PLEASE READ this 4 Step Guide
Refer to the document "Reading this PEIR" for further detail on the Steps and Documents.

STEP 1 - Impact/Effect Register

The function of the impact/effect register is to document ALL potential impacts/effects associated with the proposed development of Hornsea Four and to identify those that are "scoped out" and those of Likely Significant Effect (LSE) to be taken forward for simple or detailed assessment in the PEIR.
Please refer to the Impact Register for further detail.
NOTE: Likely Significant Effect in EIA Terms)

Question 1 - Impact and Effect Register

Are all potential impacts associated with the relevant receptor correctly identified within the Impacts/Effects Register and aligned with the Hornsea Four Scoping Opinion and therefore clearly setting the scope of the PEIR?

STEP 2 - Commitment Register

The function of the commitment register is to serve as repository of **ALL** commitments. The key function of Commitments is to reduce or eliminate LSE. Commitments may be suggested by members of the public, stakeholders and technical contributors to the EIA.
Please refer to the Commitment Register for further detail

Question 2 - Commitment Register

Are the Commitments proposed:
A. Sufficient to support "Scoping Out" of impacts?
B. Are they adequately secured (see Step 3)?

Do you have any additions or amendments to the Commitments at PEIR?

STEP 3 - Application Register

The register provides a guide to Hornsea Four's (the Applicant) Development Consent Order (DCO) The Application Register provides a full list of the documents that have been submitted as part of the draft consultation documents at the point of S42 statutory consultation. The register is a live document and will be updated when revisions are made, and a final register will accompany the DCO application to the Planning Inspectorate.

Question 3 - Application Register

Are the relevant documents presented for consultation to secure the commitments and "Scoping Out" of impacts/effects of LSE?

STEP 4 - PEIR Chapter & Technical Report

The PEIR Chapter presents an assessment (simple and detailed) of the LSEs that have been agreed via Scoping and the Evidence Plan process.

Question 4 – PEIR & Technical Report

Do you agree with the scope of the EIA at PEIR and the simple/detailed assessments?

Hornsea 4

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Reading this PEIR

PLEASE READ

Supports the "4 Step Guide to reading this PEIR"

Prepared	Julian Carolan (JULCA) 09 May 2019
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Table of Contents

1. Background and Purpose of this Position Paper

This document provides further detail to the "**4 Step Guide to Reading this PEIR**" and provides supporting information to guide the reader in navigating the various documents and registers that have been provided by Hornsea Four at the point of consultation on the Preliminary Environmental Information Report (PEIR).

The PEIR deliverables which are key to delivering proportionality in EIA include:

1. Impact/Effect Register
2. Commitment Register
3. DCO Application Register
4. PEIR Chapter and Technical Report

The role of these documents and reports are summarised in the proceeding sections. They follow a sequential order ("4 Steps") which are intended to familiarise the reader with the evolution of proportionality EIA from Scoping to PEIR and beyond to DCO application.

This note is not intended to instruct stakeholders on how to review or provide a "to do" list. Through consultation, the requirement to provide guidance on how the documents come together to deliver proportionality was suggested. This note therefore has been drafted in good faith to assist the reader to navigate what for many is a new approach to delivering a proportionate EIA that readers may not be familiar with.

2. Hornsea Four PEIR Deliverables

This section sets out the "4 Steps" and describes the various steps/documents individually in the sequential order in which they are presented to deliver proportionality.

2.1 Impact/Effect Register

STEP 1 - Impact/Effect Register

The function of the impact/effect register is to document **ALL** potential impacts/effects associated with the proposed development of Hornsea Four and to identify those that are "scoped out" and those of Likely Significant Effect (LSE) to be taken forward for simple or detailed assessment in the PEIR.

The Impact/Effect Register is the starting point for reading the PEIR. It provides several discrete and sperate functions which are set out in detail within the Register and summarised here:

1. Details all potential impacts/effects and provides a unique ID which can be traced through the subsequent steps/documents (e.g. GGC-C-8);
2. States the magnitude, sensitivity and significance of all potential impact(s)/effect(s) associated with all activities, in all phases of development for Hornsea Four;
3. Identifies Commitments and/or embedded mitigation measures and (the terms are used interchangeably) to reduce or eliminate Likely Significant Effect[1] (LSE) and hence deliver proportionality in EIA terms (see Commitment Register for further detail on Commitments);
4. Sets the scope of the EIA at Scoping and PEIR; and,
5. Defines the Maximum Design Scenario[2] for any given impact/effect.

The reader is referred to the worksheet "The Impact Register Explained" in the Impact Register for further detail on all information provided.

In terms of setting the scope of the EIA at PEIR, the Impact Register clearly distinguishes:

1. Potential impact(s) "scoped out" and where there is agreement with both PINS and the Applicant (Hornsea Four).
2. Areas of disagreement on LSE and whether an impact(s)/effect(s) should be "scoped out" of a Proportionate EIA (These areas are subject to further agreement through the Evidence Plan process).
3. LSE "scoped in" for simple or detailed assessment within the PEIR (see Appendix A)

The above positions are presented as colour coded categories for all potential impact(s)/effect(s) considered by the Applicant, as per **Table 1**. The last column identifies how an effect is considered at PEIR stage.

[1] Likely Significant Effect (LSE) in Environmental Impact Assessment (EIA) terms
[2] Maximum Design Scenario (MDS) is the aspects of each project design parameter that will result in the greatest impact upon each respective receptor

Please note that the term "scoped out" relates to the Likely Significant Effect (LSE) in EIA terms and not "scoped out" of the EIA process *per se*. All impacts "scoped out" of LSE are assessed for magnitude, sensitivity of the receiving receptor and conclude an EIA significance in the Impacts Register (see **Volume 4, Annex 5.1**). This approach is aligned with the Hornsea Four Proportionate approach to EIA (see **Volume 1, Chapter 5: EIA Methodology**).

Table 1. Categories used within the Impact/Effect Register, assessment requirements and treatment within the PEIR.

Category	Assessment Requirements	Treatment in PEIR
Potential impact is **scoped out** and both PINS and Hornsea Four agree.	These impacts are presented within the Impacts Register. Magnitude, sensitivity and significance of all potential impacts are set out.	Presented in the Impact Register table of the PEIR chapter section: Project Basis for Assessment.
PINS/Stakeholders state that impact should be **scoped in** but Hornsea Four disagree and believe that the impact should be scoped out.	The rationale for scoping out should be ascertained and reviewed. The following broad three categories are likely to apply from the scoping stage (i) lack of evidence (ii) lack of certainty or (iii) disagreement on impact significance.	Assume that these effects are scoped in UNLESS agreement has been received from PINS/stakeholders that they have been scoped out.
Potential impact is **scoped in** and both PINS and Hornsea Four agree.	Simple assessment required. There are several potential effects that require assessment but due to their nature do not require detailed assessment.	Assessed in Impact Assessment section of PEIR chapter.
Potential impact is **scoped in** and both PINS and Hornsea Four agree.	Detailed assessment required. The complexity or potential significance of these potential effects has been determined to require a detailed assessment. Such detailed assessments will form the bulk of any technical assessment section.	Assessed in Impact Assessment section of PEIR chapter.

Question 1 - Impact and Effect Register

Are all potential impacts associated with the relevant receptor correctly identified within the Impacts/Effects Register and aligned with the Hornsea Four Scoping Opinion and therefore clearly setting the scope of the PEIR?

2.2 Commitments Register

STEP 2 - Commitment Register

The function of the commitment register is to serve as a repository of **ALL** Hornsea Four commitments. The key function of Commitments is to eliminate or reduce LSE. Commitments may be suggested by members of the public, stakeholders and technical contributors to the EIA.
Please refer to the Commitment Register for further detail

The Commitment Register should be read in conjunction with the Impact/ Register as the two documents are inter-related (e.g. The Impact Register proposes Commitments which eliminate or reduce LSE and the Commitment Register details how these measures are secured).

The Commitment Register provides several discrete functions which are set out in detail within the Register and summarised here:

1. Provides a unique ID for each proposed Commitment facilitating tracking and consultation through the development of the EIA.
2. Identifies the project element (Export Cable Corridor, Landfall etc), activity and stage that the Commitment relates.
3. Identifies the relevant onshore or offshore environmental receptor topic of relevance (e.g. benthic ecology)
4. Provides a link and reference to the relative DCO documentation that secures the Commitment.

In line with the IEMA 'Guide to Shaping Quality Development' (2015), commitments are classified as:

- **Primary** (inherent) mitigation: an intrinsic part of the design that should be described in the design evolution narrative and included within the project description e.g. reducing development heights to reduce visual impact.
- **Secondary** (foreseeable) mitigation: those measures that require further activity to achieve the anticipated outcome, e.g. description of certain lighting limits that will be subject to submission of a detailed lighting layout as a condition of approval.
- **Tertiary** (inexorable): which will be required regardless of the EIA as it is imposed e.g. because of legislative requirements and/or standard sectoral practices (e.g. via a CEMP).

Commitments may be suggested by members of the public, stakeholders and technical contributors to the EIA. All commitments shall be communicated to the public and stakeholders at Scoping, PEIR and DCO Application. All Commitment suggestions will be assessed by Hornsea Four and where they assist in the delivery of proportionality be adopted as part of future versions of the register (e.g. at DCO).

The Commitment Register is provided as an interactive searchable spreadsheet allowing the user to identify Commitments relevant to their receptor, project phase and to ensure that the Commitment is secured vis the correct mechanism to deliver proportionality.

Question 2 - Commitment Register

Are the Commitments proposed:

A. Sufficient to support "Scoping Out" of impacts?
B. Are they adequately secured (see Step 3)?

Do you have any additions or amendments to the Commitments at PEIR?

2.3 Application Register

STEP 3 - Application Register

The register lists all documents submitted for Hornsea Four's (the Applicant) Development Consent Order (DCO). The Application Register also provides a full list of the documents that have been submitted as part of the draft consultation documents at the point of S42 statutory consultation. The register is a live document and will be updated when revisions are made, and a final register will accompany the DCO application to the Planning Inspectorate.

The DCO is for the construction, operation and maintenance and decommissioning of Hornsea Four Offshore Wind Farm, an electricity generating facility and electrical storage facility.

The Application Register provides several discrete and sperate functions which are set out in detail within the Register and summarised here:

1. Provides a log of all documents, reports and drawings/plans prepared by Hornsea Four to support S42 consultation at PEIR.
2. Provides a log of all documents, reports and drawings/plans to be prepared by Hornsea Four at the point of DCO application.
3. Provides a link to the necessary documentation to secure the Commitments set out in the Commitments Register.

Question 3 - Application Register

Are the relevant documents presented for consultation to secure the Commitments and "Scoping Out" of impacts/effects of LSE?

2.4 PEIR Chapter & Technical Report

STEP 4 - PEIR Chapter & TR

The PEIR Chapter presents an assessment (simple and detailed) of the LSEs that have been agreed via Scoping and the Evidence Plan process. The TR provides a description of the baseline environment to inform the assessment in the PEIR Chapter.

The PEIR Chapter is the key document delivering proportionality for Hornsea Four, when read in conjunction with the previous registers. The PEIR provides several discrete and sperate functions which are summarised here:

1. Summarises the Planning and Policy context for the project.
2. Summarises key consultation.
3. Defines the methodology and approach to characterising the baseline environment/study area
4. Sets the project basis for assessment by:
    - Confirming impact(s)/effect(s) "scoped out" of potential LSE
    - Presents the Commitments that have been adopted/embedded to reduce or eliminate LSE at the point of PEIR
5. Define the Maximum Design Scenario (MDS Table) for those impact(s)/effect(s) scoped in as potentially having an LSE.
6. Presents the methodology for the EIA for that environmental receptor and any deviations from the standard approach to EIA (DMRB approach)
7. Presents the impact assessment and any proposed measures (Commitments) to reduce or eliminate LSE and thereby reduce the scope of the EIA at the point of Environmental Statement (ES) production.
8. Assesses Cumulative and In-Combination, inter-related and transboundary effects
9. Tabulates the conclusion and summary of the assessments and any mitigation(s).

It is important to note that the PEIR presents an assessment of the likely Significant Effects **only**. All non-LSE are presented within the Impact/Effect Register. Agreement with stakeholders on the Scoping out of impacts via the Evidence Plan process or other forum is provided in the Impacts/Effects Register. However, the PEIR provides as much of the required evidence base data as is required where stakeholders have disagreed with any scoping out to provide greater certainty (noting that agreement on the level and nature of the information to be applied is discussed through the Evidence Plan process).

Question 4 - PEIR

Do you agree with the scope of the EIA at PEIR?

The Technical Report supports and evidences the PEIR and:

- Supports the scoping out of LSE by providing additional baseline data (in some cases only)
- In providing a supporting document to reduce the volume of the PEIR thereby delivering proportionality.

Appendix A

Simple Verses Detailed Assessment

One of the core concepts of Hornsea Four is progressing the use of detailed verses simple assessments.

No fixed or firm view exists on the differences between these two types of assessment within the EIA community. For some technical disciplines there will be an obvious distinction between simple and detailed assessment approaches with well understood methods ratcheting up in complexity. However, distinction between approaches is not always clear, with a grey middle ground. The following table is provided to guide the assessor in determining what may constitute a simple or detailed assessment. It is not prescriptive but sets out several characteristics of each type of assessment.

The concept of simple verses detailed may also elicit a range of responses from stakeholders and any feedback on the understanding of this approach during the evidence plan process (or wider discussions with stakeholders) should be fed back via your EIA Lead (on-shore or offshore).

It is the responsibility of the technical authors to ensure that the approach taken to each assessment aligns to either the detailed or simple assessment set out in the Impacts and Effects Register and takes regard of the following guidance as to what these comprise of.

Characteristics of a Simple Assessment	Characteristics of a Detailed Assessment
Used to determine the impact of a source-pathway-receptor process where there is high certainty of its existence, how it operates and realistic lack of alternatives.	Used to determine the impact of a complex process with multiple linkages, outcomes and alternatives where greater uncertainty exists in environmental variables, processes and outcomes.
Type of data A simple assessment is based on the assembly of data and information that is readily available or, possibly through non-intrusive site survey (e.g. walkover) to confirm conclusions of desk-based studies.	**Type of data** Detailed assessments may require intrusive data gathering or sampling of the environment.
Type of assessment Assessment will be via well-established qualitative argument which may make use or generalisations or via less detailed quantitative methods (e.g. simple spreadsheet modelling)	**Type of assessment** Assessment is likely to incorporate one or more of the following: a novel or new approach; quantitative modelling techniques, finitely argued qualitative discussion where complex arguments are postulated.
Risk of impact on consent Simple assessments can be applied where the outputs sufficiently establish confidently that the forecast environmental effect would not be a fundamental issue in the decision-making process.	**Risk of impact on consent** The objective is to gain an in-depth appreciation of the beneficial and adverse environmental consequences of the project and to inform project decisions, since they are expected to be key issues in whether the project proceeds in its proposed configuration. Relevant

	stakeholder and statutory environmental body consultations on likely significant effects are important early in the project development process.
Assessment length/detail Detailing of the assessment in the reporting document can be restricted to a small number of paragraphs, tables and figures.	**Assessment length/detail** Detailing of the assessment in the reporting documentation will consist of a number of logically set out paragraphs, tables and figures that may show and discuss complex details. A technical report may accompany such an assessment containing further, even more detailed workings.