post-consent through a requirement. No maximum or minimum existing or finished ground or floor level parameters appear to be provided, only 'likely levels'. Greater clarity should be provided on how the Examining Authority (ExA) and Secretary of State (SoS) could rely on any Development Consent Order (DCO) to control this, and the basis that was adopted for each of the relevant assessments, especially the Flood Risk Assessment (FRA) (Doc A6.2.2) and the Landscape and Visual Assessment (Doc A3.4) and accompanying visualisations (Doc A6.4.1).	The Applicant included anticipated ground levels in Section 6.2 of F2.13: Outline Design Plan (APP-248). This document is a certified document in C1.1: Draft DCO including draft DML (APP-203) and will be used pre-construction to discharge DCO Requirement 7. The anticipated ground levels outlined above have been used as the basis for assessment for both the FRA and LVIA. The Applicant has undertaken site investigations at the onshore substation (OnSS) site in October 2021 and is currently analysing the data. A follow up response will be provided pre-examination confirming the proposed maximum and minimum ground levels. A SoC will be submitted for the Outline Design Plan.
Horizontal Directional Drilling (HDD) The location of all HDDs is presented in the Onshore Crossing Schedule (Doc A4.4.2). However, this document is not referenced within the draft DCO (Doc C1.1). If HDD is proposed to mitigate any environmental effects the Applicant is advised to ensure that its delivery is secured.	The delivery of the Onshore Crossing Schedule is secured within document F2.2 : Outline Code of Construction Practice (APP-237) via relevant commitments (such as Co1, which commits to key crossings (EA main rivers, IDB maintained drains, main roads and railways) to be made by trenchless technology. The Applicant is reviewing whether there is a suitable mechanism for this to be further secured within the draft DCO or alternative document and will provide an updated draft DCO at Deadline 1.

Section 51 observation	Applicant response
Consistency Check A consistency check is required for the names used for outline and final plans and strategies that are relied upon in the mitigation mapping and to secure commitments. Some inconsistencies are apparent between document titles, cross references and the corresponding entries in the Commitment Register (Doc A4.5.2) and Schedule 15 of the draft DCO (Doc C1.1) (for example, the Outline Site Integrity Plan, the Outline Construction Traffic Management Plan, the Onshore Written Scheme of Investigation, the Outline Employment and Skills Plan).	A consistency check for names of outline and final plans and strategies has been undertaken by the Applicant. DCO application submission documents containing incorrect references have been identified and a SoC submitted for each relevant document. It is proposed that these SoC are maintained throughout examination and relevant application submission documents are updated and resubmitted later in the examination process, upon request from the Examining Authority (ExA). In summary the affected documents comprise: • A1: Non Technical Summary (APP-006) (page 36) – Outline Site Integrity Plan amended to Outline Southern North Sea Special Area of Conservation Site Integrity Plan • B2.2 Report to Inform Appropriate Assessment Part 1 (APP-167) – document reference for Outline Marine Mammal Mitigation Protocol in Table 1 amended from F2. To F2.5. Incorrect repetition of F2.11 removed from paragraph 10.3.3.9. • B2.2 Report to Inform Appropriate Assessment Part 4 (APP-170) – Marine Mammal Mitigation Protocol amended to Outline Marine Mammal Mitigation Protocol in in Matrix 1, 3, 4, 5a, 6a, 7, 8 and 9. • A4.5.2: Commitments Register (APP-050) – typographical error in Section 2. Whilst completing this exercise, the following additional change has been identified: • A2.5: Offshore and Intertidal Ornithology (APP-017) – Table 5.17 Co2 wording updated.
Advice in relation to the Environmental Statement (ES)	
Preliminary Environmental Information Report (PEIR) Parts of the ES rely on mitigation measures that are said to be set out in the PEIR or that were agreed at that stage. The PEIR is a pre-application consultation document and does not appear to have been included within the application documents. Consequently, it would not therefore be before the ExA. The ExA therefore would need an explanation of how any such assessments and commitments included in the PEIR could be examined and secured through any DCO (for example, tables 5.6 of Doc A3.5, and 6.12 of Doc A3.6).	A memo responding to this observation has been produced by the Applicant and presented in Appendix A.

Section 51 observation	Applicant response
Professional Expertise in relation to the ES The ES as currently drafted provides brief information about the expertise of the companies responsible for compiling the relevant chapter of the ES. However, given the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, consideration should be given to updating the ES to provide the necessary information in relation to the key individual experts involved in each ES topic.	The Applicant has created a table of competency in a Schedule of Change for A1.5: Environmental Impact Assessment Methodology (APP-011). It is proposed that this SoC is maintained throughout examination and relevant application submission documents are updated , upon request from the Examining Authority (ExA).
Proportionate approach The 'proportionate approach' to the EIA relies for most topics on iterative, pre-application consultation with regulators and consultees. Each topic chapter in the ES refers to agreements that are said to have been reached in relation, for example, to scoping, the type of assessment, and assessment outcomes. There is also a table in each topic chapter that sets out '…impacts not considered in detail in the ES and justification', which – in some instances – include entries that move an issue on from the scoping opinion position through reported agreement with the relevant consultees. As this is a unilateral record of all such agreements, to avoid specific, retrospective questioning of all such regulators and consultees, consideration should be given to summarising the agreements on which the EIA relies in signed Statements of Common Ground (SoCG) with those regulators and consultees.	This observation is acknowledged. It can be confirmed that SoCGs have been drafted with this approach in mind. Please refer to the draft SoCGs submitted to support the DCO application (such as F3.1: Statement of Common Ground between Hornsea Project Four and East Riding of Yorkshire Council (APP-255) (ERYC).
Withdrawal from the European Union (EU) The ES, and other application documents, are shown to have been prepared and approved during 2021 but many still refer to the withdrawal of the United Kingdom from the EU and the subsequent transitional period in the future tense (for example, section 2.2.1 of Chapter 2 of the ES (Doc A1.2)). Some references remain to EU Directives. Consideration should be	The Applicant has completed a review of all relevant ES documents. The following documents require amendments: • A3.3: Ecology and Nature Conservation (APP-027) – paragraph 3.7.6.4. • A5.2.1: Benthic and Intertidal Ecology Technical Report (APP-068), Appendix D Export Cable Corridor Benthic Ecology Baseline Characterisation – executive summary, paragraphs 3.5.1.3 and 4.1.1.3. • A5.5.5 Offshore Ornithology Migratory Birds Report (APP-078) – paragraph 3.1.1.1.

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given to updating the application documents in light of the final withdrawal agreement.	• B2.2 Report to Inform Appropriate Assessment Part 1 (APP-167) – paragraphs 1.2.1.2 and 5.2.1.1. • B2.2 Report to Inform Appropriate Assessment Part 2 (APP-168) – tense amended in paragraph 2.1.1.4 amended to reflect position at time of DCO application submission. It is understood the existing regulations relevant to the above will continue to apply with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Reference to Natura 2000 site updated in paragraph 2.2.1.1 and Table 1. • B2.6.1 Compensation measures for FFC SPA Compensation Criteria (APP-184) – Table 4 in Appendix A, Table 8. All other documents reviewed do not require changes related to EA regulations. The SoC provided to accompany this response include the abovementioned instances. It is proposed that these SoC are maintained throughout examination and relevant application submission documents are updated , upon request from the Examining Authority (ExA).
Advice in relation to the Habitat Regulations Assessment (HRA)	
In the HRA Screening Matrices (Doc B2.2 Appendix B) the footnotes associated with the matrices do not always contain specific section or paragraph cross references to supporting information. For completeness the Applicant is advised to resubmit the matrices with this information. It is noted that the SoCG between Hornsea Project 4 and Natural England: Derogation and Compensation Matters (Doc F3.4) provides a structure but that the tables within it are not populated with any information. This is drawn to the Applicant's attention in case this unpopulated document was submitted in error. The Applicant is advised to take this into account prior to submission of any further intended SoCG.	The Applicant has reviewed B2.2 Report to Inform Appropriate Assessment Part 3 (APP-169) and included section or paragraph cross references to the supporting information. Letter codes were updated where necessary to address correcting errors that arose through the addition of cross references. The Applicant has resubmitted this document in full. The observation regarding the SoCG between the Applicant and Natural England is acknowledged. The document outlines the structure of the SoCG and within Annex A provides the agreement log with Natural England on the efficacy of the compensation measures which is populated in full. The agreement log in Annex A was provided as previous discussions with PINS had requested that the efficacy of compensation measures was agreed with the SNCB and presented at the point of application. The Applicant can confirm that discussions with Natural England regarding derogation and compensation matters are ongoing. A completed SoCG with Natural England will build upon and incorporate the agreement log in any further submission.
Advice in relation to the Flood Risk Assessment (FRA)	
The FRA (ES Volume A6, Annex 2.2, Onshore Infrastructure Flood Risk Assessment (Doc A6.2.2) references an outdated version (2010) of the East Riding of Yorkshire Council's Level 1 Strategic Flood Risk Assessment (SFRA). However, the Evidence Plan (Doc B1.1.1) indicates that the Applicant has used the most recent version of the SFRA, published in 2019.	Within the A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) it is noted that the 2010 version of the ERYC's Level 1 SFRA has been used, as this was the current version at the time of writing. Due to the timescales between the drafting of the A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) and its submission as part of the DCO Application, a revised version of the Level 1 SFRA was

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The Applicant is advised to clarify which version has been used in the FRA and provide any necessary updates should the 2010 version have been used.	published in 2019. The implication that this may have on Hornsea Four was discussed with the Environment Agency at the Onshore Hydrology Technical Panel Meeting 8 meeting held on 7th September 2021. Reference to the SFRA contained in **B1.1.1: Consultation Report Evidence Plan (APP-130)** (ON-HYD-7.9) is a summary of the outcomes of this meeting, with the full minutes of the meeting included as part of the document. Reference to ERYC's 2019 Level 1 SFRA in ON-HYD-7.9 confirms that a review of this document has been undertaken but it does not state that this has been used in the **A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098)**. The following provides a brief summary of the review undertaken to provide clarification on the implications of ERYC's 2019 Level 1 SFRA on Hornsea Four. The Applicant can confirm that a review of the information contained within the Level 1 SFRA included a review of the flood risk mapping presented therein. The mapping confirmed that the flood zones remained unchanged from those reviewed within the **A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098)**. However, it was noted that in locations where detailed mapping was not available, such as at the OnSS, a mapping layer entitled *"Indicative climate change extent of areas not covered by detailed modelling"* has been provided to provide greater clarification to those using the information within the 2019 Level 1 SFRA to assess future flood risk. This was not available in the preceding version of the report. Following review of this mapping layer it shows the future extent in proximity to the OnSS to be similar to the present-day Flood Zone 2, and that this was limited to an area along the southern boundary and in the south-east corner of the OnSS. Based on previous discussions the Applicant has previously demonstrated to the Environment Agency that the OnSS will be located on ground that is elevated by approximately 2 – 3 m above this flood extent. Furthermore, it is noted that the information presented in the 2019 Level 1 SFRA does not change the understanding of present day or future flood risk to the Project. The meeting held on the 7th September 2021 comprised an agreement between the Environment Agency and the Applicant on the implications of the 2019 Level 1 SFRA whereby it has been demonstrated that the OnSS

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	will be elevated (with a 2-3 m of freeboard allowance) (via the position paper entitled Hydrology and Flood Risk - Assessment of modelled water levels for OnSS and attenuation feature) and that no modelling is required. As such, it was agreed during the meeting that the position paper can be updated and appended to the FRA to support the DCO application, rather than the need to make any amendments to the A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098).
Some of the text in the Tables provided in Appendix 1 of the submitted Evidence Plan (Doc B1.1.1) is obscured. You are advised to submit revised versions showing the full text.	B1.1.1: Consultation Report Evidence Plan (APP-130) has been updated to amend the formatting issue and resubmitted.
For elements of the proposed development located in Flood Zone (FZ) 3, the Applicant may wish to differentiate those within FZ3a or FZ3b and whether the location of the development within FZ3b has given rise to any flood compensation requirements. The FRA (Doc A6.2.2) does not demonstrate whether options exist that could wholly avoid siting the proposed development outside of FZ3, nor does it provide details of how flood risk was taken into account in the site selection process. The Applicant may wish to provide this information to inform the ExA's application of the sequential test. In order to inform the ExA's consideration of the exception test, the Applicant may want to confirm where in the submitted documents the demonstration that the Proposed Development would provide wider sustainability benefits to the community that outweigh the flood risk can be found.	Flood risk mapping provided by the Environment Agency does not differentiate between Flood Zone 3a and 3b. Furthermore, in this location the flood risk mapping is not based on detailed modelling and the Environment Agency confirmed that the 2016 Mott McDonald modelling undertaken for the Creyke Beck substation remained the most detailed modelling for the OnSS area. A review of this modelling and the implications on flood risk is provided in A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) and subsequently in the position paper entitled Hydrology and Flood Risk - Assessment of modelled water levels for OnSS and attenuation feature. In addition to the flood risk mapping the flood zones are considered on the basis of information contained within the ERYC's Level 1 SFRA, as well as Environment Agency data regarding the presence of defences and whether a location is identified as being in an area benefitting from defences. As noted in A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) this data was assessed and it was found that limited elements of the Project are located within Flood Zone 3. Paragraph 4.2.3.1 of A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) notes that the landfall is largely located in Flood Zone 1, with only temporary elements (during the construction phase) located in Flood Zone 3. Additionally, Paragraph 4.2.6.5 notes that the beach in front of the landfall is identified as Flood Zone 3. As the offshore export cables will be constructed using trenchless techniques (e.g. HDD) there would be no flood risk to the cable as it makes landfall. Along the onshore Export Cable Corridor (ECC), Paragraph 4.3.3.6 of the A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) notes that seven of the identified eight onshore ECC logistics compounds are

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	located in Flood Zone 1. The proposed onshore ECC logistics compound at Carr Lane is partially located in an area identified as being in Flood Zone 3. However, this location is also identified by the Environment Agency Product 4 data as benefitting from defences, meaning it is not currently at risk of flooding from fluvial sources (i.e. this would be classed as Flood Zone 3a, rather than Flood Zone 3b – functional floodplain). It is the conclusion of the Applicant that these elements have been sequentially located, to avoid the areas of flood risk. Paragraph 4.3.5.1 of A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) notes that temporary access tracks shall be used during the construction phase of the project, to facilitate cable installation, and will be removed following the completion of the construction phase. Although some of these temporary access tracks are partially located in Flood Zone 3, temporary access tracks follow existing lanes or tracks, where possible, to minimise the impact of Hornsea Four and as such are considered acceptable in terms of their siting and flood risk. As the onshore ECC passes under a number of watercourses, it is required to pass in proximity to areas at increased flood risk. It is noted within A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) however that upon completion of the cable laying this risk will be fully mitigated with all permanent infrastructure located below ground. There is one permanent access track serving the permanent OnSS running south from the A1079. Paragraph 4.9.7.3 of A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) notes that the permanent access track crosses over the Atkin's Keld watercourse which is shown as being at 'High' surface water flood risk and located within Flood Zone 3. This area of flood risk is limited to the location where the permanent access track passes over the existing watercourse. The document also notes that the construction of the permanent access track should be designed to ensure continued floodplain capacity and / or flow conveyance, where reasonably practicable. This was discussed and agreed with the Environment Agency, and Beverley and North Holderness IDB at the Hornsea Four water and flood risk Evidence Plan Technical Panel meeting held on 5th November 2019 (ON-HYD-3.12). This commitment by the Applicant is subsequently reflected in Co184 and Co185 of A4.5.2: Commitment Register (APP-050). Finally A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) notes in Paragraph 4.9.2.1 that the permanent OnSS intersects one Flood Zone 3 extent at the south-east corner of the permanent OnSS area.

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	However, this flood risk has been discussed in detail with the Environment Agency and the Applicant notes that the built elements of the OnSS have been sequentially located in Flood Zone 1 and are elevated by approximately 2 – 3 m above the Flood Zone 3 extent. This has been presented to the Environment Agency in the position paper entitled Hydrology and Flood Risk - Assessment of modelled water levels for the OnSS and attenuation feature has been subject to Environment Agency agreement at Technical Panel meetings as detailed within B1.1.1: Consultation Report Evidence Plan (APP-130). As such, the Applicant can confirm it is their understanding that no elements of the Project would require the provision of floodplain compensation, as those elements which may be classed as being located within Flood Zone 3b are limited to temporary access tracks or below ground features. Furthermore, paragraph 4.9.7.4 of A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) notes that the design of the permanent access track will be developed to include appropriate mitigation measures to limit any potential restriction in flow (Co185). Consideration of the Sequential Test and Exception Test has been set out in Section 5 of A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098). It notes in Paragraph 5.2.1.3 that above ground compounds / structures and permanent elements of Hornsea Four are primarily located within Flood Zone 1 and that the elements located in Flood Zone 3 are either temporary in nature or have to be sited in this location to pass over watercourses. Subterranean development is also located primarily in Flood Zone 1, with some locations in Flood Zone 2 and 3 where it is required to pass under, or in proximity to, existing watercourses. Further to this, Paragraph 5.2.1.5 notes that based on the modelling information available it has been confirmed that the built elements of the permanent OnSS area will be located within Flood Zone 1. The permanent access track is located primarily in Flood Zone 1, except for the location where it passes over the existing Atkin's Keld watercourse where it will be within Flood Zone 3. It is considered that, based on the above clarifications, the Applicant has sequentially located Hornsea Four to avoid areas of increased flood risk wherever possible, ensuring that those elements most likely to be affected by flooding are within Flood Zone 1 and at low risk from surface water flooding. On this basis, the Applicant considers that the permanent access track is the only element where there is a requirement to apply the Exception Test. A6.2.2: Onshore Infrastructure Flood Risk Assessment (APP-098) has considered how the Exception Test is considered to have been passed in Paragraphs 5.2.1.5 through to Paragraph 5.2.1.7 for this element of Hornsea Four.

Section 51 observation	Applicant response
Other matters	
Consultees identified on a precautionary basis Given the individual circumstances of this case, the Planning Inspectorate advises taking a precautionary approach to consultation under s42(1)(a) of PA2008 to ensure that all persons potentially affected by, or potentially likely to have an interest in the application are given the opportunity to participate fully in the Examination of the application. On this basis, the Applicant may wish to serve notice on the bodies listed in Box 6 of the section 55 checklist when it serves notice of the accepted application under s56(2)(a) of the PA2008; unless there is a specific justification why this is not necessary.	The consultees listed in Box 6 of the Section 55 Checklist (PD-002) have been included within the served section 56 notices as recommended.
Abbreviations and Acronyms Some of the application documents (and in particular the ES) use abbreviations and acronyms that are not included in the in-document glossary (for example ES Chapter 1.3: RPSS, SEZ, OSCG etc (Doc A1.3)). Consideration should be given to ensuring that each in-document glossary is comprehensive, or to the production of a stand-alone glossary that covers all of the application documents.	The Applicant has compiled a master list of abbreviations and acronyms G1.1: Overarching Acronyms List. As such, the Applicant does not propose to amend each individual application submission document to add missing definitions - the new master list is to be used.
Minor errors and omissions The Applicant should note any minor errors and/ or omissions that are reflected in box 30 and elsewhere in the Acceptance Checklist.	The Applicant has noted the typographical error in Schedule 1, Part 1 of C1.1: Draft DCO including draft DML (APP-203). The draft DCO has been updated to include the correct public right of way reference number that aligns with Sheet 27 of D1.7.1: Public Rights of Way (PRoW) Plan (APP-215). These will be included in the updated draft DCO and DCO Schedule of Change to be submitted at Deadline 1.

Appendix A EIA Proportionality Memo

Subject	Proportionate EIA S51 Response
To	Planning Inspectorate
Copy	Julian Carolan, Hornsea Four Consent Manager
From	Hornsea Project Four
Regarding	Response to Section 51 advice regarding proportionate EIA.

14 January 2022
Our ref. A

1. Introduction and overview

1.1.1.1 As part of the Planning Inspectorate's Section 51 advice letter (PD-003) (Ref: EN010098, dated 26 October 2021) published upon acceptance of the Hornsea Four Development Consent Order (DCO) application, the following observation was made (bold emphasis added by Orsted Hornsea Project Four Limited (hereafter 'the Applicant')):

"Preliminary Environmental Information Report (PEIR)
Parts of the ES ***rely on mitigation measures that are said to be set out in the PEIR or that were agreed at that stage****. The PEIR is a pre-application consultation document and does not appear to have been included within the application documents. Consequently, it would not therefore be before the ExA.* ***The ExA therefore would need an explanation of how any such assessments and commitments included in the PEIR could be examined and secured through any DCO*** *(for example, tables 5.6 of Doc A3.5, and 6.12 of Doc A3.6)."*

2. Hornsea Four proportionate EIA approach – background

2.1.1.1 The Applicant has engaged with stakeholders throughout the pre-application process regarding the proportionate approach to Environmental Impact Assessment (EIA). During EIA Scoping the Applicant set out the intention to produce a proportionate Environmental Statement (ES) to support the DCO application. ES chapters were intended to focus on impacts with the potential to cause significant effects, without assessing impacts that have been determined to be non-significant. Such conclusions would be agreed with relevant stakeholders via EIA Scoping or the PEIR, or via position papers and discussion during the Evidence Plan technical panel meetings (see B1.1.1: Consultation Report Evidence Plan (APP-130)). The ES would be supported by the 'Impacts Register', which would contain all impacts associated with the project, including those not covered in ES chapters (further detail provided in A4.1.1: How to read this ES (APP-035)). The proportionate approach was informed by 'Delivering Proportionate EIA, A Collaborative Strategy for Enhancing UK Environmental Impact Assessment Practice' (IEMA 2017).

2.1.1.2 Engagement with stakeholders continued throughout the pre-application process and included 'Proportionality Roadshows' (as detailed in Section 4.7 of B1.1 Consultation Report (APP-129)), which focussed solely on presenting and discussing the approach. Furthermore, the proportionate approach to EIA was consistently covered in evidence plan meetings, including steering group meetings attended by the Planning Inspectorate. Iterative updates were provided, showing the evolution of the various tools used and examples of the impacts 'not considered in detail' in ES chapters.

2.1.1.3 A 'How to read this PEIR' was created, forming part of the PEIR consultation and setting out the key steps for how the Hornsea Four PEIR should be read to follow the approach to proportionality. The 'how to' document provided detailed descriptions of the various PEIR submission documents and the interactions between them. This document was updated to support the DCO application (A4.1.1: How to read this ES (APP-035)) and covers the following four steps:

- Step 1 – Impacts Register;
- Step 2 – Commitment Register;
- Step 3 – DCO Application Document Register; and
- Step 4 – ES Chapter and Technical Reports.

2.1.1.4 The Applicant advises that this document should be referred to prior to reading ES chapters.

3. How assessments and commitments included in the PEIR could be examined and secured through the DCO

3.1.1.1 When considering the assessments and commitments covered as part of the Hornsea Four DCO application, the following key documents are of most relevance:

- A4.5.1: Impacts Register (APP-049);
- A4.5.2: Commitments Register (APP-050);
- B1.1.1: Consultation Report Evidence Plan (APP-130);
- ES Chapters in Volume A2 (offshore, APP-013 to App-024) and A3 (onshore, APP-025 to APP-034);
- Outline Plans in Volume F2, summarised in F2.1: Hierarchy of Management Plans (APP-236); and
- C.1.1: Draft DCO including draft DML (APP-203).

3.2 Impact Register Explained

3.2.1.1 A4.5.1: Impacts Register (APP-049) is an Annex to the ES. It includes an 'Impacts Register Explained' in Section 1. This describes the purpose and contents of each column, which are broken down into distinct headings 'Impact Background', 'EIA Scoping', 'Preliminary Environmental Information Report' and 'Environmental Statement'. The Impacts Register has evolved throughout the Hornsea Four pre-application process. At the point of DCO application submission it provides a succinct tool to track the progress off all impacts associated with Hornsea Four through all stages of the pre-application process from left to right. Furthermore, whilst the register contains all information required alongside ES

chapters, the 'Impacts Register Explained' also includes links to the EIA Scoping Report and the Hornsea Four PEIR documents to assist the reader (for stakeholders that can accept and open such links).

3.2.1.2 The purpose of the Impacts Register (which is an Annex to the ES) is to present a proportionate level of detail for all assessments, including those impacts which will not or are unlikely to give rise to significant effects. An ES must describe the likely significant effects of the development on the environment. Through the pre-application process including consultation with stakeholders, the Applicant carried out preliminary assessments which concluded that some potential impacts were unlikely to be significant. On that basis, and to ensure a proportionate approach, the Applicant has included a summary of the assessment process for these in the impacts register only, and not outlined in the relevant ES chapter.

3.2.1.3 For ease of reference, **Figure 1** provides a snapshot of each main heading in each Impacts Register tab. In summary, **for every impact, an impact assessment with a magnitude and sensitivity has been included and an assessment conclusion provided**. This assessment differs in complexity dependant on the type of impacts (such as 'detailed' vs 'simple' assessment' as indicated by green and orange cells) and is either presented under the heading:

- EIA Scoping, for those impacts scoped out via the EIA Scoping Report and agreed with the Planning Inspectorate or those impacts subsequently agreed with relevant stakeholders as unlikely to be significant after further justification was provided during the pre-application phase. These impacts are therefore assessed in the impacts register only and not in the relevant application ES chapters, to promote a proportionate approach to EIA reporting.
- PEIR, for impacts identified as unlikely to be significant through the PEIR assessment. This stage includes an assigned magnitude, sensitivity and subsequent residual effect. For those impacts that meet all of the following criteria, this is the final stage in the impact assessment process:
    - No residual significant effect identified at PEIR;
    - No material changes to project Order Limits or project description or methodology between PEIR and DCO application submission that would change the assessment conclusion presented.
    - Agreement with relevant stakeholders where possible to not consider impact assessment in the ES chapter and instead use the Impacts Register (agreement references added to each impact in the register, which are cross-referenced to **B1.1.1: Consultation Report Evidence Plan (APP-130)**, which includes detail of each agreement including correspondence date and content).

  The assessment of these impacts is therefore set out in the impacts register only and not in the relevant application chapters, to promote a proportionate approach to EIA reporting. The methodology for assessment for these impacts is retained in the relevant ES chapter, to ensure the reader can review the criteria used to determine the magnitude and sensitivity.
- Where likely significant effects have been identified, or material changes to the Order Limits, project description or methodology have occurred following PEIR, the impact is assessed in the relevant ES chapter and summarised in the ES column of the impacts register.

3.2.1.4 A4.5.1: Impacts Register (APP-049) is therefore a fundamental submission document that **includes an assessment of every impact** that may arise due to the construction, operation and decommissioning of Hornsea Four either via a simple assessment or presenting the results of a detailed assessment which is also included in the relevant ES chapter(s). The lack of an impact assessment presentation in an ES chapter does not mean that an assessment has not been carried out and presented in the DCO application submission and there is no need to refer to EIA Scoping or the PEIR for the assessment.

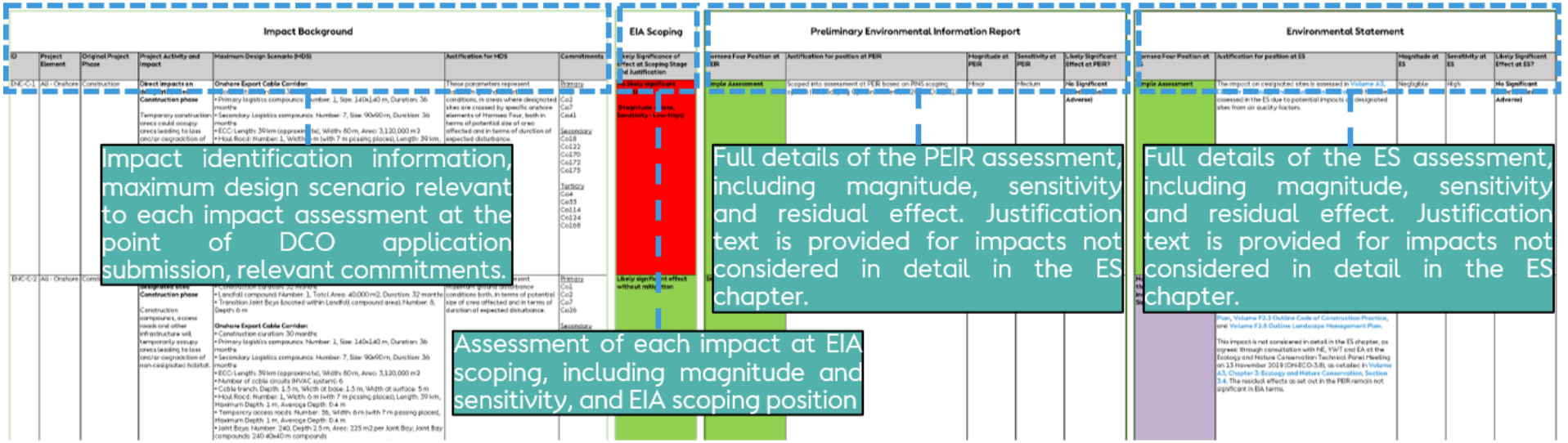


Figure 1: Impacts Register Explained Summary.

3.3 Assessments

3.3.1.1 Assessments undertaken within PEIR chapters and since excluded from the ES chapters that support the DCO application (such as the examples provided in A3.5: Historic Environment (APP-029) and A3.6: Land Use and Agriculture (APP-030), as specified in the S51 Planning Inspectorate's observation) are detailed fully within A4.5.1: Impacts Register (APP-049). This includes the magnitude and sensitivity assigned and the subsequent likely significant effect conclusion. All assessments not detailed in ES chapters have necessary justification text included within the Impacts Register.

3.3.1.2 For ease of reference examples are provided below to demonstrate differing circumstances where assessments were not considered in detail in the ES chapter. These include an example from:

- A3.5: Historic Environment (APP-029) (as per the Planning Inspectorate's S51 observation) in Figure 2;
- A3.6: Land Use and Agriculture (APP-030) (as per the Planning Inspectorate's S51 observation) in Figure 3; and
- A3.2: Hydrology and Flood Risk (APP-026) to demonstrate an impact that identified post-scoping, included mitigation requirements, and is assessed entirely within the Impacts Register (in Figure 4).

HE-O-5: Indirect impacts (non-physical) on designated heritage assets: Operation phase

EIA Scoping

- Applicant's position at EIA Scoping – Likely significant effect without mitigation.
- Planning Inspectorate's Scoping Decision – N/A as impact scoped in by the Applicant.

PEIR

- Assessment presented in PEIR chapter. Impacts Register. Assessment concluded Minor Adverse effect. This assessment is presented in the Impacts Register which is an Annex to the ES.
- No mitigation required over and above commitments secured via mechanisms presented in Commitments Register at PEIR (Co25, Co28, Co145, Co151, Co30, Co159).

ES

- Due to no significant effect conclusion at PEIR, though assessment in PEIR was partial, impact assessment for setting was included in **A6.5.1: Historic Environment Desk Based Assessment** and removed from ES chapter. Further commentary provided in column 'Justification for position at ES'. Agreement secured with relevant stakeholder and agreement reference number provided (detail provided in **B1.1.1: Consultation Report Evidence Plan**).
- Commitments relied on in PEIR assessment updated and presented in **A4.5.6: Impacts Register**, included in outline plans. For example Co30 (**F2.8**), Co145, Co151 (**F2.13**), Co159 (DCO requirement 17). Co25 and Co28 removed from list as considered irrelevant to assessment.
- Further commitments since PEIR, such as Co193 (operational lighting) and Co196 (landscaping), provided to further justify residual effect.

Impact Background							EIA Scoping	Preliminary Environmental Information Report					Environmental Statement				
ID	Project Element	Original Project Phase	Project Activity and Impact	Maximum Design Scenario (MDS)	Justification for MDS	Commitments	Likely Significance of Effect at Scoping Stage and Justification	Hornsea Four Position at PEIR	Justification for position at PEIR	Magnitude at PEIR	Sensitivity at PEIR	Likely Significant Effect at PEIR?	Hornsea Four Position at ES	Justification for position at ES	Magnitude at ES	Sensitivity at ES	Likely Significant Effect at ES?
HE-O-5	Onshore Substation	Operation	**Indirect (non-physical) impacts on designated heritage assets: Operation Phase** As a result of the presence of infrastructure in the landscape with the potential to result in a change in setting of assets.	**Onshore Substation and Energy Balancing Infrastructure:** • Onshore Operational life: 35 years **OnSS:** • Permanent area (inclusive of landscaping and attenuation): 164,000 m2 • Main Buildings: Number: 2, Length: 240 m (if single building), Width: 80m (if single building), Height: 25 m • Secondary Buildings: Number: 15, Total Combined Area: 7,000m2, Height: 15 m • Height of fire wells: 25 m • Height of lightning protection for main building: 30m **EBI:** • Main and Secondary Buildings Total Area (within permanent infrastructure area): 17,300 m2 • Main buildings: Height: 15 m • Secondary buildings: Height: 20 m (type one) • Height of fire wells: 25 m • Lightning protection Height: 25 m	These parameters present the maximum durations and maximum design scenarios for the permanent above ground infrastructure which have the potential to indirectly impact upon designated heritage assets through an alteration to their setting.	Primary Co145 Co151 Secondary Co30 Co159 Co193 Co195	**Likely significant effects without mitigation**	**Detailed Assessment**	N/A as impact scoped in	Minor	Medium to High	**No Significant Effect (Minor Adverse)**	**Not considered further in the EIA process and not included in ES due to no Significant Effect.**	As set out in ES Volume A3, Chapter 3: Historic Environment, changes to the Order Limits since PEIR have not had a material impact on the assessment. At PEIR, the setting assessment was incomplete; this has been updated to reflect the design changes and is presented in Volume A6, Annex 5.1: Historic Environment Desk Based Assessment. This approach was agreed via email correspondence with Mr Keith Emerick at Historic England on 14th November 2019 (OFHHS-5.4). In addition to this, following the change in the basis for assessment in the ES (i.e. the change to the updated DMRB assessment methodology) this impact is considered 'slight' (not significant) and is therefore not considered in detail in the ES.	N/A	N/A	**No Significant Effect**

Figure 2: Onshore Historic Environment Example.

LUA-C-2: Temporary disruption to coastal recreation

EIA Scoping

- Applicant's position at EIA Scoping – No likely significant effect
- Planning Inspectorate's Scoping Decision – Potential for likely significant effects, assessment to be presented in ES.

Inspectorate's comments

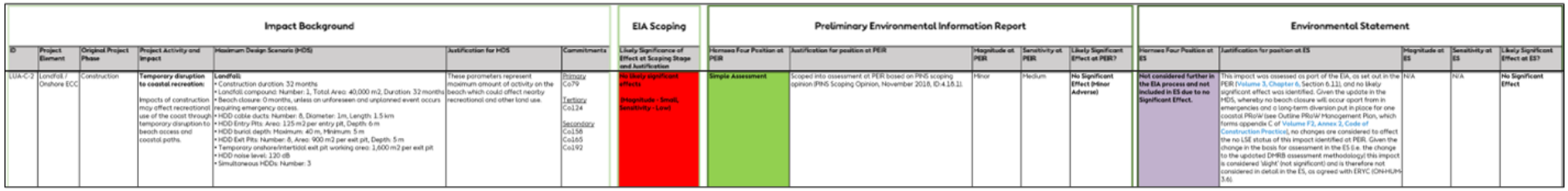
The Scoping report does not provide an accurate estimate of the duration of the construction works which will affect coastal recreational use, however Figure 3.7 indicates works could be ongoing for a month or more in two successive years. It is noted that Co79 intends to deliver mitigation in the form of Public Right of Way (PRoW)/footpath diversions however; the nature and extent of this are not known. Given the scale of the works at the landfall location the Inspectorate considers that significant effects during construction could arise, and considers that the ES should provide an assessment of effects on coastal recreational receptors.

PEIR

- Due to Planning Inspectorate Scoping Decision, assessment presented in PEIR chapter. Impacts Register cited relevant scoping opinion reference ID.
- Assessment concluded Minor Adverse effect. This assessment is presented in the Impacts Register which is an Annex to the ES.
- No mitigation required over and above commitments secured via mechanisms presented in Commitments Register at PEIR (Co79, Co158, Ch165; each secured via PEIR document 'Outline Code of Construction Practice' (Co124)).

ES

- Due to no significant effect conclusion at PEIR, impact removed from ES chapter and assessment presented in Impacts Register only (sensitivity, magnitude and residual effect). Further commentary provided in column 'Justification for position at ES'.
- Commitments relied on in PEIR assessment updated and presented in **A4.5.6: Impacts Register**, included in outline plans. For example, Co79, Co158, Co165 are detailed in **F2.2: outline Code of Construction Practice** and secured via DCO Requirements 17.
- Further commitments since PEIR, such as Co187 (HDD of landfall) and Co192 (avoiding beach closure), provided to further justify residual effect.
- Agreement secured with relevant stakeholder and agreement reference number provided (detail provided in **B1.1.1: Consultation Report Evidence Plan**).

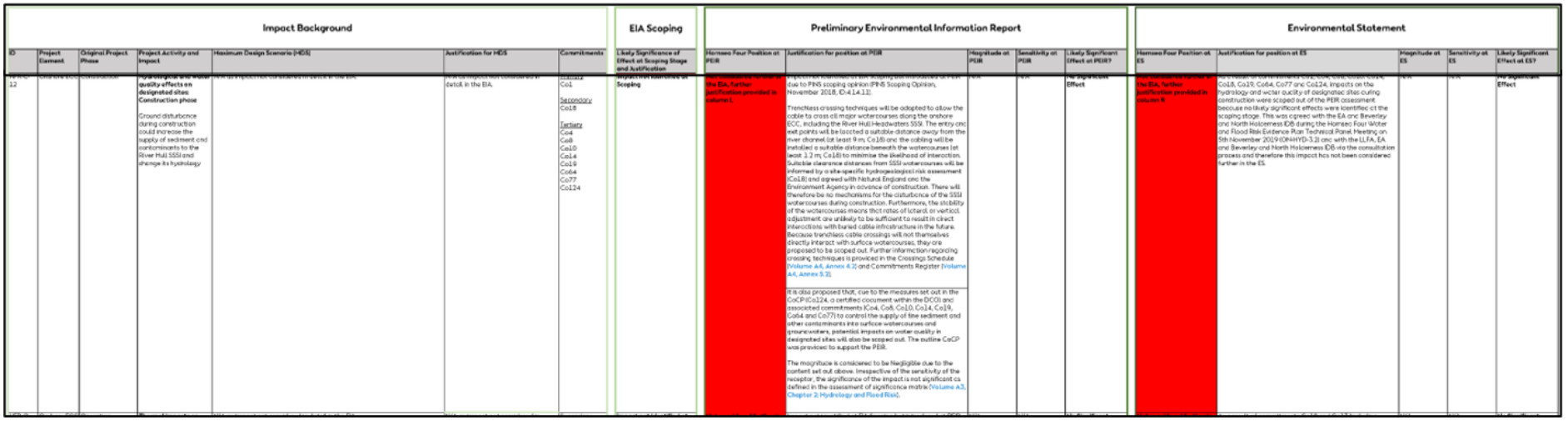


Impact Background							EIA Scoping	Preliminary Environmental Information Report					Environmental Statement				
ID	Project Element	Original Project Phase	Project Activity and Impact	Maximum Design Scenario (MDS)	Justification for MDS	Commitments	Likely Significance of Effect at Scoping Stage and Justification	Hornsea Four Position at PEIR	Justification for position at PEIR	Magnitude at PEIR	Sensitivity at PEIR	Likely Significant Effect at PEIR?	Hornsea Four Position at ES	Justification for position at ES	Magnitude at ES	Sensitivity at ES	Likely Significant Effect at ES?
LUA-C-2	Landfall / Onshore ECC	Construction	**Temporary disruption to coastal recreation:** Impacts of construction may affect recreational use of the coast through temporary disruption to beach access and coastal paths.	**Landfall:** • Construction duration: 32 months • Landfall compound: Number: 1, Total Area: 40,000 m2, Duration: 32 months • Beach closure: 0 months, unless an unforeseen and unplanned event occurs requiring emergency access. • HDD cable ducts: Number: 8, Diameter: 1m, Length: 1.5 km • HDD Entry Pits: Area: 125 m2 per entry pit, Depth: 6 m • HDD burial depth: Maximum: 40 m, Minimum: 5 m • HDD Exit Pits: Number: 8, Area: 900 m2 per exit pit, Depth: 5 m • Temporary onshore/intertidal exit pit working area: 1,600 m2 per exit pit • HDD noise level: 120 dB • Simultaneous HDDs: Number: 3	These parameters represent maximum amount of activity on the beach which could affect nearby recreational and other land use.	Primary Co79 Tertiary Co124 Secondary Co158 Co165 Co192	**No likely significant effects** **(magnitude - Small, Sensitivity - Low)**	**Simple Assessment**	Scoped into assessment at PEIR based on PINS scoping opinion (PINS Scoping Opinion, November 2018, ID 4.18.1).	Minor	Medium	**No Significant Effect (Minor Adverse)**	**Not considered further in the EIA process and not included in ES due to no Significant Effect.**	This impact was assessed as part of the EIA, as set out in the PEIR (Volume 3, Chapter 6, Section 6.11), and no likely significant effect was identified. Given the update in the MDS, whereby no beach closure will occur apart from in emergencies and a long-term diversion put in place for one coastal PRoW (see Outline PRoW Management Plan, which forms appendix C of Volume F2, Annex 2, Code of Construction Practice), no changes are considered to affect the no LSE status of this impact identified at PEIR. Given the change in the basis for assessment in the ES (i.e. the change to the updated DMRB assessment methodology) this impact is considered 'slight' (not significant) and is therefore not considered in detail in the ES, as agreed with ERYC (ON-HUM-3.46).	N/A	N/A	**No Significant Effect**

Figure 3: Land Use and Agriculture Example.

HFR-C-12: Hydrological and water quality effects on designated sites: Construction phase

EIA Scoping	PEIR	ES
• Impact not identified at EIA Scoping and not covered in EIA Scoping Response.	• Impact identified at PEIR, included in Impacts Register. Magnitude Negligible identified in 'Justification for position at PEIR' due to mitigation measures and as such irrespective of sensitivity, effect is not significant. • Key commitments secured relevant to impact (Co1, Co4, Co8, Co10, Co14, Co18, Co19, Co64, Co77, Co124), outlined in the Commitment Register and secured by DCO Requirements 13, 14, 15 and 17. Details provided in the Outline Code of Construction Practice, Outline Infrastructure Drainage Strategy.	• Impact presented in the Impacts Register only and agreement secured with relevant stakeholders and agreement reference number provided (detail provided in **B1.1.1: Consultation Report Evidence Plan**). • Commitments relied on in PEIR assessment updated and presented in **A4.5.6: Impacts Register**, included in outline plans. For example Co1, Co4, Co8, Co10, Co18, Co64, Co124 (**F2.2**), Co14, Co19 (**F2.6**), Co77 (DCO requirement 14). Outline plans secured via DCO Requirements 13, 14, 15 and 17.



Impact Background							EIA Scoping	Preliminary Environmental Information Report				Environmental Statement				
ID	Project Element	Original Project Phase	Project Activity and Impact	Maximum Design Scenario (MDS)	Justification for MDS	Commitments	Likely Significance of Effect at Scoping Stage and Justification	Hornsea Four Position at PEIR	Justification for position at PEIR	Magnitude at PEIR	Sensitivity at PEIR	Likely Significant Effect at PEIR?	Hornsea Four Position at ES	Justification for position at ES	Magnitude at ES	Sensitivity at ES	Likely Significant Effect at ES?
HFR-C-12		Construction	**Hydrological and water quality effects on designated sites: Construction phase** Ground disturbance during construction could increase the supply of sediment and contaminants to the River Hull SSSI and change its hydrology			Primary Co1 Secondary Co18 Tertiary Co4 Co8 Co10 Co14 Co19 Co64 Co77 Co124		**Not Agreed with the EIA, further justification provided in column L**	Impact not identified at EIA Scoping and not covered in EIA Scoping Response due to PINS scoping opinion (PINS Scoping Opinion, November 2018, ID:4.14.11). Trenchless crossing techniques will be adopted to allow the cable to cross all major watercourses along the onshore ECC, including the River Hull Headwaters SSSI. The entry and exit points will be located a suitable distance away from the river channel (at least 9 m; Co18) and the cabling will be installed a suitable distance beneath the watercourses (at least 1.2 m; Co18) to minimise the likelihood of interaction. Suitable clearance distances from SSSI watercourses will be informed by a site-specific hydrogeological risk assessment (Co18) and agreed with Natural England and the Environment Agency in advance of construction. There will therefore be no mechanisms for the disturbance of the SSSI watercourses during construction. Furthermore, the stability of the watercourses means that rates of lateral or vertical adjustment are unlikely to be sufficient to result in direct interactions with buried cable infrastructure in the future. Because trenchless cable crossings will not themselves directly interact with surface watercourses, they are proposed to be scoped out. Further information regarding crossing techniques is provided in the Crossings Schedule (Volume A4, Annex 4.2) and Commitments Register (Volume A4, Annex 5.3). It is also proposed that, due to the measures set out in the CoCP (Co124, a certified document within the DCO) and associated commitments (Co4, Co8, Co10, Co14, Co19, Co64 and Co77) to control the supply of fine sediment and other contaminants into surface watercourses and groundwaters, potential impacts on water quality in designated sites will also be scoped out. The outline CoCP was provided to support the PEIR. The magnitude is considered to be Negligible due to the content set out above. Irrespective of the sensitivity of the receptor, the significance of the impact is not significant as defined in the assessment of significance matrix (Volume A3, Chapter 2: Hydrology and Flood Risk).				**Not Agreed with the EIA, further justification provided in column N**	Impacts on the Hydrology and water quality of designated sites during construction were scoped out of the PEIR assessment because no likely significant effects were identified at the scoping stage. This was agreed with the EA and Beverley and North Holderness IDB during the Hornsea Four Water and Flood Risk Evidence Plan Technical Panel Meeting on 5th November 2019 (0HHYD-3.2) and with the LLFA, EA and Beverley and North Holderness IDB via the consultation process and therefore this impact has not been considered further in the ES.			

Figure 4: Hydrology and Flood Risk Example.

3.4 Commitments and mitigation

3.4.1.1 A4.5.2: Commitments Register (APP-050) is the register for all commitments made by the Applicant (other than those relevant to compensation, which are outlined in A4.6.4: Compensation Commitments Register (APP-060)). The purpose of the Commitments Register is to provide a tool to review key information associated with all commitments, allowing for easy cross reference with the Impacts Register, ES chapters and the relevant documents/plans/protocols that secure their commitment and where those are secured in the DCO.

3.4.1.2 Commitments range from large-scale design measures to small-scale methodologies or avoidance measures. Commitments have been developed through the impact assessment process, as well as consultation with statutory stakeholders and members of the public.

3.4.1.3 An explanation of the mechanisms used to secure commitments is presented in Figure 5. It is noted that not every mitigation measure relied upon for impact assessment is covered by a separate commitment – some measures are detailed in ES chapters and the necessary wording provided in the relevant outline plan, which is itself secured via a relevant DCO requirement. A notable example of this is F2.2: Outline Code of Construction Practice (APP-237) which not only secures a large number of commitments, but also provides additional detailed mitigation that is either tertiary (best practice) or necessary to mitigate impacts arising from Hornsea Four. If such additional mitigation (not covered by a commitment) was relied upon in a PEIR chapter, such detail would be provided in the Impacts Register assessment and detailed within the relevant outline plan.

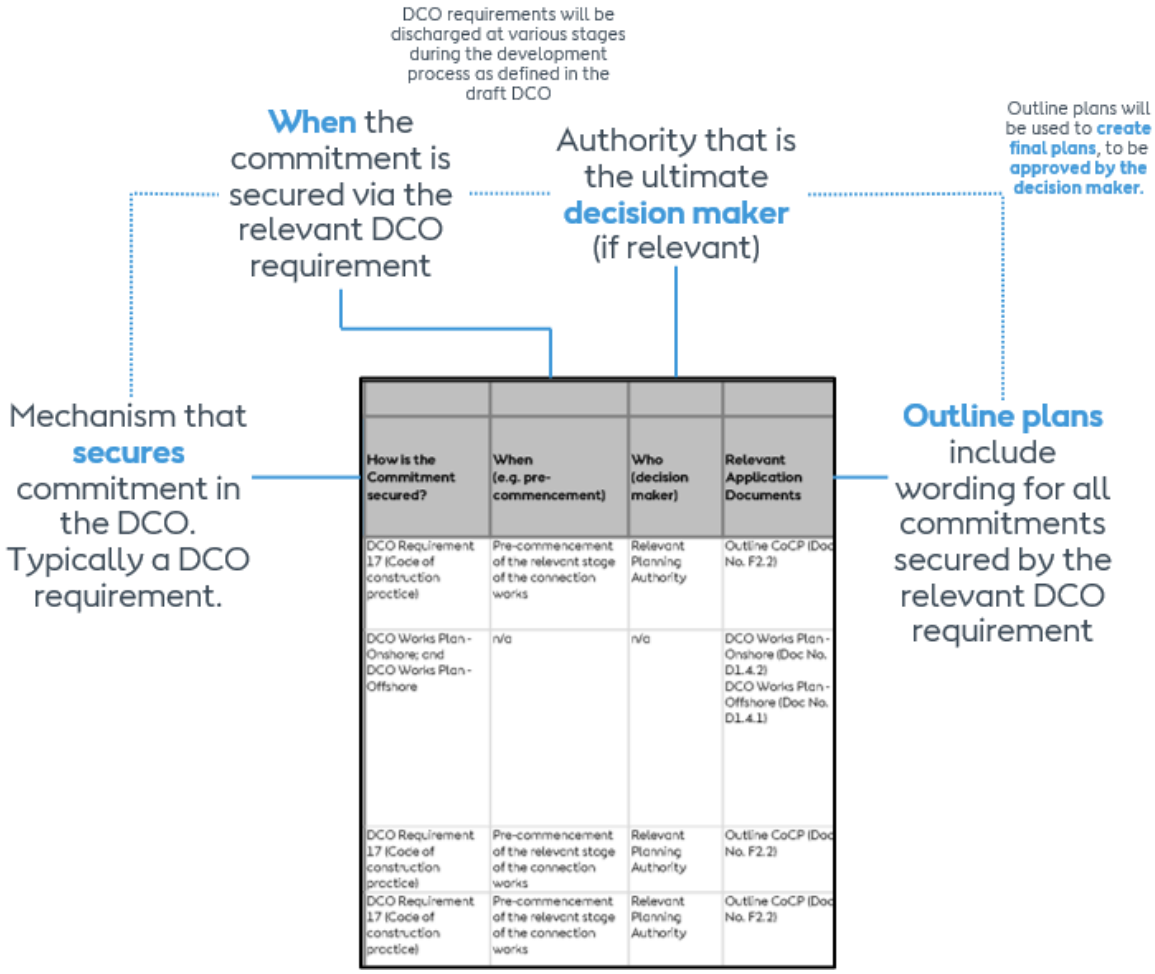


Figure 5: Commitment register explained.

4. Conclusion

4.1.1.1 The ExA therefore can rely upon the impacts register (which is an Annex to and part of the ES) to present the assessment of all impacts associated with Hornsea Four and there is no need to consult the EIA Scoping or the PEIR to understand the impacts of Hornsea Four. Any commitments associated with the assessments presented in the impacts register are identified in the commitments register (and accompanying strategies and plans) along with an explanation of how they are secured. No parts of the ES (including the impacts register) rely on mitigation measures which are not presented and secured as part of the DCO application.